

# ETSI TS 125 423 V8.8.0 (2010-04)

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*Technical Specification*

**Universal Mobile Telecommunications System (UMTS);  
UTRAN Iur interface Radio Network Subsystem  
Application Part (RNSAP) signalling  
(3GPP TS 25.423 version 8.8.0 Release 8)**

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## Foreword

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# Foreword

This Technical Specification (TS) has been produced by the 3<sup>rd</sup> Generation Partnership Project (3GPP).

The contents of the present document are subject to continuing work within the TSG and may change following formal TSG approval. Should the TSG modify the contents of the present document, it will be re-released by the TSG with an identifying change of release date and an increase in version number as follows:

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- z the third digit is incremented when editorial only changes have been incorporated in the document.

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# 1 Scope

The present document specifies the radio network layer signalling procedures of the control plane between RNCs in UTRAN, between RNC in UTRAN and BSS in GERAN Iu mode and between BSSs in GERAN Iu mode.

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# 2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

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- [2] 3GPP TS 25.413: "UTRAN Iu Interface RANAP Signalling".
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- [63] 3GPP TS 25.308: "High Speed Downlink Packet Access (HSDPA); Overall description; Stage 2".
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## 3 Definitions, Symbols and Abbreviations

### 3.1 Definitions

For the purposes of the present document, the following terms and definitions apply:

**Elementary Procedure:** RNSAP protocol consists of Elementary Procedures (EPs). An Elementary Procedure is a unit of interaction between two RNCs. An EP consists of an initiating message and possibly a response message. Two kinds of EPs are used:

- **Class 1:** Elementary Procedures with response (success or failure);
- **Class 2:** Elementary Procedures without response.

For Class 1 EPs, the types of responses can be as follows:

Successful

- A signalling message explicitly indicates that the elementary procedure has been successfully completed with the receipt of the response.

Unsuccessful

- A signalling message explicitly indicates that the EP failed.

Class 2 EPs are considered always successful.

**Prepared Reconfiguration:** A Prepared Reconfiguration exists when the Synchronised Radio Link Reconfiguration Preparation procedure has been completed successfully. The Prepared Reconfiguration does not exist anymore only after either of the procedures Synchronised Radio Link Reconfiguration Commit or Synchronised Radio Link Reconfiguration Cancellation has been completed. In particular, the Prepared Reconfiguration still exists if the object (e.g. Radio Link) concerned by the Synchronised Radio Link Reconfiguration (e.g. in the case of an HS-DSCH Setup) is removed, but the UE Context still exists.

**UE Context:** The UE Context contains the necessary information for the DRNC/DBSS to communicate with a specific UE. The UE Context is created by the Radio Link Setup procedure or by the Uplink Signalling Transfer procedure when the UE makes its first access in a cell controlled by the DRNS/DBSS or by Enhanced Relocation procedure when the procedure is the first dedicated RNSAP procedure for the UE. The UE Context is deleted by the Radio Link Deletion procedure, by the Common Transport Channel Resources Release procedure, or by the Downlink Signalling Transfer procedure when neither any Radio Links nor any common transport channels are established towards the concerned UE. The UE Context is identified by the SCCP Connection for messages using connection oriented mode of the signalling bearer and the D-RNTI for messages using connectionless mode of the signalling bearer, unless specified otherwise in the procedure text.

**Distant RNC Context:** The Distant RNC context is created by the first Common Measurement Initiation Procedure or Information Exchange Initiation Procedure initiated by one RNC/BSS and requested from another RNC/BSS. The Distant RNC Context is deleted after the Common Measurement Termination, the Common Measurement Failure, the Information Exchange Termination or the Information Exchange Failure procedure when there is no more Common Measurement and no more Information to be provided by the requested RNC/BSS to the requesting RNC/BSS. The Distant RNC Context is identified by an SCCP connection as, for common measurements and information exchange, only the connection oriented mode of the signalling bearer is used.

**Signalling radio bearer 2:** The signalling radio bearer 2 is used by the UE to access a GERAN cell in order to perform RRC procedures [36].

**UE Link:** see definition in [50].

**URA Link:** see definition in [50].

**MBMS Bearer Service:** see definition in [51].

**MBMS session:** see definition in [50].

**MBMS session start:** see definition in [50].

**MBMS session stop:** see definition in [50].

**MBMS Selected Services:** see definition in [50].

**PUESBINE feature:** as defined in [65].

## 3.2 Symbols

Void.

## 3.3 Abbreviations

For the purposes of the present document, the following abbreviations apply:

|       |                                      |
|-------|--------------------------------------|
| A-GPS | Assisted-GPS                         |
| ALCAP | Access Link Control Application Part |
| APN   | Access Point Name                    |
| ASN.1 | Abstract Syntax Notation One         |
| BER   | Bit Error Rate                       |
| BLER  | Block Error Rate                     |
| BSS   | Base Station Subsystem               |
| CBSS  | Controlling BSS                      |
| CCCH  | Common Control Channel               |

|         |  |
|---------|--|
| CCPCH   | Common Control Physical Channel  |
| CCTrCH  | Coded Composite Transport Channel  |
| CFN     | Connection Frame Number  |
| C-ID    | Cell Identifier  |
| CM      | Compressed Mode  |
| CN      | Core Network   |
| CPICH   | Common Pilot Channel   |
| CRNC    | Controlling RNC  |
| DBSS    | Drift BSS  |
| C-RNTI  | Cell Radio Network Temporary Identifier  |
| CS      | Circuit Switched   |
| CTFC    | Calculated Transport Format Combination DCH Dedicated Channel                                |
| DGANSS  | Differential GANSS   |
| DGPS    | Differential GPS   |
| DL      | Downlink   |
| DPC     | Downlink Power Control   |
| DPCCH   | Dedicated Physical Control Channel   |
| DPCH    | Dedicated Physical Channel   |
| DPDCH   | Dedicated Physical Data Channel  |
| DRNC    | Drift RNC  |
| DRNS    | Drift RNS  |
| D-RNTI  | Drift Radio Network Temporary Identifier   |
| DRX     | Discontinuous Reception  |
| DSCH    | Downlink Shared Channel  |
| Ec      | Energy in single Code  |
| E-AGCH  | E-DCH Absolute Grant Channel   |
| E-DCH   | Enhanced UL DCH  |
| E-HICH  | E-DCH HARQ Acknowledgement Indicator Channel   |
| E-PUCH  | Enhanced Uplink Physical Channel (TDD only)  |
| E-RNTI  | E-DCH RNTI   |
| E-RUCCH | E-DCH Random Access Uplink Control Channel (TDD only)  |
| E-TFCI  | E-DCH Transport Format Combination Indicator   |
| E-UCCH  | E-DCH Uplink Control Channel (TDD only)  |
| E-UTRA  | Evolved UTRA   |
| EDSCHPC | Enhanced Downlink Shared Channel Power Control   |
| EGNOS   | European Geostationary Navigation Overlay Service  |
| EP      | Elementary Procedure   |
| FACH    | Forward Access Channel   |
| FDD     | Frequency Division Duplex  |
| F-DPCH  | Fractional DPCH  |
| FN      | Frame Number   |
| FP      | Frame Protocol   |
| GANSS   | Galileo and Additional Navigation Satellite Systems  |
| GERAN   | GSM EDGE Radio Access Network  |
| GA      | Geographical Area  |
| GAGAN   | GPS Aided Geo Augmented Navigation   |
| GAI     | Geographical Area Identifier   |
| GLONASS | GLObal'naya NAVigatsionnaya Sputnikovaya Sistema (Engl.: Global Navigation Satellite System) |
| GNSS    | Global Navigation Satellite System   |
| GPS     | Global Positioning System  |
| GRA     | GERAN Registration Area  |
| GSM     | Global System Mobile   |
| GWCN    | Gateway Core Network   |
| HSDPA   | High Speed Downlink Packet Access  |
| HW      | Hardware   |
| IB      | Information Block  |
| ICD     | Interface Control Document   |
| ID      | Identity or Identifier   |
| IE      | Information Element  |
| IMSI    | International Mobile Subscriber Identity   |
| IP      | Internet Protocol  |
| IPDL    | Idle Period DownLink   |

|           |  |
|-----------|--|
| ISCP      | Interference Signal Code Power                                     |
| LAC       | Location Area Code   |
| LCR       | Low Chip Rate (1.28 Mcps)  |
| LCS       | Location Services  |
| MAC       | Medium Access Control  |
| MBMS      | Multimedia Broadcast Multicast Service                             |
| MOCN      | Multi-Operator Core Network  |
| MRNC      | MBMS Master RNC  |
| MS        | Mobile Station   |
| MSAS      | Multi-functional Satellite Augmentation System                     |
| NACC      | Network Assisted Cell Change                                       |
| NAS       | Non Access Stratum   |
| No        | Reference Noise  |
| NRT       | Non Real Time  |
| O&M       | Operation and Maintenance  |
| P(-)CCPCH | Primary CCPCH  |
| PCH       | Paging Channel   |
| OTD       | Observed Time Difference   |
| P(-)CPICH | Primary CPICH  |
| PCS       | Personal Communication Services                                    |
| PDSCH     | Physical Downlink Shared Channel                                   |
| PDU       | Protocol Data Unit   |
| PhCH      | Physical Channel   |
| PICH      | Paging Indication Channel  |
| PLCCH     | Physical Layer Common Control Channel                              |
| Pos       | Position or Positioning  |
| PRACH     | Physical Random Access Channel                                     |
| PTP       | Point To Point   |
| PTM       | Point To Multipoint  |
| PS        | Packet Switched  |
| PUESBINE  | Provision of UE Specific Behaviour Information to Network Entities |
| QE        | Quality Estimate   |
| QZSS      | Quasi-Zenith Satellite System                                      |
| RAC       | Routing Area Code  |
| RACH      | Random Access Channel  |
| RAN       | Radio Access Network   |
| RANAP     | Radio Access Network Application Part                              |
| RB        | Radio Bearer   |
| RL        | Radio Link   |
| RLC       | Radio Link Control   |
| RLS       | Radio Link Set   |
| RM        | Rate Matching  |
| RNC       | Radio Network Controller   |
| RNS       | Radio Network Subsystem  |
| RNSAP     | Radio Network Subsystem Application Part                           |
| RNTI      | Radio Network Temporary Identifier                                 |
| RRC       | Radio Resource Control   |
| RT        | Real Time  |
| RSCP      | Received Signal Code Power   |
| SBAS      | Satellite Based Augmentation System                                |
| SBSS      | Serving BSS  |
| Rx        | Receive or Reception   |
| Sat       | Satellite  |
| SCCP      | Signalling Connection Control Part                                 |
| S(-)CCPCH | Secondary CCPCH  |
| SCH       | Synchronisation Channel  |
| SCTD      | Space Code Transmit Diversity                                      |
| SDU       | Service Data Unit  |
| SF        | System Frame   |
| SFN       | System Frame Number  |
| SHCCH     | Shared Control Channel   |
| SIR       | Signal-to-Interference Ratio                                       |

|        |  |
|--------|--|
| SNA    | Shared Network Area                          |
| SRB2   | Signalling radio bearer 2                    |
| SRNC   | Serving RNC                                  |
| SRNS   | Serving RNS                                  |
| S-RNTI | Serving Radio Network Temporary Identifier   |
| STTD   | Space Time Transmit Diversity                |
| TDD    | Time Division Duplex                         |
| TF     | Transport Format                             |
| TFCI   | Transport Format Combination Indicator       |
| TFCS   | Transport Format Combination Set             |
| TFS    | Transport Format Set                         |
| TGCFN  | Transmission Gap Connection Frame Number     |
| TMGI   | Temporary Mobile Group Identity              |
| ToAWE  | Time of Arrival Window Endpoint              |
| ToAWS  | Time of Arrival Window Startpoint            |
| TPC    | Transmit Power Control                       |
| TrCH   | Transport Channel                            |
| TS     | Time Slot                                    |
| TSG    | Technical Specification Group                |
| TSTD   | Time Switched Transmit Diversity             |
| TTI    | Transmission Time Interval                   |
| TX     | Transmit or Transmission                     |
| UARFCN | UTRA Absolute Radio Frequency Channel Number |
| UDP    | User Datagram Protocol                       |
| UC-ID  | UTRAN Cell Identifier                        |
| UE     | User Equipment                               |
| UL     | Uplink                                       |
| UMTS   | Universal Mobile Telecommunications System   |
| URA    | UTRAN Registration Area                      |
| U-RNTI | UTRAN Radio Network Temporary Identifier     |
| USCH   | Uplink Shared Channel                        |
| UTC    | Universal Coordinated Time                   |
| UTRA   | Universal Terrestrial Radio Access           |
| UTRAN  | Universal Terrestrial Radio Access Network   |
| WAAS   | Wide Area Augmentation System                |

---

## 4 General

### 4.1 Procedure Specification Principles

The principle for specifying the procedure logic is to specify the functional behaviour of the DRNC/CRNC exactly and completely. The SRNC functional behaviour is left unspecified. The Physical Channel Reconfiguration procedure, [TDD – the UE Measurement Initiation, the UE Measurement Reporting, UE Measurement Termination, UE Measurement Failure,] and the Reset procedure are an exception from this principle.

The following specification principles have been applied for the procedure text in subclause 8:

- The procedure text discriminates between:

- 1) Functionality which "shall" be executed

The procedure text indicates that the receiving node "shall" perform a certain function Y under a certain condition. If the receiving node supports procedure X but cannot perform functionality Y requested in the REQUEST message of a Class 1 EP, the receiving node shall respond with the message used to report unsuccessful outcome for this procedure, containing an appropriate cause value.

- 2) Functionality which "shall, if supported" be executed

The procedure text indicates that the receiving node "shall, if supported," perform a certain function Y under a certain condition. If the receiving node supports procedure X, but does not support functionality Y, the

receiving node shall proceed with the execution of the EP, possibly informing the requesting node about the not supported functionality.

Any required inclusion of an optional IE in a response message is explicitly indicated in the procedure text. If the procedure text does not explicitly indicate that an optional IE shall be included in a response message, the optional IE shall not be included. For requirements for including *Criticality Diagnostics* IE, see section 10. For examples on how to use the *Criticality Diagnostics* IE, see Annex C.

## 4.2 Forwards and Backwards Compatibility

The forwards and backwards compatibility of the protocol is assured by a mechanism in which all current and future messages, and IEs or groups of related IEs, include ID and criticality fields that are coded in a standard format that will not be changed in the future. These parts can always be decoded regardless of the standard version.

## 4.3 Source Signalling Address Handling

The sender of an RNSAP messages shall include the Source Signalling Address, i.e. the Signalling Address of the sending node.

## 4.4 Specification Notations

For the purposes of the present document, the following notations apply:

- |                      |   |
|----------------------|---|
| [FDD]                | This tagging of a word indicates that the word preceding the tag "[FDD]" applies only to FDD. This tagging of a heading indicates that the heading preceding the tag "[FDD]" and the section following the heading applies only to FDD.   |
| [TDD]                | This tagging of a word indicates that the word preceding the tag "[TDD]" applies only to TDD, including 3.84Mcps TDD, 7.68Mcps TDD and 1.28Mcps TDD. This tagging of a heading indicates that the heading preceding the tag "[TDD]" and the section following the heading applies only to TDD, including 3.84Mcps TDD, 7.68Mcps TDD and 1.28Mcps TDD. |
| [3.84Mcps TDD]       | This tagging of a word indicates that the word preceding the tag "[3.84Mcps TDD]" applies only to 3.84Mcps TDD. This tagging of a heading indicates that the heading preceding the tag "[3.84Mcps TDD]" and the section following the heading applies only to 3.84Mcps TDD.   |
| [1.28Mcps TDD]       | This tagging of a word indicates that the word preceding the tag "[1.28Mcps TDD]" applies only to 1.28Mcps TDD. This tagging of a heading indicates that the heading preceding the tag "[1.28Mcps TDD]" and the section following the heading applies only to 1.28Mcps TDD.   |
| [7.68Mcps TDD]       | This tagging of a word indicates that the word preceding the tag "[7.68Mcps TDD]" applies only to 7.68Mcps TDD. This tagging of a heading indicates that the heading preceding the tag "[7.68Mcps TDD]" and the section following the heading applies only to 7.68Mcps TDD.   |
| [FDD - ...]          | This tagging indicates that the enclosed text following the "[FDD - " applies only to FDD. Multiple sequential paragraphs applying only to FDD are enclosed separately to enable insertion of TDD specific (or common) paragraphs between the FDD specific paragraphs.  |
| [TDD - ...]          | This tagging indicates that the enclosed text following the "[TDD - " applies only to TDD including 3.84Mcps TDD, 7.68Mcps TDD and 1.28Mcps TDD. Multiple sequential paragraphs applying only to TDD are enclosed separately to enable insertion of FDD specific (or common) paragraphs between the TDD specific paragraphs.                          |
| [3.84Mcps TDD - ...] | This tagging indicates that the enclosed text following the "[3.84Mcps TDD - " applies only to 3.84Mcps TDD. Multiple sequential paragraphs applying only to 3.84Mcps TDD are enclosed separately to enable insertion of FDD and TDD specific (or common) paragraphs between the 3.84Mcps TDD specific paragraphs.                                    |

|                      |  |
|----------------------|--|
| [1.28Mcps TDD - ...] | This tagging indicates that the enclosed text following the "[1.28Mcps TDD - " applies only to 1.28Mcps TDD. Multiple sequential paragraphs applying only to 1.28Mcps TDD are enclosed separately to enable insertion of FDD and TDD specific (or common) paragraphs between the 1.28Mcps TDD specific paragraphs. |
| [7.68Mcps TDD - ...] | This tagging indicates that the enclosed text following the "[7.68Mcps TDD - " applies only to 7.68Mcps TDD. Multiple sequential paragraphs applying only to 7.68Mcps TDD are enclosed separately to enable insertion of FDD and TDD specific (or common) paragraphs between the 7.68Mcps TDD specific paragraphs. |
| Procedure            | When referring to an elementary procedure in the specification, the Procedure Name is written with the first letters in each word in upper case characters followed by the word "procedure", e.g. Radio Link Setup procedure.  |
| Message              | When referring to a message in the specification, the MESSAGE NAME is written with all letters in upper case characters followed by the word "message", e.g. RADIO LINK SETUP REQUEST message.   |
| IE                   | When referring to an information element (IE) in the specification, the <i>Information Element Name</i> is written with the first letters in each word in upper case characters and all letters in Italic font followed by the abbreviation "IE", e.g. <i>Transport Format Set</i> IE.                             |
| Value of an IE       | When referring to the value of an information element (IE) in the specification, the "Value" is written as it is specified in subclause 9.2 enclosed by quotation marks, e.g. "Abstract Syntax Error (Reject)".  |

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## 5 RNSAP Services

### 5.1 RNSAP Procedure Modules

The Iur interface RNSAP procedures are divided into five modules as follows:

1. RNSAP Basic Mobility Procedures;
2. RNSAP Dedicated Procedures;
3. RNSAP Common Transport Channel Procedures;
4. RNSAP Global Procedures;
5. RNSAP MBMS Procedures.

The Basic Mobility Procedures module contains procedures used to handle the mobility within UTRAN, within GERAN and between UTRAN and GERAN.

The Dedicated Procedures module contains procedures that are used to handle DCHs, [FDD – F-DPCH,] [TDD – DSCHs, USCHs], HS-DSCH and E-DCH between two RNSs. If procedures from this module are not used in a specific Iur, then the usage of DCH, [FDD – F-DPCH,] [TDD – DSCH, USCH,] HS-DSCH and E-DCH traffic between corresponding RNSs is not possible.

The Common Transport Channel Procedures module contains procedures that are used to control common transport channel data streams (excluding the DSCH, HS-DSCH and USCH) over Iur interface.

The Global Procedures module contains procedures that are not related to a specific UE. The procedures in this module are in contrast to the above modules involving two peer CRNCs/CBSSs.

The MBMS Procedures module contains procedures that are specific to MBMS and used for cases that cannot be handled by other modules.



## 5.2 Parallel Transactions

Unless explicitly indicated in the procedure specification, at any instance in time one protocol peer shall have a maximum of one ongoing RNSAP Dedicated procedure related to a certain UE.

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# 6 Services Expected from Signalling Transport

The signalling transport shall provide two different service modes for the RNSAP.

1. Connection oriented data transfer service. This service is supported by a signalling connection between two RNCs. It shall be possible to dynamically establish and release signalling connections based on the need. Each active UE shall have its own signalling connection. The signalling connection shall provide in sequence delivery of RNSAP messages. RNSAP shall be notified if the signalling connection breaks.
2. Connectionless data transfer service. RNSAP shall be notified in case a RNSAP message did not reach the intended peer RNSAP entity.

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# 7 Functions of RNSAP

The RNSAP protocol provides the following functions:

- Radio Link Management. This function allows the SRNC to manage radio links using dedicated resources in a DRNS;
- Physical Channel Reconfiguration. This function allows the DRNC to reallocate the physical channel resources for a Radio Link;
- Radio Link Supervision. This function allows the DRNC to report failures and restorations of a Radio Link;
- Compressed Mode Control [FDD]. This function allows the SRNC to control the usage of compressed mode within a DRNS;
- Measurements on Dedicated Resources. This function allows the SRNC to initiate measurements on dedicated resources in the DRNS. The function also allows the DRNC to report the result of the measurements;
- DL Power Drifting Correction [FDD]. This function allows the SRNC to adjust the DL power level of one or more Radio Links in order to avoid DL power drifting between the Radio Links;
- DCH Rate Control. This function allows the DRNC to limit the rate of each DCH configured for the Radio Link(s) of a UE in order to avoid congestion situations in a cell;
- CCCH Signalling Transfer. This function allows the SRNC and DRNC to pass information between the UE and the SRNC on a CCCH controlled by the DRNS;
- GERAN Signalling Transfer. This function allows the SBSS and DBSS, the SRNC and DBSS or the SBSS and DRNC to pass information between the UE/MS and the SRNC/SBSS on an SRB2/CCCH controlled by the DBSS/DRNC;
- Paging. This function allows the SRNC/SBSS to page a UE in a URA/GRA or a cell in the DRNS;
- Common Transport Channel Resources Management. This function allows the SRNC to utilise Common Transport Channel Resources within the DRNS;
- Relocation Execution. This function allows the SRNC/SBSS to finalise a Relocation previously prepared via other interfaces;
- Reporting of General Error Situations. This function allows reporting of general error situations, for which function specific error messages have not been defined.
- DL Power Timeslot Correction [TDD]. This function enables the DRNS to apply an individual offset to the transmission power in each timeslot according to the downlink interference level at the UE.

- Measurements on Common Resources. This function allows an RNC/BSS to request from another RNC/BSS to initiate measurements on Common Resources. The function also allows the requested RNC/BSS to report the result of the measurements.
- Information Exchange. This function allows an RNC to request from another RNC the transfer of information. The function also allows the requested RNC to report the requested information.
- Resetting the Iur. This function is used to completely or partly reset the Iur interface.
- UE Measurement Forwarding[TDD]. This function allows the DRNC to request and receive UE measurements from the SRNC.
- Tracing. This function allows the SRNC to activate or deactivate trace in a DRNC.
- MBMS UE Linking/De-linking. This function allows the SRNC to provide/update/remove the UE Link to/in/from the DRNC.
- MBMS URA Linking/De-linking. This function allows the SRNC to provide/update/remove the URA Link to/in/from the DRNC.
- MBMS Channel Type Indication. This function allows the DRNC to indicate to the SRNC the selected channel type for an MBMS bearer service within certain cells in the DRNS.
- MBMS Preferred Frequency Layer Indication. This function allows the DRNC to indicate to the SRNC the preferred frequency layer for an MBMS bearer service within certain cells in the DRNS.
- MBMS MCCH Information Control. This function allows an MRNC to distribute the MCCH Information to CRNC within the MBSFN cluster.
- Direct Information Transfer. This function allows an RNC to transfer information to another RNC.
- Relocating serving RNC. This function enables to change the serving RNC functionality as well as the related Iu resources (RAB(s) and Signalling connection) from one RNC to another.

The mapping between the above functions and RNSAP elementary procedures is shown in the Table 1.

**Table 1: Mapping between functions and RNSAP elementary procedures**

| Function                                      | Elementary Procedure(s)  |
|---|--|
| Radio Link Management                         | a) Radio Link Setup<br>b) Radio Link Addition<br>c) Radio Link Deletion<br>d) Unsynchronised Radio Link Reconfiguration<br>e) Synchronised Radio Link Reconfiguration Preparation<br>f) Synchronised Radio Link Reconfiguration Commit<br>g) Synchronised Radio Link Reconfiguration Cancellation<br>h) Radio Link Pre-emption<br>i) Radio Link Activation<br>j) Radio Link Parameter Update |
| Physical Channel Reconfiguration              | Physical Channel Reconfiguration   |
| Radio Link Supervision                        | a) Radio Link Failure<br>b) Radio Link Restoration   |
| Compressed Mode Control [FDD]                 | a) Radio Link Setup<br>b) Radio Link Addition<br>c) Compressed Mode Command<br>d) Unsynchronised Radio Link Reconfiguration<br>e) Synchronised Radio Link Reconfiguration Preparation<br>f) Synchronised Radio Link Reconfiguration Commit<br>g) Synchronised Radio Link Reconfiguration Cancellation  |
| Measurements on Dedicated Resources           | a) Dedicated Measurement Initiation<br>b) Dedicated Measurement Reporting<br>c) Dedicated Measurement Termination<br>d) Dedicated Measurement Failure  |
| DL Power Drifting Correction [FDD]            | Downlink Power Control   |
| DCH Rate Control                              | a) Radio Link Setup<br>b) Radio Link Addition<br>c) Unsynchronised Radio Link Reconfiguration<br>d) Synchronised Radio Link Reconfiguration Preparation<br>e) Radio Link Congestion  |
| CCCH Signalling Transfer                      | a) Uplink Signalling Transfer<br>b) Downlink Signalling Transfer   |
| GERAN Signalling Transfer                     | a) GERAN Uplink Signalling Transfer<br>b) Downlink Signalling Transfer   |
| Paging  | Paging   |
| Common Transport Channel Resources Management | a) Common Transport Channel Resources Initiation<br>b) Common Transport Channel Resources Release  |
| Relocation Execution                          | Relocation Commit  |
| Reporting of General Error Situations         | Error Indication   |
| Measurements on Common Resources              | a) Common Measurement Initiation<br>b) Common Measurement Reporting<br>c) Common Measurement Termination<br>d) Common Measurement Failure  |
| Information Exchange                          | a) Information Exchange Initiation<br>b) Information Reporting<br>c) Information Exchange Termination<br>d) Information Exchange Failure   |
| DL Power Timeslot Correction [TDD]            | Downlink Power Timeslot Control  |
| Reset   | Reset  |
| UE Measurement Forwarding[TDD]                | a) UE Measurement Initiation<br>b) UE Measurement Reporting<br>c) UE Measurement Termination<br>d) UE Measurement Failure  |
| Trace   | a) Iur Invoke Trace<br>b) Iur Deactivate Trace   |

| Function                                  | Elementary Procedure(s)  |
|---|--|
| MBMS UE Linking/De-linking                | a) Common Transport Channel Resources Initiation<br>b) Radio Link Setup<br>c) Downlink Signalling Transfer<br>d) MBMS Attach<br>e) MBMS Detach                       |
| MBMS Channel Type Indication              | a) Direct Information Transfer<br>b) Uplink Signalling Transfer<br>c) Radio Link Setup<br>d) Radio Link Addition<br>e) Common Transport Channel Resources Initiation |
| MBMS Preferred Frequency Layer Indication | a) Direct Information Transfer<br>b) Radio Link Setup<br>d) Radio Link Addition  |
| MBMS URA Linking/De-linking               | a) Downlink Signalling Transfer<br>b) MBMS Attach<br>c) MBMS Detach  |
| MBMS MCCH Information Control             | a) MBSFN MCCH Information  |
| Direct Information Transfer               | a) Direct Information Transfer   |
| Relocating serving RNC                    | a) Enhanced Relocation<br>b) Enhanced Relocation Cancel<br>c) Enhanced Relocation Signalling Transfer<br>d) Enhanced Relocation Release                              |

## 7.1 RNSAP functions and elementary procedures for Iur-g.

The functions and RNSAP elementary procedures, which are applicable on the Iur-g interface are shown in the Table 1A.

**Table 1A: RNSAP elementary procedures applicable on the Iur-g interface**

| Function                              | Elementary Procedure(s)   |
|---------------------------------------|---|
| GERAN Signalling Transfer             | a) GERAN Uplink Signalling Transfer<br>b) Downlink Signalling Transfer  |
| Paging                                | Paging  |
| Relocation Execution                  | Relocation Commit   |
| Reporting of General Error Situations | Error Indication  |
| Measurements on Common Resources      | a) Common Measurement Initiation<br>b) Common Measurement Reporting<br>c) Common Measurement Termination<br>d) Common Measurement Failure |
| Information Exchange                  | a) Information Exchange Initiation<br>b) Information Reporting<br>c) Information Exchange Termination<br>d) Information Exchange Failure  |

NOTE: In the connection with the functions related to the GERAN and UTRAN, the term RNC shall refer to RNC/BSS.

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## 8 RNSAP Procedures

### 8.1 Elementary Procedures

In the following tables, all EPs are divided into Class 1 and Class 2 EPs.

Table 2: Class 1 Elementary Procedures

| Elementary Procedure                                | Initiating Message                         | Successful Outcome                          | Unsuccessful Outcome                       |
|---|--|---|--|
|   |  | Response message                            | Response message                           |
| Radio Link Setup                                    | RADIO LINK SETUP REQUEST                   | RADIO LINK SETUP RESPONSE                   | RADIO LINK SETUP FAILURE                   |
| Radio Link Addition                                 | RADIO LINK ADDITION REQUEST                | RADIO LINK ADDITION RESPONSE                | RADIO LINK ADDITION FAILURE                |
| Radio Link Deletion                                 | RADIO LINK DELETION REQUEST                | RADIO LINK DELETION RESPONSE                |  |
| Synchronised Radio Link Reconfiguration Preparation | RADIO LINK RECONFIGURATION PREPARE         | RADIO LINK RECONFIGURATION READY            | RADIO LINK RECONFIGURATION FAILURE         |
| Unsynchronised Radio Link Reconfiguration           | RADIO LINK RECONFIGURATION REQUEST         | RADIO LINK RECONFIGURATION RESPONSE         | RADIO LINK RECONFIGURATION FAILURE         |
| Physical Channel Reconfiguration                    | PHYSICAL CHANNEL RECONFIGURATION REQUEST   | PHYSICAL CHANNEL RECONFIGURATION COMMAND    | PHYSICAL CHANNEL RECONFIGURATION FAILURE   |
| Dedicated Measurement Initiation                    | DEDICATED MEASUREMENT INITIATION REQUEST   | DEDICATED MEASUREMENT INITIATION RESPONSE   | DEDICATED MEASUREMENT INITIATION FAILURE   |
| Common Transport Channel Resources Initialisation   | COMMON TRANSPORT CHANNEL RESOURCES REQUEST | COMMON TRANSPORT CHANNEL RESOURCES RESPONSE | COMMON TRANSPORT CHANNEL RESOURCES FAILURE |
| Common Measurement Initiation                       | COMMON MEASUREMENT INITIATION REQUEST      | COMMON MEASUREMENT INITIATION RESPONSE      | COMMON MEASUREMENT INITIATION FAILURE      |
| Information Exchange Initiation                     | INFORMATION EXCHANGE INITIATION REQUEST    | INFORMATION EXCHANGE INITIATION RESPONSE    | INFORMATION EXCHANGE INITIATION FAILURE    |
| Reset   | RESET REQUEST                              | RESET RESPONSE                              |  |
| UE Measurement Initiation[TDD]                      | UE MEASUREMENT INITIATION REQUEST          | UE MEASUREMENT INITIATION RESPONSE          | UE MEASUREMENT INITIATION FAILURE          |
| Enhanced Relocation                                 | ENHANCED RELOCATION REQUEST                | ENHANCED RELOCATION RESPONSE                | ENHANCED RELOCATION FAILURE                |

**Table 3: Class 2 Elementary Procedures**

| <b>Elementary Procedure</b>                          | <b>Initiating Message</b>                          |
|--|--|
| Uplink Signalling Transfer                           | UPLINK SIGNALLING TRANSFER INDICATION              |
| GERAN Uplink Signalling Transfer                     | GERAN UPLINK SIGNALLING TRANSFER INDICATION        |
| Downlink Signalling Transfer                         | DOWNLINK SIGNALLING TRANSFER REQUEST               |
| Relocation Commit                                    | RELOCATION COMMIT                                  |
| Paging   | PAGING REQUEST                                     |
| Synchronised Radio Link Reconfiguration Commit       | RADIO LINK RECONFIGURATION COMMIT                  |
| Synchronised Radio Link Reconfiguration Cancellation | RADIO LINK RECONFIGURATION CANCEL                  |
| Radio Link Failure                                   | RADIO LINK FAILURE INDICATION                      |
| Radio Link Restoration                               | RADIO LINK RESTORE INDICATION                      |
| Dedicated Measurement Reporting                      | DEDICATED MEASUREMENT REPORT                       |
| Dedicated Measurement Termination                    | DEDICATED MEASUREMENT TERMINATION REQUEST          |
| Dedicated Measurement Failure                        | DEDICATED MEASUREMENT FAILURE INDICATION           |
| Downlink Power Control [FDD]                         | DL POWER CONTROL REQUEST                           |
| Compressed Mode Command [FDD]                        | COMPRESSED MODE COMMAND                            |
| Common Transport Channel Resources Release           | COMMON TRANSPORT CHANNEL RESOURCES RELEASE REQUEST |
| Error Indication                                     | ERROR INDICATION                                   |
| Downlink Power Timeslot Control [TDD]                | DL POWER TIMESLOT CONTROL REQUEST                  |
| Radio Link Pre-emption                               | RADIO LINK PREEMPTION REQUIRED INDICATION          |
| Radio Link Congestion                                | RADIO LINK CONGESTION INDICATION                   |
| Common Measurement Reporting                         | COMMON MEASUREMENT REPORT                          |
| Common Measurement Termination                       | COMMON MEASUREMENT TERMINATION REQUEST             |
| Common Measurement Failure                           | COMMON MEASUREMENT FAILURE INDICATION              |
| Information Reporting                                | INFORMATION REPORT                                 |
| Information Exchange Termination                     | INFORMATION EXCHANGE TERMINATION REQUEST           |
| Information Exchange Failure                         | INFORMATION EXCHANGE FAILURE INDICATION            |
| MBMS Attach  | MBMS ATTACH COMMAND                                |
| MBMS Detach  | MBMS DETACH COMMAND                                |
| Radio Link Parameter Update                          | RADIO LINK PARAMETER UPDATE INDICATION             |
| UE Measurement Reporting [TDD]                       | UE MEASUREMENT REPORT                              |
| UE Measurement Termination [TDD]                     | UE MEASUREMENT TERMINATION REQUEST                 |
| UE Measurement Failure [TDD]                         | UE MEASUREMENT FAILURE INDICATION                  |
| Iur Invoke Trace                                     | IUR INVOKE TRACE                                   |
| Iur Deactivate Trace                                 | IUR DEACTIVATE TRACE                               |
| Direct Information Transfer                          | DIRECT INFORMATION TRANSFER                        |
| Enhanced Relocation Cancel                           | ENHANCED RELOCATION CANCEL                         |
| Enhanced Relocation Signalling Transfer              | ENHANCED RELOCATION SIGNALLING TRANSFER            |
| Enhanced Relocation Release                          | ENHANCED RELOCATION RELEASE                        |
| MBSFN MCCH Information                               | MBSFN MCCH INFORMATION                             |

## 8.2 Basic Mobility Procedures

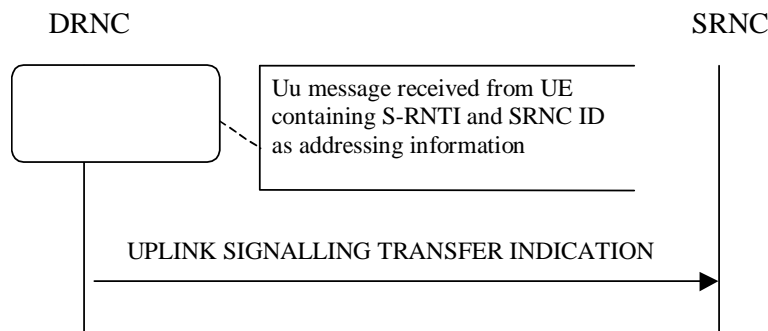
### 8.2.1 Uplink Signalling Transfer

#### 8.2.1.1 General

The procedure is used by the DRNC to forward a Uu message received on the CCCH to the SRNC.

This procedure shall use the connectionless mode of the signalling bearer.

### 8.2.1.2 Successful Operation



**Figure 1: Uplink Signalling Transfer procedure, Successful Operation**

When the DRNC receives an Uu message on the CCCH in which the UE addressing information is U-RNTI, i.e. S-RNTI and SRNC-ID, DRNC shall send the UPLINK SIGNALLING TRANSFER INDICATION message to the SRNC identified by the SRNC-ID received from the UE.

If at least one URA Identity is being broadcast in the cell where the Uu message was received (the accessed cell), the DRNC shall include a URA Identity for this cell in the *URA ID IE*, the *Multiple URAs Indicator IE* indicating whether or not multiple URA Identities are being broadcast in the accessed cell, and the RNC Identity of all other RNCs that are having at least one cell within the URA where the Uu message was received in the *URA Information IE* in the UPLINK SIGNALLING TRANSFER INDICATION message.

The DRNC shall include in the message the C-RNTI that it allocates to identify the UE in the radio interface in the accessed cell. If there is no valid C-RNTI for the UE in the accessed cell, the DRNS shall allocate a new C-RNTI for the UE [FDD - and in case Enhanced FACH operation is activated in the accessed cell the DRNC shall allocate the HS-DSCH-RNTI to the UE and shall include the *HS-DSCH-RNTI IE* in the message. And in case Common E-DCH operation is activated in the accessed cell the DRNC shall include the E-RNTI received from Node B and shall include the *E-RNTI IE* in the message]. [1.28Mcps TDD - and in case Enhanced FACH operation is activated in the accessed cell the DRNC shall allocate the HS-DSCH-RNTI to the UE and shall include the *HS-DSCH-RNTI IE* in the message and the DRNC shall include the E-RNTI received from Node B and shall include the *E-RNTI IE* in the message]. If the DRNS allocates a new C-RNTI it shall also release any C-RNTI previously allocated for the UE.

If the DRNS has any RACH and/or FACH resources allocated for the UE identified by the U-RNTI in another cell than the accessed cell in which the Mac SDU sizes, flow control settings (including credits) and/or transport bearer are different from those in the old cell, then the DRNS shall not include the *Common Transport Channel Resources Initialisation Not Required IE* in the UPLINK SIGNALLING TRANSFER INDICATION message. In addition the DRNS shall release these RACH and/or FACH resources in old cell.

If the DRNS has any RACH and/or FACH resources allocated for the UE identified by the U-RNTI in another cell than the accessed cell in which the Mac SDU sizes, flow control settings (including credits) and transport bearer are the same as in the old cell, there is no need for Common Transport Channel Resources Initialisation to be initiated. In that case, DRNC may include the *Common Transport Channel Resources Initialisation Not Required IE* in the UPLINK SIGNALLING TRANSFER INDICATION message. In addition, the DRNS shall move these RACH and/or FACH resources to the new cell. If no Common Transfer Channel Resources Initialisation procedure is executed, the currently applicable Mac SDU sizes, flow control settings (including credits) and transport bearer shall continue to be used while the UE is in the new cell.

If no context exists for this UE in the DRNC, the DRNC shall create a UE Context for this UE, allocate a D-RNTI for the UE Context, and include the *D-RNTI IE* and the identifiers for the CN CS Domain and CN PS Domain that the DRNC is connected to in the UPLINK SIGNALLING TRANSFER INDICATION message. These CN Domain Identifiers shall be based on the LAC and RAC respectively of the cell where the message was received from the UE.

Depending on local configuration in the DRNS, it may include the geographical co-ordinates of the cell, represented either by the *Cell GAI IE* or by the *Cell GA Additional Shapes IE*, in which the Uu message was received in the UPLINK SIGNALLING TRANSFER INDICATION message. If the DRNC includes the *Cell GA Additional Shapes IE* in the UPLINK SIGNALLING TRANSFER INDICATION message, it shall also include the *Cell GAI IE*.

[FDD - The DRNC shall include the *DPC Mode Change Support Indicator IE* in the UPLINK SIGNALLING TRANSFER INDICATION message if the accessed cell supports DPC mode change.]

The DRNC shall include [FDD - the *Cell Capability Container FDD IE*] [3.84Mcps TDD - the *Cell Capability Container TDD IE*] [1.28Mcps TDD - the *Cell Capability Container TDD LCR IE*] [7.68Mcps TDD - the *Cell Capability Container 7.68Mcps TDD IE*] [FDD - and/or the *Cell Capability Container Extension FDD IE*] in the UPLINK SIGNALLING TRANSFER INDICATION message if the accessed cell supports any functionalities listed in [FDD - 9.2.2.D] [3.84Mcps TDD - 9.2.3.1a] [1.28Mcps TDD - 9.2.3.1b] [7.68Mcps TDD - 9.2.3.31] [FDD - 9.2.2.106].

[FDD - If the cell is multicell adjacent carrier operation capable and if the cell can be the serving HS-DSCH then the possible cells to serve multicell adjacent carrier operation (same sector) that can act as secondary serving HS-DSCH shall be listed in the *Secondary Serving Cell List IE*.]

If MOCN or GWCN network sharing configuration is used then the DRNC shall include the broadcasted PLMN identities of the concerned cell in the *Multiple PLMN List IE* in the UPLINK SIGNALLING TRANSFER INDICATION message.

If available, the DRNC shall include the *SNA Information IE* for the concerned cell.

When receiving the *SNA Information IE*, the SRNC should use it to restrict cell access based on SNA information. See also [40] for a broader description of the SNA access control.

[FDD - The DRNC shall include the *Cell Portion ID IE* in the UPLINK SIGNALLING TRANSFER INDICATION message if available.]

[FDD – If the propagation delay value exceeds the range of the *Propagation Delay IE* then the DRNC shall if supported include the *Extended Propagation Delay IE* and set the *Propagation Delay IE* to its maximum value.]

If the *D-RNTI IE* is not to be included in the UPLINK SIGNALLING TRANSFER INDICATION message and the UE Link is currently stored in the UE Context in the DRNC, the DRNC shall assume that the UE changes the cell under which it camps in the DRNS (see ref. [50], section 5.1.6 on intra-DRNC cell change). In this case, if an MBMS session for some MBMS bearer services contained in the UE Link is ongoing in the cell identified by the *UC-ID IE*, the DRNC shall include in the *Active MBMS Bearer Service List IE* the *Transmission Mode IE* for each of these active MBMS bearer services. Or else, if the DRNC receives a Uu message on the CCCH in which the short identities for MBMS Selected Services are included, and the Uu message requests for MBMS PtP radio bearer establishment, the DRNC shall determine which TMGIs correspond with the short identities and shall include in the *Active MBMS Bearer Service List IE* the *TMGI IE* together with the *Transmission Mode IE* for each of these MBMS Selected Services.

If the CCCH message contains *Measurement results for monitored cells on non-used frequencies IE* in *Measured Result on RACH IE*, the DRNC may include in the UPLINK SIGNALLING TRANSFER INDICATION message the *Inter-frequency Cell List IE* for each of the measured inter-frequency cells. The order of cells in *Measurement results for monitored cells on non-used frequencies IE* in the CCCH message shall be preserved in *Inter-frequency Cell List IE*. If the *UL UARFCN IE* in the *Inter-frequency Cell List IE* is not present, the default duplex distance defined for the operating frequency band shall be used in the SRNC (see ref. [43]).

[3.84 Mcps TDD - the DRNC shall include the *Rx Timing Deviation IE* unless the cell to which the CCCH message was sent is configured to use the extended timing advance in which case *Rx Timing Deviation 3.84Mcps Extended IE* shall be included.]

[7.68 Mcps TDD - the DRNC shall include the *Rx Timing Deviation 7.68Mcps IE*.]

### 8.2.1.3 Abnormal Conditions

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## 8.2.1A GERAN Uplink Signalling Transfer

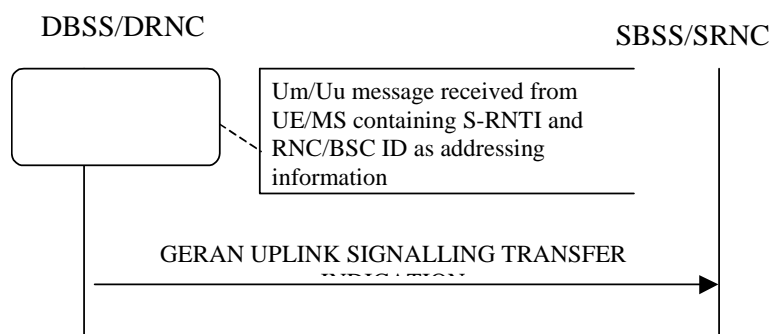
### 8.2.1A.1 General

The procedure is used by the DBSS to forward an Um message received on the SRB2 to the SBSS/SRNC. The procedure is also used by the DRNC to forward a Uu message received on the CCCH to the SBSS.

This procedure shall use the connectionless mode of the signalling bearer.



## 8.2.1A.2 Successful Operation



**Figure 1A: GERAN Uplink Signalling Transfer procedure, Successful Operation**

When the DBSS receives an Um message on the SRB2 in which the MS addressing information is G-RNTI, i.e. S-RNTI and BSC-ID, DBSS shall send the GERAN UPLINK SIGNALLING TRANSFER INDICATION message to the SBSS/SRNC identified by the BSC-ID received from the MS.

Alternatively, when the DRNC receives an Uu message on the CCCH in which the UE addressing information is U-RNTI, i.e. S-RNTI and SRNC-ID, and in which the SRNC-ID points to a GERAN BSS, the DRNC shall send the GERAN UPLINK SIGNALLING TRANSFER INDICATION message to the SBSS identified by SRNC-ID received from the UE.

If at least one GRA/URA Identity is being broadcast in the cell where the Um/Uu message was received (the accessed cell), the DBSS/DRNC shall include a GRA/URA Identity for this cell in the *URA ID IE*, the *Multiple URAs Indicator IE* indicating whether or not multiple GRA/URA Identities are being broadcast in the accessed cell, and the RNC/BSS Identity of all other RNC/BSSs that are having at least one cell within the GRA/URA where the Um/Uu message was received in the *URA Information IE* in the GERAN UPLINK SIGNALLING TRANSFER INDICATION message.

If no context exists for this UE/MS in the DBSS/DRNC, the DBSS/DRNC shall create a UE Context for this UE/MS, allocate a D-RNTI for the UE Context, and include the *D-RNTI IE* and the identifiers for the CN CS Domain and CN PS Domain that the DBSS/DRNC is connected to in the GERAN UPLINK SIGNALLING TRANSFER INDICATION message. These CN Domain Identifiers shall be based on the LAC and RAC respectively of the cell where the message was received from the UE/MS.

## 8.2.1A.3 Abnormal Conditions

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## 8.2.2 Downlink Signalling Transfer

### 8.2.2.1 General

The procedure is used by the SRNC to request to the DRNC the transfer of a Uu message on the CCCH in a cell. When used, the procedure is in response to a received Uplink Signalling Transfer procedure.

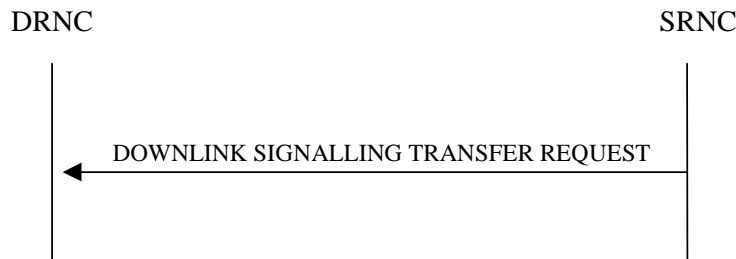
This procedure shall use the connectionless mode of the signalling bearer.

#### 8.2.2.1.1 Downlink Signalling Transfer for lur-g

The procedure is used by the SRNC/SBSS to request to the DBSS the transfer of an Um message on the SRB2 in a cell.

The procedure is used by the SBSS to request to the DRNC the transfer of a Uu message on the CCCH in a cell.

### 8.2.2.2 Successful Operation



**Figure 2: Downlink Signalling Transfer procedure, Successful Operation**

The procedure consists of the DOWNLINK SIGNALLING TRANSFER REQUEST message sent by the SRNC to the DRNC.

The message contains the Cell Identifier (*C-ID*) contained in the received UPLINK SIGNALLING TRANSFER INDICATION message and the *D-RNTI*.

Upon receipt of the message, the DRNC shall send the L3 Information on the CCCH in the cell indicated by the *C-ID* IE to the UE identified by the *D-RNTI* IE.

If the *D-RNTI Release Indication* IE is set to "Release *D-RNTI*" and the DRNS has no dedicated resources (DCH, [TDD - USCH and/or DSCH]) allocated for the UE, the DRNS shall release the *D-RNTI*, the UE Context and any RACH and FACH resources and any *C-RNTI* allocated to the UE Context upon receipt of the DOWNLINK SIGNALLING TRANSFER REQUEST message. If a UE Link is currently stored in the UE Context, the DRNC shall perform UE De-linking as specified in [50], section 5.1.6.

If the *D-RNTI Release Indication* IE is set to "Release *D-RNTI*" and the DRNS has dedicated resources allocated for the UE, the DRNS shall only release any RACH and FACH resources and any *C-RNTI* allocated to the UE Context upon receipt of the DOWNLINK SIGNALLING TRANSFER REQUEST message.

If the *MBMS Bearer Service List* IE is included and *URA-ID* IE is not included in the DOWNLINK SIGNALLING TRANSFER REQUEST message, the DRNC shall perform the UE Linking as specified in [50], section 5.1.6.

If the *MBMS Bearer Service List* IE is included and the *URA-ID* IE is included in the DOWNLINK SIGNALLING TRANSFER REQUEST message, the DRNC shall perform the URA Linking as specified in [50], section 5.1.10.

If the *MBMS Bearer Service List* IE is included and the *Old URA-ID* IE is included in the DOWNLINK SIGNALLING TRANSFER REQUEST message, the DRNC shall perform URA De-linking for the URA identified by the *Old URA-ID* IE as specified in [50], section 5.1.10.

[FDD - If the *Enhanced PCH Capability* IE is included in the message, the DRNC should store the information. If the *Enhanced PCH Capability* IE is not included in the message, the DRNC shall use the information to release an RRC Connection for the UE in cells supporting Enhanced PCH.]

[1.28Mcps TDD - If the *Enhanced PCH Capability* IE is included in the message, the DRNC should store the information. If the *Enhanced PCH Capability* IE is not included in the message, the DRNC shall use the information to release an RRC Connection for the UE in cells supporting Enhanced PCH.]

#### 8.2.2.2.1 Successful Operation for lur-g

The procedure consists of the DOWNLINK SIGNALLING TRANSFER REQUEST message sent by the SRNC/SBSS to the DBSS or by the SBSS to the DRNC.

The message contains the Cell Identifier (*C-ID*) contained in the received UPLINK SIGNALLING TRANSFER INDICATION message and the *D-RNTI*.

Upon receipt of the message, the DBSS shall send the L3 Information on the SRB2 in the cell indicated by the *C-ID* IE to the UE/MS identified by the *D-RNTI* IE.

Upon receipt of the message, the DRNC shall send the L3 Information on the CCCH in the cell indicated by the *C-ID* IE to the UE/MS identified by the *D-RNTI* IE.

### 8.2.2.3 Abnormal Conditions

If the user identified by the *D-RNTI* IE has already accessed another cell controlled by the DRNC than the cell identified by the *C-ID* IE in the DOWNLINK SIGNALLING TRANSFER REQUEST message, the message shall be ignored.

#### 8.2.2.3.1 Abnormal Conditions for lur-g

If the user identified by the *D-RNTI* IE has already accessed another cell controlled by the DRNC/DBSS than the cell identified by the *C-ID* IE in the DOWNLINK SIGNALLING TRANSFER REQUEST message, the message shall be ignored.

If the DRNC receives from the SBSS the DOWNLINK SIGNALLING TRANSFER REQUEST message, in which the *D-RNTI Release Indication* IE is set to "not Release D-RNTI", the DRNC shall ignore this IE and release the D-RNTI.

If the DBSS receives from the SBSS/SRNC the DOWNLINK SIGNALLING TRANSFER REQUEST message, in which the *D-RNTI Release Indication* IE is set to "not Release D-RNTI", the DBSS shall ignore this IE and release the D-RNTI.

## 8.2.3 Relocation Commit

### 8.2.3.1 General

The Relocation Commit procedure is used by source RNC to execute the Relocation. This procedure supports the Relocation procedures described in [2].

This procedure shall use the signalling bearer mode specified below.

### 8.2.3.2 Successful Operation



**Figure 3: Relocation Commit procedure, Successful Operation**

The source RNC sends the RELOCATION COMMIT message to the target RNC to request the target RNC to proceed with the Relocation. When the UE is utilising one or more radio links in the DRNC the message shall be sent using the connection oriented service of the signalling bearer and no further identification of the UE Context in the DRNC is required. If on the other hand, the UE is not utilising any radio link the message shall be sent using the connectionless service of the signalling bearer and the *D-RNTI* IE shall be included in the message to identify the UE Context in the DRNC.

Upon receipt of the RELOCATION COMMIT message from the source RNC the target RNC finalises the Relocation. If the message contains the transparent *RANAP Relocation Information* IE the target RNC shall use this information when finalising the Relocation.

#### 8.2.3.2.1 Successful Operation for lur-g

The source RNC/BSS sends the RELOCATION COMMIT message to the target RNC/BSS to request the target RNC/BSS to proceed with the Relocation.

The message shall be sent using the connectionless service of the signalling bearer and the *D-RNTI* IE shall be included in the message to identify the UE/MS context in the DBSS.

Upon receipt of the RELOCATION COMMIT message from the source RNC/BSS, the target RNC/BSS finalises the Relocation. If the message contains the transparent *RANAP Relocation Information* IE the target RNC/BSS shall use this information when finalising the Relocation.

### 8.2.3.3 Abnormal Conditions

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## 8.2.4 Paging

### 8.2.4.1 General

This procedure is used by the SRNC to indicate to a CRNC that a UE shall be paged in a cell or URA that is under the control of the CRNC.

This procedure shall use the connectionless mode of the signalling bearer.

### 8.2.4.2 Successful Operation



**Figure 4: Paging procedure, Successful Operation**

The procedure is initiated with a PAGING REQUEST message sent from the SRNC to the CRNC.

If the message contains the *C-ID* IE, the CRNC shall page in the indicated cell. Alternatively, if the message contains the *URA-ID* IE, the CRNC shall page in all cells that it controls in the indicated URA.

If the PAGING REQUEST message includes the *CN Originated Page to Connected Mode UE* IE, the CRNC shall include the information contained in the *CN Originated Page to Connected Mode UE* IE when paging the UE.

The CRNC shall calculate the Paging Occasions from the *IMSI* IE and the *DRX Cycle Length Coefficient* IE according to specification in ref. [15] and apply transmission on PICH and PCH [FDD - or HS-DSCH] [1.28Mcps TDD - or HS-DSCH] accordingly.

[FDD - If the PAGING REQUEST message includes the *Enhanced PCH Capability* IE, the CRNC shall use the information to page the UE in cells supporting Enhanced PCH.]

[1.28Mcps TDD - If the PAGING REQUEST message includes the *Enhanced PCH Capability* IE, the CRNC shall use the information to page the UE in cells supporting Enhanced PCH.]

#### 8.2.4.2.1 Successful Operation for lur-g

The procedure is initiated with a PAGING REQUEST message sent from the SBSS to the CRNC/CBSS or from the SRNC to the CBSS.

If the message contains the *URA-ID* IE, the CRNC/CBSS shall page in all cells that it controls in the indicated URA/GRA.

If the PAGING REQUEST message includes the *CN Originated Page to Connected Mode UE* IE, the CRNC/CBSS shall include the information contained in the *CN Originated Page to Connected Mode UE* IE when paging the UE.

The CBSS shall calculate the Paging Occasions from the *IMSI* IE and the *GERAN DRX Cycle Length Coefficient* IE according to specification in ref. [36] and apply transmission on PCCCH or PACCH accordingly.

### 8.2.4.3 Abnormal Conditions

#### 8.2.4.3.1 Abnormal Conditions for Iur-g

If the DRNC receives a PAGING REQUEST message from the SBSS, which contains the *C-ID* IE, the message shall be ignored.

If the DBSS receives a PAGING REQUEST message from the SBSS/SRNC, which contains the *C-ID* IE, the message shall be ignored.

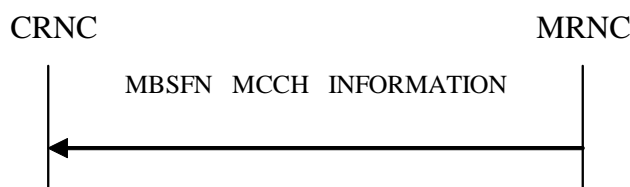
## 8.2.5 MBSFN MCCH Information

### 8.2.5.1 General

The procedure is used by the MRNC to inform the CRNC of the MCCH configuration and scheduling information used in MRNC.

This procedure shall use the connectionless mode of the signalling bearer.

### 8.2.5.2 Successful Operation



**Figure 4A: MBSFN MCCH Information procedure, Successful Operation**

The procedure is used for MBSFN operation when a MRNC is used.

The message contains the MCCH message list sent on the MRNC and the MCCH configuration information of the MRNC.

Upon receipt of the message, if the *MCCH Configuration* IE exists, the CRNC shall setup or reconfigure the MCCH of all cells in the MBSFN cluster with the configuration contained in this IE, and update the System Information of these cells.

The CRNC shall decode the *L3 Information* IE contained in the *MCCH Message List* IE and apply the RLC/MAC/PHY configuration specified by relative MCCH Message to setup the RB information of MTCH, and then send the *L3 Information* IE on the MCCH in the receiving sequence at the beginning of the first MCCH modification period following the CFN indicated by the *CFN* IE.

In case MRNC is used and TDM multiplexing is used over air interface, the *MBSFN Scheduling Transmission Time Interval info List* IE shall be contained to show the scheduling transmission time interval for MBMS service which is configured with MBSFN TDM multiplexing. The CRNC shall schedule received data packets in the scheduling transmission time interval following the time point indicated by the timestamp.

### 8.2.5.3 Abnormal Conditions

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## 8.3 Dedicated Procedures

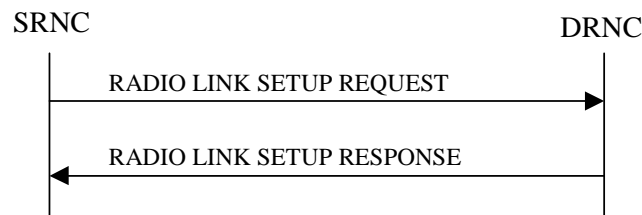
### 8.3.1 Radio Link Setup

#### 8.3.1.1 General

This procedure is used for establishing the necessary resources in the DRNS for one or more radio links.

The connection-oriented service of the signalling bearer shall be established in conjunction with this procedure.

#### 8.3.1.2 Successful Operation



**Figure 5: Radio Link Setup procedure: Successful Operation**

When the SRNC makes an algorithmic decision to add the first cell or set of cells from a DRNS to the active set of a specific UE-UTRAN connection, the RADIO LINK SETUP REQUEST message is sent to the corresponding DRNC to request establishment of the radio link(s). The Radio Link Setup procedure is initiated with this RADIO LINK SETUP REQUEST message sent from the SRNC to the DRNC.

Upon receipt of the RADIO LINK SETUP REQUEST message, the DRNS shall reserve the necessary resources and configure the new RL(s) according to the parameters given in the message. Unless specified below, the meaning of parameters is specified in other specifications.

The DRNS shall prioritise resource allocation for the RL(s) to be established according to Annex A.

If the RADIO LINK SETUP REQUEST message includes the *Allowed Queuing Time* IE the DRNS may queue the request for a time period not to exceed the value of the *Allowed Queuing Time* IE before starting to execute the request.

#### Transport Channels Handling:

##### DCH(s):

[TDD - If the *DCH Information* IE is present in the RADIO LINK SETUP REQUEST message, the DRNS shall configure the new DCHs according to the parameters given in the message.]

If the RADIO LINK SETUP REQUEST message includes a *DCH Information* IE with multiple *DCH Specific Info* IEs, then the DRNS shall treat the DCHs in the *DCH Information* IE as a set of co-ordinated DCHs.

If the *DCH Specific Info* IE includes the *Unidirectional DCH Indicator* IE set to "Uplink DCH only", the DRNS shall ignore the *Transport Format Set* IE for the downlink for this DCH. As a consequence this DCH is not included as a part of the downlink CCTrCH.

If the *DCH Specific Info* IE includes the *Unidirectional DCH Indicator* IE set to "Downlink DCH only", the DRNS shall ignore the *Transport Format Set* IE for the uplink for this DCH. As a consequence this DCH is not included as a part of the uplink CCTrCH.

[FDD - For each DCH which do not belong to a set of co-ordinated DCHs, and which includes a *QE-Selector* IE set to "selected", the DRNS shall use the Transport channel BER from that DCH for the QE in the UL data frames. If no Transport channel BER is available for the selected DCH, the DRNS shall use the Physical channel BER for the QE, ref. [4]. If the *QE-Selector* IE is set to "non-selected", the DRNS shall use the Physical channel BER for the QE in the UL data frames, ref. [4].]

For a set of co-ordinated DCHs, the DRNS shall use the Transport channel BER from the DCH with the *QE-Selector* IE set to "selected" for the QE in the UL data frames, ref. [4]. [FDD - If no Transport channel BER is available for the selected DCH, the DRNS shall use the Physical channel BER for the QE, ref. [4]. If all DCHs have *QE-Selector* IE set to "non-selected", the DRNS shall use the Physical channel BER for the QE, ref. [4].] [TDD - If no Transport channel BER is available for the selected DCH, the DRNS shall use 0 for the QE, ref. [4].]

The DRNS shall use the included *UL DCH FP Mode* IE for a DCH or a set of co-ordinated DCHs as the DCH FP Mode in the Uplink of the user plane for the DCH or the set of co-ordinated DCHs.

The DRNS shall use the included *ToAWS* IE for a DCH or a set of co-ordinated DCHs as the Time of Arrival Window Startpoint in the user plane for the DCH or the set of co-ordinated DCHs.

The DRNS shall use the included *ToAWE* IE for a DCH or a set of co-ordinated DCHs as the Time of Arrival Window Endpoint in the user plane for the DCH or the set of co-ordinated DCHs.

The *Frame Handling Priority* IE defines the priority level that should be used by the DRNS to prioritise between different frames of the data frames of the DCHs in the downlink on the radio interface in congestion situations once the new RL(s) have been activated.

The *Traffic Class* IE may be used to determine the transport bearer characteristics to apply between DRNC and Node B for the related DCH or set of co-ordinated DCHs. The DRNC should ignore the *Traffic Class* IE if the *TrCH Source Statistics Descriptor* IE indicates the value "RRC".

If the *TNL QoS* IE is included for a DCH or a set of co-ordinated DCHs and if ALCAP is not used, the *TNL QoS* IE may be used by the DRNS to determine the transport bearer characteristics to apply in the uplink for the related DCH or set of co-ordinated DCHs.

If the *DCH Information* IE contains a *DCH Specific Info* IE which includes the *Guaranteed Rate Information* IE, the DRNS shall treat the included IEs according to the following:

- If the *Guaranteed Rate Information* IE includes the *Guaranteed UL Rate* IE, the DRNS shall apply the Guaranteed Rate in the uplink of this DCH. The DRNS may decide to request the SRNC to limit the user rate of the uplink of the DCH at any point in time. The DRNS may request the SRNC to reduce the user rate of the uplink of the DCH below the guaranteed bit rate, however, whenever possible the DRNS should request the SRNC to only reduce the user rate between the maximum bit rate and the guaranteed bit rate. If the *DCH Specific Info* IE in the *DCH Information* IE does not include the *Guaranteed UL Rate* IE, the DRNS shall not limit the user rate of the uplink of the DCH.
- If the *Guaranteed Rate Information* IE includes the *Guaranteed DL Rate* IE, the DRNS shall apply the Guaranteed Rate in the downlink of this DCH. The DRNS may decide to request the SRNC to limit the user rate of the downlink of the DCH at any point in time. The DRNS may request the SRNC to reduce the user rate of the downlink of the DCH below the guaranteed bit rate, however, whenever possible the DRNS should request the SRNC to only reduce the user rate between the maximum bit rate and the guaranteed bit rate. If the *DCH Specific Info* IE in the *DCH Information* IE does not include the *Guaranteed DL Rate* IE, the DRNS shall not limit the user rate of the downlink of the DCH.

[FDD - If the RADIO LINK SETUP REQUEST message includes the *Transport Bearer Not Requested Indicator* IE set to "Transport Bearer shall not be Established" for a DCH, then the DRNC shall not establish a transport bearer for the concerned DCH and shall include the *Transport Bearer Not Setup Indicator* IE for the corresponding DCH in the RADIO LINK SETUP RESPONSE message.]

[FDD - If the RADIO LINK SETUP REQUEST message includes the *Transport Bearer Not Requested Indicator* IE set to "Transport Bearer may not be Established" for a DCH and:]

- [FDD - if the DRNC establishes a transport bearer for the concerned DCH, the DRNC shall include in the RADIO LINK SETUP RESPONSE message the *Binding ID* IE and *Transport Layer Address* IE for establishment of a transport bearer for the DCH being established.]
- [FDD - if the DRNC does not establish a transport bearer for the concerned DCH, the DRNC shall include the *Transport Bearer Not Setup Indicator* IE for the corresponding DCH in the RADIO LINK SETUP RESPONSE message.]

[TDD – DSCH(s):]

[TDD – If the *DSCH Information* IE is included in the RADIO LINK SETUP REQUEST message, the DRNC shall establish the requested DSCHs. If the *Transport Layer Address* IE and *Binding ID* IE are included in the *DSCH Information* IE the DRNC may use the transport layer address and the binding identifier received from the SRNC when establishing a transport bearer for the DSCH. In addition, the DRNC shall send a valid set of *DSCH Scheduling Priority* IE and *MAC-c/sh SDU Length* IE parameters to the SRNC in the RADIO LINK SETUP RESPONSE message. If the *PDSCH RL ID* IE indicates a radio link in the DRNS, then the DRNC shall allocate a DSCH-RNTI to the UE Context and include the *DSCH-RNTI* IE in the RADIO LINK SETUP RESPONSE message.]

[TDD – If the *DSCH Information* IE is included in the RADIO LINK SETUP REQUEST message, the DRNS may use the *Traffic Class* IE to determine the transport bearer characteristics to apply between DRNC and Node B for the related DSCHs.]

[TDD – The DRNC shall include the *DSCH Initial Window Size* IE in the RADIO LINK SETUP RESPONSE message for each DSCH, if the DRNS allows the SRNC to start transmission of MAC-c/sh SDUs before the DRNS has allocated capacity on user plane as described in [32].]

[TDD - If the RADIO LINK SETUP REQUEST message includes the *TNL QoS* IE in the *DSCH TDD Information* IE and if ALCAP is not used, the DRNS may use the *TNL QoS* IE to determine the transport bearer characteristics to apply in the uplink for the related DSCH.]

#### [TDD - USCH(s):]

[TDD - The DRNS shall use the list of RB Identities in the *RB Info* IE in the *USCH information* IE to map each *RB Identity* IE to the corresponding USCH. If the *Transport Layer Address* IE and *Binding ID* IE are included in the *USCH Information* IE the DRNC may use the transport layer address and the binding identifier received from the SRNC when establishing a transport bearer for the USCH.]

[TDD - If the *USCH Information* IE is included in the RADIO LINK SETUP REQUEST message, the DRNS may use the *Traffic Class* IE to determine the transport bearer characteristics to apply between DRNC and Node B for the related USCHs.]

[TDD - If the *USCH Information* IE is included in the RADIO LINK SETUP REQUEST message and contains the *TNL QoS* IE, and if ALCAP is not used, the DRNS may use the *TNL QoS* IE to determine the transport bearer characteristics to apply in the uplink for the related USCH.]

[TDD - If the *USCH Information* IE is included in the RADIO LINK SETUP REQUEST message, the DRNS shall establish the requested USCHs, and the DRNC shall provide the [3.84 Mcps TDD - *USCH Information Response* IE] [1.28 Mcps TDD - *USCH Information Response LCR* IE] [7.68 Mcps TDD - *USCH Information Response 7.68 Mcps* IE] in the RADIO LINK SETUP RESPONSE message.]

#### [TDD - CCTrCH Handling:]

[TDD - If the *UL CCTrCH Information* IE is present in the RADIO LINK SETUP REQUEST message, the DRNS shall configure the new UL CCTrCH(s) according to the parameters given in the message.]

[1.28Mcps TDD - If the *UL CCTrCH Information LCR* IE includes the *TDD TPC Uplink Step Size* IE, the DRNS shall configure the uplink TPC step size according to the parameters given in the message.]

[TDD - If the *DL CCTrCH Information* IE is present in the RADIO LINK SETUP REQUEST message, the DRNS shall configure the new DL CCTrCH(s) according to the parameters given in the message.]

[TDD - If the *TPC CCTrCH List* IE is present in the RADIO LINK SETUP REQUEST message, the DRNS shall configure the identified UL CCTrCHs with TPC according to the parameters given in the message.]

#### HS-DSCH:

If the *HS-DSCH Information* IE is present in the RADIO LINK SETUP REQUEST message, then:

- The DRNS shall setup the requested HS-PDSCH resources on the Serving HS-DSCH Radio Link indicated by the *HS-PDSCH RL ID* IE.
- The DRNC shall include the *HARQ Memory Partitioning* IE in the [FDD – *HS-DSCH FDD Information Response* IE] [TDD – *HS-DSCH TDD Information Response* IE] in the RADIO LINK SETUP RESPONSE message. [FDD – The *HARQ Memory Partitioning* IE shall either contain the



*HARQ Memory Partitioning Information Extension For MIMO IE* or the *Number of Processes IE* set to a value higher than "8", if the *MIMO Activation Indicator IE* is included in the *HS-DSCH Information IE*.] [1.28Mcps TDD– The *HARQ Memory Partitioning IE* shall either contain the *HARQ Memory Partitioning Information Extension For MIMO IE* or the *Number of Processes IE* set to a value higher than "8", if the *MIMO Activation Indicator IE* is included in the *HS-DSCH Information IE*.]

- The DRNC shall allocate an HS-DSCH-RNTI to the UE Context and include the *HS-DSCH-RNTI IE* in the RADIO LINK SETUP RESPONSE message.
- The DRNC shall include in the RADIO LINK SETUP RESPONSE message the *Binding ID IE* and *Transport Layer Address IE* for establishment of transport bearer for every HS-DSCH MAC-d flow being established.
- If the RADIO LINK SETUP REQUEST message includes the *Transport Layer Address IE* and *Binding ID IE* in the *HS-DSCH Information IE* for an HS-DSCH MAC-d flow, then the DRNC may use the transport layer address and the binding identifier received from the SRNC when establishing a transport bearer for the concerned HS-DSCH MAC-d flow.
- The DRNS may use the *Traffic Class IE* for a specific HS-DSCH MAC-d flow to determine the transport bearer characteristics to apply between DRNC and Node B. If *TrCH Source Statistics Descriptor IE* is present with the value "RRC" in the *HS-DSCH MAC-d Flows Information IE*, then the DRNC should ignore the *Traffic Class IE*.
- If fields are to be included in the User Plane by the SRNC to handle TNL Congestion Control for HSDPA in the DRNS, then the DRNC shall include the *User Plane Congestion Fields Inclusion IE* in the *HS-DSCH Information Response IE*.
- If the RADIO LINK SETUP REQUEST message includes the *MAC-hs Guaranteed Bit Rate IE* for a Priority Queue in the *HS-DSCH MAC-d Flows Information IE* in the *HS-DSCH Information IE*, then the DRNS shall use this information to optimise MAC-hs scheduling decisions for the related HSDPA Priority Queue.
- If the RADIO LINK SETUP REQUEST message includes the *Discard Timer IE* for a Priority Queue in the *HS-DSCH MAC-d Flows Information IE* in the *HS-DSCH Information IE*, then the DRNS shall use this information to discard out-of-date MAC-hs SDUs from the related HSDPA Priority Queue.
- If the RADIO LINK SETUP REQUEST message includes the *Maximum MAC-d PDU Size Extended IE* for a Priority Queue in the *HS-DSCH MAC-d Flows Information IE* in the *HS-DSCH Information IE*, then the DRNS shall ignore the *SID IE* and *MAC-d PDU Size IE* in the *MAC-d PDU Size Index IE* and use *Maximum MAC-d PDU Size Extended IE* to optimise capacity allocation for the related HSDPA Priority Queue.
- The DRNC shall include the *HS-DSCH Initial Capacity Allocation IE* in the [FDD – *HS-DSCH FDD Information Response IE*] [TDD – *HS-DSCH TDD Information Response IE*] in the RADIO LINK SETUP RESPONSE message for every HS-DSCH MAC-d flow being established, if the DRNS allows the SRNC to start transmission of MAC-d PDUs before the DRNS has allocated capacity on user plane as described in [32]. If RADIO LINK SETUP REQUEST message includes *HS-DSCH MAC-d PDU Size Format IE* in the *HS-DSCH Information IE* set to the value "Flexible MAC-d PDU Size", then DRNC shall only set in the *HS-DSCH Initial Capacity Allocation IE* the values for the peer of *Scheduling Priority Indicator IE* and *Maximum MAC-d PDU Size Extended IE* to the values of the corresponding peer received in RADIO LINK SETUP REQUEST in the *HS-DSCH MAC-d Flows Information IE* in the *HS-DSCH Information IE* for a Priority Queue including *Scheduling Priority Indicator IE* and *Maximum MAC-d PDU Size Extended IE*.
- [FDD - If the RADIO LINK SETUP REQUEST message includes the *HS-SCCH Power Offset IE* in the *HS-DSCH Information IE*, then the DRNS may use this value to determine the HS-SCCH power. The HS-SCCH Power Offset should be applied for any HS-SCCH transmission to this UE.]
- [FDD - The DRNC shall include the *Measurement Power Offset IE* in the *HS-DSCH Information Response IE* in the RADIO LINK SETUP RESPONSE message.]

- [FDD - The DRNS shall allocate HS-SCCH codes corresponding to the HS-DSCH and the DRNC shall include the *HS-SCCH Specific Information Response IE* in the *HS-DSCH FDD Information Response IE* in the RADIO LINK SETUP RESPONSE message.]
- [TDD - The DRNS shall allocate HS-SCCH parameters corresponding to the HS-DSCH and the DRNC shall include the [3.84Mcps TDD - *HS-SCCH Specific Information Response IE*] [1.28Mcps TDD - *HS-SCCH Specific Information Response LCR IE*] [7.68 Mcps TDD - *HS-SCCH Specific Information Response 7.68 Mcps IE*] in the *HS-DSCH TDD Information Response IE* in the RADIO LINK SETUP RESPONSE message.]
- [TDD - The DRNC shall include the [3.84 Mcps TDD - *HS-PDSCH Timeslot Specific Information Response IE*] [1.28 Mcps TDD - *HS-PDSCH Timeslot Specific Information Response LCR IE*] [7.68 Mcps TDD - *HS-PDSCH Timeslot Specific Information Response IE*] in the *HS-DSCH Information Response IE* in the RADIO LINK SETUP RESPONSE message.]
- [FDD - The DRNC shall include the *HS-PDSCH And HS-SCCH Scrambling Code IE* in the *HS-DSCH FDD Information Response IE* in the RADIO LINK SETUP RESPONSE message.]
- [FDD – If the RADIO LINK SETUP REQUEST message includes the *HARQ Preamble Mode IE* in the *HS-DSCH Information IE*, then the DRNS shall use the indicated HARQ Preamble Mode as described in [10], if HS-DPCCH ACK/NACK preamble and postamble is supported. Then, in this case, if the mode 1 is applied, the DRNC shall include the *HARQ Preamble Mode Activation Indicator IE* in the *HS-DSCH Information Response IE* in the RADIO LINK SETUP RESPONSE message. If the *HARQ Preamble Mode IE* is not included or if the mode 0 is applied, then the DRNC shall not include the *HARQ Preamble Mode Activation Indicator IE* in the RADIO LINK SETUP RESPONSE message.]
- If the RADIO LINK SETUP REQUEST message includes the *HS-DSCH MAC-d PDU Size Format IE* in the *HS-DSCH Information IE*, then the DRNS shall use the indicated format in user plane frame structure for HS-DSCH channels [32] and MAC-hs [41].
- [FDD – If the *TNL QoS IE* is included for a MAC-d flow and if ALCAP is not used, the *TNL QoS IE* may be used by the DRNS to determine the transport bearer characteristics to apply in the uplink between the DRNS and the SRNC for the related MAC-d flow.]
- [FDD - If the *Serving Cell Change CFN IE* is included in the RADIO LINK SETUP REQUEST message, then the DRNS shall activate the resources that are allocated for the new serving HS-DSCH Radio Link at the next coming CFN with a value equal to the value requested by the SRNC.]
- [FDD - If the *MIMO Activation Indicator IE* is included in the *HS-DSCH FDD Information IE*, then]
  - [FDD - The DRNS shall activate the MIMO mode for the HS-DSCH Radio Link.]
  - [FDD - The DRNS shall decide the pilot configuration and the UE reporting configuration (N/M ratio) according to [10] for MIMO and include the *MIMO Information Response IE* in the *HS-DSCH FDD Information Response IE* in the RADIO LINK SETUP RESPONSE message.]
  - [FDD - If the *Power Offset For S-CPICH for MIMO Request Indicator IE* is included, the DRNC shall, if supported and MIMO pilot configuration with Primary and Secondary CPICH is set up on the cell where the Serving HS-DSCH Radio Link is established, include the *Power Offset For S-CPICH for MIMO IE* in the *HS-DSCH FDD Information Response IE* in the RADIO LINK SETUP RESPONSE message.]
- [1.28 Mcps TDD - If the *MIMO Activation Indicator IE* is included in the *HS-DSCH TDD Information IE*, then]
  - [1.28 Mcps TDD - The DRNS shall activate the MIMO mode for the HS-DSCH Radio Link.]
  - [1.28 Mcps TDD - The DRNS shall decide the SF mode for HS-PDSCH dual stream and include the *MIMO SF Mode for HS-PDSCH dual stream IE* in the *HS-DSCH TDD Information Response IE* in the RADIO LINK SETUP RESPONSE message.]
- [FDD - If the *Sixtyfour QAM Usage Allowed Indicator IE* is included in the *HS-DSCH FDD Information IE*, then the DRNS may if the value is set to "allowed" use 64 QAM for the HS-DSCH

Radio Link, and the DRNS shall include the *SixtyfourQAM DL Usage Indicator IE* in the *HS-DSCH FDD Information Response IE* in the RADIO LINK SETUP RESPONSE message.]

- [FDD - If the *Sixtyfour QAM Usage Allowed Indicator IE* is included in the *HS-DSCH FDD Information IE* with value set to "not allowed", then the DRNS shall not use 64 QAM for the HS-DSCH Radio Link.]
- [FDD - If the RADIO LINK SETUP REQUEST message includes the *HS-DSCH MAC-d PDU Size Format IE* set to "Flexible MAC-d PDU Size" and if Sixtyfour QAM will not be used, the DRNS shall include the *HS-DSCH TB Size Table Indicator IE* in the RADIO LINK SETUP RESPONSE message if it decides to use the octet aligned table defined in [41] for HS-DSCH Transport Block Size signalling.]
- [FDD - If the *UE with enhanced HS-SCCH support indicator IE* is included in the *HS-DSCH FDD Information IE*, then the DRNS may use:]
  - [FDD - a different HS-SCCH in consecutive TTIs for this UE]
  - [FDD - HS-SCCH orders for the case of HS-SCCH-less operation to this UE]
- [FDD – If the *UE Support Indicator Extension IE* is included in the *HS-DSCH FDD Information IE* the DRNS may use the supported HSDPA functions for this UE.
- [FDD - The DRNS shall include the *SixtyfourQAM DL Support Indicator IE* in the RADIO LINK SETUP RESPONSE message. This *SixtyfourQAM DL Support Indicator IE* is related to the HS-DSCH Radio Link.]
- [1.28 Mcps TDD - The DRNS shall include the *SixtyfourQAM DL Support Indicator IE* in the RADIO LINK SETUP RESPONSE message.]
- If the RADIO LINK SETUP REQUEST message includes the *DL RLC PDU Size Format IE* for a Priority Queue in the *HS-DSCH MAC-d Flows Information IE* in the *HS-DSCH Information IE*, the *DL RLC PDU Size Format IE* may be used by the DRNS to determine the allocated capacity on user plane as described in [32].

#### [FDD - Secondary Serving HS-DSCH:]

[FDD - If the *Additional HS Cell Information RL Setup IE* is present in the RADIO LINK SETUP REQUEST message, then:]

- [FDD - The DRNS shall setup the requested HS-PDSCH resources on the Serving HS-DSCH Radio Link indicated by the *HS-PDSCH RL ID IE*. Non cell specific secondary serving Radio Link and non cell specific secondary serving HS-DSCH parameters take the same values as for the serving HS-DSCH cell.]
- [FDD - The DRNC shall allocate an HS-DSCH-RNTI to the UE Context and include the *HS-DSCH-RNTI IE* in the *Additional HS Cell Information Response IE* in the RADIO LINK SETUP RESPONSE message.]
- [FDD - If the RADIO LINK SETUP REQUEST message includes the *HS-SCCH Power Offset IE* in the *HS-DSCH Secondary Serving Information IE*, then the DRNS may use this value to determine the HS-SCCH power. The HS-SCCH Power Offset should be applied for any secondary serving HS-SCCH transmission to this UE.]
- [FDD - The DRNC shall include the Measurement Power Offset IE in the HS-DSCH FDD Secondary Serving Information Response IE in the Additional HS Cell Information Response IE in the RADIO LINK SETUP RESPONSE message.]
- [FDD - The DRNS shall allocate HS-SCCH codes corresponding to the HS-DSCH and the DRNC shall include the *HS-SCCH Specific Secondary Serving Information Response IE* in the *HS-DSCH FDD Secondary Serving Information Response IE* in the *Additional HS Cell Information Response IE* in the RADIO LINK SETUP RESPONSE message.]

- [FDD - The DRNC shall include the HS-PDSCH And HS-SCCH Scrambling Code IE in the HS-DSCH FDD Secondary Serving Information Response IE in the Additional HS Cell Information Response IE in the RADIO LINK SETUP RESPONSE message.]
- [FDD - If the *Serving Cell Change CFN* IE is included in the RADIO LINK SETUP REQUEST message, then the DRNS shall activate the resources that are allocated for the new serving HS-DSCH Radio Link at the next coming CFN with a value equal to the value requested by the SRNC.]
- [FDD - If the *Sixtyfour QAM Usage Allowed Indicator* IE is included in the *HS-DSCH FDD Secondary Serving Information* IE, then the DRNS may if the value is set to "allowed" use 64 QAM for the secondary serving HS-DSCH Radio Link, and the DRNS shall include the *SixtyfourQAM DL Usage Indicator* IE in the *HS-DSCH FDD Secondary Serving Information Response* IE in the *Additional HS Cell Information Response* IE in the RADIO LINK SETUP RESPONSE message.]
- [FDD - If the *Sixtyfour QAM Usage Allowed Indicator* IE is included in the *HS-DSCH FDD Secondary Serving Information* IE with value set to "not allowed", then the DRNS shall not use 64 QAM for the secondary serving HS-DSCH Radio Link.]
- [FDD - If Sixtyfour QAM will not be used for the secondary serving HS-DCSH, the DRNS shall include the *HS-DSCH TB Size Table Indicator* IE in the *HS-DSCH FDD Secondary Serving Information Response* IE in the *Additional HS Cell Information Response* IE in the RADIO LINK SETUP RESPONSE message if it decides to use the octet aligned table defined in [41] for the secondary serving HS-DSCH Transport Block Size signalling.]
- [FDD - The DRNS shall include the *SixtyfourQAM DL Support Indicator* IE in the *Additional HS Cell Information Response* IE in the RADIO LINK SETUP RESPONSE message.]

#### [FDD - E-DCH:]

[FDD - If the *E-TFCS Information* IE in the *E-DPCH Information* IE contains the *E-DCH Minimum Set E-TFCI Validity Indicator* IE the DRNS shall ignore the value in *E-DCH Minimum Set E-TFCI* IE. If the *E-DCH Minimum Set E-TFCI validity indicator* IE is absent DRNS shall use the value for the related resource allocation operation.]

[FDD - If the *E-TFCS Information* IE in the *E-DPCH Information* IE contains the *E-DPDCH Power Interpolation* IE, the DRNS shall use the value to determine the applicable E-DPDCH power formula defined in [10]. If the *E-DPDCH Power Interpolation* IE is not present, the DRNS shall use the E-DPDCH power extrapolation formula defined in [10].]

[FDD - If the *E-TFCS Information* IE in the *E-DPCH Information* IE contains the *E-TFCI Boost Information* IE, the DRNS shall use the information according to [10]. If the *E-TFCI Boost Information* IE is not present, the DRNS shall use the value "127" in the algorithm defined in [10].]

[FDD - If the RADIO LINK SETUP REQUEST message includes the *E-DPCH Information* IE, which contains the *Minimum Reduced E-DPDCH Gain Factor* IE, then the DRNS shall use the value to determine the applicable minimum gain factor ( $\beta_{ed,k, reduced, min}$ ) defined in [10]. For the case the *Minimum Reduced E-DPDCH Gain Factor* IE is not available for the UE Context, the DRNS may use the default value defined in [16].]

[FDD - If the *E-DCH FDD Information* IE is present in the RADIO LINK SETUP REQUEST message then:]

- [FDD - The DRNS shall setup the requested E-DCH resources on the Radio Links indicated by the *E-DCH RL Indication* IE, set to "E-DCH", in the *RL Information* IE.]
- [FDD - If the RADIO LINK SETUP REQUEST message includes the *HARQ Process Allocation For 2ms Scheduled Transmission Grant* IE, the DRNS shall use this information for the related resource allocation operation.]
- [FDD - If the RADIO LINK SETUP REQUEST message includes the *Transport Layer Address* IE and *Binding ID* IE in the *RL specific E-DCH Information* IE for an E-DCH MAC-d flow, then if the *Transport Bearer Not Requested Indicator* IE is not included for this E-DCH MAC-d flow, the DRNC may use the transport layer address and the binding identifier received from the SRNC when establishing a transport bearer for the concerned E-DCH MAC-d flow. The DRNC shall include in the RADIO LINK SETUP RESPONSE message the *Binding ID* IE and *Transport Layer Address* IE for

establishment of a transport bearer for every E-DCH MAC-d flow being established for which the *Transport Bearer Not Requested Indicator* IE was not included.]

- [FDD - If the RADIO LINK SETUP REQUEST message includes the *Transport Bearer Not Requested Indicator* IE set to "Transport Bearer shall not be Established" for an E-DCH MAC-d flow, then the DRNC shall not establish a transport bearer for the concerned E-DCH MAC-d flow and shall include the *Transport Bearer Not Setup Indicator* IE for the corresponding E-DCH MAC-d flow in the RADIO LINK SETUP RESPONSE message.]
- [FDD - If the RADIO LINK SETUP REQUEST message includes the *Transport Bearer Not Requested Indicator* IE set to "Transport Bearer may not be Established" for an E-DCH MAC-d flow and:]
  - [FDD - if the DRNC establishes a transport bearer for the concerned E-DCH MAC-d flow, the DRNC shall include in the RADIO LINK SETUP RESPONSE message the *Binding ID* IE and *Transport Layer Address* IE for establishment of a transport bearer for the E-DCH MAC-d flow being established.]
  - [FDD - if the DRNC does not establish a transport bearer for the concerned E-DCH MAC-d flow, the DRNC shall include the *Transport Bearer Not Setup Indicator* IE for the corresponding E-DCH MAC-d flow in the RADIO LINK SETUP RESPONSE message.]
- [FDD - The DRNS may use the *Traffic Class* IE for a specific E-DCH MAC-d flow to determine the transport bearer characteristics to apply between DRNC and Node B. If *TrCH Source Statistics Descriptor* IE is present with the value "RRC" in the *E-DCH MAC-d Flows Information* IE, then the DRNC should ignore the *Traffic Class* IE.]
- [FDD - If the RADIO LINK SETUP REQUEST message includes the *MAC-es Guaranteed Bit Rate* IE in the *E-DCH Logical Channel Information* IE in the *E-DCH MAC-d Flow Specific Information* IE in the *E-DCH FDD Information* IE, then the DRNS shall use this information to optimise MAC-e scheduling decisions.]
- [FDD - If the RADIO LINK SETUP REQUEST message includes the *Maximum MAC-d PDU Size Extended* IE for a E-DCH Logical Channel in the *E-DCH MAC-d Flows Information* IE in the *E-DCH FDD Information* IE, then the DRNS shall ignore the *MAC-d PDU Size* IE in the *MAC-d PDU Size List* IE and use *Maximum MAC-d PDU Size Extended* IE to optimise capacity allocation for the related E-DCH Logical Channel and use the indicated format in user plane frame structure for E-DCH channels [32] and MAC [41].]
- [FDD - If the RADIO LINK SETUP REQUEST message includes the *E-DCH MAC-d Flow Multiplexing List* IE for an E-DCH MAC-d flow the DRNS shall use this information for the related resource allocation operation.]
- [FDD - If in the RADIO LINK SETUP REQUEST message the E-DCH Grant Type is indicated as being "E-DCH Non-Scheduled Transmission Grant" for an E-DCH MAC-d flow the DRNS shall assume non-scheduled grants being configured for that E-DCH MAC-d flow and shall use the information within the *HARQ Process Allocation For 2ms Non-Scheduled Transmission Grant* IE, if included, for the related resource allocation operation.]
- [FDD - If in the RADIO LINK SETUP REQUEST message the E-DCH Grant Type is indicated as being "E-DCH Scheduled Transmission Grant" for an E-DCH MAC-d flow the DRNS shall assume scheduled grants being configured for that E-DCH MAC-d flow.]
- [FDD - If the *TNL QoS* IE is included for a E-DCH MAC-d flow and if ALCAP is not used, the *TNL QoS* IE may be used by the DRNS to determine the transport bearer characteristics to apply in the uplink for the related MAC-d flow.]
- [FDD - The DRNC may include the *E-AGCH and E-RGCH and E-HICH FDD Scrambling Code* IE and shall include the *E-RGCH and E-HICH Channelisation Code* IE and the corresponding *E-HICH Signature Sequence* IE and the DRNC may include the corresponding *E-RGCH Signature Sequence* IE in the *E-DCH FDD DL Control Channel Information* IE in the RADIO LINK SETUP RESPONSE message, for every RL indicated by the *E-DCH RL Indication* IE, set to "E-DCH", in the *RL Information* IE.]

- [FDD – If the RADIO LINK SETUP REQUEST message includes the *E-DCH ReferencePower Offset* IE, then the DRNS may use this value as a default HARQ power offset if it is not able to decode the MAC-e PDU and to determine the value of the actual HARQ power offset.]
- [FDD – If the RADIO LINK SETUP REQUEST message includes the *E-DCH Power Offset for Scheduling Info* IE, then the DRNS shall use this value as a power offset for the transmission of scheduling information without any MAC-d PDUs.]
  - [FDD - If the RADIO LINK SETUP REQUEST message contains the *Serving E-DCH RL* IE indicating that the Serving E-DCH RL is in this DRNS:]
    - [FDD - The DRNS shall allocate a primary E-RNTI identifier or a secondary E-RNTI identifier or both and include these E-RNTI identifiers and the Channelisation Code of the corresponding E-AGCH in the *E-DCH FDD DL Control Channel Information* IE in the *RL Information Response* IE for the indicated RL in the RADIO LINK SETUP RESPONSE message.]
    - [FDD - The DRNS may include the *Serving Grant Value* IE and *Primary/Secondary Grant Selector* IE in the RADIO LINK SETUP RESPONSE message for the initial grant for the serving E-DCH RL.]
    - [FDD - If the E-DCH HARQ process allocation for 2ms TTI for scheduled and/or non-scheduled transmission shall be changed, the DRNS shall allocate resources according to the new/changed configuration and include the new/changed configuration in the *E-DCH FDD Information Response* IE in the RADIO LINK SETUP RESPONSE message.]
    - [FDD - If a serving cell change is performed the RADIO LINK SETUP RESPONSE message may contain invalid data (see 9.2.2.4C).]
  - [FDD - If the DRNS has no valid data for the *E-RGCH and E-HICH Channelisation Code* IE in the *E-DCH FDD DL Control Channel Information* IE in the RADIO LINK SETUP RESPONSE message, then it shall insert the *E-RGCH and E-HICH Channelisation Code Validity Indicator* IE in the *E-DCH FDD DL Control Channel Information* IE, to indicate that the *E-RGCH and E-HICH Channelisation Code* IE contains invalid data.]
  - [FDD - The DRNS may include the *Default Serving Grant in DTX Cycle 2* IE in the RADIO LINK SETUP RESPONSE message for the serving E-DCH RL.]
  - [FDD - If the RADIO LINK SETUP REQUEST message includes the *Bundling Mode Indicator* IE for a E-DCH MAC-d flow in the *E-DCH MAC-d Flow Specific Information* IE in the *E-DCH FDD Information* IE and the *Bundling Mode Indicator* IE is set to "Bundling" and the *E-TTI* IE is set to "2ms", then the DRNS shall use the bundling mode for the E-DCH UL data frames for the related MAC-d flow, otherwise the DRNS shall use the non-bundling mode for the E-DCH UL data frames for the related MAC-d flow.]
  - [FDD - If the RADIO LINK SETUP REQUEST message includes the *E-DCH Maximum Bitrate* IE for an E-DCH, the DRNS shall use this information for the related resource allocation operation, and when applicable, for E-DCH scheduling.]
  - [FDD - If the RADIO LINK SETUP REQUEST message includes the *E-DCH Processing Overload Level* IE, then if the DRNS could not decode the E-DPCCH/E-DPDCH for the last consecutive number of TTIs, indicated in the *E-DCH Processing Overload Level* IE, because of processing issue, the DRNS shall notify the SRNC by initiating the Radio Link Failure procedure.]
  - [FDD - If the RADIO LINK SETUP REQUEST message includes the *E-AGCH Power Offset* IE in the *RL Specific E-DCH Information* IE, then the DRNS may use this value to determine the E-AGCH power. The E-AGCH Power Offset should be applied for any E-AGCH transmission to this UE.]
  - [FDD - If the RADIO LINK SETUP REQUEST message includes the *E-RGCH Power Offset* IE in the *RL Specific E-DCH Information* IE, then the DRNS may use this value to determine the E-RGCH power for the RL. The E-RGCH Power Offset should be applied for any E-RGCH transmission to this UE.]
  - [FDD - If the RADIO LINK SETUP REQUEST message includes the *E-HICH Power Offset* IE in the *RL Specific E-DCH Information* IE, then the DRNS may use this value to determine the E-HICH

power for the RL. The E-HICH Power Offset should be applied for any E-HICH transmission to this UE.]

- [FDD - If the *Serving Cell Change CFN* IE is included in the RADIO LINK SETUP REQUEST message, then the DRNS shall activate the resources that are allocated for the new serving E-DCH Radio Link at the next coming CFN with a value equal to the value requested by the SRNC.]
- [FDD – If the RADIO LINK SETUP REQUEST message includes the *SixteenQAM UL Operation Indicator* IE, the DRNS shall activate/deactivate SixteenQAM UL Operation for the RL in accordance with the *SixteenQAM UL Operation Indicator* IE.]
- [FDD – If SixteenQAM UL Operation is activated, then the DRNS shall base the handling of the Relative Grant signalling on Scheduling Grant Table 2 according to [41]. If SixteenQAM UL Operation is deactivated, then the DRNS shall base the handling of the Relative Grant signalling on Scheduling Grant Table 1 according to [41].]

#### [FDD - E-DCH -HS-DSCH:]

[FDD – If the RADIO LINK SETUP REQUEST message includes the *DCH Indicator For E-DCH-HSDPA Operation* IE, then the DRNS shall ignore the *DCH Information* IE in the RADIO LINK SETUP REQUEST message.]

### Physical Channels Handling:

#### [FDD - Compressed Mode:]

[FDD - If the RADIO LINK SETUP REQUEST message includes the *Transmission Gap Pattern Sequence Information* IE, the DRNS shall store the information about the Transmission Gap Pattern Sequences to be used in the Compressed Mode Configuration. This Compressed Mode Configuration shall be valid in the DRNS until the next Compressed Mode Configuration is configured in the DRNS or the last Radio Link is deleted.]

[FDD - If the RADIO LINK SETUP REQUEST message includes the *Transmission Gap Pattern Sequence Information* IE and the *Active Pattern Sequence Information* IE, the DRNS shall use the information to activate the indicated Transmission Gap Pattern Sequence(s) in the new RL. The received *CM Configuration Change CFN* IE refers to latest passed CFN with that value. The DRNS shall treat the received *TGCFN* IEs as follows:]

- [FDD - If any received *TGCFN* IE has the same value as the received *CM Configuration Change CFN* IE, the DRNS shall consider the concerned Transmission Gap Pattern Sequence as activated at that CFN.]
- [FDD - If any received *TGCFN* IE does not have the same value as the received *CM Configuration Change CFN* IE but the first CFN after the CM Configuration Change CFN with a value equal to the *TGCFN* IE has already passed, the DRNS shall consider the concerned Transmission Gap Pattern Sequence as activated at that CFN.]
- [FDD - For all other Transmission Gap Pattern Sequences included in the *Active Pattern Sequence Information* IE, the DRNS shall activate each Transmission Gap Pattern Sequence at the first CFN after the CM Configuration Change CFN with a value equal to the *TGCFN* IE for the Transmission Gap Pattern Sequence.]

[FDD - If the *Downlink Compressed Mode Method* IE in one or more Transmission Gap Pattern Sequence is set to "SF/2" in the RADIO LINK SETUP REQUEST message and the UE Context is configured to use DPCH in the downlink, the DRNS shall include the *Transmission Gap Pattern Sequence Scrambling Code Information* IE in the RADIO LINK SETUP RESPONSE message indicating for each DL Channelisation Code whether the alternative scrambling code shall be used or not.]

[FDD - If the RADIO LINK SETUP REQUEST message includes the *Transmission Gap Pattern Sequence Information* IE and the *Active Pattern Sequence Information* IE and the concerned UE Context is configured to use F-DPCH in the downlink, the DRNS shall ignore, when activating the Transmission Gap Pattern Sequence(s), the information provided by the *Downlink Compressed Mode Method* IE if included for the concerned Transmission Gap Pattern Sequence(s).]

#### [FDD - DL Code Information:]

[FDD - When more than one DL DPDCH are assigned per RL, the segmented physical channel shall be mapped on to DL DPDCHs according to [8]. When  $p$  number of DL DPDCHs are assigned to each RL, the first pair of DL Scrambling Code and FDD DL Channelisation Code Number corresponds to "*PhCH number 1*", the second to "*PhCH number 2*", and so on until the  $p$ th to "*PhCH number p*".]

**[FDD – Phase Reference Handling:]**

[FDD – If Primary CPICH is not to be used as a Phase Reference for this Radio Link, the DRNC shall include the *Primary CPICH Usage For Channel Estimation* IE set to the value "Primary CPICH shall not be used" in the RADIO LINK SETUP RESPONSE message.]

[FDD – If Secondary CPICH may be used as a Phase Reference for this Radio Link, the DRNC shall include the *Secondary CPICH Information* IE in the RADIO LINK SETUP RESPONSE message.]

[FDD – If the DRNC doesn't include the *Secondary CPICH Information* IE in the RADIO LINK SETUP RESPONSE message, it shall not include the *Primary CPICH Usage For Channel Estimation* IE set to the value "Primary CPICH shall not be used" in the RADIO LINK SETUP RESPONSE message.]

**General:**

[FDD - If the *Propagation Delay* IE and optionally the *Extended Propagation Delay* IE are included, the DRNS may use this information to speed up the detection of UL synchronisation on the Uu interface.]

[FDD - If the received *Limited Power Increase* IE is set to "Used", the DRNS shall, if supported, use Limited Power Increase according to ref. [10] subclause 5.2.1 for the inner loop DL power control.]

[TDD - If the RADIO LINK SETUP REQUEST message includes the [1.28 Mcps TDD and 3.84 Mcps TDD - *Maximum Number of DL Physical Channels per Timeslot* IE] [7.68 Mcps TDD - *Maximum Number of DL Physical Channels per Timeslot 7.68 Mcps* IE] the DRNC shall take this value into account when allocating physical resources, otherwise the DRNC can assume that this UE capability is consistent with the other signalled UE capabilities.]

[1.28Mcps TDD - If the RADIO LINK SETUP REQUEST message includes the *Support for 8PSK* IE within the *DL Physical Channel Information* IE or *UL Physical Channel Information* IE, the DRNC shall take this into account in the specified direction when allocating physical resources, otherwise the DRNC can assume that this UE does not support 8PSK resource allocation.]

[1.28Mcps TDD - If the RADIO LINK SETUP REQUEST message includes the *Support for PLCCCH* IE within the *DL Physical Channel Information* IE, the DRNC shall take this into account when allocating PLCCCH sequence numbers, otherwise the DRNC can assume that this UE does not support PLCCCH.]

[FDD – If the RADIO LINK SETUP REQUEST message includes the *DL DPCH Information* IE, then the DRNS shall configure the concerned UE Context to use DPCH in the downlink, i.e. with a DL DPCCCH and a DL DPDCH.]

[FDD – If the RADIO LINK SETUP REQUEST message includes the *F-DPCH Information* IE, then:]

- [FDD – The DRNS shall configure the concerned UE Context to use F-DPCH in the downlink, i.e. with transmission of only the TPC field.]
- [FDD – If the *F-DPCH Information* IE includes the *F-DPCH Slot Format Support Request* IE, then the DRNS shall configure the concerned UE Context for F-DPCH Slot Format operation according to [8] and include the *F-DPCH Slot Format* IE in the RADIO LINK SETUP RESPONSE message. If the *F-DPCH Information* IE includes the *F-DPCH Slot Format* IE, the DRNC may use the *F-DPCH Slot Format* IE to determine the F-DPCH slot format.]

**[FDD - E-DPCH Handling:]**

[FDD - If the UL DPDCH Indicator for E-DCH operation IE is included in the UL DPCH Information IE and set to "UL-DPDCH not present" the Min UL Channelisation Code Length IE, the Puncture Limit IE and the TFCS IE, within the UL DPCH Information IE shall be ignored and no UL DPDCH resources shall be allocated.]

**[FDD - Continuous Packet Connectivity Handling:]**



[FDD – If the RADIO LINK SETUP REQUEST message includes the *Continuous Packet Connectivity DTX-DRX Information IE*, then:]

- [FDD – The DRNS shall configure the concerned UE Context for Continuous Packet Connectivity DTX operation according to [10].]
- [FDD – If *DRX Information IE* is included in the *Continuous Packet Connectivity DTX-DRX Information IE*, then the DRNS shall configure the concerned UE Context for Continuous Packet Connectivity DRX operation according to [10].]

[FDD – If the RADIO LINK SETUP REQUEST message includes the *Continuous Packet Connectivity HS-SCCH less Information IE*, then:]

- [FDD – The DRNS shall configure the Serving HS-DSCH Radio Link indicated by the *HS-PDSCH RL ID IE* for Continuous Packet Connectivity HS-SCCH less operation according to [10].]
- [FDD – The DRNS shall allocate the HS-PDSCH codes needed for HS-SCCH less operation and include the *Continuous Packet Connectivity HS-SCCH less Information Response IE* in the RADIO LINK SETUP RESPONSE message.]
- [FDD – If at least one of *HS-PDSCH Second Code Support IE* is set to "True", then the DRNC shall include *HS-PDSCH Second Code Index IE* in the RADIO LINK SETUP RESPONSE message.]

#### [1.28 Mcps TDD - Continuous Packet Connectivity Handling:]

[1.28 Mcps TDD - If the RADIO LINK SETUP REQUEST message includes the *Continuous Packet Connectivity DRX Information LCR IE*, then the DRNS shall take account into these parameters to decide the DRX operation related parameters and configure the concerned UE Context for DRX operation according to [21] and include the parameter(s) in the *Continuous Packet Connectivity DRX Information Response LCR IE* in the RADIO LINK SETUP RESPONSE message.]

[1.28 Mcps TDD - If the RADIO LINK SETUP REQUEST message includes the *HS-DSCH Semi-Persistent scheduling Information LCR IE*, then:]

- [1.28 Mcps TDD - The DRNS shall configure the Serving HS-DSCH Radio Link indicated by the *HS-PDSCH RL ID IE* for HS-DSCH Semi-Persistent scheduling operation according to [21].]
- [1.28 Mcps TDD - The DRNS shall allocate the HS-SICH information needed for HS-DSCH Semi-Persistent scheduling operation and include the *HS-DSCH Semi-Persistent scheduling Information Response LCR IE* in the RADIO LINK SETUP RESPONSE message.]
- [1.28 Mcps TDD - If the HS-DSCH Semi-Persistent Resource Reservation Indicator IE is included in the HS-DSCH Semi-Persistent scheduling Information LCR IE, then the DRNS shall include Allcoated HS-PDSCH Semi-persistent resource IE in the RADIO LINK SETUP RESPONSE message.]
- [1.28 Mcps TDD - The DRNS shall include the *Buffer Size for HS-DSCH Semi-Persistent scheduling IE* in the RADIO LINK SETUP RESPONSE message.]
- [1.28 Mcps TDD - The DRNS shall include the *Number of Processes for HS-DSCH Semi-Persistent scheduling IE* in the RADIO LINK SETUP RESPONSE message.]
- [1.28 Mcps TDD - If the *HS-DSCH Semi-Persistent scheduling operation Indicator IE* is included in the *HS-DSCH Semi-Persistent scheduling Information LCR IE*, then the DRNS shall apply this information for HS-DSCH Semi-Persistent scheduling operation.]

[1.28 Mcps TDD - If the RADIO LINK SETUP REQUEST message includes the *E-DCH Semi-Persistent scheduling Information LCR IE*, then:]

- [1.28 Mcps TDD - The DRNS shall configure the Serving E-DCH Radio Link indicated by the *E-DCH Serving RL IE* for E-DCH Semi-Persistent scheduling operation according to [21].]
- [1.28 Mcps TDD - The DRNS shall allocate the E-PUCH codes needed for E-DCH Semi-Persistent scheduling operation and include the *E-DCH Semi-Persistent scheduling Information Response LCR IE* in the RADIO LINK SETUP RESPONSE message.]

- [1.28 Mcps TDD - If the E-DCH Semi-Persistent Resource Reservation Indicator IE is included in the E-DCH Semi-Persistent scheduling Information LCR IE, then the DRNS shall include Allcoated E-DCH Semi-persistent resource IE in the RADIO LINK SETUP RESPONSE message.]
- [1.28 Mcps TDD - If the *E-DCH Semi-Persistent scheduling Indicator* IE is included in the *E-DCH Semi-Persistent scheduling Information LCR* IE, then the DRNS shall apply this information for E-DCH Semi-Persistent scheduling operation.]

### Radio Link Handling:

#### Diversity Combination Control:

[FDD - The *Diversity Control Field* IE indicates for each RL except for the first RL whether the DRNS shall combine the RL with any of the other RLs or not.]

- [FDD - If the *Diversity Control Field* IE is set to "May" (be combined with another RL), the DRNS shall decide for any of the alternatives.]
- [FDD - If the *Diversity Control Field* IE is set to "Must", the DRNS shall combine the RL with one of the other RL.]
- [FDD - If the *Diversity Control Field* IE is set to "Must not", the DRNS shall not combine the RL with any other existing RL.]

[FDD - When an RL is to be combined, the DRNS shall choose which RL(s) to combine it with.]

[FDD - The *Diversity Control Field* IE is only applicable for DCHs, in case of E-DCH it shall always be assumed to be set to "May".]

[FDD - In the RADIO LINK SETUP RESPONSE message, the DRNC shall indicate for each RL with the Diversity Indication in the *RL Information Response* IE whether the RL is combined or not.]

- [FDD - In case of not combining with a RL previously listed in the RADIO LINK SETUP RESPONSE message or for the first RL in the RADIO LINK SETUP RESPONSE message, the DRNC shall]
  - [FDD - in case of requested DCHs, include in the *DCH Information Response* IE in the RADIO LINK SETUP RESPONSE message for which the *Transport Bearer Not Requested Indicator* IE was not included the *Binding ID* IE and *Transport Layer Address* IE for the transport bearer to be established for each DCH of this RL.]
  - [FDD - in case of requested DCHs, include in the RADIO LINK SETUP RESPONSE message the *Transport Bearer Not Setup Indicator* IE for every DCH for which establishment of a transport bearer has not taken place as a result of information in the *Transport Bearer Not Requested Indicator* IE in the RADIO LINK SETUP REQUEST message.]
  - [FDD - in case of a requested E-DCH, include in the *E-DCH FDD Information Response* IE in the RADIO LINK SETUP RESPONSE for which the *Transport Bearer Not Requested Indicator* IE was not included message the *Binding ID* IE and the *Transport Layer Address* IE for the establishment of transport bearers for every E-DCH MAC-d flow being established.]
  - [FDD - in case of a requested E-DCH, include in the RADIO LINK SETUP RESPONSE message the *Transport Bearer Not Setup Indicator* IE for every E-DCH MAC-d flow for which establishment of a transport bearer has not taken place as a result of information in the *Transport Bearer Not Requested Indicator* IE in the RADIO LINK SETUP REQUEST message.]
- [FDD - Otherwise in case of combining, the *RL ID* IE indicates (one of) the RL(s) previously listed in this RADIO LINK SETUP RESPONSE message with which the concerned RL is combined and if the ALCAP is not used and the transport bearer for the DCH is already established, the *Transport Layer Address* IE and the *Binding ID* IE in the *RL Specific DCH Information* IE included in the *RL Information* IE for a specific RL in the RADIO LINK SETUP REQUEST message, shall not be used. In case of combining an E-DCH RL, one of the RLs previously listed in this RADIO LINK SETUP RESPONSE message including the *E-DCH FDD Information Response* IE and part of the same Radio Link Set shall be regarded as the RL with which the concerned E-DCH RL is combined and if the ALCAP is not used, the *Transport Layer Address* IE and the *Binding ID* IE in the *RL Specific E-DCH Information* IE included

in the *RL Information* IE for a specific RL in the RADIO LINK SETUP REQUEST message, shall not be used.]

[TDD - The DRNC shall always include in the RADIO LINK SETUP RESPONSE message both the *Transport Layer Address* IE and the *Binding ID* IE for the transport bearer to be established for each DCH, DSCH and USCH of the RL.]

In the case of a set of co-ordinated DCHs requiring a new transport bearer the *Binding ID* IE and the *Transport Layer Address* IE shall be included in the RADIO LINK SETUP RESPONSE message for only one of the DCHs in the set of co-ordinated DCHs [FDD - where the *Transport Bearer Not Requested Indicator* IE was not included].

**[FDD - Transmit Diversity:]**

[FDD - If the cell in which the RL is being set up is capable to provide Close loop Tx diversity, the DRNC shall include the *Closed Loop Timing Adjustment Mode* IE in the RADIO LINK SETUP RESPONSE message indicating the configured Closed loop timing adjustment mode of the cell.]

[FDD - When the *Diversity Mode* IE is set to "STTD", or "Closed loop mode1", the DRNC shall activate/deactivate the Transmit Diversity for each Radio Link in accordance with the *Transmit Diversity Indicator* IE.]

[FDD - If the *Diversity Mode* IE is included in the *HS-DSCH FDD Secondary Serving Information* IE in the *Additional HS Cell Information RL Setup* IE in the RADIO LINK SETUP REQUEST message, the DRNS shall apply cell specific transmit diversity configuration and if the *Diversity Mode* IE is not set to "None" the DRNS shall activate/deactivate the Transmit Diversity for the secondary serving HS-DSCH Radio Link in accordance with the *Transmit Diversity Indicator* IE in the *HS-DSCH FDD Secondary Serving Information* IE.]

**DL Power Control:**

[FDD - If both the *Initial DL TX Power* IE and *Uplink SIR Target* IE are included in the message, the DRNS shall use the indicated DL TX Power and Uplink SIR Target as initial value. If the value of the *Initial DL TX Power* IE is outside the configured DL TX power range, the DRNS shall apply these constraints when setting the initial DL TX power. The DRNS shall also include the configured DL TX power range defined by *Maximum DL TX Power* IE and *Minimum DL TX Power* IE in the RADIO LINK SETUP RESPONSE message. The DRNS shall not transmit with a power higher than indicated by the *Maximum DL TX Power* IE or lower than indicated by the *Minimum DL TX Power* IE on any DL DPCH or on the F-DPCH of the RL except, if the UE Context is configured to use DPCH in the downlink, during compressed mode, when the  $\delta P_{curr}$ , as described in ref.[10] subclause 5.2.1.3, shall be added to the maximum DL power for the associated compressed frame.]

[FDD - If both the *Initial DL TX Power* and the *Uplink SIR Target* IEs are not included in the RADIO LINK SETUP REQUEST message, then DRNC shall determine the initial Uplink SIR Target and include it in the *Uplink SIR Target* IE in the RADIO LINK SETUP RESPONSE message.]

[TDD - The DRNC shall use the *Uplink SIR Target CCTrCH* IEs in the RADIO LINK SETUP RESPONSE message to indicate for any UL CCTrCH an Uplink SIR Target value in case this is deviating from the value included in the *Uplink SIR Target* IE specified for the Radio Link. If in any [3.84Mcps TDD - *UL CCTrCH Information* IE] [1.28Mcps TDD - *UL CCTrCH Information LCR* IE] [7.68Mcps TDD - *UL CCTrCH Information 7.68 Mcps* IE] the *Uplink SIR Target CCTrCH* IE is not included, the value of the *Uplink SIR Target* IE shall apply to the respective UL CCTrCH.]

[FDD - If the *Primary CPICH Ec/No* IE is present, the DRNC should use the indicated value when deciding the Initial DL TX Power. If the *Enhanced Primary CPICH Ec/No* IE is present, the DRNC should use the indicated value when deciding the Initial DL Tx Power.]

[TDD - If [3.84Mcps TDD and 7.68 Mcps TDD - the *DL Time Slot ISCP Info* IE] [1.28Mcps TDD - the *DL Time Slot ISCP Info LCR* IE] is present, the DRNS should use the indicated value when deciding the Initial DL TX Power for the Radio Link. The DRNS shall use the indicated DL Timeslot ISCP when determining the initial DL power per timeslot as specified in [22], i.e. it shall reduce the DL TX power in those downlink timeslots of the radio link where the interference is low, and increase the DL TX power in those timeslots where the interference is high, while keeping the total downlink power in the radio link unchanged.]

[TDD - If the *Primary CCPCH RSCP Delta* IE is included, the DRNS should assume that the reported value for Primary CCPCH RSCP is in the negative range as per [24], and the value is equal to the *Primary CCPCH RSCP Delta* IE. If the *Primary CCPCH RSCP Delta* IE is not included and the *Primary CCPCH RSCP* IE is included, the DRNS should assume that the reported value is in the non-negative range as per [24], and the value is equal to the *Primary CCPCH RSCP* IE. The DRNS should use the indicated value when deciding the Initial DL TX Power for the Radio Link.]

[3.84 Mcps TDD and 7.68 Mcps TDD - The DL TX power upper and lower limit is configured in the following way:

- The DRNC shall include the *Maximum DL TX Power* IE and *Minimum DL TX Power* IE in the RADIO LINK SETUP RESPONSE message. If the maximum or minimum power needs to be different for particular DCH type CCTrCHs, the DRNC shall include the value(s) for that CCTrCH in the *CCTrCH Maximum DL TX Power* IE and *CCTrCH Minimum DL TX Power* IE. The DRNS shall not transmit with a higher power than indicated by the appropriate *Maximum DL TX Power* IE/*CCTrCH Maximum DL TX Power* IE or lower than indicated by the appropriate *Minimum DL TX Power* IE/*CCTrCH Minimum DL TX Power* IE on any DL DPCH within each CCTrCH of the RL.]

[1.28 Mcps TDD - The DL TX power upper and lower limit is configured in the following way:

- The DRNC shall include the *Maximum DL TX Power* IE and *Minimum DL TX Power* IE in the RADIO LINK SETUP RESPONSE message. If the maximum or minimum power needs to be different for particular timeslots within a DCH type CCTrCH, the DRNC shall include the value(s) for that timeslot in the *Maximum DL TX Power* IE and *Minimum DL TX Power* IE within the *DL Timeslot Information LCR* IE. The DRNS shall not transmit with a higher power than indicated by the appropriate *Maximum DL TX Power* IE or lower than indicated by the appropriate *Minimum DL TX Power* IE on any DL DPCH within each timeslot of the RL.]

[1.28McpsTDD - If the *TSTD Support Indicator* IE is present, the DRNS shall apply this information when configuring the transmit diversity for the new radio link.]

[FDD - The DRNS shall start any DL transmission using the indicated DL TX power level (if received) or the decided DL TX power level on each DL channelisation code or on the F-DPCH of a RL until UL synchronisation is achieved on the Uu interface for the concerned RLS or Power Balancing is activated. No inner loop power control or power balancing shall be performed during this period. The DL power shall then vary according to the inner loop power control (see ref.[10] subclause 5.2.1.2) and the power control procedure (see 8.3.15).]

[TDD - The DRNS shall start any DL transmission using the decided DL TX power level on each DL channelisation code and on each Time Slot of a RL until UL synchronisation is achieved on the Uu interface for the concerned RL. No inner loop power control shall be performed during this period. Then after UL synchronisation, the DL power shall vary according to the inner loop power control (see ref. [22] subclause 4.2.3.3).]

[FDD - If the received *Inner Loop DL PC Status* IE is set to "Active", the DRNS shall activate the inner loop DL power control for all RLS. If *Inner Loop DL PC Status* IE is set to "Inactive", the DRNS shall deactivate the inner loop DL power control for all RLS according to ref. [10].]

[FDD - If the *DPC Mode* IE is present in the RADIO LINK SETUP REQUEST message, the DRNC shall apply the DPC mode indicated in the message, and be prepared that the DPC mode may be changed during the lifetime of the RL. If the *DPC Mode* IE is not present in the RADIO LINK SETUP REQUEST message, DPC mode 0 shall be applied (see ref. [10]).]

[FDD - If the RADIO LINK SETUP REQUEST message includes the *DL Power Balancing Information* IE and the *Power Adjustment Type* IE is set to "Common" or "Individual", the DRNS shall activate the power balancing, if activation of power balancing by the RADIO LINK SETUP REQUEST message is supported, according to subclause 8.3.15, using the *DL Power Balancing Information* IE. If the DRNS starts the DL transmission and the activation of the power balancing at the same CFN, the initial power of the power balancing i.e.  $P_{init}$  shall be set to the power level indicated by the *Initial DL TX Power* IE (if received) or the decided DL TX power level on each DL channelisation code of a RL based on the *Primary CPICH Ec/No* IE or the *Enhanced Primary CPICH Ec/No* IE.]

[FDD - If activation of power balancing by the RADIO LINK SETUP REQUEST message is supported by the DRNS, the DRNC shall include the *DL Power Balancing Activation Indicator* IE in the *RL Information Response* IE in the RADIO LINK SETUP RESPONSE message.]

#### Neighbouring Cell Handling:

If there are UMTS neighbouring cell(s) to the cell in which a Radio Link was established then:

- The DRNC shall include in the RADIO LINK SETUP RESPONSE message the *Neighbouring FDD Cell Information* IE and/or *Neighbouring TDD Cell Information* IE in the *Neighbouring UMTS Cell Information* IE for each neighbouring FDD cell and/or TDD cell respectively. In addition, if the information is available, the DRNC shall include in the RADIO LINK SETUP RESPONSE message the *Frame Offset* IE, *Primary CPICH Power* IE, *Cell Individual Offset* IE, *STTD Support Indicator* IE, *Closed Loop Mode1 Support Indicator* IE, *Coverage Indicator* IE, *Antenna Co-location Indicator* IE and *HCS Prio* IE in the *Neighbouring FDD Cell Information* IE, and the *Frame Offset* IE, *Cell Individual Offset* IE, *DPCH Constant Value* IE, the *PCCPCH Power* IE, *Coverage Indicator* IE, *Antenna Co-location Indicator* IE and *HCS Prio* IE in the *Neighbouring TDD Cell Information* IE or the *Neighbouring TDD Cell Information LCR* IE. If the *Neighbouring TDD Cell Information* IE includes the *Sync Case* IE for the set to "Case1", the DRNC shall include the *Time Slot For SCH* IE in the *Neighbouring TDD Cell Information* IE. If the *Neighbouring TDD Cell Information* IE includes *Sync Case* IE set to "Case2", the DRNC shall include the *SCH Time Slot* IE in the *Neighbouring TDD Cell Information* IE.
- If a UMTS neighbouring cell is not controlled by the same DRNC, the DRNC shall also include in the RADIO LINK SETUP RESPONSE message the *CN PS Domain Identifier* IE and/or *CN CS Domain Identifier* IE which are the identifiers of the CN nodes connected to the RNC controlling the UMTS neighbouring cell.
- If the information is available, the DRNC shall include in the RADIO LINK SETUP RESPONSE message the *DPC Mode Change Support Indicator* IE for each neighbour cell in the *Neighbouring FDD Cell Information* IE
- The DRNC shall include the *Cell Capability Container FDD* IE, the *Cell Capability Container TDD* IE, the *Cell Capability Container TDD LCR* IE and/or the *Cell Capability Container Extension FDD* IE if the DRNC is aware that the neighbouring cell supports any functionality listed in 9.2.2.D, 9.2.3.1a, 9.2.3.1b and 9.2.2.106.
- For the UMTS neighbouring cells which are controlled by the DRNC, the DRNC shall report in the RADIO LINK SETUP RESPONSE message the restriction state of those cells, otherwise the *Restriction State Indicator* IE may be absent. The DRNC shall include in the RADIO LINK SETUP RESPONSE message the *Restriction State Indicator* IE for the neighbouring cells which are controlled by the DRNC in the *Neighbouring FDD Cell Information* IE, the *Neighbouring TDD Cell Information* IE and the *Neighbouring TDD Cell Information LCR* IE.
- If MOCN or GWCN network sharing configuration is used then the DRNC shall include the broadcasted PLMN identities of the concerned neighbouring cells in the *Multiple PLMN List* IE in the *Neighbouring FDD Cell Information* IE, the *Neighbouring TDD Cell Information* IE and the *Neighbouring TDD Cell Information LCR* IE.
- If available, the DRNC shall include the *SNA Information* IE for the concerned neighbouring cells in the *Neighbouring FDD Cell Information* IE, the *Neighbouring TDD Cell Information* IE and the *Neighbouring TDD Cell Information LCR* IE.
- If available, the DRNC shall include the *Frequency Band Indicator* IE for the concerned neighbouring cells in the *Neighbouring FDD Cell Information* IE.

If there are GSM neighbouring cells to the cell(s) where a radio link is established, the DRNC shall include in the RADIO LINK SETUP RESPONSE message the *Neighbouring GSM Cell Information* IE for each of the GSM neighbouring cells. If available the DRNC shall include in the RADIO LINK SETUP RESPONSE message the *Cell Individual Offset* IE, and if the *Cell Individual Offset* IE alone cannot represent the value of the offset, the DRNC shall also include the *Extended GSM Cell Individual Offset* IE in the *Neighbouring GSM Cell Information* IE. If available the DRNC shall also include in the RADIO LINK SETUP RESPONSE message the *Coverage Indicator* IE, *Antenna Co-location Indicator* IE and *HCS Prio* IE in the

*Neighbouring GSM Cell Information* IE. If available, the DRNC shall also include the *SNA Information* IE for the concerned neighbouring cells in the *Neighbouring GSM Cell Information* IE.

When receiving the *SNA Information* IE in the RADIO LINK SETUP RESPONSE message, the SRNC should use it to restrict cell access based on SNA information. See also [40] for a broader description of the SNA access control.

If there are GERAN neighbouring cells to the cell(s) where a radio link is established, the DRNC shall include the *GERAN Cell Capability* IE in the *Neighbouring GSM Cell Information* IE that is included in the RADIO LINK SETUP RESPONSE message for each of the GERAN cells.

If there are GERAN Iu-mode neighbouring cells to the cell(s) where a radio link is established, the DRNC shall include, if available, the *GERAN Classmark* IE in the *Neighbouring GSM Cell Information* IE that is included in the RADIO LINK SETUP RESPONSE message for each of the GERAN Iu-mode neighbouring cells. Ref. [39] defines when the transmission of the *GERAN Classmark* IE will be required at the initiation of the Relocation Preparation procedure.

If there are E-UTRA neighbouring cells to the cell(s) where a radio link is established, the DRNC shall include in the RADIO LINK SETUP RESPONSE message the *Neighbouring E-UTRA Cell Information* IE for each of the E-UTRA neighbouring cells.

#### **[1.28Mcps TDD - Uplink Synchronisation Parameters LCR:]**

[1.28Mcps TDD - If the *Uplink Synchronisation Parameters LCR* IE is present, the DRNC shall use the indicated values of *Uplink synchronisation stepsize* IE and *Uplink synchronisation frequency* IE when evaluating the timing of the UL synchronisation.]

#### **[1.28Mcps TDD - Shared physical channels Synchronisation Detection:]**

[1.28Mcps TDD - If HS-PDSCH and E-PUCH are configured but no DPCH is configured for the UE, then the DRNS shall also include the *Out-of-sync Detection Window* IE in the *HS-DSCH TDD Information Response* IE in the RADIO LINK SETUP RESPONSE message.]

#### **[1.28Mcps TDD - Uplink Timing Advance Control LCR:]**

[1.28Mcps TDD - The DRNC shall include the *Uplink Timing Advance Control LCR* IE in the RADIO LINK SETUP RESPONSE message.]

#### **[1.28Mcps TDD - PowerControl GAP:]**

[1.28Mcps TDD - If applied in the DRNS, the DRNC may include the *PowerControl GAP* IE in the RADIO LINK SETUP RESPONSE message.]

#### **[1.28Mcps TDD - E-UTRAN Inter-RAT measurement:]**

[1.28Mcps TDD - If the RADIO LINK SETUP REQUEST message includes the *Idle Interval Configuration Indicator* IE, if supported, the DRNC shall include the *Idle Interval Information* IE in the RADIO LINK SETUP RESPONSE message.]

#### **[1.28Mcps TDD - RNTI Allocation Indicator:]**

[1.28Mcps TDD - If the RADIO LINK SETUP REQUEST message includes the *RNTI Allocation Indicator* IE, if supported, the DRNS may allocate an E-RNTI and/or an H-RNTI for UE to use in CELL\_FACH state.]

#### **MBMS Handling:**

If the *MBMS Bearer Service List* IE is included in the RADIO LINK SETUP REQUEST message, the DRNC shall, if supported, perform the UE Linking as specified in [50], section 5.1.6. If the UE Link is currently stored in the UE Context or the *MBMS Bearer Service List* IE is included in the RADIO LINK SETUP REQUEST message and if an MBMS session for some MBMS bearer services contained in the UE Link is ongoing in some of the cells identified by the *C-ID* IEs in the RADIO LINK SETUP REQUEST message, the DRNC shall include for each of these active MBMS bearer services in the *Active MBMS Bearer Service List* IE the *Transmission Mode* IE in the concerned *RL Information Response* IEs in the RADIO LINK SETUP RESPONSE message.

If the UE Link is currently stored in the UE Context or the *MBMS Bearer Service List* IE is included in the RADIO LINK SETUP REQUEST message and if an MBMS preferred frequency layer for some active MBMS bearer services contained in the UE Link is set in some of the cells identified by the *C-ID* IEs in the RADIO LINK SETUP REQUEST message, the DRNC shall include for each of these active MBMS bearer services in the *Active MBMS Bearer Service List* IE the *Preferred Frequency Layer* IE in the concerned *RL Information Response* IEs in the RADIO LINK SETUP RESPONSE message.

#### [FDD – HS-DSCH Preconfiguration for Enhanced HS Serving Cell Change]

[FDD – If the RADIO LINK SETUP REQUEST message includes the *HS-DSCH Preconfiguration Setup* IE in the *RL Information* IE the DRNS shall if supported preconfigure the indicated cells for Enhanced HS Serving Cell Change according to [63]: ]

- [FDD – The DRNS shall preconfigure sets of HS-SCCH codes on the cells preconfigured for HS-DSCH, primary serving HS-DSCH cell, as well as on the secondary serving HS-DSCH cells. The primary serving HS-DSCH cell is designated through the *C-ID* IE part of the *RL Information* IE in the RADIO LINK SETUP REQUEST message. The list of secondary serving HS-DSCH cells is designated by the list of *Secondary C-ID* IEs in the *HS-DSCH Preconfiguration Setup* IE part of the *RL Information* IE in the RADIO LINK SETUP REQUEST message. ]
- [FDD – The number of HS-SCCH codes to preconfigure for each cell may be optionally specified: ]
  - [FDD – by the *Num Primary HS-SCCH Codes* IE in the *HS-DSCH Preconfiguration Setup* IE, for the primary serving HS-DSCH cell]
  - [FDD – by the *Num Secondary HS-SCCH Codes* IE in the *Secondary Cells* IE in the *HS-DSCH Preconfiguration Setup* IE for each of the secondary serving HS-DSCH cells]
- [FDD –If *Num Primary HS-SCCH Codes* IE or *Num Secondary HS-SCCH Codes* IE is not included in the message the number and distribution of codes on primary and any secondary cells shall be preconfigured to satisfy any limitations in [10]. ]
- [FDD – The DRNS shall return these codes in the *Sets of HS-SCCH Codes* IE along with the corresponding per-cell *HS-DSCH-RNTI* IE in the *HS-DSCH Preconfiguration Info* IE in the *RL Information Response* IE of the RADIO LINK SETUP RESPONSE message or in the *Successful RL Information Response* IE of the RADIO LINK SETUP FAILURE message. ]
- [FDD – The DRNS shall use the first in the numbered list of the primary serving HS-DSCH cell's HS-SCCH codes in the *HS-SCCH Preconfigured Codes* IE sent to the SRNC to signal the Target Cell HS-SCCH Order defined in [18]. ]
- [FDD – The DRNS shall include, in the *HS-DSCH Preconfiguration Info* IE in the *RL Information Response* IE in the RADIO LINK SETUP RESPONSE message or in the *Successful RL Information Response* IE of the RADIO LINK SETUP FAILURE message, IEs according to the rules defined for HS-DSCH setup and: ]
  - [FDD – if HARQ Preamble Mode IE is included in the *HS-DSCH Preconfiguration Setup* IE the HARQ Preamble Mode Activation Indicator IE]
  - [FDD – if MIMO Activation Indicator IE is included in the *HS-DSCH Preconfiguration Setup* IE the MIMO N/M Ratio IE ]
  - [FDD – if *HS-DSCH MAC-d PDU Size Format* IE is included in the *HS-DSCH Preconfiguration Setup* IE and set to "Flexible MAC-d PDU Size" and if Sixtyfour QAM will not be used in the preconfiguration, the *HS-DSCH TB Size Table Indicator* IE for each preconfigured cell]
  - [FDD – if Sixtyfour QAM Usage Allowed Indicator IE is included in the *Secondary Cells* IE in the *HS-DSCH Preconfiguration Setup* IE or in the *HS-DSCH Preconfiguration Setup* IE the SixtyfourQAM DL Usage Indicator IE for each preconfigured cell]
  - [FDD – if Continuous Packet Connectivity HS-SCCH less Information IE is included in the *HS-DSCH Preconfiguration Setup* IE the Continuous Packet Connectivity HS-SCCH less Information Response IE]

- [FDD – if the *UE with enhanced HS-SCCH support indicator* IE is included in the *HS-DSCH Preconfiguration Setup* IE, then the DRNS shall store this information in the preconfigured configuration.]
  - [FDD – the *SixtyfourQAM DL Support Indicator* IE shall be included]
  - [FDD – if the *UE Support Indicator Extension* IE is included in the *HS-DSCH Preconfiguration Setup* IE, then the DRNS may store this information in the preconfigured configuration.]
- [FDD – The DRNS shall include in the *HS-DSCH Preconfiguration Info* IE in the *RL Information Response* IE in the RADIO LINK SETUP RESPONSE message or in the *Successful RL Information Response* IE of the RADIO LINK SETUP FAILURE message the *E-DCH FDD DL Control Channel Information* containing the preconfigured configuration of the E-DCH serving cell according to the rules defined for Serving E-DCH Radio Link Change as follows: ]
  - [FDD – The DRNS shall allocate for the preconfigured configuration a primary E-RNTI identifier or a secondary E-RNTI identifier or both for the new Serving E-DCH Radio Link and include these E-RNTI identifiers along with the channelisation code of the corresponding E-AGCH in the *E-DCH FDD DL Control Channel Information* IE. ]
  - [FDD – The DRNS may preconfigure the *Serving Grant Value* IE and *Primary/Secondary Grant Selector* IE for the initial grant for the serving E-DCH RL and include these values in the *E-DCH FDD DL Control Channel Information* IE]
  - [FDD – If the *Power Offset For S-CPICH for MIMO Request Indicator* IE is included, the DRNC shall, if supported and MIMO pilot configuration with Primary and Secondary CPICH is set up on the cell where HS-DSCH is preconfigured, include the *Power Offset For S-CPICH for MIMO* IE in the *HS-DSCH Preconfiguration Info* IE in the RADIO LINK SETUP RESPONSE message.]

#### General:

If the RADIO LINK SETUP REQUEST message includes the *RL Specific DCH Information* IE, the DRNC may use the transport layer address and the binding identifier received from the SRNC when establishing a transport bearer for the DCH or the set of co-ordinated DCHs [FDD - for every DCH being established for which the *Transport Bearer Not Requested Indicator* IE was not included].

If no *D-RNTI* IE was included in the RADIO LINK SETUP REQUEST message, the DRNC shall include in the RADIO LINK SETUP RESPONSE message the *D-RNTI* IE, the *CN PS Domain Identifier* IE and/or the *CN CS Domain Identifier* IE for the CN domains (using LAC and RAC of the current cell) to which the DRNC is connected.

[1.28 Mcps TDD - If no *D-RNTI* IE was included in the RADIO LINK SETUP REQUEST message, the DRNC could include in the RADIO LINK SETUP RESPONSE message the *UARFCN* IE.]

[FDD - If the *D-RNTI* IE was included in the RADIO LINK SETUP REQUEST message the DRNC shall include in the RADIO LINK SETUP RESPONSE message the *Primary Scrambling Code* IE, the *UL UARFCN* IE and the *DL UARFCN* IE.]

[TDD - If the *D-RNTI* IE was included in the RADIO LINK SETUP REQUEST message the DRNC shall include in the RADIO LINK SETUP RESPONSE message the *UARFCN* IE, the *Cell Parameter ID* IE and the *SCTD Indicator* IE.]

[3.84Mcps TDD and 7.68 Mcps TDD - If the *D-RNTI* IE was included in the RADIO LINK SETUP REQUEST message the DRNC shall include in the RADIO LINK SETUP RESPONSE message the *Sync Case* IE and if the *Sync Case* IE is set to "Case 2", the DRNC shall also include the *SCH Time Slot* IE in the RADIO LINK SETUP RESPONSE message. If the included *Sync Case* IE is set to "Case1", the DRNC shall also include the *Time Slot For SCH* IE.]

[3.84Mcps TDD - The DRNC shall include the *Secondary CCPCH Info TDD* IE in the RADIO LINK SETUP RESPONSE message if at least one *DSCH Information Response* IE or *USCH Information Response* IE is included in the message and at least one DCH is configured for the radio link. The DRNC shall also include the *Secondary CCPCH Info TDD* IE in the RADIO LINK SETUP RESPONSE message if at least one *DSCH Information Response* IE or *USCH Information Response* IE is included in the message and the SHCCH messages for this radio link will be transmitted over a different secondary CCPCH than selected by the UE from system information.]



[1.28 Mcps TDD - The DRNC shall include the *Secondary CCPCH Info TDD LCR IE* in the RADIO LINK SETUP RESPONSE message if at least one *DSCH Information Response LCR IE* or *USCH Information Response LCR IE* is included in the message and at least one DCH is configured for the radio link. The DRNC shall also include the *Secondary CCPCH Info TDD LCR IE* in the RADIO LINK SETUP RESPONSE message if at least one *DSCH Information Response LCR IE* or *USCH Information Response LCR IE* is included in the message and the SHCCH messages for this radio link will be transmitted over a different secondary CCPCH than selected by the UE from system information.]

[7.68 Mcps TDD - The DRNC shall include the *Secondary CCPCH Info 7.68Mcps TDD IE* in the RADIO LINK SETUP RESPONSE message if at least one *DSCH Information Response 7.68 Mcps IE* or *USCH Information Response 7.68 Mcps IE* is included in the message and at least one DCH is configured for the radio link. The DRNC shall also include the *Secondary CCPCH Info 7.68Mcps TDD IE* in the RADIO LINK SETUP RESPONSE message if at least one *DSCH Information Response 7.68 Mcps IE* or *USCH Information Response 7.68 Mcps IE* is included in the message and the SHCCH messages for this radio link will be transmitted over a different secondary CCPCH than selected by the UE from system information.]

For each Radio Link established in a cell in which at least one URA Identity is being broadcast, the DRNC shall include in the *URA Information IE* within the RADIO LINK SETUP RESPONSE message URA Information for this cell including the *URA ID IE*, the *Multiple URAs Indicator IE* indicating whether or not multiple URA Identities are being broadcast in the cell, and the *RNC-ID IEs* of all other RNCs that have at least one cell within the URA identified by the *URA ID IE*.

Depending on local configuration in the DRNS, the DRNC may include in the RADIO LINK SETUP RESPONSE message the *UTRAN Access Point Position IE* and the geographical co-ordinates of the cell, represented either by the *Cell GAI IE* or by the *Cell GA Additional Shapes IE*. If the DRNC includes the *Cell GA Additional Shapes IE* in the RADIO LINK SETUP RESPONSE message, it shall also include the *Cell GAI IE*.

If the DRNS need to limit the user rate in the uplink of a DCH due to congestion caused by the UL UTRAN Dynamic Resources (see subclause 9.2.1.79) when starting to utilise a new Radio Link, the DRNC shall include in the RADIO LINK SETUP RESPONSE message the *Allowed UL Rate IE* in the *DCH Information Response IE* for this Radio Link.

If the DRNS need to limit the user rate in the downlink of a DCH due to congestion caused by the DL UTRAN Dynamic Resources (see subclause 9.2.1.79) when starting to utilise a new Radio Link, the DRNC shall include in the RADIO LINK SETUP RESPONSE message the *Allowed DL Rate IE* in the *DCH Information Response IE* for this Radio Link.

If the *Permanent NAS UE Identity IE* is included in the RADIO LINK SETUP REQUEST message, the DRNS shall store the information for the considered UE Context for the life-time of the UE Context.

If the RADIO LINK SETUP REQUEST message includes the *Permanent NAS UE Identity IE* and a *C-ID IE* corresponding to a cell reserved for operator use, the DRNS shall use this information to determine whether it can set up a Radio Link on this cell or not for the considered UE Context.

If the HCS priority information is available in the DRNS, it shall include the *HCS Prio IE* for each of the established RLs in the RADIO LINK SETUP RESPONSE message.

The DRNS shall start receiving on the new RL(s) after the RLs are successfully established.

[FDD - If the RADIO LINK SETUP REQUEST message includes the *Cell Portion ID IE*, the DRNS shall use this information when it decides to use beamforming for the new RL.]

[FDD - If the RADIO LINK SETUP REQUEST message includes the *Initial DL DPCH Timing Adjustment Allowed IE*, then the DRNS may perform an initial DL DPCH Timing Adjustment (i.e. perform a timing advance or a timing delay with respect to the SFN timing) on a Radio Link. In this case, the DRNS shall include, for the concerned Radio Link(s), the *Initial DL DPCH Timing Adjustment IE* in the *Radio Link Information Response IE* in the RADIO LINK SETUP RESPONSE message.]

[FDD - If the RADIO LINK SETUP REQUEST message includes the *D-RNTI IE* which already has a RL and *Synchronisation Indicator IE*, the DRNC shall ignore the value in the *Frame Offset IE* and *Chip Offset IE* in the RADIO LINK SETUP REQUEST message and shall include in the *Frame Offset IE* and *Chip Offset IE* the values used for already established RL in the RADIO LINK SETUP RESPONSE message.]

**[FDD - Radio Link Set Handling:]**

[FDD - The *First RLS Indicator* IE indicates if the concerned RL shall be considered part of the first RLS established towards this UE. The DRNS shall use the *First RLS Indicator* IE to determine the initial TPC pattern in the DL of the concerned RL and all RLs which are part of the same RLS, as described in [10], section 5.1.2.2.1.2.]

[FDD - For each RL not having a common generation of the TPC commands in the DL with another RL, the DRNS shall assign to the RL a unique value for the *RL Set ID* IE which uniquely identifies the RL as an RL Set within the UE Context. In case of E-DCH, the generation of E-HICH related information for RLs in different RL Set(s) shall not be common.]

[FDD - For all RLs having a common generation of the TPC commands in the DL with another RL, the DRNS shall assign to each RL the same value for the *RL Set ID* IE which uniquely identifies these RLs as members of the same RL Set within the UE Context. In case of E-DCH, the generation of E-HICH information for all RLs in a RL Set shall be common.]

[FDD -The UL out-of-sync algorithm defined in ref. [10] shall, for each of the established RL Set(s), use the maximum value of the parameters *N\_OUTSYNC\_IND* and *T\_RLFAILURE* that are configured in the cells supporting the radio links of the RL Set. The UL in-sync algorithm defined in [10] shall, for each of the established RL Set(s), use the minimum value of the parameters *N\_INSYNC\_IND* that are configured in the cells supporting the radio links of the RL Set.]

[FDD - For each E-DCH RL which has or can have a common generation of E-RGCH information with another RL (current or future) when the DRNS would contain the E-DCH serving RL, the DRNS shall include the *E-DCH RL Set ID* IE in the RADIO LINK SETUP RESPONSE message. The value of the *E-DCH RL Set ID* IE shall allow the SRNC to identify the E-DCH RLs that have or can have a common generation of E-RGCH information.]

**[TDD- E-DCH:]**

[TDD – If the [3.84Mcps - *E-DCH Information IE*][1.28Mcps – *E-DCH Information 1.28Mcps IE*][7.68Mcps TDD - *E-DCH Information 7.68Mcps IE*] is present in the RADIO LINK SETUP REQUEST message:]

- [TDD – The DRNS shall setup the requested E-DCH resources on the Radio Link indicated by the *E-DCH Serving RL* IE.]
- [TDD – If the *TNL QoS* IE is included in the *E-DCH MAC-d Flows Information TDD* IE for an E-DCH MAC-d flow and if ALCAP is not used, the *TNL QoS* IE may be used by the DRNS to determine the transport bearer characteristics to apply in the uplink for the related MAC-d flow.]
- [TDD – If the RADIO LINK SETUP REQUEST message includes the *Transport Layer Address* IE and *Binding ID* IE in the *E-DCH MAC-d Flows Information TDD* IE for an E-DCH MAC-d flow, then the DRNS may use the transport layer address and the binding identifier received from the SRNC when establishing a transport bearer for the concerned E-DCH MAC-d flow.]
- [TDD - If the RADIO LINK SETUP REQUEST message includes the *E-DCH MAC-d Flow Multiplexing List* IE for an E-DCH MAC-d flow in the *E-DCH MAC-d Flows Information TDD* IE, the DRNS shall use this information for the related resource allocation operation.]
- [TDD - If in the RADIO LINK SETUP REQUEST message the *E-DCH Grant Type* IE in the *E-DCH MAC-d Flows Information TDD* IE is set to "Non-scheduled" for an E-DCH MAC-d flow the DRNS shall assume non-scheduled grants are configured for that E-DCH MAC-d flow.]
- [TDD - If in the RADIO LINK SETUP REQUEST message the *E-DCH Grant Type* IE in the *E-DCH MAC-d Flows Information TDD* IE is set to "Scheduled" the DRNS shall assume that it may issue scheduled grants for the concerned E-DCH MAC-d flow.]
- [TDD – If the RADIO LINK SETUP REQUEST message includes the *MAC-es Guaranteed Bit Rate* IE in the *E-DCH Logical Channel Information* IE in the *E-DCH MAC-d Flows Information TDD* IE, then the DRNS shall use this information to optimise MAC-e scheduling decisions for the related queue.]
- [1.28Mcps TDD - If the RADIO LINK SETUP REQUEST message includes the *MAC-es Maximum Bit Rate LCR* IE in the *E-DCH Logical Channel Information* IE in the *E-DCH MAC-d Flows Information TDD* IE, the DRNS shall use this information for the related resource allocation operation, and when applicable, for E-DCH scheduling.]

- [TDD - If the RADIO LINK SETUP REQUEST message includes the *Maximum MAC-d PDU Size Extended IE* for a E-DCH Logical Channel in the *E-DCH MAC-d Flows Information TDD IE* in the *E-DCH Information IE*, then the DRNS shall ignore the *MAC-d PDU Size IE* in the *MAC-d PDU Size List IE* and use *Maximum MAC-d PDU Size Extended IE* to optimise capacity allocation for the related E-DCH Logical Channel and use the indicated format in user plane frame structure for E-DCH channels [32] and MAC [41].]
- [3.84Mcps TDD - If the RADIO LINK SETUP REQUEST message includes the *E-DCH TDD Maximum Bitrate IE* in the *E-DCH TDD Information IE* for an E-DCH, the DRNS shall use this information for the related resource allocation operation, and when applicable, for E-DCH scheduling.]
- [1.28Mcps TDD - If the RADIO LINK SETUP REQUEST message includes the *E-DCH Physical Layer Category LCR IE* or *Extended E-DCH Physical Layer Category LCR IE* in the *E-DCH TDD Information LCR IE* for an E-DCH, the DRNS shall use this information for the related resource allocation operation, and when applicable, for E-DCH scheduling.]
- [7.68Mcps TDD - If the RADIO LINK SETUP REQUEST message includes the *E-DCH TDD Maximum Bitrate 7.68Mcps IE* in the *E-DCH TDD Information 7.68Mcps IE* for an E-DCH, the Node B shall use this information for the related resource allocation operation, and when applicable, for E-DCH scheduling.]
- [3.84Mcps TDD - If the RADIO LINK SETUP REQUEST message includes the *E-DCH Processing Overload Level IE* in the *E-DCH TDD Information IE*, then if the DRNS could not decode the E-PUCH for the last consecutive number of TTIs, indicated in the *E-DCH Processing Overload Level IE*, because of a processing issue, the DRNS shall notify the SRNC by initiating the Radio Link Failure procedure.]
- [7.68Mcps TDD - If the RADIO LINK SETUP REQUEST message includes the *E-DCH Processing Overload Level IE* in the *E-DCH TDD Information 7.68Mcps IE*, then if the DRNS could not decode the E-PUCH for the last consecutive number of TTIs, indicated in the *E-DCH Processing Overload Level IE*, because of a processing issue, the DRNS shall notify the SRNC by initiating the Radio Link Failure procedure.]
- [1.28Mcps TDD - If the RADIO LINK SETUP REQUEST message includes the *E-DCH Processing Overload Level IE* in the *E-DCH TDD Information LCR IE*, then if the DRNS could not decode the E-PUCH for the last consecutive number of TTIs, indicated in the *E-DCH Processing Overload Level IE*, because of a processing issue, the DRNS shall notify the SRNC by initiating the Radio Link Failure procedure.]
- [TDD - The DRNS may use the *Traffic Class IE* for a specific E-DCH MAC-d flow to determine the transport bearer characteristics to apply between DRNC and Node B.]
- [TDD – If the RADIO LINK SETUP REQUEST message includes the [3.84Mcps TDD - *E-DCH TDD Information IE*][1.28Mcps TDD - *E-DCH TDD Information LCR IE*] in the *E-DCH MAC-d Flows Information TDD IE*, then the DRNS shall use this value as a power offset for the transmission of scheduling information without any MAC-d PDUs.]
- [1.28Mcps TDD - If the RADIO LINK SETUP REQUEST message includes the *Maximum Number of Retransmission for Scheduling Info LCR IE* and the *E-DCH Retransmission timer for Scheduling Info LCR IE* in the *E-DCH TDD Information LCR IE*, then the DRNS shall use these parameters for the transmission of scheduling information without any MAC-d PDUs.]
- [3.84Mcps TDD - The DRNS shall determine any non-scheduled resource to be granted for the radio link, and return this in the *E-DCH Non-scheduled Grant Information TDD IE* in the *E-DCH Information Response IE* in the RADIO LINK SETUP RESPONSE message.]
- [3.84Mcps TDD - The DRNS shall allocate an E-RNTI identifier and include the E-RNTI identifier and the E-AGCH(s) assigned in the *E-DCH Information Response IE* in the RADIO LINK SETUP RESPONSE message.]
- [1.28Mcps TDD - The DRNS shall determine any non-scheduled resource to be granted for the radio link, and return this in the *E-DCH Non-scheduled Grant Information LCR TDD IE* in the *E-DCH Information Response 1.28Mcps IE* in the RADIO LINK ADDITION RESPONSE message.]
- [1.28Mcps TDD - The DRNS shall allocate an E-RNTI identifier and include the E-RNTI identifier, the E-AGCH(s) and E-HICH(s) assigned in the *E-DCH Information Response 1.28Mcps IE* in the RADIO LINK SETUP RESPONSE message.]
- [7.68Mcps TDD - The DRNS shall determine any non-scheduled resource to be granted for the radio link, and return this in the *E-DCH Non-scheduled Grant Information 7.68Mcps TDD IE* in the *E-DCH Information Response 7.68Mcps IE* in the RADIO LINK SETUP RESPONSE message.]

- [7.68Mcps TDD - The DRNS shall allocate an E-RNTI identifier and include the E-RNTI identifier and the E-AGCH(s) assigned in the *E-DCH Information Response 7.68Mcps* IE in the RADIO LINK SETUP RESPONSE message.]

#### Response Message:

Upon receipt of the RADIO LINK SETUP REQUEST message, the DRNS allocates the requested type of channelisation codes and other physical channel resources for each RL and assigns a binding identifier and a transport layer address for each DCH, for each set of co-ordinated DCHs [TDD - and for each DSCH and USCH]. This information shall be sent to the SRNC in the RADIO LINK SETUP RESPONSE message when all the RLs have been successfully established.

[1.28 Mcps TDD – if the DRNS assigns one or more PLCCCH sequence numbers to the radio link, then the PLCCCH assignment(s) shall be sent to the SRNC in the RADIO LINK SETUP RESPONSE message.]

After sending the RADIO LINK SETUP RESPONSE message the DRNS shall continuously attempt to obtain UL synchronisation on the Uu interface and start reception on the new RL.

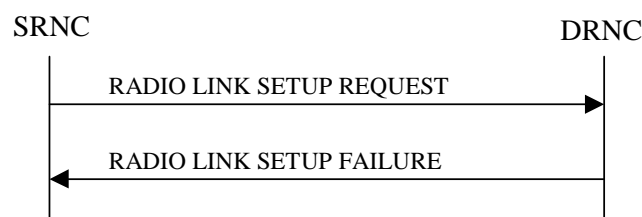
For each RL for which the *Delayed Activation* IE is not included in the RADIO LINK SETUP REQUEST message the DRNS shall:

- [FDD - start transmission on the DL DPDCH(s) of the new RL as specified in ref. [4].]
- [TDD - start transmission on the new RL immediately as specified in ref. [4].]

For each RL for which the *Delayed Activation* IE is included in the RADIO LINK SETUP REQUEST message, the DRNS shall:

- if the *Delayed Activation* IE indicates "Separate Indication":
  - not start any DL transmission for the concerned RL on the Uu interface;
- if the *Delayed Activation* IE indicates "CFN":
  - [FDD - start transmission on the DL DPDCH(s) of the new RL as specified in ref. [4], however never before the CFN indicated in the *Activation CFN* IE.]
  - [TDD - start transmission on the new RL at the CFN indicated in the *Activation CFN* IE as specified in ref. [4].]

#### 8.3.1.3 Unsuccessful Operation



**Figure 6: Radio Link Setup procedure: Unsuccessful Operation**

If the establishment of at least one radio link is unsuccessful, the DRNC shall respond with a RADIO LINK SETUP FAILURE message. The DRNC shall include in the RADIO LINK SETUP FAILURE message a general *Cause* IE or a *Cause* IE for each failed radio link. The *Cause* IE indicates the reason for failure.

[FDD - If some radio links were established successfully, the DRNC shall indicate this in the RADIO LINK SETUP FAILURE message in the same way as in the RADIO LINK SETUP RESPONSE message.]

If the RADIO LINK SETUP REQUEST message includes a *C-ID* IE corresponding to a cell reserved for operator use and the *Permanent NAS UE Identity* IE is not present, the DRNC shall reject the procedure and send the RADIO LINK SETUP FAILURE message.

[FDD - If the RL identified by the *HS-PDSCH RL ID IE* is a radio link in the DRNS and this RL is successfully established, then the DRNC shall allocate a HS-DSCH-RNTI to the UE Context and include the *HS-DSCH-RNTI IE*, the *HS-DSCH FDD Information Response IE* and the *SixtyfourQAM DL Support Indicator IE* in the RADIO LINK SETUP FAILURE message. This *SixtyfourQAM DL Support Indicator IE* is related to the HS-DSCH Radio Link.]

[FDD - If the RL identified by the *HS-PDSCH RL ID IE* in the *Additional HS Cell Information RL Setup IE* is a radio link in the DRNS and this RL is successfully established, then the DRNC shall allocate a HS-DSCH-RNTI to the UE Context and include the *HS-DSCH-RNTI IE*, the *HS-DSCH FDD Secondary Serving Information Response IE* and the *SixtyfourQAM DL Support Indicator IE* in the *Additional HS Cell Information Response IE* in the RADIO LINK SETUP FAILURE message. If the establishment of the RL identified by the *HS-PDSCH RL ID IE* in the *Additional HS Cell Information RL Setup IE*, i.e secondary serving HS-DSCH Radio Link is unsuccessful but the establishment of the RL identified by the *HS-PDSCH RL ID IE* for the serving HS-DSCH Radio Link is successful, then the DRNC shall indicate the unsuccessful secondary serving HS-DSCH Radio Link in the *Unsuccessful RL Information Response IE* in the RADIO LINK SETUP FAILURE message by setting the *RL ID IE* to the same value as the unsuccessful *HS-PDSCH RL ID IE* in the *Additional HS Cell Information RL Setup IE*.]

[1.28 Mcps TDD - If the RL identified by the *HS-PDSCH RL ID IE* is a radio link in the DRNS and this RL is successfully established, then the DRNC shall allocate a HS-DSCH-RNTI to the UE Context and include the *HS-DSCH-RNTI IE*, the *HS-DSCH TDD Information Response IE* and the *SixtyfourQAM DL Support Indicator IE* in the RADIO LINK SETUP FAILURE message.]

[FDD – If the *MIMO Activation Indicator IE* is included and the *Power Offset For S-CPICH for MIMO Request Indicator IE* is not included in the *HS-DSCH FDD Information IE* in the RADIO LINK SETUP REQUEST message but MIMO pilot configuration with Primary and Secondary CPICH is set up on the cell where the Serving HS-DSCH Radio Link is established, the setup of the serving HS-DSCH Radio Link shall be reported as failed and the DRNC shall include in the RADIO LINK SETUP FAILURE message the *Cause IE*.]

Typical cause values are:

#### Radio Network Layer Causes:

[FDD - UL Scrambling Code Already in Use;]  
 DL Radio Resources not Available;  
 UL Radio Resources not Available;  
 [FDD - Combining Resources not available;]  
 Combining not Supported  
 Requested Configuration not Supported;  
 Cell not Available;  
 [FDD - Requested Tx Diversity Mode not Supported;]  
 Power Level not Supported;  
 Number of DL codes not supported;  
 Number of UL codes not supported;  
 Dedicated Transport Channel Type not Supported;  
 DL Shared Channel Type not Supported;  
 [TDD - UL Shared Channel Type not Supported;]  
 [FDD - UL Spreading Factor not Supported;]  
 [FDD - DL Spreading Factor not Supported;]  
 CM not Supported;  
 [FDD - DPC mode change not Supported;]  
 Cell reserved for operator use;  
 Delayed Activation not supported;  
 E-DCH not supported;  
 [FDD - F-DPCH not supported;]  
 [FDD - Continuous Packet Connectivity DTX-DRX operation not Supported;]  
 [FDD - Continuous Packet Connectivity HS-SCCH less operation not Supported;]  
 [FDD - MIMO not supported;]  
 [FDD - E-DCH TTI2ms not supported;]  
 [FDD - Continuous Packet Connectivity DTX-DRX operation not available;]  
 [FDD - Continuous Packet Connectivity UE DTX Cycle not available;]  
 [FDD - MIMO not available;]  
 [FDD - SixteenQAM UL not Supported;]  
 HS-DSCH MAC-d PDU Size Format not supported;  
 [FDD – F-DPCH Slot Format operation not supported;]

E-DCH MAC-d PDU Size Format not available;  
 [FDD - E-DPCCH Power Boosting not supported;]  
 [FDD - SixtyfourQAM DL and MIMO Combined not available;]  
 [FDD - Multi Cell operation not available;]  
 [FDD - Multi Cell operation not supported;]  
 [FDD - TX diversity for MIMO UE on DL Control Channels not available;]  
 [FDD - Cell Specific Tx Diversity Handling For Multi Cell Operation Not Available;]  
 [FDD - Cell Specific Tx Diversity Handling For Multi Cell Operation Not Supported.]

#### Transport Layer Causes:

Transport Resource Unavailable.

#### Miscellaneous Causes:

Control Processing Overload;  
 HW Failure;  
 Not enough User Plane Processing Resources.

### 8.3.1.4 Abnormal Conditions

If the DRNC receives either an S-RNTI or a D-RNTI which already has RL(s) established [FDD – and the *Synchronisation Indicator* IE is not included in the RADIO LINK SETUP message,] the DRNC shall send the RADIO LINK SETUP FAILURE message to the SRNC, indicating the reason for failure.

[FDD - If the RADIO LINK SETUP REQUEST message includes the *Active Pattern Sequence Information* IE, but the *Transmission Gap Pattern Sequence Information* IE is not present, then the DRNC shall reject the procedure using the RADIO LINK SETUP FAILURE message.]

[FDD - If the RADIO LINK SETUP REQUEST message includes both the *Initial DL TX Power* IE and the *Primary CPICH Ec/No* IE or does not include either of these IEs, then the DRNC shall reject the procedure using the RADIO LINK SETUP FAILURE message.]

If more than one DCH of a set of co-ordinated DCHs has the *QE-Selector* IE set to "selected" [TDD - or no DCH of a set of co-ordinated DCHs has the *QE-Selector* IE set to "selected"] the DRNS shall reject the Radio Link Setup procedure and shall respond with a RADIO LINK SETUP FAILURE message.

[FDD - If only the *Initial DL TX Power* IE or the *Uplink SIR Target* IE is included in the RADIO LINK SETUP REQUEST message, then DRNC shall reject the Radio Link Setup procedure and shall respond with the RADIO LINK SETUP FAILURE message.]

If the RADIO LINK SETUP REQUEST message includes a *DCH Information* IE with multiple *DCH Specific Info* IEs, and if the DCHs in the *DCH Information* IE do not have the same *Transmission Time Interval* IE in the *Semi-static Transport Format Information* IE, then the DRNC shall reject the procedure using the RADIO LINK SETUP FAILURE message.

[FDD - If the RADIO LINK SETUP REQUEST message includes the *Enhanced Primary CPICH Ec/No* IE, but not the *Primary CPICH Ec/No* IE, then the DRNC shall reject the procedure using the RADIO LINK SETUP FAILURE message.]

If the RADIO LINK SETUP REQUEST message includes the *Transport Layer Address* IE and the *Binding ID* IE in the *RL Specific DCH Information* IE [FDD – or in the *RL Specific E-DCH Information* IE] included in the *RL Information* IE for a specific RL and the *Diversity Control Field* IE is set to "Must" [FDD- or the RL is combined with an E-DCH RL previously listed in the RADIO LINK SETUP RESPONSE message in the DRNS], the DRNC shall reject the Radio Link Setup procedure and the DRNC shall respond with the RADIO LINK SETUP FAILURE message.

If ALCAP is not used, if the RADIO LINK SETUP REQUEST message does not include the *Transport Layer Address* IE and the *Binding ID* IE in the *RL Specific DCH Information* IE nor *RL Specific E-DCH Information* IE in the *RL Information* IE for a specific RL and the *Diversity Control Field* IE is set to "May", the DRNC shall reject the Radio Link Setup procedure and respond with the RADIO LINK SETUP FAILURE message.

If ALCAP is not used, if the RADIO LINK SETUP REQUEST message does not include the *Transport Layer Address* IE and the *Binding ID* IE in the *RL Specific DCH Information* IE in the *RL Information* IE for a specific RL and the

*Diversity Control Field* IE is set to "Must Not", the DRNC shall reject the Radio Link Setup procedure and respond with the RADIO LINK SETUP FAILURE message.

If ALCAP is not used, if the RADIO LINK SETUP REQUEST message does not include the *Transport Layer Address* IE and the *Binding ID* IE in the *RL Specific DCH Information* IE in the *RL Information* IE for the first RL and/or [FDD - in the *RL Specific E-DCH Information* IE in the *RL Information* IE for the first E-DCH RL][TDD – in the *E-DCH MAC-d Flows Information TDD* IE], the DRNC shall reject the Radio Link Setup procedure and respond with the RADIO LINK SETUP FAILURE message.

If ALCAP is not used, if the RADIO LINK SETUP REQUEST message does not include the *Transport Layer Address* IE and the *Binding ID* IE for an HS-DSCH MAC-d Flow in the *HS-DSCH MAC-d Flows Information* IE, the DRNC shall reject the Radio Link Setup procedure and respond with the RADIO LINK SETUP FAILURE message.

[TDD - If ALCAP is not used, if the RADIO LINK SETUP REQUEST message does not include the *Transport Layer Address* IE and the *Binding ID* IE for a DSCH in the *DSCH TDD Information* IE and/or for an USCH in the *USCH Information* IE, the DRNC shall reject the Radio Link Setup procedure and respond with the RADIO LINK SETUP FAILURE message.]

If the RADIO LINK SETUP REQUEST message includes the *Transport Layer Address* IE or the *Binding ID* IE, and not both are present for a transport bearer intended to be established, the DRNC shall reject the Radio Link Setup procedure and the DRNC shall respond with the RADIO LINK SETUP FAILURE message.

If the RADIO LINK SETUP REQUEST message includes an *HS-PDSCH RL-ID* IE not referring to one of the radio links to be established, the DRNC shall reject the procedure using the RADIO LINK SETUP FAILURE message.

If the RADIO LINK SETUP REQUEST message contains the *HS-DSCH Information* IE and if the Priority Queues associated with the same *HS-DSCH MAC-d Flow ID* IE have the same *Scheduling Priority Indicator* IE value, the DRNC shall reject the procedure using the RADIO LINK SETUP FAILURE message.

If the RADIO LINK SETUP REQUEST message includes the *Maximum MAC-d PDU Size Extended* IE for a Priority Queue in the *HS-DSCH MAC-d Flows Information* IE in the *HS-DSCH Information* IE, and the *HS-DSCH MAC-d PDU Size Format* IE in the *HS-DSCH Information* IE has the value "Indexed MAC-d PDU Size", the DRNC shall reject the procedure using the RADIO LINK SETUP FAILURE message.

If the RADIO LINK SETUP REQUEST message does not include the *Maximum MAC-d PDU Size Extended* IE for a Priority Queue in the *HS-DSCH MAC-d Flows Information* IE in the *HS-DSCH Information* IE, and the *HS-DSCH MAC-d PDU Size Format* IE in the *HS-DSCH Information* IE has the value "Flexible MAC-d PDU Size", the DRNC shall reject the procedure using the RADIO LINK SETUP FAILURE message.

[FDD - If the RADIO LINK SETUP REQUEST message contains, for at least one logical channel, the *Maximum MAC-d PDU Size Extended* IE in the *E-DCH MAC-d Flows Information* IE in the *E-DCH FDD Information* IE and there exist a logical channel for which the *Maximum MAC-d PDU Size Extended* IE in the *E-DCH MAC-d Flows Information* IE in the *E-DCH FDD Information* IE is not present, the DRNC shall reject the procedure using the RADIO LINK SETUP FAILURE message.]

[TDD - If the RADIO LINK SETUP REQUEST message contains, for at least one logical channel, the *Maximum MAC-d PDU Size Extended* IE in the *E-DCH MAC-d Flows Information TDD* IE in the *E-DCH Information* IE, and there exist a logical channel for which the *Maximum MAC-d PDU Size Extended* IE in the *E-DCH MAC-d Flows Information TDD* IE in the *E-DCH Information* IE is not present, the DRNC shall reject the procedure using the RADIO LINK SETUP FAILURE message.]

[FDD - If the RADIO LINK SETUP REQUEST message includes the *F-DPCH Information* IE and the *DL DPCH Information* IE, then the DRNS shall reject the procedure using the RADIO LINK SETUP FAILURE message.]

[FDD – If the RADIO LINK SETUP REQUEST message contains the *E-DCH RL Indication* IE set to "E-DCH", but does not contain the *E-DCH FDD Information* IE, or if the message contains the *E-DCH FDD Information* IE, but does not contain the *E-DCH RL Indication* IE set to "E-DCH", then the DRNC shall reject the procedure using the RADIO LINK SETUP FAILURE message.]

If the RADIO LINK SETUP REQUEST message contains the *HS-PDSCH RL ID* IE and the *Serving E-DCH RL* IE but the Serving HS-DSCH Radio Link and the Serving E-DCH Radio Link are not configured to be in the same cell then the DRNC shall reject the procedure using the RADIO LINK SETUP FAILURE message.

[FDD - If the RADIO LINK SETUP REQUEST message contains the *HS-PDSCH RL ID IE* and the *E-DPCH Information IE* which includes the *HS-DSCH Configured Indicator IE* set as "HS-DSCH not configured" then the DRNC shall reject the procedure using the RADIO LINK SETUP FAILURE message.]

[FDD - If the RADIO LINK SETUP REQUEST message contains the *E-DPCH Information IE* but does not contain the *UL DPDCCH Indicator for E-DCH operation IE*, then the DRNC shall reject the procedure using the RADIO LINK SETUP FAILURE message.]

[FDD – If the RADIO LINK SETUP REQUEST message contains the *Serving Cell Change CFN IE*, but neither the *Serving E-DCH RL IE* nor *HS-DSCH Information IE* is included, then the DRNS shall reject the procedure using the RADIO LINK SETUP FAILURE message.]

[FDD – If the RADIO LINK SETUP REQUEST message contains the *Transport Bearer Not Requested Indicator IE* for a DCH, but does not contain the *Unidirectional DCH indicator IE* set to "Uplink DCH only" in the *DCH Specific Info IE* for the DCH, the DRNC shall reject the procedure using the RADIO LINK SETUP FAILURE message.]

[FDD – If the RADIO LINK SETUP REQUEST message contains the *Synchronisation Indicator IE* for a RL, but does not contain the *D-RNTI IE* which already has the RL, the DRNC shall reject the procedure using the RADIO LINK SETUP FAILURE message.]

[FDD - If the *UL DPCH Information IE* in the RADIO LINK SETUP REQUEST message contains the *UL DPCCCH Slot Format* set to "4" but does not contain the *F-DPCH Information IE*, then the DRNC shall reject the procedure using the RADIO LINK SETUP FAILURE message.]

[FDD - If the *UL DPCH Information IE* in the RADIO LINK SETUP REQUEST message contains the *UL DPCCCH Slot Format* set to "0" or "2" and the *Continuous Packet Connectivity DTX-DRX Information IE*, then the DRNC shall reject the procedure using the RADIO LINK SETUP FAILURE message.]

[FDD - If the *UL DPCH Information IE* in the RADIO LINK SETUP REQUEST message contains *Diversity Mode IE* set to "Closed loop mode 1" and *UL DPCCCH Slot Format* not set to "2" or "3", then the DRNC shall reject the procedure using the RADIO LINK SETUP FAILURE message.]

[FDD - If the RADIO LINK SETUP REQUEST message contains the *MIMO Activation Indicator IE*, *Sixtyfour QAM Usage Allowed Indicator IE* set to "Allowed" and/or the *Additional HS Cell Information RL Setup IE*, but does not contain the *HS-DSCH MAC-d PDU Size Format IE* set to "Flexible MAC-d PDU Size", then the DRNC shall reject the procedure using the RADIO LINK SETUP FAILURE message.]

[FDD - If the RADIO LINK SETUP REQUEST message contains a *MIMO Activation Indicator IE* and an *Additional HS Cell Information RL Setup IE*, then the DRNC shall reject the procedure using the RADIO LINK SETUP FAILURE message.]

[FDD – If the RADIO LINK SETUP REQUEST message contains the *Continuous Packet Connectivity DTX-DRX Information IE* but does not contain the *F-DPCH Information IE*, then the DRNC shall reject the procedure using the RADIO LINK SETUP FAILURE message.]

[FDD – If the RADIO LINK SETUP REQUEST message contains the *Serving E-DCH RL ID IE* but contains the *Transport Bearer Not Requested Indicator IE* in the RL Specific E-DCH Information for the new Serving E-DCH RL, the DRNC shall reject the procedure using the RADIO LINK FAILRE message.]

[FDD - If the RADIO LINK SETUP REQUEST message includes the *Transport Bearer Not Requested Indicator IE* for a DCH or an E-DCH MAC-d Flow for a specific RL and the specific RL is combined with RL which the transport bearer is configured to be established for the DCH or the E-DCH MAC-d Flow, previously listed in the RADIO LINK SETUP RESPONSE message in the DRNS, the DRNC shall reject the procedure using the RADIO LINK SETUP FAILURE message.]

[FDD – If the RADIO LINK SETUP REQUEST message contains the *Additional HS Cell Information RL Setup IE* indicating a secundary serving cell that is not in the same Node B as the new serving HS-DSCH cell, then the DRNC shall reject the procedure using the RADIO LINK SETUP FAILURE message.]

[FDD - If the RADIO LINK SETUP REQUEST message contains the *Additional HS Cell Information RL Setup IE* and if the *HS-DSCH Information IE* is not present, then the DRNC shall reject the procedure using the RADIO LINK SETUP FAILURE message.]

If the RADIO LINK SETUP REQUEST message includes the *DL RLC PDU Size Format IE* for a Priority Queue in the *HS-DSCH MAC-d Flows Information IE* in the *HS-DSCH Information IE* set to "Flexible RLC PDU Size", and the *HS-*



*DSCH MAC-d PDU Size Format* IE in the *HS-DSCH Information* IE has the value "Indexed MAC-d PDU Size", the DRNC shall reject the procedure using the RADIO LINK SETUP FAILURE message.

If the RADIO LINK SETUP REQUEST message does not include the *Maximum MAC-d PDU Size Extended* IE for a Priority Queue in the *HS-DSCH MAC-d Flows Information* IE in the *HS-DSCH Information* IE, and the *DL RLC PDU Size Format* IE in the *HS-DSCH Information* IE has the value "Flexible RLC PDU Size", the DRNC shall reject the procedure using the RADIO LINK SETUP FAILURE message.

[FDD - If the RADIO LINK SETUP REQUEST message contains in the *HS-DSCH FDD Secondary Serving Information* IE in the *Additional HS Cell Information RL Setup* IE the *Diversity Mode* IE not set to "None" but not the *Transmit Diversity Indicator* or contains the *Transmit Diversity Indicator* but not the *Diversity Mode* IE not set to "None", then the DRNS shall reject the procedure using the RADIO LINK SETUP FAILURE message.]

## 8.3.2 Radio Link Addition

### 8.3.2.1 General

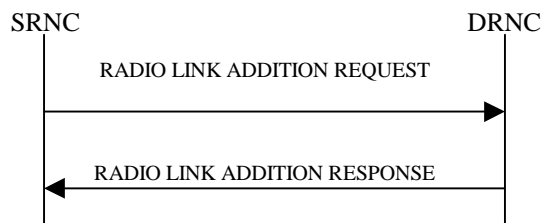
This procedure is used for establishing the necessary resources in the DRNS for one [FDD – or more] additional RLs towards a UE when there is already at least one RL established to the concerned UE via this DRNS.

This procedure shall use the signalling bearer connection for the relevant UE Context.

The Radio Link Addition procedure shall not be initiated if a Prepared Reconfiguration exists, as defined in subclause 3.1.

[TDD - The Radio Link Addition procedure serves to establish a new Radio Link with the DSCH and USCH included, if they existed before.]

### 8.3.2.2 Successful Operation



**Figure 7: Radio Link Addition procedure: Successful Operation**

The procedure is initiated with a RADIO LINK ADDITION REQUEST message sent from the SRNC to the DRNC.

Upon receipt, the DRNS shall reserve the necessary resources and configure the new RL(s) according to the parameters given in the message. Unless specified below, the meaning of parameters is specified in other specifications.

The DRNS shall prioritise resource allocation for the RL(s) to be established according to Annex A.

#### Transport Channel Handling:

[3.84 Mcps TDD - The DRNC shall include the *UL/DL DPCH Information* IE within the *UL/DL CCTrCH Information* IE for each CCTrCH that requires DPCHs.]

[1.28 Mcps TDD - The DRNC shall include the *UL/DL DPCH Information LCR* IE within the *UL/DL CCTrCH Information LCR* IE for each CCTrCH that requires DPCHs.]

[7.68 Mcps TDD - The DRNC shall include the *UL/DL DPCH Information 7.68 Mcps* IE within the *UL/DL CCTrCH Information 7.68 Mcps* IE for each CCTrCH that requires DPCHs.]

#### [TDD - DSCH:]

[3.84 Mcps TDD - If the radio link to be added includes a DSCH, the DRNC shall include in the RADIO LINK ADDITION RESPONSE message a *DSCH Information Response* IE for each DSCH.]

[1.28 Mcps TDD - If the radio link to be added includes a DSCH, the DRNC shall include in the RADIO LINK ADDITION RESPONSE message a *DSCH Information Response LCR* IE for each DSCH.]

[7.68 Mcps TDD - If the radio link to be added includes a DSCH, the DRNC shall include in the RADIO LINK ADDITION RESPONSE message a *DSCH Information Response 7.68 Mcps* IE for each DSCH.]

**[TDD - USCH:]**

[3.84 Mcps TDD - If the radio link to be added includes any USCHs, the DRNC shall include in the RADIO LINK ADDITION RESPONSE message a *USCH Information Response* IE for each USCH.]

[1.28 Mcps TDD - If the radio link to be added includes any USCHs, the DRNC shall include in the RADIO LINK ADDITION RESPONSE message a *USCH Information Response LCR* IE for each USCH.]

[7.68 Mcps TDD - If the radio link to be added includes any USCHs, the DRNC shall include in the RADIO LINK ADDITION RESPONSE message a *USCH Information Response 7.68 Mcps* IE for each USCH.]

**Physical Channels Handling:**

**[FDD -Compressed Mode:]**

[FDD - If the RADIO LINK ADDITION REQUEST message includes the *Active Pattern Sequence Information* IE, the DRNS shall use the information to activate the indicated (all ongoing) Transmission Gap Pattern Sequence(s) in the new RL. The received *CM Configuration Change CFN* IE refers to the latest passed CFN with that value. The DRNS shall treat the received *TGCFN* IEs as follows:]

- [FDD - If any received *TGCFN* IE has the same value as the received *CM Configuration Change CFN* IE, the DRNS shall consider the concerned Transmission Gap Pattern Sequence as activated at that CFN.]
- [FDD - If any received *TGCFN* IE does not have the same value as the received *CM Configuration Change CFN* IE but the first CFN after the *CM Configuration Change CFN* with a value equal to the *TGCFN* IE has already passed, the DRNS shall consider the concerned Transmission Gap Pattern Sequence as activated at that CFN.]
- [FDD - For all other Transmission Gap Pattern Sequences included in the *Active Pattern Sequence Information* IE, the DRNS shall activate each Transmission Gap Pattern Sequence at the first CFN after the *CM Configuration Change CFN* with a value equal to the *TGCFN* IE for the Transmission Gap Pattern Sequence.]

[FDD - If the RADIO LINK ADDITION REQUEST message includes the *Active Pattern Sequence Information* IE and the concerned UE Context is configured to use F-DPCH in the downlink, the DRNS shall ignore, when activating the Transmission Gap Pattern Sequence(s), the downlink compressed mode method information, if existing, for the concerned Transmission Gap Pattern Sequence(s) in the Compressed Mode Configuration.]

[FDD - If the *Active Pattern Sequence Information* IE is not included, the DRNS shall not activate the ongoing compressed mode pattern in the new RLs, but the ongoing pattern in the existing RL shall be maintained.]

[FDD - If some Transmission Gap Pattern sequences using SF/2 method are initialised in the DRNS and the UE Context is configured to use DPCH in the downlink, the DRNC shall include the *Transmission Gap Pattern Sequence Scrambling Code Information* IE in the *DL Code Information* IE in the RADIO LINK ADDITION RESPONSE message to indicate the Scrambling code change method that it selects for each channelisation code.]

**[FDD - DL Code Information:]**

[FDD - When more than one DL DPDCH are assigned per RL, the segmented physical channel shall be mapped on to DL DPDCHs according to [8]. When  $p$  number of DL DPDCHs are assigned to each RL, the first pair of DL Scrambling Code and FDD DL Channelisation Code Number corresponds to "*PhCH number 1*", the second to "*PhCH number 2*", and so on until the  $p$ th to "*PhCH number p*".]

**[TDD - CCTrCH Handling:]**

[TDD - If the *UL CCTrCH Information* IE is present, the DRNS shall configure the new UL CCTrCH(s) according to the parameters given in the message.]

[1.28Mcps TDD - If the *UL CCTrCH Information* IE includes the *TDD TPC Uplink Step Size* IE, the DRNS shall configure the uplink TPC step size according to the parameters given in the message, otherwise it shall use the step size configured in other radio link.]

[TDD - If the *DL CCTrCH Information* IE is present, the DRNS shall configure the new DL CCTrCH(s) according to the parameters given in the message.]

[TDD - If the *DL CCTrCH Information* IE includes the *TDD TPC Downlink Step Size* IE, the DRNS shall configure the downlink TPC step size according to the parameters given in the message, otherwise it shall use the step size configured in other radio link.]

#### General:

[FDD - The DRNS shall use the provided Uplink SIR Target value as the current target for the inner-loop power control.]

### Radio Link Handling:

#### Diversity Combination Control:

The *Diversity Control Field* IE indicates for each RL whether the DRNS shall combine the new RL with existing RL(s) or not on the Iur.

- If the *Diversity Control Field* IE is set to "May" (be combined with another RL), the DRNS shall decide for any of the alternatives.
- If the *Diversity Control Field* IE is set to "Must", the DRNS shall combine the RL with one of the other RL. When a new RL is to be combined the DRNS shall choose which RL(s) to combine it with.
- If the *Diversity Control Field* IE is set to "Must not", the DRNS shall not combine the RL with any other existing RL.

[FDD - The *Diversity Control Field* IE is only applicable for DCHs, in case of E-DCH it shall always be assumed to be set to "May".]

In the case of not combining a RL with a RL established with a previous Radio Link Setup or Radio Link Addition Procedure or a RL previously listed in the RADIO LINK ADDITION RESPONSE message, the DRNC shall indicate with the Diversity Indication in the *RL Information Response* IE in the RADIO LINK ADDITION RESPONSE message that no combining is done. In this case the DRNC shall:

- include in the *DCH Information Response* IE both the *Transport Layer Address* IE and the *Binding ID* IE for the transport bearer to be established for each DCH of the RL in the RADIO LINK ADDITION RESPONSE message [FDD - for which the *Transport Bearer Not Requested Indicator* IE was not included].
- [FDD - include in the RADIO LINK ADDITION RESPONSE the *Transport Bearer Not Setup Indicator* IE for every DCH or set of co-ordinated DCHs for which establishment of a transport bearer has not taken place as a result of information in the *Transport Bearer Not Requested Indicator* IE in the RADIO LINK ADDITION REQUEST message.]

[FDD - In case of not combining E-DCH, the *E-DCH FDD Information Response* IE shall be included in the RADIO LINK ADDITION RESPONSE message containing the *Binding ID* IE and the *Transport Layer Address* IE for the establishment of transport bearers for every E-DCH MAC-d flow being established for which the *Transport Bearer Not Requested Indicator* IE was not included.]

[FDD - In case of not combining E-DCH, the DRNC shall include in the RADIO LINK ADDITION RESPONSE the *Transport Bearer Not Setup Indicator* IE for every E-DCH MAC-d flow for which establishment of a transport bearer has not taken place as a result of information in the *Transport Bearer Not Requested Indicator* IE in the RADIO LINK ADDITION REQUEST message.]

In the case of combining with a RL established with a previous Radio Link Setup or Radio Link Addition Procedure or with a RL previously listed in this RADIO LINK ADDITION RESPONSE message, the DRNC shall indicate with the Diversity Indication in the *RL Information Response* IE in the RADIO LINK ADDITION RESPONSE message that the RL is combined. In this case, the *RL ID* IE indicates (one of) the previously established RL(s) or a RL previously listed in this RADIO LINK ADDITION RESPONSE

message with which the new RL is combined and if the ALCAP is not used [FDD - and the transport bearer for this DCH is already established], the *Transport Layer Address IE* and the *Binding ID IE* in the *RL Specific DCH Information IE* included in the *RL Information IE* for a specific RL in the RADIO LINK ADDITION REQUEST message, shall not be used.

[FDD - In the case of combining with an E-DCH RL established with a previous Radio Link Setup or Radio Link Addition Procedure or with a RL previously listed in this RADIO LINK ADDITION RESPONSE message, one of the previously established RLs or a RL previously listed in this RADIO LINK ADDITION RESPONSE message including the *E-DCH FDD Information Response IE* and part of the same Radio Link Set shall be regarded as the RL with which the concerned E-DCH RL is combined and if the ALCAP is not used, the *Transport Layer Address IE* and the *Binding ID IE* in the *RL Specific E-DCH Information IE* included in the *RL Information IE* for a specific RL in the RADIO LINK ADDITION REQUEST message, shall not be used. In case E-DCH RL is established for the first time, the DRNC shall include *E-DCH FDD Information Response IE* instead of using the Diversity Indication of DCH RL in the *RL Information Response IE* in the RADIO LINK ADDITION RESPONSE message. It shall include in the *E-DCH FDD Information Response IE* the *Binding ID IE* and *Transport Layer Address IE* for the transport bearers to be established for each E-DCH MAC-d flow of this E-DCH RL for which the *Transport Bearer Not Requested Indicator IE* was not included.]

[TDD - The DRNC shall always include in the RADIO LINK ADDITION RESPONSE message both the *Transport Layer Address IE* and the *Binding ID IE* for the transport bearer to be established for each DSCH and USCH of the RL.]

In the case of a set of co-ordinated DCHs, the DRNC shall include in the RADIO LINK ADDITION RESPONSE message the *Binding ID IE* and the *Transport Layer Address IE* for only one of the DCHs in the set of co-ordinated DCHs [FDD - for which the *Transport Bearer Not Requested Indicator IE* was not included].

If the DRNS needs to limit the user rate in the uplink of a DCH due to congestion caused by the UL UTRAN Dynamic Resources (see subclause 9.2.1.79) when starting to utilise a new Radio Link, the DRNC shall include in the RADIO LINK ADDITION RESPONSE message the *Allowed UL Rate IE* in the *DCH Information Response IE* for this Radio Link.

If the DRNS needs to limit the user rate in the downlink of a DCH due to congestion caused by the DL UTRAN Dynamic Resources (see subclause 9.2.1.79) when starting to utilise a new Radio Link, the DRNC shall include in the RADIO LINK ADDITION RESPONSE message the *Allowed DL Rate IE* in the *DCH Information Response IE* for this Radio Link.

#### **[FDD - Transmit Diversity:]**

[FDD - The DRNS shall activate any feedback mode diversity according to the received settings.]

[FDD - If the cell in which the RL is being added is capable to provide Close loop Tx diversity, the DRNC shall indicate the Closed loop timing adjustment mode of the cell by including the *Closed Loop Timing Adjustment Mode IE* in the RADIO LINK ADDITION RESPONSE message.]

[FDD - When the *Transmit Diversity Indicator IE* and/or *Transmit Diversity Indicator IE* in the *HS-DSCH FDD Secondary Serving Information IE* in the *Additional HS Cell Information RL Addition IE* is present the DRNS shall activate/deactivate the Transmit Diversity for each new Radio Link and/or secondary serving HS-DSCH Radio Link in accordance with the *Transmit Diversity Indicator IE* and/or *Transmit Diversity Indicator IE* in the *HS-DSCH FDD Secondary Serving Information IE* using the diversity mode of the existing Radio Link(s) and/or existing secondary serving HS-DSCH Radio Link.]

#### **DL Power Control:**

[FDD - If the *Primary CPICH Ec/No IE* or the *Primary CPICH Ec/No IE* and the *Enhanced Primary CPICH Ec/No IE* measured by the UE are included for an RL in the RADIO LINK ADDITION REQUEST message, the DRNS shall use this in the calculation of the Initial DL TX Power for this RL. If the *Primary CPICH Ec/No IE* is not present, the DRNS shall set the Initial DL TX Power based on the power relative to the Primary CPICH power used by the existing RLs.]

[TDD - If [3.84Mcps TDD and 7.68 Mcps TDD - the *DL Time Slot ISCP Info IE*] [1.28Mcps TDD - the *DL Time Slot ISCP Info LCR IE*] is included in the RADIO LINK ADDITION REQUEST message, the DRNS shall use it in the calculation of the Initial DL TX Power.]

[TDD - If the *Primary CCPCH RSCP Delta* IE is included, the DRNS shall assume that the reported value for Primary CCPCH RSCP is in the negative range as per [24], and the value is equal to the *Primary CCPCH RSCP Delta* IE. If the *Primary CCPCH RSCP Delta* IE is not included and the *Primary CCPCH RSCP* IE is included, the DRNS shall assume that the reported value is in the non-negative range as per [24], and the value is equal to the *Primary CCPCH RSCP* IE. The DRNS shall use it in the calculation of the Initial DL TX Power.]

[TDD - If the *Primary CCPCH RSCP* IE, *Primary CCPCH RSCP Delta* IE, [3.84Mcps TDD and 7.68 Mcps TDD - and the *DL Time Slot ISCP Info* IE] [1.28Mcps TDD - and the *DL Time Slot ISCP Info LCR* IE] are not present, the DRNS shall set the Initial DL TX Power based on the power relative to the Primary CCPCH power used by the existing RL.]

[FDD - The Initial DL TX Power shall be applied until UL synchronisation is achieved on the Uu interface for that RLS or Power Balancing is activated. No inner loop power control or power balancing shall be performed during this period. The DL power shall then vary according to the inner loop power control (see ref. [10] subclause 5.2.1.2) and the power control procedure (see 8.3.7).]

[TDD - The Initial DL TX Power shall be applied until UL synchronisation is achieved on the Uu interface for that RL. No inner loop power control shall be performed during this period. The DL power shall then vary according to the inner loop power control (see ref. [22] subclause 4.2.3.3).]

[3.84 Mcps TDD and 7.68 Mcps TDD - The DL TX power upper and lower limit is configured in the following way: The DRNC shall include the *Maximum DL TX Power* IE and *Minimum DL TX Power* IE in the RADIO LINK ADDITION RESPONSE message. If the maximum or minimum power needs to be different for particular DCH type CCTrCHs, the DRNC shall include the value(s) for that CCTrCH in the *CCTrCH Maximum DL TX Power* IE and *CCTrCH Minimum DL TX Power*. The DRNS shall not transmit with a higher power than indicated by the appropriate *Maximum DL TX Power* IE/*CCTrCH Maximum DL TX Power* IE or lower than indicated by the appropriate *Minimum DL TX Power* IE/*CCTrCH Minimum DL TX Power* IE on any DL DPCH within each CCTrCH of the RL.]

[1.28 Mcps TDD - The DL TX power upper and lower limit is configured in the following way: The DRNC shall include the *Maximum DL TX Power* IE and *Minimum DL TX Power* IE in the RADIO LINK ADDITION RESPONSE message. If the maximum or minimum power needs to be different for particular timeslots within a DCH type CCTrCH, the DRNC shall include the value(s) for that timeslot in the *Maximum DL TX Power* IE and *Minimum DL TX Power* within the *DL Timeslot Information LCR* IE. The DRNS shall not transmit with a higher power than indicated by the appropriate *Maximum DL TX Power* IE or lower than indicated by the appropriate *Minimum DL TX Power* IE on any DL DPCH within each timeslot of the RL.]

[FDD - If the *DPC Mode* IE is present in the RADIO LINK ADDITION REQUEST message, the DRNC shall apply the DPC mode indicated in the message, and be prepared that the DPC mode may be changed during the lifetime of the RL. If the *DPC Mode* IE is not present in the RADIO LINK ADDITION REQUEST message, DPC mode 0 shall be applied (see ref. [10]).]

The DRNC shall provide the configured *Maximum DL TX Power* IE and *Minimum DL TX Power* IE for every new RL to the SRNC in the RADIO LINK ADDITION RESPONSE message. The DRNS shall not transmit with a power higher than indicated by the *Maximum DL TX Power* IE or lower than indicated by the *Minimum DL TX Power* IE on any DL DPCH [FDD - or on the F-DPCH] of the RL [FDD - except, if the UE Context is configured to use DPCH in the downlink, during compressed mode, when the  $\delta P_{curr}$ , as described in ref.[10] subclause 5.2.1.3, shall be added to the maximum DL power for the associated compressed frame.]

[FDD - If the power balancing is active with the Power Balancing Adjustment Type of the UE Context set to "Individual" in the existing RL(s) and the RADIO LINK ADDITION REQUEST message includes the *DL Reference Power* IE, the DRNS shall activate the power balancing and use the *DL Reference Power* IE for the power balancing procedure in the new RL(s), if activation of power balancing by the RADIO LINK ADDITION REQUEST message is supported by the DRNS, according to subclause 8.3.15. In this case, the DRNC shall include the *DL Power Balancing Activation Indicator* IE in the *RL Information Response* IE in the RADIO LINK ADDITION RESPONSE message. If the DRNS starts the DL transmission and the activation of the power balancing at the same CFN, the initial power of the power balancing, i.e.  $P_{init}$  shall be set to the power level which is calculated based on the *Primary CPICH Ec/No* IE or the *Enhanced Primary CPICH Ec/No* IE (if received), or to the power level which is calculated based on the power relative to the Primary CPICH power used by the existing RLs.]

#### **UL Power Control:**

The DRNC shall also provide the configured UL Maximum SIR and UL Minimum SIR for every new RL to the SRNC in the RADIO LINK ADDITION RESPONSE message. These values are taken into consideration by DRNS admission control and shall be used by the SRNC as limits for the UL inner-loop power control target.

#### Neighbouring Cell Handling:

If there are UMTS neighbouring cell(s) to the cell in which a Radio Link was established then:

- The DRNC shall include in the RADIO LINK ADDITION RESPONSE message the *Neighbouring FDD Cell Information IE* and/or *Neighbouring TDD Cell Information IE* in the *Neighbouring UMTS Cell Information IE* for each neighbouring FDD cell and/or TDD cell respectively. In addition, if the information is available, the DRNC shall include in the RADIO LINK ADDITION RESPONSE message the *Frame Offset IE*, *Primary CPICH Power IE*, *Cell Individual Offset IE*, *STTD Support Indicator IE*, *Closed Loop Mode1 Support Indicator IE*, *Coverage Indicator IE*, *Antenna Co-location Indicator IE* and *HCS Prio IE* in the *Neighbouring FDD Cell Information IE*, and the *Frame Offset IE*, *Cell Individual Offset IE*, *DPCH Constant Value IE* and the *PCCPCH Power IE*, *Coverage Indicator IE*, *Antenna Co-location Indicator IE* and *HCS Prio IE* in the *Neighbouring TDD Cell Information IE* or the *Neighbouring TDD Cell Information LCR IE*. If the *Neighbouring TDD Cell Information IE* includes the *Sync Case IE* set to "Case1", the DRNC shall include the *Time SlotFor SCH IE* in the *Neighbouring TDD Cell Information IE*. If the *Neighbouring TDD Cell Information IE* includes the *Sync Case IE* set to "Case2", the DRNC shall include the *SCH Time Slot IE* in the *Neighbouring TDD Cell Information IE*.
- If a UMTS neighbouring cell is not controlled by the same DRNC, the DRNC shall also include in the RADIO LINK ADDITION RESPONSE message the *CN PS Domain Identifier IE* and/or *CN CS Domain Identifier IE* which are the identifiers of the CN nodes connected to the RNC controlling the UMTS neighbouring cell.
- [FDD - The DRNC shall include in the RADIO LINK ADDITION RESPONSE message the *DPC Mode Change Support Indicator IE* for each neighbour cell in the *Neighbouring FDD Cell Information IE* if this information is available.]
- The DRNC shall include the *Cell Capability Container FDD IE*, the *Cell Capability Container TDD IE*, *Cell Capability Container 7.68Mcps TDD IE*, the *Cell Capability Container TDD LCR IE* and/or the *Cell Capability Container Extension FDD IE* if the DRNC is aware that the neighbouring cell supports any functionality listed in 9.2.2.D, 9.2.3.1a, 9.2.3.1b and 9.2.2.106.
- For the UMTS neighbouring cells which are controlled by the DRNC, the DRNC shall report in the RADIO LINK ADDITION RESPONSE message the restriction state of those cells, otherwise *Restriction State Indicator IE* may be absent. The DRNC shall include the *Restriction State Indicator IE* for the neighbouring cells which are controlled by the DRNC in the *Neighbouring FDD Cell Information IE*, the *Neighbouring TDD Cell Information IE* and the *Neighbouring TDD Cell Information LCR IE*.
- If available, the DRNC shall include the *SNA Information IE* for the concerned neighbouring cells in the *Neighbouring FDD Cell Information IE*, the *Neighbouring TDD Cell Information IE* and the *Neighbouring TDD Cell Information LCR IE*.
- If MOCN or GWCN network sharing configuration is used then the DRNC shall include the broadcasted PLMN identities of concerned neighbouring cells in the *Multiple PLMN List IE* in the *Neighbouring FDD Cell Information IE*, the *Neighbouring TDD Cell Information IE* and the *Neighbouring TDD Cell Information LCR IE*.
- If available, the DRNC shall include the *Frequency Band Indicator IE* for the concerned neighbouring cells in the *Neighbouring FDD Cell Information IE*.

If there are GSM neighbouring cells to the cell(s) in which a radio link is established, the DRNC shall include the *Neighbouring GSM Cell Information IE* in the RADIO LINK ADDITION RESPONSE message for each of the GSM neighbouring cells. If available the DRNC shall include the *Cell Individual Offset IE*, and if the *Cell Individual Offset IE* alone cannot represent the value of the offset, the DRNC shall also include the *Extended GSM Cell Individual Offset IE* in the *Neighbouring GSM Cell Information IE*. If available the DRNC shall also include the *Coverage Indicator IE*, *Antenna Co-location Indicator IE* and *HCS Prio IE* in the *Neighbouring GSM Cell Information IE*. If available, the DRNC shall also include the *SNA Information IE* for the concerned neighbouring cells in the *Neighbouring GSM Cell Information IE*.

When receiving the *SNA Information* IE in the RADIO LINK ADDITION RESPONSE message, the SRNC should use it to restrict cell access based on SNA information. See also [40] for a broader description of the SNA access control.

If there are GERAN neighbouring cells to the cell(s) where a radio link is established, the DRNC shall include the *GERAN Cell Capability* IE in the *Neighbouring GSM Cell Information* IE that is included in the RADIO LINK ADDITION RESPONSE message for each of the GERAN cells.

If there are GERAN Iu-mode neighbouring cells to the cell(s) where a radio link is established, the DRNC shall include, if available, the *GERAN Classmark* IE in the *Neighbouring GSM Cell Information* IE that is included in the RADIO LINK ADDITION RESPONSE message for each of the GERAN Iu-mode neighbouring cells. Ref. [39] defines when the transmission of the *GERAN Classmark* IE will be required at the initiation of the Relocation Preparation procedure.

If there are E-UTRA neighbouring cells to the cell(s) in which a radio link is established, the DRNC shall include the *Neighbouring E-UTRA Cell Information* IE in the RADIO LINK ADDITION RESPONSE message for each of the E-UTRA neighbouring cells.

#### **[1.28Mcps TDD - Uplink Synchronisation Parameters LCR:]**

[1.28Mcps TDD - If the *Uplink Synchronisation Parameters LCR* IE is present, the DRNC shall use the indicated values of *Uplink synchronisation stepsize* IE and *Uplink synchronisation frequency* IE when evaluating the timing of the UL synchronisation.]

#### **[1.28Mcps TDD - Shared physical channels Synchronisation Detection:]**

[1.28Mcps TDD - If HS-PDSCH and E-PUCH are configured but no DPCH is configured for the UE, then the DRNC shall also include the *Out-of-sync Detection Window* IE in the *HS-DSCH TDD Information Response* IE in the RADIO LINK ADDITION RESPONSE message.]

#### **[1.28Mcps TDD - Uplink Timing Advance Control LCR:]**

[1.28Mcps TDD - The DRNC shall include the *Uplink Timing Advance Control LCR* IE in the RADIO LINK ADDITION RESPONSE message.]

#### **[1.28Mcps TDD - PowerControl GAP:]**

[1.28Mcps TDD - If applied in the DRNS, the DRNC may include the *PowerControl GAP* IE in the RADIO LINK ADDITION RESPONSE message.]

#### **[1.28Mcps TDD - E-UTRAN Inter-RAT measurement:]**

[1.28Mcps TDD - If the RADIO LINK ADDITION REQUEST message includes the *Idle Interval Configuration Indicator* IE, if supported, the DRNC shall include the *Idle Interval Information* IE in the RADIO LINK ADDITION RESPONSE message.]

#### **MBMS Handling:**

If the UE Link is currently stored in the UE Context and an MBMS session for some MBMS bearer services contained in the UE Link is ongoing in some of the cells identified by the *C-ID* IEs in the RADIO LINK ADDITION REQUEST message, the DRNC shall include for each of these active MBMS bearer services in the *Active MBMS Bearer Service List* IE the *Transmission Mode* IE in the concerned *RL Information Response* IEs in the RADIO LINK ADDITION RESPONSE message.

If the UE Link is currently stored in the UE Context and an MBMS preferred frequency layer for some active MBMS bearer services contained in the UE Link is set in some of the cells identified by the *C-ID* IEs in the RADIO LINK ADDITION REQUEST message, the DRNC shall include for each of these active MBMS bearer services in the *Active MBMS Bearer Service List* IE the *Preferred Frequency Layer* IE in the concerned *RL Information Response* IEs in the RADIO LINK ADDITION RESPONSE message.

#### **[FDD – HS-DSCH Preconfiguration for Enhanced HS Serving Cell Change]**

[FDD – If the RADIO LINK ADDITION REQUEST message includes the *HS-DSCH Preconfiguration Setup* IE in the *RL Information* IE the DRNS shall, if supported, preconfigure the indicated cells for Enhanced HS Serving Cell Change according to [63]:]

- [FDD – The DRNS shall preconfigure sets of HS-SCCH codes on the cells preconfigured for HS-DSCH, primary serving HS-DSCH cell, as well as on the secondary serving HS-DSCH cells. The primary serving HS-DSCH cell is designated through the *C-ID* IE part of the *RL Information* IE in the RADIO LINK ADDITION REQUEST message. The list of secondary serving HS-DSCH cells is designated by the list of *Secondary C-ID* IEs in the *HS-DSCH Preconfiguration Setup* IE part of the *RL Information* IE in the RADIO LINK ADDITION REQUEST message. ]
- [FDD – The number of HS-SCCH codes to preconfigure for each cell may be optionally specified: ]
  - [FDD – by the *Num Primary HS-SCCH Codes* IE in the *HS-DSCH Preconfiguration Setup* IE, for the primary serving HS-DSCH cell]
  - [FDD – by the *Num Secondary HS-SCCH Codes* IE in the *Secondary Cells* IE in the *HS-DSCH Preconfiguration Setup* IE for each of the secondary serving HS-DSCH cells]
- [FDD – If *Num Primary HS-SCCH Codes* IE or *Num Secondary HS-SCCH Codes* IE is not included in the message the number and distribution of codes on primary and any secondary cells shall be preconfigured to satisfy any limitations in [10]. ]
- [FDD – The DRNS shall return these codes in the *Sets of HS-SCCH Codes* IE along with the corresponding per- cell *HS-DSCH-RNTI* IE in the *HS-DSCH Preconfiguration Info* IE in the *RL Information Response* IE of the RADIO LINK ADDITION RESPONSE message or in the *Successful RL Information Response* IE of the RADIO LINK ADDITION FAILURE message. ]
- [FDD – The DRNS shall use the first in the numbered list the primary serving HS-DSCH cell's of HS-SCCH codes in the *HS-SCCH Preconfigured Codes* IE sent to the SRNC to signal the Target Cell HS-SCCH Order defined in [18] ].
- [FDD – The DRNS shall include, in the *HS-DSCH Preconfiguration Info* IE in the *RL Information Response* IE in the RADIO LINK ADDITION RESPONSE message or in the *Successful RL Information Response* IE of the RADIO LINK ADDITION FAILURE message, IEs according to the rules defined for HS-DSCH Setup at Serving HS-DSCH Radio Link Change and: ]
  - [FDD – if HARQ Preamble Mode IE is included in the *HS-DSCH Preconfiguration Setup* IE the HARQ Preamble Mode Activation Indicator IE]
  - [FDD – if MIMO Activation Indicator IE is included in the *HS-DSCH Preconfiguration Setup* IE the MIMO N/M Ratio IE]
  - [FDD – if *HS-DSCH MAC-d PDU Size Format* IE is included in the *HS-DSCH Preconfiguration Setup* IE and set to "Flexible MAC-d PDU Size" and if Sixtyfour QAM will not be used for the cell in the preconfiguration the *HS-DSCH TB Size Table Indicator* IE for each preconfigured cell.]
  - [FDD – if Sixtyfour QAM Usage Allowed Indicator IE is included in the *Secondary Cells* IE in the *HS-DSCH Preconfiguration Setup* IE or in the *HS-DSCH Preconfiguration Setup* IE the SixtyfourQAM DL Usage Indicator IE for each preconfigured cell]
  - [FDD – if Continuous Packet Connectivity HS-SCCH less Information IE is included in the *HS-DSCH Preconfiguration Setup* IE the Continuous Packet Connectivity HS-SCCH less Information Response IE]
  - [FDD – if the *UE with enhanced HS-SCCH support indicator* IE is included in the *HS-DSCH Preconfiguration Setup* IE, then the DRNS shall store this information in the preconfigured configuration.]
- [FDD – the *SixtyfourQAM DL Support Indicator* IE may be included]
- [FDD – If the *UE Support Indicator Extension* IE is included in the *HS-DSCH Preconfiguration Setup* IE, then the DRNS may store this information in the preconfigured configuration. ]
- [FDD – If the *Power Offset For S-CPICH for MIMO Request Indicator* IE is included, the DRNC shall, if supported and MIMO pilot configuration with Primary and Secondary CPICH is set up on the cell where HS-DSCH is preconfigured, include the *Power Offset For S-CPICH for MIMO* IE in the *HS-DSCH Preconfiguration Info* IE in the RADIO LINK ADDITION RESPONSE message.]



[FDD – The DRNS shall include in the *HS-DSCH Preconfiguration Info* IE in the *RL Information Response* IE in the RADIO LINK ADDITION RESPONSE message or in the *Successful RL Information Response* IE of the RADIO LINK ADDITION FAILURE message the *E-DCH FDD DL Control Channel Information* containing the preconfigured configuration of the E-DCH serving cell according to the rules defined for Serving E-DCH Radio Link Change as follows:]

- [FDD – The DRNS shall allocate for the preconfigured configuration a primary E-RNTI identifier or a secondary E-RNTI identifier or both for the new Serving E-DCH Radio Link and include these E-RNTI identifiers along with the channelisation code of the corresponding E-AGCH in the *E-DCH FDD DL Control Channel Information* IE.]
- [FDD – The DRNS may preconfigure the *Serving Grant Value* IE and *Primary/Secondary Grant Selector* IE for the initial grant for the serving E-DCH RL and include these values in the *E-DCH FDD DL Control Channel Information* IE.]

#### General:

If the RADIO LINK ADDITION REQUEST message includes the *RL Specific DCH Information* IE, the DRNC may use the transport layer address and the binding identifier received from the SRNC when establishing a transport bearer for the DCH or the set of co-ordinated DCHs [FDD - for which the *Transport Bearer Not Requested Indicator* IE was not included].

[FDD - If the RADIO LINK ADDITION REQUEST message includes the *Transport Bearer Not Requested Indicator* IE set to "Transport Bearer shall not be Established" for a DCH, then the DRNC shall not establish a transport bearer for the concerned DCH and shall include the *Transport Bearer Not Setup Indicator* IE for the corresponding DCH in the RADIO LINK ADDITION RESPONSE message.]

[FDD - If the RADIO LINK ADDITION REQUEST message includes the *Transport Bearer Not Requested Indicator* IE set to "Transport Bearer may not be Established" for a DCH and:]

- [FDD - if the DRNC establishes a transport bearer for the concerned DCH, the DRNC shall include in the RADIO LINK ADDITION RESPONSE message the *Binding ID* IE and *Transport Layer Address* IE for establishment of a transport bearer for the DCH being established.]
- [FDD - if the DRNC does not establish a transport bearer for the concerned DCH, the DRNC shall include the *Transport Bearer Not Setup Indicator* IE for the corresponding DCH in the RADIO LINK ADDITION RESPONSE message.]

Depending on local configuration in the DRNS, the DRNC may include in the RADIO LINK ADDITION RESPONSE message the *UTRAN Access Point Position* IE and the geographical co-ordinates of the cell, represented either by the *Cell GAI* IE or by the *Cell GA Additional Shapes* IE. If the DRNC includes the *Cell GA Additional Shapes* IE in the RADIO LINK ADDITION RESPONSE message, it shall also include the *Cell GAI* IE.

For each Radio Link established in a cell in which at least one URA Identity is being broadcast, the DRNC shall include in the RADIO LINK ADDITION RESPONSE message a URA Information for this cell including the *URA ID* IE, the *Multiple URAs Indicator* IE indicating whether or not multiple URA Identities are being broadcast in the cell, and the *RNC-ID* IEs of all other RNCs that have at least one cell within the URA identified by the *URA ID* IE.

[3.84Mcps TDD - The DRNC shall include the *Secondary CCPCH Info TDD* IE in the RADIO LINK ADDITION RESPONSE message if at least one *DSCH Information Response* IE or *USCH Information Response* IE is included in the message and at least one DCH is configured for the radio link. The DRNC shall also include the *Secondary CCPCH Info TDD* IE in the RADIO LINK ADDITION RESPONSE message if at least one *DSCH Information Response* IE or *USCH Information Response* IE is included in the message and the SHCCH messages for this radio link will be transmitted over a different secondary CCPCH than selected by the UE from system information.]

[1.28 Mcps TDD - The DRNC shall include the *Secondary CCPCH Info TDD LCR* IE in the RADIO LINK ADDITION RESPONSE message if at least one *DSCH Information Response LCR* IE or *USCH Information Response LCR* IE is included in the message and at least one DCH is configured for the radio link. The DRNC shall also include the *Secondary CCPCH Info TDD LCR* IE in the RADIO LINK ADDITION RESPONSE message if at least one *DSCH Information Response LCR* IE or *USCH Information Response*

*LCR* IE is included in the message and the SHCCH messages for this radio link will be transmitted over a different secondary CCPCH than selected by the UE from system information.]

[7.68 Mcps TDD - The DRNC shall include the *Secondary CCPCH Info 7.68 Mcps TDD* IE in the RADIO LINK ADDITION RESPONSE message if at least one *DSCH Information Response 7.68 Mcps* IE or *USCH Information Response 7.68 Mcps* IE is included in the message and at least one DCH is configured for the radio link. The DRNC shall also include the *Secondary CCPCH Info 7.68 Mcps TDD* IE in the RADIO LINK ADDITION RESPONSE message if at least one *DSCH Information Response 7.68 Mcps* IE or *USCH Information Response 7.68 Mcps* IE is included in the message and the SHCCH messages for this radio link will be transmitted over a different secondary CCPCH than selected by the UE from system information.]

If the *Permanent NAS UE Identity* IE is present in the RADIO LINK ADDITION REQUEST message, the DRNS shall store the information for the considered UE Context for the lifetime of the UE Context.

If the RADIO LINK ADDITION REQUEST message includes a *C-ID* IE corresponding to a cell reserved for operator use and the Permanent NAS UE Identity is available in the DRNC for the considered UE Context, the DRNC shall use this information to determine whether it can add the Radio Link on this cell or not.

If the HCS priority information is available in the DRNS, it shall include the *HCS Prio* IE for each of the established RLs in the RADIO LINK ADDITION RESPONSE message.

The DRNS shall start receiving on the new RL(s) after the RLs are successfully established.

[FDD - If the RADIO LINK ADDITION REQUEST message includes the *Initial DL DPCH Timing Adjustment Allowed* IE, then the DRNS may perform an initial DL DPCH Timing Adjustment (i.e. perform a timing advance or a timing delay with respect to the SFN timing) on a Radio Link. In this case, the DRNS shall include, for the concerned Radio Link(s), the *Initial DL DPCH Timing Adjustment* IE in the *Radio Link Information Response* IE in the RADIO LINK ADDITION RESPONSE message.]

[FDD – If the RADIO LINK ADDITION REQUEST message includes the *Synchronisation Indicator* IE, set to "Timing Maintained Synchronisation", the DRNS shall use synchronisation procedure B according to subclause 4.3.2.4 in [10]. The DRNS shall select the TPC pattern as if "first RLS indicator" is set to "first RLS" according to subclause 5.1.2.2.1.2 in [10].]

[FDD – If the UE Context is configured for F-DPCH Slot Format operation, then the DRNS shall include the *F-DPCH Slot Format* IE in the RADIO LINK ADDITION RESPONSE message.]

#### [FDD - Radio Link Set Handling:]

[FDD - For each RL not having a common generation of the TPC commands in the DL with another RL, the DRNS shall assign to the RL a unique value for the *RL Set ID* IE which uniquely identifies the RL as an RL Set within the UE Context. In case of E-DCH, the generation of E-HICH information for RLs in different RL Sets shall not be common.]

[FDD - For all RLs having a common generation of the TPC commands in the DL with another new or existing RL, the DRNS shall assign to each RL the same value for the *RL Set ID* IE which uniquely identifies these RLs as members of the same RL Set within the UE Context. In case of E-DCH, the generation of E-HICH related information for all RLs in a RL Set shall be common.]

[FDD - After addition of the new RL(s), the UL out-of-sync algorithm defined in ref. [10] shall, for each of the previously existing and newly established RL Set(s), use the maximum value of the parameters *N\_OUTSYNC\_IND* and *T\_RLFAILURE* that are configured in the cells supporting the radio links of the RL Set. The UL in-sync algorithm defined in [10] shall, for each of the established RL Set(s), use the minimum value of the parameters *N\_INSYNC\_IND* that are configured in the cells supporting the radio links of the RL Set.]

[FDD - For each E-DCH RL which has or can have a common generation of E-RGCH information with another RL (current or future) when the DRNS would contain the E-DCH serving RL, the DRNS shall include the *E-DCH RL Set ID* IE in the RADIO LINK ADDITION RESPONSE message. The value of the *E-DCH RL Set ID* IE shall allow the SRNC to identify the E-DCH RLs that have or can have a common generation of E-RGCH information.]

#### [FDD - Serving HS-DSCH Radio Link Change:]

[FDD - If the RADIO LINK ADDITION REQUEST message includes the *HS-DSCH Serving Cell Change Information* IE, then the *HS-PDSCH RL ID* IE indicates the new Serving HS-DSCH Radio Link:]

- [FDD - In the new configuration the DRNS shall allocate the HS-PDSCH resources for the new Serving HS-PDSCH Radio Link.]
- [FDD - The DRNS may include the *HARQ Memory Partitioning* IE in the *HS-DSCH FDD Information Response* IE in the RADIO LINK ADDITION RESPONSE message. The *HARQ Memory Partitioning* IE may contain the *HARQ Memory Partitioning Information Extension For MIMO* IE.]
- [FDD - If fields are to be included in the User Plane by the SRNC to handle TNL Congestion Control for HSDPA in the DRNS, then the DRNC shall include the *User Plane Congestion Fields Inclusion* IE in the *HS-DSCH Information Response* IE.]
- [FDD - The DRNC shall allocate a new HS-DSCH-RNTI to the UE Context and include the *HS-DSCH-RNTI* IE in the RADIO LINK ADDITION RESPONSE message.]
- [FDD - If a reset of the MAC-hs is not required the DRNS shall include the *MAC-hs Reset Indicator* IE in the RADIO LINK ADDITION RESPONSE message.]
- [FDD - The DRNC shall include the *Measurement Power Offset* IE in the *HS-DSCH Information Response* IE in the RADIO LINK ADDITION RESPONSE message.]
- [FDD - The DRNS shall allocate HS-SCCH codes corresponding to the HS-DSCH and include the *HS-SCCH Specific Information Response* IE in the *HS-DSCH FDD Information Response* IE in the RADIO LINK ADDITION RESPONSE message.]
- [FDD - The DRNC shall include the *HS-PDSCH And HS-SCCH Scrambling Code* IE in the *HS-DSCH FDD Information Response* IE in the RADIO LINK ADDITION RESPONSE message.]
- If the *TNL QoS* IE is included for a MAC-d flow and if ALCAP is not used, the *TNL QoS* IE may be used by the DRNS to determine the transport bearer characteristics to apply in the uplink between the DRNS and the SRNC for the related MAC-d flow.
- [FDD – If the *HS-DSCH Serving Cell Change Information* IE includes the *Continuous Packet Connectivity HS-SCCH less Information* IE, then:]
  - [FDD – The DRNS shall configure the Serving HS-DSCH Radio Link indicated by the *HS-PDSCH RL ID* IE for Continuous Packet Connectivity HS-SCCH less operation according to [10].]
  - [FDD – The DRNS shall allocate the HS-PDSCH codes needed for HS-SCCH less operation and include the *Continuous Packet Connectivity HS-SCCH less Information Response* IE in the RADIO LINK ADDITION RESPONSE message.]
- [FDD – If at least one of *HS-PDSCH Second Code Support* IE is set to "True", then the DRNC shall include *HS-PDSCH Second Code Index* IE in the RADIO LINK ADDITION RESPONSE message.]
- [FDD – If MAC-ehs is applied in the new configuration, and if Sixtyfour QAM will not be used, the DRNS shall include the *HS-DSCH TB Size Table Indicator* IE in the *HS-DSCH FDD Information Response* IE in the *HS-DSCH Serving Cell Change Information Response* IE in the RADIO LINK ADDITION RESPONSE message if it decides to use the octet aligned table defined in [41] for HS-DSCH Transport Block Size signalling.]

**[FDD - HS-DSCH Setup on a New Radio Link at Serving HS-DSCH Radio Link Change:]**

[FDD - If the *HS-DSCH Information* IE is present in the *HS-DSCH Serving Cell Change Information* IE, then:]

- [FDD - The DRNS shall setup the requested HS-PDSCH resources on the Serving HS-DSCH Radio Link indicated by the *HS-PDSCH RL ID* IE.]
- [FDD - the *HS-DSCH Information* IE defines the new HS-DSCH configuration in the DRNS to be used on the new HS-DSCH Radio Link.]
- [FDD - The DRNC shall include the *HARQ Memory Partitioning* IE in the *HS-DSCH FDD Information Response* IE in the RADIO LINK ADDITION RESPONSE message. The *HARQ Memory Partitioning* IE shall either contain the *HARQ Memory Partitioning Information Extension For MIMO* IE or the *Number*

of Processes IE set to a value higher than "8", if the MIMO Activation Indicator IE is included in the HS-DSCH Information IE.]

- [FDD - The DRNS may use the Traffic Class IE for a specific HS-DSCH MAC-d flow to determine the transport bearer characteristics to apply between DRNC and Node B. If TrCH Source Statistics Descriptor IE is present with the value "RRC" in the HS-DSCH MAC-d Flows Information IE, then the DRNC should ignore the Traffic Class IE. If the TNL QoS IE is included for a MAC-d flow and if ALCAP is not used, the TNL QoS IE may be used by the DRNS to determine the transport bearer characteristics to apply in the uplink between the DRNS and the SRNC for the related MAC-d flow.]
- [FDD - If the RADIO LINK ADDITION REQUEST message includes the MAC-hs Guaranteed Bit Rate IE for a Priority Queue in the HS-DSCH MAC-d Flows Information IE in the HS-DSCH Information IE, then the DRNS shall use this information to optimise MAC-hs scheduling decisions for the related HSDPA Priority Queue.]
- [FDD - If the RADIO LINK ADDITION REQUEST message includes the Discard Timer IE for a Priority Queue in the HS-DSCH MAC-d Flows Information IE in the HS-DSCH Information IE, then the DRNS shall use this information to discard out-of-date MAC-hs SDUs from the related HSDPA Priority Queue.]
- [FDD - If the RADIO LINK ADDITION REQUEST message includes the Maximum MAC-d PDU Size Extended IE for a Priority Queue in the HS-DSCH MAC-d Flows Information IE in the HS-DSCH Information IE, then the DRNS shall ignore the SID IE and MAC-d PDU Size IE in the MAC-d PDU Size Index IE and use Maximum MAC-d PDU Size Extended IE to optimise capacity allocation for the related HSDPA Priority Queue.]
- [FDD - The DRNC shall include the HS-DSCH Initial Capacity Allocation IE in the HS-DSCH FDD Information Response IE in the RADIO LINK ADDITION RESPONSE message for every HS-DSCH MAC-d flow being established, if the DRNS allows the SRNC to start transmission of MAC-d PDUs before the DRNS has allocated capacity on user plane as described in [32]. If RADIO LINK ADDITION REQUEST message includes HS-DSCH MAC-d PDU Size Format IE in the HS-DSCH Information IE set to "Flexible MAC-d PDU Size", then DRNC shall only set in the HS-DSCH Initial Capacity Allocation IE the values for the peer of Scheduling Priority Indicator IE and Maximum MAC-d PDU Size Extended IE to the values of the corresponding peer received in RADIO LINK ADDITION REQUEST in the HS-DSCH MAC-d Flows Information IE in the HS-DSCH Information IE for a Priority Queue including Scheduling Priority Indicator IE and Maximum MAC-d PDU Size Extended IE.]
- [FDD - If the RADIO LINK ADDITION REQUEST message includes the HS-SCCH Power Offset IE in the HS-DSCH Information IE, then the DRNS may use this value to determine the HS-SCCH power. The HS-SCCH Power Offset should be applied for any HS-SCCH transmission to this UE.]
- [FDD – If the RADIO LINK ADDITION REQUEST message includes the HARQ Preamble Mode IE in the HS-DSCH Information IE, then the DRNS shall use the indicated HARQ Preamble Mode as described in [10], if HS-DPCCH ACK/NACK preamble and postamble is supported. Then, in this case, if the mode 1 is applied, the DRNC shall include the HARQ Preamble Mode Activation Indicator IE in the HS-DSCH Information Response IE in the RADIO LINK ADDITION RESPONSE message. If the HARQ Preamble Mode IE is not included or if the mode 0 is applied, then the DRNC shall not include the HARQ Preamble Mode Activation Indicator IE in the HS-DSCH Information Response IE in the RADIO LINK ADDITION RESPONSE message.]
- [FDD - If the RADIO LINK ADDITION REQUEST message includes the HS-DSCH MAC-d PDU Size Format IE in the HS-DSCH Information IE, then the DRNS shall use the indicated format in user plane frame structure for HS-DSCH channels [32] and MAC-hs [41].]
- [FDD – If the MIMO Activation Indicator IE is included in the HS-DSCH FDD Information IE, then ]
  - [FDD – The DRNS shall activate the MIMO mode for the HS-DSCH Radio Link.]
  - [FDD – The DRNS shall decide the pilot configuration and the UE reporting configuration (N/M ratio) according to [10] for MIMO and include the MIMO Information Response IE in the HS-DSCH FDD Information Response IE in the RADIO LINK ADDITION RESPONSE message.]
  - [FDD – If the Power Offset For S-CPICH for MIMO Request Indicator IE is included, the DRNC shall, if supported and MIMO pilot configuration with Primary and Secondary CPICH is set up on the

cell where the Serving HS-DSCH Radio Link is established, include the *Power Offset For S-CPICH for MIMO* IE in the *HS-DSCH FDD Information Response* IE.]

- [FDD - If the *Sixtyfour QAM Usage Allowed Indicator* IE is included in the *HS-DSCH FDD Information* IE, then the DRNS may if the value is set to "allowed" use 64 QAM for the HS-DSCH Radio Link, and the DRNS shall include the *SixtyfourQAM DL Usage Indicator* IE in the *HS-DSCH FDD Information Response* IE in the RADIO LINK ADDITION RESPONSE message.]
- [FDD - If the *Sixtyfour QAM Usage Allowed Indicator* IE is included in the *HS-DSCH FDD Information* IE with value set to "not allowed", then the DRNS shall not use 64 QAM for the HS-DSCH Radio Link.]
- [FDD - If the RADIO LINK ADDITION REQUEST message includes the *HS-DSCH MAC-d PDU Size Format* IE set to "Flexible MAC-d PDU Size" and if Sixtyfour QAM will not be used, the DRNS shall include the *HS-DSCH TB Size Table Indicator* IE in the *HS-DSCH FDD Information Response* IE in the *HS-DSCH Serving Cell Change Information Response* IE in the RADIO LINK ADDITION RESPONSE message if it decides to use the octet aligned table defined in [41] for HS-DSCH Transport Block Size signalling.]
- [FDD - If the *UE with enhanced HS-SCCH support indicator* IE is included in the HS-DSCH FDD Information IE, then the DRNS may use:]
  - [FDD - a different HS-SCCH in consecutive TTIs for this UE]
  - [FDD - HS-SCCH orders for the case of HS-SCCH-less operation to this UE]
- [FDD - If the *UE Support Indicator Extension* IE is included in the *HS-DSCH FDD Information* IE the DRNS may use the supported HSDPA functions for this UE.]
- [FDD - If the RADIO LINK ADDITION REQUEST message includes *DL RLC PDU Size Format* IE for a Priority Queue in the *HS-DSCH MAC-d Flows Information* IE in the *HS-DSCH Information* IE, the *DL RLC PDU Size Format* IE may be used by the DRNS to determine the allocated capacity on user plane as described in [32].]
- [FDD - The DRNC may include the *Transport Layer Address* IE and the *Binding ID* IE for HS-DSCH MAC-d flow in the *HS-DSCH FDD Information Response* IE in the RADIO LINK ADDITION RESPONSE message.]
- [FDD - If the *Serving Cell Change CFN* IE is included in the RADIO LINK ADDITION REQUEST message, then the DRNS shall activate the resources that are allocated for the new serving HS-DSCH Radio Link at the next coming CFN with a value equal to the value requested by the SRNC, or earlier. In this case, in the new configuration the DRNS shall, if applicable, de-allocate the HS-PDSCH resources of the old Serving HS-PDSCH Radio Link. The DRNS shall deactivate those resources at the next coming CFN with a value equal to the value requested by the SRNC. ]
- [FDD - If the *Serving Cell Change CFN* IE is not included then the DRNS shall activate immediately the resources that are allocated for the new serving HS-PDSCH Radio Link, and shall keep active the resources that are allocated for the previous serving HS-PDSCH Radio Link.]
- [FDD - If the requested Serving HS-DSCH Radio Link Change was successful or unsuccessful, the DRNS shall indicate this in the *HS-DSCH Serving Cell Change Information Response* IE in the RADIO LINK ADDITION RESPONSE message.]
- [FDD – If the power offset for S-CPICH for MIMO Request indicator and MIMO activation indicator have been configured in the UE Context and MIMO pilot configuration with Primary and Secondary CPICH is set up on the cell where the Serving HS-DSCH Radio Link is established, include the *Power Offset For S-CPICH for MIMO* IE in the *HS-DSCH FDD Information Response* IE.]

#### [FDD – Secondary Serving HS-DSCH Radio Link Change:]

[FDD - If the RADIO LINK ADDITION REQUEST message includes the *Additional HS Cell Information RL Addition* IE, then the *HS-PDSCH RL ID* IE indicates the new Serving HS-DSCH Radio Link:]

- [FDD - In the new configuration the DRNS shall allocate the HS-PDSCH resources for the new secondary serving HS-PDSCH Radio Link. Non cell specific secondary serving Radio Link and non cell specific secondary serving HS-DSCH parameters take the same values as for the serving HS-DSCH cell.]

- [FDD - The DRNC shall allocate a new HS-DSCH-RNTI to the UE Context and include the *HS-DSCH-RNTI* IE in the *HS-DSCH Secondary Serving Cell Change Information Response* IE in the *Additional HS Cell Change Information Response* IE in the RADIO LINK ADDITION RESPONSE message.]
- [FDD - The DRNC shall include the *Measurement Power Offset* IE in the *HS-DSCH FDD Secondary Serving Information Response* IE in the *Additional HS Cell Change Information Response* IE in the RADIO LINK ADDITION RESPONSE message.]
- [FDD - The DRNS shall allocate HS-SCCH codes corresponding to the secondary serving HS-DSCH and include the *HS-SCCH Specific Secondary Serving Information Response* IE in the *HS-DSCH FDD Secondary Serving Information Response* IE in the *HS-DSCH Secondary Serving Cell Change Information Response* IE in the *Additional HS Cell Change Information Response* IE in the RADIO LINK ADDITION RESPONSE message.]
- [FDD - The DRNC shall include the *HS-PDSCH And HS-SCCH Scrambling Code* IE in the *HS-DSCH FDD Secondary Serving Information Response* IE in the *HS-DSCH Secondary Serving Cell Change Information Response* IE in the *Additional HS Cell Change Information Response* IE in the RADIO LINK ADDITION RESPONSE message.]
- [FDD - If, in the new configuration, the UE context is configured not to use Sixtyfour QAM for the secondary serving HS-DSCH, the DRNS shall include the *HS-DSCH TB Size Table Indicator* IE in the *HS-DSCH FDD Secondary Serving Information Response* IE in the *Additional HS Cell Change Information Response* IE in the RADIO LINK ADDITION RESPONSE message if it decides to use the octet aligned table defined in [41] for the secondary serving HS-DSCH Transport Block Size signalling.]

**[FDD – Secondary Serving HS-DSCH Setup on a New Radio Link at Serving HS-DSCH Radio Link Change:]**

- [FDD - The DRNS shall setup the requested HS-PDSCH resources on the Secondary Serving HS-DSCH Radio Link indicated by the *HS-PDSCH RL ID* IE.]
- [FDD - The *HS-DSCH FDD Secondary Serving Information* IE defines the new secondary serving HS-DSCH configuration in the DRNS to be used on the new secondary serving HS-DSCH Radio Link. Non cell specific secondary serving Radio Link and non cell specific secondary serving HS-DSCH parameters take the same values as for the serving HS-DSCH cell.]
- [FDD - If the RADIO LINK ADDITION REQUEST message includes the *HS-SCCH Power Offset* IE in the *HS-DSCH FDD Secondary Serving Information* IE in the *Additional HS Cell Information RL Addition* IE, then the DRNS may use this value to determine the HS-SCCH power. The HS-SCCH Power Offset should be applied for any secondary serving HS-SCCH transmission to this UE.]
- [FDD - If the *Sixtyfour QAM Usage Allowed Indicator* IE is included in the *HS-DSCH FDD Secondary Serving Information* IE, then the DRNS may if the value is set to "allowed" use 64 QAM for the secondary serving HS-DSCH Radio Link, and the DRNS shall include the *SixtyfourQAM DL Usage Indicator* IE in the *HS-DSCH FDD Secondary Serving Information Response* IE in the *HS-DSCH Secondary Serving Cell Change Information Response* IE in the *Additional HS Cell Change Information Response* IE in the RADIO LINK ADDITION RESPONSE message.]
- [FDD - If the *Sixtyfour QAM Usage Allowed Indicator* IE is included in the *HS-DSCH FDD Secondary Serving Information* IE with value set to "not allowed", then the DRNS shall not use 64 QAM for the secondary serving HS-DSCH Radio Link.]
- [FDD - If Sixtyfour QAM will not be used for the secondary serving cell, the DRNS shall include the *HS-DSCH TB Size Table Indicator* IE in the *HS-DSCH FDD Secondary Serving Information Response* IE in the *HS-DSCH Secondary Serving Cell Change Information Response* IE in the *Additional HS Cell Change Information Response* IE in the RADIO LINK ADDITION RESPONSE message if it decides to use the octet aligned table defined in [41] for secondary serving HS-DSCH Transport Block Size signalling.]
- [FDD - If the *Diversity Mode* IE is included in the *HS-DSCH FDD Secondary Serving Information* IE in the *Additional HS Cell Information RL Addition* IE in the RADIO LINK ADDITION REQUEST message the DRNS shall apply cell specific transmit diversity configuration and if the *Diversity Mode* IE is not set to "None" the DRNS shall activate/deactivate the Transmit Diversity for the secondary serving HS-DSCH

Radio Link in accordance with the *Transmit Diversity Indicator* IE in the *HS-DSCH FDD Secondary Serving Information* IE.]

- [FDD - If the *Serving Cell Change CFN* IE is included in the RADIO LINK ADDITION REQUEST message, then the DRNS shall activate the resources that are allocated for the new secondary serving HS-DSCH Radio Link at the next coming CFN with a value equal to the value requested by the SRNC, or earlier. In this case, in the new configuration the DRNS shall, if applicable, de-allocate the HS-PDSCH resources of the old secondary serving HS-PDSCH Radio Link. The DRNS shall deactivate those resources at the next coming CFN with a value equal to the value requested by the SRNC. ]
- [FDD - If the *Serving Cell Change CFN* IE is not included then the DRNS shall activate immediately the resources that are allocated for the new secondary serving HS-PDSCH Radio Link, and shall keep active the resources that are allocated for the previous secondary serving HS-PDSCH Radio Link.]
- [FDD - If the requested secondary serving HS-DSCH Radio Link Change was successful or unsuccessful, the DRNS shall indicate this in the *HS-DSCH Secondary Serving Cell Change Information Response* IE in the *Additional HS Cell Change Information Response* IE in the RADIO LINK ADDITION RESPONSE message.]

#### [FDD - E-DCH:]

[FDD - If the RADIO LINK ADDITION REQUEST message contains the *E-DCH RL Indication* IE, set to "E-DCH", in the *RL Information* IE, then for every such RL.]

- [FDD - The DRNS shall setup the E-DCH resources as configured in the UE context.]
- [FDD - If the RADIO LINK ADDITION REQUEST message includes the *Transport Layer Address* IE and *Binding ID* IE in the *RL specific E-DCH Information* IE for an E-DCH MAC-d flow, then if the *Transport Bearer Not Requested Indicator* IE is not included for this E-DCH MAC-d flow, the DRNC may use the transport layer address and the binding identifier received from the SRNC when establishing a transport bearer for the concerned E-DCH MAC-d flow.]
- [FDD - The DRNC shall include in the RADIO LINK ADDITION RESPONSE message the *Binding ID* IE and *Transport Layer Address* IE for establishment of a transport bearer for every E-DCH MAC-d flow being established for which the *Transport Bearer Not Requested Indicator* IE was not included.]
- [FDD - If the RADIO LINK ADDITION REQUEST message includes the *Transport Bearer Not Requested Indicator* IE set to "Transport Bearer Shall not be Established" for an E-DCH MAC-d flow, then the DRNC shall not establish a transport bearer for the concerned E-DCH MAC-d flow and shall include the *Transport Bearer Not Setup Indicator* IE for the corresponding E-DCH MAC-d flow in the RADIO LINK ADDITION RESPONSE message.]
- [FDD - If the RADIO LINK ADDITION REQUEST message includes the *Transport Bearer Not Requested Indicator* IE set to "Transport Bearer may not be Established" for an E-DCH MAC-d flow and:]
  - [FDD - if the DRNC establishes a transport bearer for the concerned E-DCH MAC-d flow, the DRNC shall include in the RADIO LINK ADDITION RESPONSE message the *Binding ID* IE and *Transport Layer Address* IE for establishment of a transport bearer for the E-DCH MAC-d flow being established.]
  - [FDD - if the DRNC does not establish a transport bearer for the concerned E-DCH MAC-d flow, the DRNC shall include the *Transport Bearer Not Setup Indicator* IE for the corresponding E-DCH MAC-d flow in the RADIO LINK ADDITION RESPONSE message.]
- [FDD - The DRNC may include the *E-AGCH* and *E-RGCH* and *E-HICH FDD Scrambling Code* IE and shall include the *E-RGCH* and *E-HICH Channelisation Code* IE and the corresponding *E-HICH Signature Sequence* IE and the DRNC may include the corresponding *E-RGCH Signature Sequence* IE in the *E-DCH FDD DL Control Channel Information* IE in the RADIO LINK ADDITION RESPONSE message, for every RL indicated by the *E-DCH RL Indication* IE, set to "E-DCH", in the *RL Information* IE.]
- [FDD - If the RADIO LINK ADDITION REQUEST message includes the *E-RGCH Power Offset* IE in the *RL Specific E-DCH Information* IE, then the DRNS may use this value to determine the E-RGCH power for the RL. The E-RGCH Power Offset should be applied for any E-RGCH transmission to this UE.]
- [FDD - If the RADIO LINK ADDITION REQUEST message includes the *E-HICH Power Offset* IE in the *RL Specific E-DCH Information* IE, then the DRNS may use this value to determine the E-HICH power for the RL. The E-HICH Power Offset should be applied for any E-HICH transmission to this UE.]

- [FDD - If the DRNS has no valid data for the *E-RGCH* and *E-HICH Channelisation Code* IE in the *E-DCH FDD DL Control Channel Information* IE in the RADIO LINK ADDITION RESPONSE message, then it shall insert the *E-RGCH* and *E-HICH Channelisation Code Validity Indicator* IE in the *E-DCH FDD DL Control Channel Information* IE, to indicate that the *E-RGCH* and *E-HICH Channelisation Code* IE contains invalid data.]

#### [FDD - Serving E-DCH Radio Link Change:]

[FDD - If the RADIO LINK ADDITION REQUEST message contains the *Serving E-DCH RL* IE, this indicates the new Serving E-DCH Radio Link:]

- [FDD - If the new Serving E-DCH RL is in this DRNS:]
  - [FDD - The DRNS shall allocate a primary E-RNTI identifier or a secondary E-RNTI identifier or both and include these E-RNTI identifiers and the Channelisation Code of the corresponding E-AGCH in the *E-DCH FDD DL Control Channel Information* IE in the *E-DCH Serving Cell Change Information Response* IE for the indicated RL in the RADIO LINK ADDITION RESPONSE message.]
  - [FDD - The DRNS may include the *Serving Grant Value* IE and *Primary/Secondary Grant Selector* IE in the *E-DCH Serving Cell Change Information Response* IE in the RADIO LINK ADDITION RESPONSE message for the initial grant for the new serving E-DCH RL.]
  - [FDD - If the E-DCH HARQ process allocation for 2ms TTI for scheduled and/or non-scheduled transmission shall be changed, the DRNS shall allocate resources according to the new/changed configuration and include the new/changed configuration in the *E-DCH FDD Information Response* IE in the RADIO LINK ADDITION RESPONSE message.]
  - [FDD - If a serving cell change is performed the RADIO LINK ADDITION RESPONSE message may contain invalid data (see 9.2.2.4C).]
  - [FDD - The DRNS may include the *Default Serving Grant in DTX Cycle 2* IE in the RADIO LINK ADDITION RESPONSE message for the new serving E-DCH RL.]
- [FDD – The DRNS may include the *E-RGCH/E-HICH Channelisation Code* IE and/or the *E-HICH Signature Sequence* IE and/or the *E-RGCH Signature Sequence* IE or may alternatively include the *E-RGCH Release Indicator* IE in the *E-DCH FDD DL Control Channel Information* IE in the *E-DCH Serving Cell Change Information Response* IE in the RADIO LINK ADDITION RESPONSE message for any of the other E-DCH Radio Link in the DRNS Communication Context that have not been included in the *E-DCH FDD DL Control Channel Information* IE in *RL Information Response* IE.]
- [FDD - If the *Serving Cell Change CFN* IE is included in the RADIO LINK ADDITION REQUEST message, then the DRNS shall activate the resources that are allocated for the new serving E-DCH Radio Link at the next coming CFN with a value equal to the value requested by the SRNC, or earlier. In this case, in the new configuration the DRNS shall, if applicable, de-allocate the E-AGCH resources of the old Serving E-DCH Radio Link. The DRNS shall deactivate those resources at the next coming CFN with a value equal to the value requested by the SRNC.]
- [FDD- If the *Serving Cell Change CFN* IE is not included then the DRNS shall activate immediately the resources that are allocated for the new serving E-DCH Radio Link, and shall keep active the resources that are allocated for the previous serving E-DCH Radio Link.]
- [FDD - If the addition of the requested Serving E-DCH Radio Link was successful but the Serving E-DCH Radio Link change was unsuccessful, the DRNS shall indicate this in the *E-DCH Serving Cell Change Information Response* IE in the RADIO LINK ADDITION RESPONSE message.]

#### [FDD - E-DPCH Handling:]

[FDD - If the RADIO LINK ADDITION REQUEST message includes an *E-DPCH Information* IE it defines the new E-DPCH configuration in the DRNS to be used on the new E-DCH Radio Link and the DRNS shall use the new parameters for the related resource allocation operations.]

[FDD - If the *E-TFCS Information* IE in the *E-DPCH Information* IE contains the *E-TFCI Boost Information* IE, the DRNS shall use the information according to [10]. If the *E-TFCI Boost Information* IE is not present, the DRNS shall use the value "127" in the algorithm defined in [10].]



[FDD - If the *E-DPCH Information* IE includes the *E-TFCS Information* IE, the DRNS shall use the *E-TFCS Information* IE for the E-DCH when reserving resources for the uplink of the new configuration. The DRNS shall apply the new TFCS in the uplink of the new configuration. If the *E-TFCS Information* IE contains the *E-DCH Minimum Set E-TFCI Validity Indicator* IE the DRNS shall ignore the value in *E-DCH Minimum Set E-TFCI* IE. If the *E-DCH Minimum Set E-TFCI validity indicator* IE is absent DRNS shall use the value for the related resource allocation operation.]

[FDD - If the *E-TFCS Information* IE in the *E-DPCH Information* IE contains the *E-DPDCH Power Interpolation* IE, the DRNS shall use the value to determine the applicable E-DPDCH power formula defined in [10]. If the *E-DPDCH Power Interpolation* IE is not present, the DRNS shall use the E-DPDCH power extrapolation formula defined in [10].]

[FDD - If the RADIO LINK ADDITION REQUEST message includes an *E-DPCH Information* IE, which contains the *Minimum Reduced E-DPDCH Gain Factor* IE, then the DRNS shall use the value to determine the applicable minimum gain factor ( $\beta_{ed,k, reduced, min}$ ) defined in [10]. For the case the *Minimum Reduced E-DPDCH Gain Factor* IE is not available for the UE Context, the DRNS may use the default value defined in [16]. ]

#### [FDD - E-DCH Setup on a new Radio Link:]

[FDD - If the *E-DCH FDD Information* IE is present in the RADIO LINK ADDITION REQUEST message then:]

- [FDD - the *E-DCH FDD Information* IE defines the new E-DCH FDD configuration in the DRNS to be used on the new E-DCH Radio Link.]
- [FDD - If the RADIO LINK ADDITION REQUEST message includes the *MAC-es Guaranteed Bit Rate* IE in the *E-DCH Logical Channel Information* IE in the *E-DCH FDD Information* IE, then the DRNS shall use this information to optimise MAC-e scheduling decisions.]
- [FDD - If the RADIO LINK ADDITION REQUEST message includes the *Maximum MAC-d PDU Size Extended* IE for a E-DCH Logical Channel in the *E-DCH MAC-d Flows Information* IE in the *E-DCH FDD Information* IE, then the DRNS shall ignore the *MAC-d PDU Size* IE in the *MAC-d PDU Size List* IE and use *Maximum MAC-d PDU Size Extended* IE to optimise capacity allocation for the related E-DCH Logical Channel and use the indicated format in user plane frame structure for E-DCH channels [32] and MAC [41].]
- [FDD - If the RADIO LINK ADDITION REQUEST message includes the *E-DCH MAC-d Flow Multiplexing List* IE for an E-DCH MAC-d flow the DRNS shall use this information for the related resource allocation operation.]
- [FDD - If the RADIO LINK ADDITION REQUEST message includes the *HARQ Process Allocation For 2ms Scheduled Transmission Grant* IE, the DRNS shall use this information for the related resource allocation operation.]
- [FDD - If in the RADIO LINK ADDITION REQUEST message the E-DCH Grant Type is indicated as being "E-DCH Non-Scheduled Transmission Grant" for an E-DCH MAC-d flow the DRNS shall assume non-scheduled grants being configured for that E-DCH MAC-d flow and shall use the information within the *HARQ Process Allocation For 2ms Non-Scheduled Transmission Grant* IE, if included, for the related resource allocation operation.]
- [FDD - If in the RADIO LINK ADDITION REQUEST message the E-DCH Grant Type is indicated as being "E-DCH Scheduled Transmission Grant" for an E-DCH MAC-d flow the DRNS shall assume scheduled grants being configured for that E-DCH MAC-d flow.]
- [FDD - The DRNS may use the *Traffic Class* IE for a specific E-DCH MAC-d flow to determine the transport bearer characteristics to apply between DRNC and Node B. If *TrCH Source Statistics Descriptor* IE is present with the value "RRC" in the *E-DCH MAC-d Flows Information* IE, then the DRNC should ignore the *Traffic Class* IE.]
- [FDD - If the *TNL QoS* IE is included for an E-DCH MAC-d flow and if ALCAP is not used, the *TNL QoS* IE may be used by the DRNS to determine the transport bearer characteristics to apply in the uplink for the related MAC-d flow.]
- [FDD - If the RADIO LINK ADDITION REQUEST message includes the *Bundling Mode Indicator* IE for a E-DCH MAC-d flow in the *E-DCH MAC-d Flow Specific Information* IE in the *E-DCH FDD Information* IE and the *Bundling Mode Indicator* IE is set to "Bundling" and the *E-TTI* IE is set to "2ms", then the DRNS shall use the bundling mode for the E-DCH UL data frames for the related MAC-d flow, otherwise the DRNS shall use the non-bundling mode for the E-DCH UL data frames for the related MAC-d flow.]

- [FDD - If the RADIO LINK ADDITION REQUEST message includes the *E-DCH Maximum Bitrate* IE for an E-DCH, the DRNS shall use this information for the related resource allocation operation, and when applicable, for E-DCH scheduling.]
- [FDD - If the RADIO LINK ADDITION REQUEST message includes the *E-DCH Processing Overload Level* IE, then if the DRNS could not decode the E-DPCCH/E-DPDCH for the last consecutive number of TTIs, indicated in the *E-DCH Processing Overload Level* IE, because of processing issue, the DRNS shall notify the SRNC by initiating the Radio Link Failure procedure.]
- [FDD – If the RADIO LINK ADDITION REQUEST message includes the *E-DCH Reference Power Offset* IE, then the DRNS may use this value as a default HARQ power offset if it is not able to decode the MAC-e PDU and to determine the value of the actual HARQ power offset.]
- [FDD - If the RADIO LINK ADDITION REQUEST message includes the *E-AGCH Power Offset* IE in the *RL Specific E-DCH Information* IE, then the DRNS may use this value to determine the E-AGCH power. The E-AGCH Power Offset should be applied for any E-AGCH transmission to this UE.]
- [FDD - If the RADIO LINK ADDITION REQUEST message includes the *E-RGCH Power Offset* IE in the *RL Specific E-DCH Information* IE, then the DRNS may use this value to determine the E-RGCH power for the RL. The E-RGCH Power Offset should be applied for any E-RGCH transmission to this UE.]
- [FDD - If the RADIO LINK ADDITION REQUEST message includes the *E-HICH Power Offset* IE in the *RL Specific E-DCH Information* IE, then the DRNS may use this value to determine the E-HICH power for the RL. The E-HICH Power Offset should be applied for any E-HICH transmission to this UE.]
- [FDD – If the RADIO LINK ADDITION REQUEST message includes the *E-DCH Power Offset for Scheduling Info* IE, then the DRNS shall use this value as a power offset for the transmission of scheduling information without any MAC-d PDUs.]
- [FDD – If the RADIO LINK ADDITION REQUEST message includes the *SixteenQAM UL Operation Indicator* IE, the DRNS shall activate/deactivate SixteenQAM UL Operation for the RL in accordance with the *SixteenQAM UL Operation Indicator* IE.]
  - [FDD – If SixteenQAM UL Operation is activated, then the DRNS shall base the handling of the Relative Grant signalling on Scheduling Grant Table 2 according to [41]. If SixteenQAM UL Operation is deactivated, then the DRNS shall base the handling of the Relative Grant signalling on Scheduling Grant Table 1 according to [41].]

#### [TDD - HS-DSCH Setup:]

[TDD - If the *HS-DSCH Information* IE is present in the RADIO LINK ADDITION REQUEST message, then:]

- [TDD - The DRNS shall setup the requested HS-PDSCH resources on the Serving HS-DSCH Radio Link indicated by the *HS-PDSCH RL ID* IE.]
- [TDD - The DRNC shall include the *HARQ Memory Partitioning* IE in the *HS-DSCH TDD Information Response* IE in the RADIO LINK ADDITION RESPONSE message.]
- [TDD - If the RADIO LINK ADDITION REQUEST message includes the *HS-DSCH MAC-d PDU Size Format* IE in the *HS-DSCH Information* IE, then the DRNS shall use the indicated format in user plane frame structure for HS-DSCH channels [32] and MAC-hs [41]. ]
- [TDD - The DRNS may use the *Traffic Class* IE for a specific HS-DSCH MAC-d flow to determine the transport bearer characteristics to apply between DRNC and Node B. If *TrCH Source Statistics Descriptor* IE is present with the value "RRC" in the *HS-DSCH MAC-d Flows Information* IE, then the DRNC should ignore the *Traffic Class* IE.]
- [TDD - The DRNC shall allocate an HS-DSCH-RNTI to the UE Context and include the *HS-DSCH-RNTI* IE in the RADIO LINK ADDITION RESPONSE message.]
- [TDD - The DRNC shall include in the RADIO LINK ADDITION RESPONSE message the *Binding ID* IE and *Transport Layer Address* IE for establishment of transport bearer for every HS-DSCH MAC-d flow being established.]

- [TDD - If the RADIO LINK ADDITION REQUEST message includes the *Transport Layer Address* IE and *Binding ID* IE in the *HS-DSCH Information* IE for an HS-DSCH MAC-d flow, then the DRNC may use the transport layer address and the binding identifier received from the SRNC when establishing a transport bearer for the concerned HS-DSCH MAC-d flow. If the *TNL QoS* IE is included for a MAC-d flow and if ALCAP is not used, the *TNL QoS* IE may be used by the DRNS to determine the transport bearer characteristics to apply in the uplink between the DRNS and the SRNC for the related MAC-d flow.]
- [TDD - If the RADIO LINK ADDITION REQUEST message includes the *MAC-hs Guaranteed Bit Rate* IE for a Priority Queue in the *HS-DSCH MAC-d Flows Information* IE in the *HS-DSCH Information* IE, then the DRNS shall use this information to optimise MAC-hs scheduling decisions for the related HSDPA Priority Queue.]
- [TDD - If the RADIO LINK ADDITION REQUEST message includes the *Discard Timer* IE for a Priority Queue in the *HS-DSCH MAC-d Flows Information* IE in the *HS-DSCH Information* IE, then the DRNS shall use this information to discard out-of-date MAC-hs SDUs from the related HSDPA Priority Queue.]
- [TDD - If the RADIO LINK ADDITION REQUEST message includes the *Maximum MAC-d PDU Size Extended* IE for a Priority Queue in the *HS-DSCH MAC-d Flows Information* IE in the *HS-DSCH Information* IE, then the DRNC shall ignore the *SID* IE and *MAC-d PDU Size* IE in the *MAC-d PDU Size Index* IE and use *Maximum MAC-d PDU Size Extended* IE to optimise capacity allocation for the related HSDPA Priority Queue.]
- [TDD - If the RADIO LINK ADDITION REQUEST message includes *DL RLC PDU Size Format* IE for a Priority Queue in the *HS-DSCH MAC-d Flows Information* IE in the *HS-DSCH Information* IE, the DL RLC PDU Size Format IE may be used by the DRNS to determine the allocated capacity on user plane as described in [32].]
- [TDD - The DRNC shall include the *HS-DSCH Initial Capacity Allocation* IE in the *HS-DSCH TDD Information Response* IE in the RADIO LINK ADDITION RESPONSE message for every HS-DSCH MAC-d flow being established, if the DRNS allows the SRNC to start transmission of MAC-d PDUs before the DRNS has allocated capacity on user plane as described in [32]. If RADIO LINK ADDITION REQUEST message includes *HS-DSCH MAC-d PDU Size Format* IE in the *HS-DSCH Information* IE set to "Flexible MAC-d PDU Size", then DRNC shall only set in the *HS-DSCH Initial Capacity Allocation* IE the values for the peer of *Scheduling Priority Indicator* IE and *Maximum MAC-d PDU Size Extended* IE to the values of the corresponding peer received in RADIO LINK ADDITION REQUEST in the *HS-DSCH MAC-d Flows Information* IE in the *HS-DSCH Information* IE for a Priority Queue including *Scheduling Priority Indicator* IE and *Maximum MAC-d PDU Size Extended* IE.]
- [TDD - The DRNS shall allocate HS-SCCH parameters corresponding to the HS-DSCH and the DRNC shall include the [3.84Mcps TDD - *HS-SCCH Specific Information Response* IE] [1.28Mcps TDD - *HS-SCCH Specific Information Response LCR* IE] in the *HS-DSCH TDD Information Response* IE in the RADIO LINK ADDITION RESPONSE message.]

[1.28 Mcps TDD - If the *MIMO Activation Indicator* IE is included in the *HS-DSCH TDD Information* IE, then, The DRNS shall activate the MIMO mode for the HS-DSCH Radio Link. The DRNS shall decide the SF mode for HS-PDSCH dual stream and include the *MIMO SF Mode for HS-PDSCH dual stream* IE in the *HS-DSCH TDD Information Response* IE in the RADIO LINK ADDITION RESPONSE message.]

#### [TDD - Intra-Node B Serving HS-DSCH Radio Link Change:]

[TDD - If the RADIO LINK ADDITION REQUEST message includes the *HS-PDSCH RL ID* IE, this indicates the new Serving HS-DSCH Radio Link:]

- [TDD - The DRNC shall include the *HARQ Memory Partitioning* IE in the *HS-DSCH TDD Information Response* IE in the RADIO LINK ADDITION RESPONSE message.]
- [TDD - The DRNS shall allocate HS-SCCH parameters corresponding to the HS-DSCH and the DRNC shall include the [3.84Mcps TDD - *HS-SCCH Specific Information Response* IE] [1.28Mcps TDD - *HS-SCCH Specific Information Response LCR* IE] [7.68Mcps TDD - *HS-SCCH Specific Information Response 7.68Mcps* IE] in the *HS-DSCH TDD Information Response* IE in the RADIO LINK ADDITION RESPONSE message.]

#### [TDD - E-DCH:]

[3.84Mcps TDD, 1.28Mcps TDD and 7.68Mcps TDD – If the [3.84Mcps TDD - *E-DCH Information IE*][1.28Mcps TDD - *E-DCH Information 1.28Mcps IE*] [7.68Mcps TDD - *E-DCH Information 7.68Mcps IE*] is present in the RADIO LINK ADDITION REQUEST message:]

- [TDD – The DRNS shall setup the requested E-DCH resources on the Radio Link indicated by the *E-DCH Serving RL IE*.]
- [TDD – If the *TNL QoS IE* is included in the *E-DCH MAC-d Flows Information TDD IE* for an E-DCH MAC-d flow and if ALCAP is not used, the *TNL QoS IE* may be used by the DRNS to determine the transport bearer characteristics to apply in the uplink for the related MAC-d flow.]
- [TDD – If the RADIO LINK ADDITION REQUEST message includes the *Transport Layer Address IE* and *Binding ID IE* in the *E-DCH MAC-d Flows Information TDD IE* for an E-DCH MAC-d flow, then the DRNS may use the transport layer address and the binding identifier received from the SRNC when establishing a transport bearer for the concerned E-DCH MAC-d flow.]
- [TDD - If the RADIO LINK ADDITION REQUEST message includes the *E-DCH MAC-d Flow Multiplexing List IE* for an E-DCH MAC-d flow in the *E-DCH MAC-d Flows Information TDD IE*, the DRNS shall use this information for the related resource allocation operation.]
- [TDD - If in the RADIO LINK ADDITION REQUEST message the *E-DCH Grant Type IE* in the *E-DCH MAC-d Flows Information TDD IE* is set to "Non-scheduled" for an E-DCH MAC-d flow the DRNS shall assume non-scheduled grants are configured for that E-DCH MAC-d flow.]
- [TDD - If in the RADIO LINK ADDITION REQUEST message the *E-DCH Grant Type IE* in the *E-DCH MAC-d Flows Information TDD IE* is set to "Scheduled" the DRNS shall assume that it may issue scheduled grants for the concerned E-DCH MAC-d flow.]
- [TDD – If the RADIO LINK ADDITION REQUEST message includes the *MAC-es Guaranteed Bit Rate IE* in the *E-DCH Logical Channel Information IE* in the *E-DCH MAC-d Flows Information TDD IE*, then the DRNS shall use this information to optimise MAC-e scheduling decisions for the related queue.]
- [1.28Mcps TDD - If the RADIO LINK ADDITION REQUEST message includes the *MAC-es Maximum Bit Rate LCR IE* in the *E-DCH Logical Channel Information IE* in the *E-DCH MAC-d Flows Information TDD IE*, the DRNS shall use this information for the related resource allocation operation, and when applicable, for E-DCH scheduling.]
- [TDD - If the RADIO LINK ADDITION REQUEST message includes the *Maximum MAC-d PDU Size Extended IE* for a E-DCH Logical Channel in the *E-DCH MAC-d Flows Information TDD IE* in the *E-DCH Information IE*, then the DRNS shall ignore the *MAC-d PDU Size IE* in the *MAC-d PDU Size List IE* and use *Maximum MAC-d PDU Size Extended IE* to optimise capacity allocation for the related E-DCH Logical Channel and use the indicated format in user plane frame structure for E-DCH channels [32] and MAC [41].]
- [3.84Mcps TDD - If the RADIO LINK ADDITION REQUEST message includes the *E-DCH TDD Maximum Bitrate IE* in the *E-DCH TDD Information IE* for an E-DCH, the DRNS shall use this information for the related resource allocation operation, and when applicable, for E-DCH scheduling.]
- [1.28Mcps TDD - If the RADIO LINK ADDITION REQUEST message includes the *E-DCH Physical Layer Category LCR IE* or *Extended E-DCH Physical Layer Category LCR IE* in the *E-DCH TDD Information LCR IE* for an E-DCH, the DRNS shall use this information for the related resource allocation operation, and when applicable, for E-DCH scheduling.]
- [7.68Mcps TDD - If the RADIO LINK ADDITION REQUEST message includes the *E-DCH TDD Maximum Bitrate 7.68Mcps IE* in the *E-DCH TDD Information 7.68Mcps IE* for an E-DCH, the DRNS shall use this information for the related resource allocation operation, and when applicable, for E-DCH scheduling.]
- [3.84Mcps TDD - If the RADIO LINK ADDITION REQUEST message includes the *E-DCH Processing Overload Level IE* in the *E-DCH TDD Information IE*, then if the DRNS could not decode the E-PUCH for the last consecutive number of TTIs, indicated in the *E-DCH Processing Overload Level IE*, because of a processing issue, the DRNS shall notify the SRNC by initiating the Radio Link Failure procedure.]
- [7.68Mcps TDD - If the RADIO LINK ADDITION REQUEST message includes the *E-DCH Processing Overload Level IE* in the *E-DCH TDD Information 7.68Mcps IE*, then if the DRNS could not decode the E-PUCH for the last consecutive number of TTIs, indicated in the *E-DCH Processing Overload Level IE*, because of a processing issue, the DRNS shall notify the SRNC by initiating the Radio Link Failure procedure.]

- [1.28Mcps TDD - If the RADIO LINK ADDITION REQUEST message includes the *E-DCH Processing Overload Level IE* in the *E-DCH TDD Information LCR IE*, then if the DRNS could not decode the E-PUCH for the last consecutive number of TTIs, indicated in the *E-DCH Processing Overload Level IE*, because of a processing issue, the DRNS shall notify the SRNC by initiating the Radio Link Failure procedure.]
- [TDD - The DRNS may use the *Traffic Class IE* for a specific E-DCH MAC-d flow to determine the transport bearer characteristics to apply between DRNC and Node B.]
- [TDD – If the RADIO LINK ADDITION REQUEST message includes the [3.84Mcps TDD - *E-DCH TDD Information IE*][1.28Mcps TDD - *E-DCH TDD Information LCR IE*] in the *E-DCH MAC-d Flows Information TDD IE*, then the DRNS shall use this value as a power offset for the transmission of scheduling information without any MAC-d PDUs.]
- [1.28Mcps TDD - If the RADIO LINK ADDITION REQUEST message includes the *Maximum Number of Retransmission for Scheduling Info LCR IE* and the *E-DCH Retransmission timer for Scheduling Info LCR IE* in the *E-DCH TDD Information LCR IE*, then the DRNS shall use these parameters for the transmission of scheduling information without any MAC-d PDUs.]
- [3.84Mcps TDD - The DRNS shall determine any non-scheduled resource to be granted for the radio link, and return this in the *E-DCH Non-scheduled Grant Information TDD IE* in the *E-DCH Information Response IE* in the RADIO LINK ADDITION RESPONSE message.]
- [3.84Mcps TDD - The DRNS shall allocate an E-RNTI identifier and include the E-RNTI identifier and the E-AGCH(s) assigned in the *E-DCH Information Response IE* in the RADIO LINK ADDITION RESPONSE message.]
- [1.28Mcps TDD - The DRNS shall determine any non-scheduled resource to be granted for the radio link, and return this in the *E-DCH Non-scheduled Grant Information LCR TDD IE* in the *E-DCH Information Response 1.28Mcps IE* in the RADIO LINK ADDITION RESPONSE message.]
- [1.28Mcps TDD - The DRNS shall allocate an E-RNTI identifier and include the E-RNTI identifier, the E-AGCH(s) and E-HICH(s) assigned in the *E-DCH Information Response 1.28Mcps IE* in the RADIO LINK ADDITION RESPONSE message.]
- [7.684Mcps TDD - The DRNS shall determine any non-scheduled resource to be granted for the radio link, and return this in the *E-DCH Non-scheduled Grant Information 7.68Mcps TDD IE* in the *E-DCH Information Response 7.68Mcps IE* in the RADIO LINK ADDITION RESPONSE message.]
- [7.68Mcps TDD - The DRNS shall allocate an E-RNTI identifier and include the E-RNTI identifier and the E-AGCH(s) assigned in the *E-DCH Information Response 7.68Mcps IE* in the RADIO LINK ADDITION RESPONSE message.]

#### **[3.84Mcps TDD - Intra-Node B Serving E-DCH Radio Link Change:]**

[3.84Mcps TDD - If the RADIO LINK ADDITION REQUEST message includes the *E-DCH Serving RL IE*, this indicates the new Serving E-DCH Radio Link:]

- [3.84Mcps TDD - The DRNS shall allocate E-AGCH parameters corresponding to the E-DCH and include the *E-AGCH Specific Information Response IE* in the *E-DCH Information Response IE* in the RADIO LINK ADDITION RESPONSE message.]

#### **[1.28Mcps TDD - Intra-Node B Serving E-DCH Radio Link Change:]**

[1.28Mcps TDD - If the RADIO LINK ADDITION REQUEST message includes the *E-DCH Serving RL IE*, this indicates the new Serving E-DCH Radio Link:]

- [1.28Mcps TDD - The DRNS shall allocate E-AGCH parameters and E-HICH parameters corresponding to the E-DCH and include the *E-AGCH Specific Information Response IE* and the *E-HICH Specific Information Response IE* in the *E-DCH Information Response 1.28Mcps IE* in the RADIO LINK ADDITION RESPONSE message.]

#### **[7.68Mcps TDD - Intra-Node B Serving E-DCH Radio Link Change:]**

[7.68Mcps TDD - If the RADIO LINK ADDITION REQUEST message includes the *E-DCH Serving RL IE*, this indicates the new Serving E-DCH Radio Link:]

- [7.68Mcps TDD - The DRNS shall allocate E-AGCH parameters corresponding to the E-DCH and include the *E-AGCH Specific Information Response 7.68Mcps TDD* IE in the *E-DCH Information Response 7.68Mcps* IE in the RADIO LINK ADDITION RESPONSE message.]

#### [1.28 Mcps TDD - Continuous Packet Connectivity Handling:]

[1.28 Mcps TDD - If the RADIO LINK ADDITION REQUEST message includes the Continuous Packet *Connectivity DRX Information LCR* IE, then the DRNS shall take account into these parameters to decide the DRX operation related parameters and configure the concerned UE Context for DRX operation according to [21] and include the parameter(s) in the *Continuous Packet Connectivity DRX Information Response LCR* IE in the RADIO LINK ADDITION RESPONSE message.]

[1.28 Mcps TDD - If the RADIO LINK ADDITION REQUEST message includes the *HS-DSCH Semi-Persistent scheduling Information LCR* IE, then:]

- [1.28 Mcps TDD - The DRNS shall configure the Serving HS-DSCH Radio Link indicated by the *HS-PDSCH RL ID* IE for HS-DSCH Semi-Persistent scheduling operation according to [21].]
- [1.28 Mcps TDD - The DRNS shall allocate the HS-SICH information needed for HS-DSCH Semi-Persistent scheduling operation and include the *HS-DSCH Semi-Persistent scheduling Information Response LCR* IE in the RADIO LINK ADDITION RESPONSE message.]
- [1.28 Mcps TDD - If the *HS-DSCH Semi-Persistent Resource Reservation Indicator* IE is included in the *HS-DSCH Semi-Persistent scheduling Information LCR* IE, then the DRNS shall include *Allcoated HS-PDSCH Semi-persistent resource* IE in the RADIO LINK ADDITION RESPONSE message.]
- [1.28 Mcps TDD - The DRNS shall include the *Buffer Size for HS-DSCH Semi-Persistent scheduling* IE in the RADIO LINK ADDITION RESPONSE message.]
- [1.28 Mcps TDD - The DRNS shall include the *Number of Processes for HS-DSCH Semi-Persistent scheduling* IE in the RADIO LINK ADDITION RESPONSE message.]
- [1.28 Mcps TDD - If the *HS-DSCH Semi-Persistent scheduling operation Indicator* IE is included in the *HS-DSCH Semi-Persistent scheduling Information LCR* IE, then the DRNS shall apply this information for HS-DSCH Semi-Persistent scheduling operation.]

[1.28 Mcps TDD - If the RADIO LINK ADDITION REQUEST message includes the *E-DCH Semi-Persistent scheduling Information LCR* IE, then:]

- [1.28 Mcps TDD - The DRNS shall configure the Serving E-DCH Radio Link indicated by the *E-DCH Serving RL* IE for E-DCH Semi-Persistent scheduling operation according to [21].]
- [1.28 Mcps TDD - The DRNS shall allocate the E-PUCH codes needed for E-DCH Semi-Persistent scheduling operation and include the *E-DCH Semi-Persistent scheduling Information Response LCR* IE in the RADIO LINK ADDITION RESPONSE message.]
- [1.28 Mcps TDD - If the *E-DCH Semi-Persistent Resource Reservation Indicator* IE is included in the *E-DCH Semi-Persistent scheduling Information LCR* IE, then the DRNS shall include *Allcoated E-DCH Semi-persistent resource* IE in the RADIO LINK ADDITION RESPONSE message.]
- [1.28 Mcps TDD - If the *E-DCH Semi-Persistent scheduling Indicator* IE is included in the *E-DCH Semi-Persistent scheduling Information LCR* IE, then the DRNS shall apply this information for E-DCH Semi-Persistent scheduling operation.]

#### Response message:

If all requested RLs are successfully added, the DRNC shall respond with a RADIO LINK ADDITION RESPONSE message.

After sending the RADIO LINK ADDITION RESPONSE message the DRNS shall continuously attempt to obtain UL synchronisation on the Uu interface.

For each RL for which the *Delayed Activation* IE is not included in the RADIO LINK ADDITION REQUEST message the DRNS shall:

- [FDD -start transmission on the DL DPDCH(s) of the new RL as specified in ref. [4].]

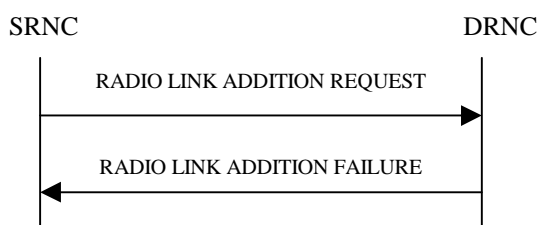
- [TDD - start transmission on the new RL immediately as specified in ref. [4].]

For each RL for which the *Delayed Activation* IE is included in the RADIO LINK ADDITION REQUEST message, the DRNS shall:

- if the *Delayed Activation* IE indicates "Separate Indication":
  - not start any DL transmission for the concerning RL on the Uu interface;
- if the *Delayed Activation* IE indicates "CFN":
  - [FDD - start transmission on the DL DPDCH(s) of the new RL as specified in ref. [4], however never before the CFN indicated in the *Activation CFN* IE.]
  - [TDD - start transmission on the new RL at the CFN indicated in the *Activation CFN* IE as specified in ref. [4].]

[1.28 Mcps TDD – if the DRNS assigns one or more PLCCCH sequence numbers to the radio link, then the PLCCCH assignment(s) shall be sent to the SRNC in the RADIO LINK ADDITION RESPONSE message.]

### 8.3.2.3 Unsuccessful Operation



**Figure 8: Radio Link Addition procedure: Unsuccessful Operation**

If the establishment of at least one RL is unsuccessful, the DRNC shall respond with a RADIO LINK ADDITION FAILURE message. DRNC shall include in the RADIO LINK ADDITION FAILURE message a general *Cause* IE or a *Cause* IE for each failed radio link. The *Cause* IE indicates the reason for failure.

[FDD - If some RL(s) were established successfully, the DRNC shall indicate this in the RADIO LINK ADDITION FAILURE message in the same way as in the RADIO LINK ADDITION RESPONSE message.]

[FDD - If the requested Serving HS-DSCH Radio Link Change was successful, or if the addition of the requested serving HS-DSCH Radio Link was successful or existed already but the Serving HS-DSCH Radio Link change was unsuccessful, the DRNS shall indicate this in the *HS-DSCH Serving Cell Change Information Response* IE in the RADIO LINK ADDITION FAILURE message]

[FDD - If the requested secondary serving HS-DSCH Radio Link Change was successful, or if the addition of the requested secondary serving HS-DSCH Radio Link was successful or existed already but the secondary serving HS-DSCH Radio Link change was unsuccessful, the DRNS shall indicate this in the *HS-DSCH Secondary Serving Cell Change Information Response* IE in the *Additional HS Cell Information Response* IE in the RADIO LINK ADDITION FAILURE message.]

[FDD - If the requested Serving E-DCH Radio Link Change was successful, or if the addition of the requested serving E-DCH Radio Link was successful or existed already but the Serving E-DCH Radio Link change was unsuccessful, the DRNS shall indicate this in the *E-DCH Serving Cell Change Information Response* IE in the RADIO LINK ADDITION FAILURE message.]

[FDD – If the *MIMO Activation Indicator* IE is included and the *Power Offset For S-CPICH for MIMO Request Indicator* IE is not included in the *HS-DSCH FDD Information* IE in the *HS-DSCH Serving Cell Change Information* IE in the RADIO LINK ADDITION REQUEST message or the power offset for S-CPICH for MIMO Request indicator has not been configured in the UE Context but MIMO pilot configuration with Primary and Secondary CPICH is set up on the cell where the Serving HS-DSCH Radio Link is established, the setup of the serving HS-DSCH Radio Link shall be reported as failed and the DRNC shall include in the RADIO LINK ADDITION FAILURE message the *Cause* IE.]

Typical cause values are:

#### Radio Network Layer Causes:

DL Radio Resources not Available;  
 UL Radio Resources not Available;  
 Combining Resources not Available;  
 Combining not Supported  
 Cell not Available;  
 [FDD - Requested Tx Diversity Mode not Supported;]  
 Power Level not Supported;  
 CM not Supported;  
 Reconfiguration CFN not Elapsed;  
 Number of DL Codes not Supported;  
 Number of UL codes not Supported;  
 [FDD - DPC mode change not Supported;]  
 Cell reserved for operator use;  
 Delayed Activation not supported;  
 [FDD – F-DPCH not supported;]  
 E-DCH not supported;  
 [FDD - MIMO not supported;]  
 [FDD - E-DCH TTI2ms not supported;]  
 [FDD - Continuous Packet Connectivity DTX-DRX operation not available;]  
 [FDD - Continuous Packet Connectivity UE DTX Cycle not available;]  
 [FDD - MIMO not available;]  
 [FDD – F-DPCH Slot Format operation not supported;]  
 [FDD - E-DPCCH Power Boosting not supported;]  
 [FDD - SixtyfourQAM DL and MIMO Combined not available;]  
 [FDD – Multi Cell operation not available;]  
 [FDD – Multi Cell operation not supported;]  
 [1.28Mcps TDD - MIMO not supported;]  
 [1.28Mcps TDD - MIMO not available;]  
 [1.28Mcps TDD - SixtyfourQAM DL and MIMO Combined not available;]  
 [FDD - TX diversity for MIMO UE on DL Control Channels not available;]  
 [FDD - Cell Specific Tx Diversity Handling For Multi Cell Operation Not Available;]  
 [FDD - Cell Specific Tx Diversity Handling For Multi Cell Operation Not Supported.]

#### Transport Layer Causes:

Transport Resource Unavailable.

#### Miscellaneous Causes:

Control Processing Overload;  
 HW Failure;  
 Not enough User Plane Processing Resources.

### 8.3.2.4 Abnormal Conditions

If the RADIO LINK ADDITION REQUEST message includes a *C-ID* IE corresponding to a cell reserved for operator use and the Permanent NAS UE Identity is not available in the DRNC for the considered UE Context, the DRNC shall reject the procedure for this particular Radio Link and send the RADIO LINK ADDITION FAILURE message.

[FDD - If the RADIO LINK ADDITION REQUEST message includes the *Transmission Gap Pattern Sequence Status* IEs in the *Active Pattern Sequence Information* IE and it does not address exactly all ongoing compressed mode patterns the DRNS shall reject the Radio Link Addition procedure and shall respond with a RADIO LINK ADDITION FAILURE message with the *Cause* IE value "Invalid CM settings".]

[FDD - If the RADIO LINK ADDITION REQUEST message is used to establish a new RL without compressed mode when compressed mode is active for the existing RL(s) (as specified in subclause 8.3.2.2), and if at least one of the new RLs is to be established in a cell that has the same UARFCN (both UL and DL) as at least one cell with an already existing RL, the DRNS shall reject the Radio Link Addition procedure and shall respond with a RADIO LINK ADDITION FAILURE message with the cause value "Invalid CM settings".]

[FDD - If the power balancing is active with the Power Balancing Adjustment Type of the UE Context set to "Individual" in the existing RL(s) and if the *DL Reference Power* IEs are included in the *RL Information* IE but the *DL*



*Reference Power* IE is not present for each RL in the *RL Information* IE, the DRNC shall reject the Radio Link Addition procedure and shall respond with a RADIO LINK ADDITION FAILURE message.]

[FDD - If the RADIO LINK ADDITION REQUEST message includes the *DL Reference Power* IEs in the *RL Information* IE but the power balancing is not active in the existing RL(s) or the power balancing is active with the Power Balancing Adjustment Type of the UE Context set to "Common" in the existing RL(s), the DRNC shall reject the Radio Link Addition procedure and shall respond with a RADIO LINK ADDITION FAILURE message with the cause value "Power Balancing status not compatible".]

[FDD - If the RADIO LINK ADDITION REQUEST message includes the *Enhanced Primary CPICH Ec/No* IE, but not the *Primary CPICH Ec/No* IE, then the DRNC shall reject the procedure using the RADIO LINK ADDITION FAILURE message.]

If the RADIO LINK ADDITION REQUEST message includes the *Transport Layer Address* IE and the *Binding ID* IE in the *RL Specific DCH Information* IE [FDD - or for an E-DCH MAC-d flow in *RL Specific E-DCH Information* IE] included in the *RL Information* IE for a specific RL and the *Diversity Control Field* IE is set to "Must" [FDD – or the RL is combined with existing E-DCH RL which transport bearer is not established in the DRNS], the DRNC shall reject the Radio Link Addition procedure and respond with the RADIO LINK ADDITION FAILURE message.

If ALCAP is not used, if the RADIO LINK ADDITION REQUEST message does not include the *Transport Layer Address* IE and the *Binding ID* IE in the *RL Specific DCH Information* IE nor *RL Specific E-DCH Information* IE in the *RL Information* IE for a specific RL and the *Diversity Control Field* IE is set to "May", the DRNC shall reject the Radio Link Addition procedure and respond with the RADIO LINK ADDITION FAILURE message.

If ALCAP is not used, if the RADIO LINK ADDITION REQUEST message does not include the *Transport Layer Address* IE and the *Binding ID* IE in the *RL Specific DCH Information* IE in the *RL Information* IE for a specific RL and the *Diversity Control Field* IE is set to "Must Not", the DRNC shall reject the Radio Link Addition procedure and respond with the RADIO LINK ADDITION FAILURE message.

If ALCAP is not used, if the RADIO LINK ADDITION REQUEST message does not include the *Transport Layer Address* IE and the *Binding ID* IE in [FDD - the *RL Specific E-DCH Information* IE in the *RL Information* IE for the first E-DCH RL][TDD – the *E-DCH MAC-d Flows Information TDD* IE], the DRNC shall reject the Radio Link Addition procedure and respond with the RADIO LINK ADDITION FAILURE message.

If ALCAP is not used, if the RADIO LINK ADDITION REQUEST message does not include the *Transport Layer Address* IE and the *Binding ID* IE for an HS-DSCH MAC-d Flow in the *HS-DSCH MAC-d Flows Information* IE, the DRNC shall reject the Radio Link Addition procedure and respond with the RADIO LINK ADDITION FAILURE message.

If the RADIO LINK ADDITION REQUEST message includes the *Transport Layer Address* IE or the *Binding ID* IE, and not both are present for a transport bearer intended to be established, the DRNC shall reject the Radio Link Addition procedure and respond with the RADIO LINK ADDITION FAILURE message.

[FDD - If the RADIO LINK ADDITION REQUEST message includes the *HS-DSCH Serving Cell Change Information* IE but not the *HS-DSCH FDD Information* IE and the UE Context is not configured for HS-DSCH, then the DRNS shall reject the procedure using the RADIO LINK ADDITION FAILURE message.]

[FDD - If the RADIO LINK ADDITION REQUEST message includes the *Serving Cell Change CFN* IE but neither the *Serving E-DCH RL* IE nor the *HS-DSCH Serving Cell Change Information* IE, then the DRNS shall reject the procedure using the RADIO LINK ADDITION FAILURE message.]

[FDD - If the RADIO LINK ADDITION REQUEST message includes the *Serving E-DCH RL* IE but the UE Context is not configured for E-DCH, then the DRNS shall reject the procedure using the RADIO LINK ADDITION FAILURE message.]

[FDD - If the *E-DCH FDD Information* IE is present in the RADIO LINK ADDITION REQUEST message, but the *E-DPCH Information* IE is not present, then the DRNS shall reject the procedure using the RADIO LINK ADDITION FAILURE message.]

[FDD - If the RADIO LINK ADDITION REQUEST message includes the *E-DCH RL Indication* IE set to "E-DCH", but no *E-DCH FDD Information* IE, and the UE Context is not configured for E-DCH, then the DRNC shall reject the procedure using the RADIO LINK ADDITION FAILURE message.]

[FDD - If the RADIO LINK ADDITION REQUEST message includes the *E-DCH FDD Information* IE but no *E-DCH RL Indication* IE set to "E-DCH", then the DRNC shall reject the procedure using the RADIO LINK ADDITION FAILURE message.]

[TDD - If the RADIO LINK ADDITION REQUEST message includes the *HS-PDSCH RL-ID* IE not equal to the *RL ID* IE, the DRNC shall reject the procedure using the RADIO LINK ADDITION FAILURE message.]

[TDD - If the RADIO LINK ADDITION REQUEST message includes the *E-DCH Serving RL* IE not equal to the *RL ID* IE, the DRNS shall reject the procedure using the RADIO LINK ADDITION FAILURE message.]

If the RADIO LINK ADDITION REQUEST message contains the *HS-PDSCH RL ID* IE [FDD – in the *HS-DSCH Serving Cell Change Information* IE] and/or *Serving E-DCH RL* IE and if both HS-DSCH and E-DCH are configured in the DRNS but the Serving HS-DSCH Radio Link and the Serving E-DCH Radio Link are not in the same cell then the DRNC shall reject the procedure using the RADIO LINK ADDITION FAILURE message.

[FDD - If the RADIO LINK ADDITION REQUEST message contains the *HS-DSCH Serving Cell Change Information* IE and the *E-DPCH Information* IE which includes the *HS-DSCH Configured Indicator* IE set as "HS-DSCH not configured" then the DRNC shall reject the procedure using the RADIO LINK ADDITION FAILURE message.]

If the RADIO LINK ADDITION REQUEST message includes the *Maximum MAC-d PDU Size Extended* IE for a Priority Queue in the *HS-DSCH MAC-d Flows Information* IE in the *HS-DSCH Information* IE [FDD - in the *HS-DSCH Serving Cell Change Information*] and the *HS-DSCH MAC-d PDU Size Format* IE in the *HS-DSCH Information* IE [FDD - in the *HS-DSCH Serving Cell Change Information*] has the value "Indexed MAC-d PDU Size", the DRNC shall reject the procedure using the RADIO LINK ADDITION FAILURE message.

If the RADIO LINK ADDITION REQUEST message does not include the *Maximum MAC-d PDU Size Extended* IE for a Priority Queue in the *HS-DSCH MAC-d Flows Information* IE in the *HS-DSCH Information* IE [FDD - in the *HS-DSCH Serving Cell Change Information*] and the *HS-DSCH MAC-d PDU Size Format* IE in the *HS-DSCH Information* IE [FDD - in the *HS-DSCH Serving Cell Change Information*] has the value "Flexible MAC-d PDU Size", the DRNC shall reject the procedure using the RADIO LINK ADDITION FAILURE message.

[FDD - If the RADIO LINK ADDITION REQUEST message contains, for at least one logical channel, the *Maximum MAC-d PDU Size Extended* IE in the *E-DCH MAC-d Flows Information* IE in the *E-DCH FDD Information* IE and there exist a logical channel for which the *Maximum MAC-d PDU Size Extended* IE in the *E-DCH MAC-d Flows Information* IE in the *E-DCH FDD Information* IE is not present, the DRNC shall reject the procedure using the RADIO LINK ADDITION FAILURE message.]

[TDD - If the RADIO LINK ADDITION REQUEST message contains, for at least one logical channel, the *Maximum MAC-d PDU Size Extended* IE in the *E-DCH MAC-d Flows Information TDD* IE in the *E-DCH Information* IE, and there exist a logical channel for which the *Maximum MAC-d PDU Size Extended* IE in the *E-DCH MAC-d Flows Information TDD* IE in the *E-DCH Information* IE is not present, the DRNC shall reject the procedure using the RADIO LINK ADDITION FAILURE message.]

[FDD – If the RADIO LINK ADDITION REQUEST message contains the *Transport Bearer Not Requested Indicator* IE for a DCH but the DCH is configured to be included as a part of the downlink CCTrCH, the DRNC shall reject the procedure using the RADIO LINK ADDITION FAILURE message.]

[FDD - If the RADIO LINK ADDITION REQUEST message contains the *MIMO Activation Indicator* IE, *Sixtyfour QAM Usage Allowed Indicator* IE set to "Allowed" and/or the *Additional HS Cell Information RL Addition* IE, but does not contain the *HS-DSCH MAC-d PDU Size Format* IE set to "Flexible MAC-d PDU Size", then the DRNC shall reject the procedure using the RADIO LINK ADDITION FAILURE message.]

[FDD – If the RADIO LINK ADDITION REQUEST message contains the *Serving E-DCH RL ID* IE but contains the *Transport Bearer Not Requested Indicator* IE in the RL Specific E-DCH Information for the new Serving E-DCH RL or there is at least one E-DCH MAC-d flow which transport bearer was not configured in the existing E-DCH RL to be combined with the Serving E-DCH RL, the DRNC shall reject the procedure using the RADIO LINK ADDITION FAILURE message.]

[FDD - If the RADIO LINK ADDITION REQUEST message includes the *Transport Bearer Not Requested Indicator* IE for a DCH or an E-DCH MAC-d Flow for a specific RL and the specific RL is combined with the existing RL which the transport bearer is established for the DCH or the E-DCH MAC-d Flow in DRNS, the DRNC shall reject the procedure using the RADIO LINK ADDITION FAILURE message.]

[FDD - If the RADIO LINK ADDITION REQUEST message contains a *MIMO Activation Indicator* IE and an *Additional HS Cell Information RL Addition* IE, then the DRNC shall reject the procedure using the RADIO LINK ADDITION FAILURE message.]

[FDD – If the RADIO LINK ADDITION REQUEST message contains the *Additional HS Cell Information RL Addition* IE indicating a secondary serving cell that is not in the same Node B as the new serving HS-DSCH cell, then the DRNC shall reject the procedure using the RADIO LINK ADDITION FAILURE message]

[FDD - If the RADIO LINK ADDITION REQUEST message contains the *Additional HS Cell Information RL Addition* IE and if the HS-DSCH is not configured in the DRNS Communication Context and the *HS-DSCH Information* IE is not present, then the DRNS shall reject the procedure using the RADIO LINK SETUP FAILURE message.]

If the RADIO LINK ADDITION REQUEST message includes *DL RLC PDU Size Format* IE for a Priority Queue in the *HS-DSCH MAC-d Flows Information* IE in the *HS-DSCH Information* IE [FDD - in the *HS-DSCH Serving Cell Change Information* IE] set to "Flexible RLC PDU Size", *HS-DSCH MAC-d PDU Size Format* IE in the *HS-DSCH Information* IE [FDD - in the *HS-DSCH Serving Cell Change Information* IE] has the value "Indexed MAC-d PDU Size", the DRNC shall reject the procedure using the RADIO LINK ADDITION FAILURE message.

If the RADIO LINK ADDITION REQUEST message does not include the *Maximum MAC-d PDU Size Extended* IE for a Priority Queue in the *HS-DSCH MAC-d Flows Information* IE in the *HS-DSCH Information* IE [FDD - in the *HS-DSCH Serving Cell Change Information* IE] and the *DL RLC PDU Size Format* IE in the *HS-DSCH Information* IE [FDD - in the *HS-DSCH Serving Cell Change Information* IE] has the value "Flexible RLC PDU Size", the DRNC shall reject the procedure using the RADIO LINK ADDITION FAILURE message.

[FDD - If the RADIO LINK ADDITION REQUEST message contains the *Diversity Mode* IE in the *HS-DSCH FDD Secondary Serving Information* IE in the *Additional HS Cell Information RL Addition* IE and the secondary serving HS-DSCH is already configured in the UE Context, then the DRNS shall reject the procedure using the RADIO LINK ADDITION FAILURE message.]

[FDD - If the secondary serving HS-DSCH is not configured in the UE Context and if the RADIO LINK ADDITION REQUEST message contains in the *HS-DSCH FDD Secondary Serving Information* IE in the *Additional HS Cell Information RL Addition* IE the *Diversity Mode* IE not set to "None" but not the *Transmit Diversity Indicator* or contains the *Transmit Diversity Indicator* but not the *Diversity Mode* IE not set to "None", then the DRNS shall reject the procedure using the RADIO LINK SETUP FAILURE message.]

### 8.3.3 Radio Link Deletion

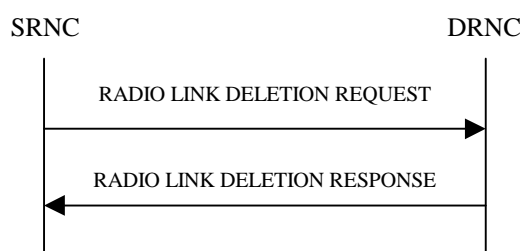
#### 8.3.3.1 General

The Radio Link Deletion procedure is used to release the resources in a DRNS for one or more established radio links towards a UE.

This procedure shall use the signalling bearer connection for the relevant UE Context.

The Radio Link Deletion procedure may be initiated by the SRNC at any time after establishing a Radio Link.

#### 8.3.3.2 Successful Operation



**Figure 9: Radio Link Deletion procedure, Successful Operation**

The procedure is initiated with a RADIO LINK DELETION REQUEST message sent from the SRNC to the DRNC.

Upon receipt of this message, the DRNS shall delete the radio link(s) identified by the *RL ID* IE(s) in the message, shall release all associated resources and shall respond to the SRNC with a RADIO LINK DELETION RESPONSE message.

If the radio link(s) to be deleted represent the last radio link(s) for the UE in the DRNS and if the UE is not using any common resources in the DRNS, then the DRNC shall release the UE Context.

[FDD - After deletion of the RL(s), the UL out-of-sync algorithm defined in ref. [10] shall for each of the remaining RL Set(s) use the maximum value of the parameters *N\_OUTSYNC\_IND* and *T\_RLFAILURE* that are configured in the cells supporting the radio links of the RL Set. The UL in-sync algorithm defined in ref. [10] shall for each of the remaining RL Set(s) use the minimum value of the parameters *N\_INSYNC\_IND* that are configured in the cells supporting the radio links of the RL Set.]

[FDD – If the RL indicated by the *RL ID* IE in the RADIO LINK DELETION REQUEST message is the serving HS-DSCH Radio link and a related secondary serving HS-DSCH Radio Link exists in the DRNS, the DRNC shall delete the secondary serving HS-DSCH Radio Link.]

[FDD – If the RL indicated by the *RL ID* IE in the RADIO LINK DELETION REQUEST message is the secondary serving HS-DSCH Radio link, the DRNC shall delete the secondary serving HS-DSCH Radio Link.]

### 8.3.3.3 Unsuccessful Operation

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### 8.3.3.4 Abnormal Conditions

If the RL indicated by the *RL ID* IE does not exist, the DRNC shall respond with the RADIO LINK DELETION RESPONSE message.

## 8.3.4 Synchronised Radio Link Reconfiguration Preparation

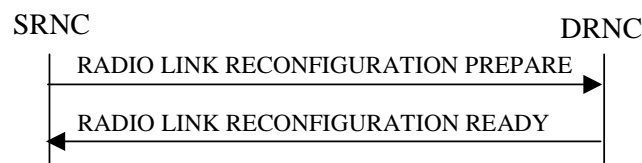
### 8.3.4.1 General

The Synchronised Radio Link Reconfiguration Preparation procedure is used to prepare a new configuration of Radio Link(s) related to one UE-UTRAN connection within a DRNS.

This procedure shall use the signalling bearer connection for the relevant UE Context.

The Synchronised Radio Link Reconfiguration Preparation procedure shall not be initiated if a Prepared Reconfiguration exists, as defined in subclause 3.1.

### 8.3.4.2 Successful Operation



**Figure 10: Synchronised Radio Link Reconfiguration Preparation procedure, Successful Operation**

The Synchronised Radio Link Reconfiguration Preparation procedure is initiated by the SRNC by sending the RADIO LINK RECONFIGURATION PREPARE message to the DRNC.

Upon receipt, the DRNS shall reserve necessary resources for the new configuration of the Radio Link(s) according to the parameters given in the message. Unless specified below, the meaning of parameters is specified in other specifications.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *Allowed Queuing Time* IE the DRNS may queue the request the time corresponding to the value of the *Allowed Queuing Time* IE before starting to execute the request.

The DRNS shall prioritise resource allocation for the RL(s) to be modified according to Annex A.

#### **DCH Modification:**

If the RADIO LINK RECONFIGURATION PREPARE message includes any *DCHs To Modify* IEs, the DRNS shall treat them each as follows:

- If the *DCHs To Modify* IE includes multiple *DCH Specific Info* IEs then the DRNS shall treat the DCHs in the *DCHs To Modify* IE as a set of co-ordinated DCHs. The DRNS shall include these DCHs in the new configuration only if it can include all of them in the new configuration.
- If the *DCHs To Modify* IE includes the *UL FP Mode* IE for a DCH or a set of co-ordinated DCHs to be modified, the DRNS shall apply the new FP Mode in the Uplink of the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- If the *DCHs To Modify* IE includes the *ToAWS* IE for a DCH or a set of co-ordinated DCHs to be modified, the DRNS shall apply the new ToAWS in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- If the *DCHs To Modify* IE includes the *ToAWE* IE for a DCH or a set of co-ordinated DCHs to be modified, the DRNS shall apply the new ToAWE in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- If the *DCHs To Modify* IE contains a *DCH Specific Info* IE which includes the *Frame Handling Priority* IE for a DCH to be modified, the DRNS should store this information for this DCH in the new configuration. The received Frame Handling Priority should be used when prioritising between different frames in the downlink on the radio interface in congestion situations within the DRNS once the new configuration has been activated.
- If the *DCHs To Modify* IE contains a *DCH Specific Info* IE which includes the *Traffic Class* IE for a DCH to be modified, the DRNS should store this information for this DCH in the new configuration. The *Traffic Class* IE may be used to determine the transport bearer characteristics to apply between DRNC and Node B for the related DCH or set of co-ordinated DCHs. The DRNC should ignore the *Traffic Class* IE if the *TrCH Source Statistics Descriptor* IE for this DCH indicates the value "RRC".
- [FDD - If the *DCHs to Modify* IE contains a *DCH Specific Info* IE which includes the *Unidirectional DCH indicator* IE set to "Uplink DCH only", the DRNS shall ignore the *Transport Format Set* IE for the downlink for this DCH. As a consequence this DCH is not included as a part of the downlink CCTrCH.]
- [FDD - If the *DCHs to Modify* IE contains a *DCH Specific Info* IE which includes the *Unidirectional DCH indicator* IE set to "Downlink DCH only", the DRNS shall ignore the *Transport Format Set* IE for the uplink for this DCH. As a consequence this DCH is not included as a part of the uplink CCTrCH.]
- If the *DCHs To Modify* IE contains a *DCH Specific Info* IE which includes the *Transport Format Set* IE for the UL of a DCH to be modified, the DRNS shall apply the new Transport Format Set in the Uplink of this DCH in the new configuration.
- If the *DCHs to Modify* IE includes the *TNL QoS* IE for a DCH or a set of co-ordinated DCHs to be modified and if ALCAP is not used, the DRNS may store this information for this DCH in the new configuration. The *TNL QoS* IE may be used to determine the transport bearer characteristics to apply in the uplink for the related DCH or set of co-ordinated DCHs.
- If the *DCHs To Modify* IE contains a *DCH Specific Info* IE which includes the *Transport Format Set* IE for the DL of a DCH to be modified, the DRNS shall apply the new Transport Format Set in the Downlink of this DCH in the new configuration.
- If the *DCHs To Modify* IE contains a *DCH Specific Info* IE which includes the *Allocation/Retention Priority* IE, the DRNS shall apply the new Allocation/Retention Priority to this DCH in the new configuration according to Annex A.
- [TDD - If the *DCHs To Modify* IE includes the *CCTrCH ID* IE for the UL, the DRNS shall map the DCH onto the referenced UL CCTrCH in the new configuration.]
- [TDD - If the *DCHs To Modify* IE includes the *CCTrCH ID* IE for the DL, the DRNS shall map the DCH onto the referenced DL CCTrCH in the new configuration.]

- If the *DCHs To Modify* IE contains a *DCH Specific Info* IE which includes the *Guaranteed Rate Information* IE, the DRNS shall treat the included IEs according to the following:
  - If the *Guaranteed Rate Information* IE includes the *Guaranteed UL Rate* IE, the DRNS shall apply the new Guaranteed Rate in the uplink of this DCH in the new configuration. The DRNS may decide to request the SRNC to limit the user rate in the uplink of the DCH at any point in time after activating the new configuration. The DRNS may request the SRNC to reduce the user rate of the uplink of the DCH below the guaranteed bit rate, however, whenever possible the DRNS should request the SRNC to reduce the user rate between the maximum bit rate and the guaranteed bit rate.
  - If the *Guaranteed Rate Information* IE includes the *Guaranteed DL Rate* IE, the DRNS shall apply the new Guaranteed Rate in the downlink of this DCH in the new configuration. The DRNS may decide to request the SRNC to limit the user rate in the downlink of the DCH at any point in time after activating the new configuration. The DRNS may request the SRNC to reduce the user rate of the downlink of the DCH below the guaranteed bit rate, however, whenever possible the DRNS should request the SRNC to reduce the user rate between the maximum bit rate and the guaranteed bit rate.

#### DCH Addition:

If the RADIO LINK RECONFIGURATION PREPARE message includes any *DCHs To Add* IEs, the DRNS shall treat them each as follows:

- The DRNS shall reserve necessary resources for the new configuration of the Radio Link(s) according to the parameters given in the message and include these DCH in the new configuration.
- If the *DCH Information* IE includes a *DCHs To Add* IE with multiple *DCH Specific Info* IEs, the DRNS shall treat the DCHs in the *DCHs To Add* IE as a set of co-ordinated DCHs. The DRNS shall include these DCHs in the new configuration only if it can include all of them in the new configuration.
- If the *DCH Specific Info* IE includes the *Unidirectional DCH Indicator* IE set to "Uplink DCH only", the DRNS shall ignore the *Transport Format Set* IE for the downlink for this DCH. As a consequence this DCH is not included as a part of the downlink CCTrCH.
- If the *DCH Specific Info* IE includes the *Unidirectional DCH Indicator* IE set to "Downlink DCH only", the DRNS shall ignore the *Transport Format Set* IE for the uplink for this DCH. As a consequence this DCH is not included as a part of the uplink CCTrCH.
- [FDD - For each DCH which do not belong to a set of co-ordinated DCHs and which includes a *QE-Selector* IE set to "selected", the DRNS shall use the Transport channel BER from that DCH for the QE in the UL data frames. If no Transport channel BER is available for the selected DCH, the DRNS shall use the Physical channel BER for the QE, ref. [4]. If the *QE-Selector* IE is set to "non-selected", the DRNS shall use the Physical channel BER for the QE in the UL data frames, ref. [4].]
- For a set of co-ordinated DCHs, the DRNS shall use the Transport channel BER from the DCH with the *QE-Selector* IE set to "selected" for the QE in the UL data frames, ref. [4]. [FDD - If no Transport channel BER is available for the selected DCH, the DRNS shall use the Physical channel BER for the QE, ref. [4]. If all DCHs have the *QE-Selector* IE set to "non-selected", the DRNS shall use the Physical channel BER for the QE, ref. [4].] [TDD - If no Transport channel BER is available for the selected DCH, the DRNS shall use 0 for the QE, ref. [4].]
- The DRNS should store the *Frame Handling Priority* IE received for a DCH to be added in the new configuration. The received Frame Handling Priority should be used when prioritising between different frames in the downlink on the Uu interface in congestion situations within the DRNS once the new configuration has been activated.
- If the *TNL QoS* IE is included for a DCH or a set of co-ordinated DCHs and if ALCAP is not used, the DRNS may use this information to determine the transport bearer characteristics to apply for the uplink for the related DCH or set of co-ordinated DCHs.
- The DRNS should store the *Traffic Class* IE received for a DCH to be added in the new configuration. The *Traffic Class* IE may be used to determine the transport bearer characteristics to apply between DRNC and Node B for the related DCH or set of co-ordinated DCHs. The DRNC should ignore the *Traffic Class* IE if the *TrCH Source Statistics Descriptor* IE indicates the value "RRC".

- The DRNS shall use the included *UL FP Mode* IE for a DCH or a set of co-ordinated DCHs to be added as the new FP Mode in the Uplink of the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- The DRNS shall use the included *ToAWS* IE for a DCH or a set of co-ordinated DCHs to be added as the new Time of Arrival Window Startpoint in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- The DRNS shall use the included *ToAWE* IE for a DCH or a set of co-ordinated DCHs to be added as the new Time of Arrival Window Endpoint in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- [3.84Mcps TDD - The DRNC shall include the *Secondary CCPCH Info TDD* IE in the RADIO LINK RECONFIGURATION READY message if at least one DSCH or USCH exists in the new configuration.]
- [1.28Mcps TDD - The DRNC shall include the *Secondary CCPCH Info TDD LCR* IE in the RADIO LINK RECONFIGURATION READY message if at least one DSCH or USCH exists in the new configuration.]
- [7.68Mcps TDD - The DRNC shall include the *Secondary CCPCH Info TDD 7.68Mcps* IE in the RADIO LINK RECONFIGURATION READY message if at least one DSCH or USCH exists in the new configuration.]
- If the *DCHs To Add* IE contains a *DCH Specific Info* IE which includes the *Guaranteed Rate Information* IE, the DRNS shall treat the included IEs according to the following:
  - If the *Guaranteed Rate Information* IE includes the *Guaranteed UL Rate* IE, the DRNS shall apply the new Guaranteed Rate in the uplink of this DCH in the new configuration. The DRNS may decide to request the SRNC to limit the user rate of the uplink of the DCH at any point in time after activating the new configuration. The DRNS may request the SRNC to reduce the user rate of the uplink of the DCH below the guaranteed bit rate, however, whenever possible the DRNS should request the SRNC to reduce the user rate between the maximum bit rate and the guaranteed bit rate. If the *DCH Specific Info* IE in the *DCHs To Add* IE does not include the *Guaranteed UL Rate* IE, the DRNS shall not limit the user rate of the uplink of the DCH.
  - If the *Guaranteed Rate Information* IE includes the *Guaranteed DL Rate* IE, the DRNS shall apply the new Guaranteed Rate in the downlink of this DCH in the new configuration. The DRNS may decide to request the SRNC to limit the user rate of the downlink of the DCH at any point in time after activating the new configuration. The DRNS may request the SRNC to reduce the user rate of the downlink of the DCH below the guaranteed bit rate, however, whenever possible the DRNS should request the SRNC to reduce the user rate between the maximum bit rate and the guaranteed bit rate. If the *DCH Specific Info* IE in the *DCHs To Add* IE does not include the *Guaranteed DL Rate* IE, the DRNS shall not limit the user rate of the downlink of the DCH.
- [TDD - The DRNS shall apply the *CCTrCH ID* IE (for the DL) in the Downlink of this DCH in the new configuration.]
- [TDD - The DRNS shall apply the *CCTrCH ID* IE (for the UL) in the Uplink of this DCH in the new configuration.]

#### **DCH Deletion:**

If the RADIO LINK RECONFIGURATION PREPARE message includes any *DCH To Delete*, the DRNS shall not include the referenced DCHs in the new configuration.

If all of the DCHs belonging to a set of co-ordinated DCHs are requested to be deleted, the DRNS shall not include this set of co-ordinated DCHs in the new configuration.

#### **Physical Channel Modification:**

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes an *UL DPCH Information* IE, the DRNS shall apply the parameters to the new configuration as follows:]

- [FDD - If the *UL DPCH Information* IE includes the *Uplink Scrambling Code* IE, the DRNS shall apply this Uplink Scrambling Code to the new configuration.]

- [FDD - If the *UL DPCH Information IE* includes the *Min UL Channelisation Code Length IE*, the DRNS shall apply the new Min UL Channelisation Code Length in the new configuration. The DRNS shall apply the contents of the *Max Number of UL DPDCHs IE* (if it is included) in the new configuration.]
- [FDD - If the *UL DPCH Information IE* includes the *TFCS IE*, the DRNS shall use the *TFCS IE* for the UL when reserving resources for the uplink of the new configuration. The DRNS shall apply the new TFCS in the uplink of the new configuration.]
- [FDD - If the *UL DPCH Information IE* includes the *UL DPCCH Slot Format IE*, the DRNS shall apply the new Uplink DPCCH Slot Format to the new configuration.]
- [FDD - If the *UL DPCH Information IE* includes the *UL SIR Target IE*, the DRNS shall use the value for the UL inner loop power control when the new configuration is being used.]
- [FDD - If the *UL DPCH Information IE* includes the *Puncture Limit IE*, the DRNS shall apply the value in the uplink of the new configuration.]
- [FDD - If the *UL DPCH Information IE* includes the *Diversity Mode IE*, the DRNS shall apply diversity according to the given value.]
- [FDD – If the *UL DPCH Information IE* includes the *UL DPDCH Indicator For E-DCH Operation IE* and it is set to "UL DPDCH not present", the UL DPDCH resources shall be removed from the configuration.]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes a *DL DPCH Information IE* and the concerned UE Context is configured to use F-DPCH in the downlink in the old configuration, the DRNS shall configure the concerned UE Context to use DPCH in the downlink in the new configuration. In this case, if at least one Transmission Gap Pattern Sequence is configured with an SF/2 downlink compressed mode method in the new configuration, the DRNC shall include the *Transmission Gap Pattern Sequence Scrambling Code Information IE* in the RADIO LINK RECONFIGURATION READY message indicating for each Channelisation Code whether the alternative scrambling code shall be used or not.]

- [FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *DL DPCH Power Information IE*, the DRNS shall use the information contained in it for the power settings of the DL DPCH. In particular, if the received *Inner Loop DL PC Status IE* is set to "Active", the DRNS shall activate the inner loop DL power control for all RLs. If *Inner Loop DL PC Status IE* is set to "Inactive", the DRNS shall deactivate the inner loop DL power control for all RLs according to ref. [10]. Furthermore, the DRNC shall include the *DL Code Information IE* in the RADIO LINK RECONFIGURATION READY.]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes a *DL DPCH Information IE*, the DRNS shall apply the parameters to the new configuration as follows:]

- [FDD - If the *DL DPCH Information IE* includes the *Number of DL Channelisation Codes IE*, the DRNS shall allocate given number of Downlink Channelisation Codes per Radio Link and apply the new Downlink Channelisation Code(s) to the new configuration. Each Downlink Channelisation Code allocated for the new configuration shall be included in the RADIO LINK RECONFIGURATION READY message within the *DL Code Information IE* as a *FDD DL Channelisation Code Number IE* when sent to the SRNC. If some Transmission Gap Pattern sequences using "SF/2" method are already initialised in the DRNS, DRNC shall include the *Transmission Gap Pattern Sequence Scrambling Code Information IE* in the RADIO LINK RECONFIGURATION READY message in case the DRNS selects to change the Scrambling code change method for one or more DL Channelisation Code.]
- [FDD - When more than one DL DPDCH are assigned per RL, the segmented physical channel shall be mapped on to DL DPDCHs according to [8]. When  $p$  number of DL DPDCHs are assigned to each RL, the first pair of DL Scrambling Code and FDD DL Channelisation Code Number corresponds to "*PhCH number 1*", the second to "*PhCH number 2*", and so on until the  $p$ th to "*PhCH number p*".]
- [FDD - If the *DL DPCH Information IE* includes the *TFCS IE*, the DRNS shall use the *TFCS IE* for the DL when reserving resources for the downlink of the new configuration. The DRNS shall apply the new TFCS in the Downlink of the new configuration.]
- [FDD - If the *DL DPCH Information IE* includes the *DL DPCH Slot Format IE*, the DRNS shall apply the new slot format used in DPCH in DL.]
- [FDD - If the *DL DPCH Information IE* includes the *TFCI Signalling Mode IE*, the DRNS shall apply the new signalling mode of the TFCI.]



- [FDD - If the *DL DPCH Information IE* includes the *Multiplexing Position IE*, the DRNS shall apply the new parameter to define whether fixed or flexible positions of transport channels shall be used in the physical channel.]
- [FDD - If the *DL DPCH Information IE* includes the *Limited Power Increase IE* set to "Used", the DRNS shall, if supported, use Limited Power Increase according to ref. [10] subclause 5.2.1 for the inner loop DL power control in the new configuration.]
- [FDD - If the *DL DPCH Information IE* includes the *Limited Power Increase IE* set to "Not Used", the DRNS shall not use Limited Power Increase for the inner loop DL power control in the new configuration.]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *F-DPCH Information IE*, then:]

- [FDD – The DRNS shall configure the concerned UE Context to use F-DPCH in the downlink in the new configuration.]
- [FDD – If the *F-DPCH Information IE* includes the *F-DPCH Slot Format Support Request IE*, then the DRNS shall configure the concerned UE Context for F-DPCH Slot Format operation according to [8] and include the *F-DPCH Slot Format IE* in the RADIO LINK RECONFIGURATION READY message. If the *F-DPCH Information IE* includes the *F-DPCH Slot Format IE*, the DRNC may use the *F-DPCH Slot Format IE* to determine the F-DPCH slot format.]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *Transmission Gap Pattern Sequence Information IE*, the DRNS shall store the new information about the Transmission Gap Pattern Sequences to be used in the new Compressed Mode Configuration. Any Transmission Gap Pattern Sequences already existing in the previous Compressed Mode Configuration are replaced by the new sequences once the new Compressed Mode Configuration has been activated or once the previous Compressed Mode Configuration has been deactivated. This new Compressed Mode Configuration shall be valid in the DRNS until the next Compressed Mode Configuration is configured in the DRNS or until the last Radio Link is deleted.]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *Transmission Gap Pattern Sequence Information IE* and the *Downlink Compressed Mode Method IE* in one or more Transmission Gap Pattern Sequence within the *Transmission Gap Pattern Sequence Information IE* is set to "SF/2" and the UE Context is configured to use DPCH in the downlink in the new configuration, the DRNC shall include the *Transmission Gap Pattern Sequence Scrambling Code Information IE* in the RADIO LINK RECONFIGURATION READY message indicating for each Channelisation Code whether the alternative scrambling code shall be used or not.]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes an *E-DPCH Information IE*, the DRNS shall apply the parameters to the new configuration as follows:]

- [FDD - If the *E-DPCH Information IE* includes the *Maximum Set of E-DPDCHs IE*, the DRNS shall apply the contents of the Maximum Set in the new configuration.]
- [FDD - If the *E-DPCH Information IE* includes the *Puncture Limit IE*, the DRNS shall apply the value in the uplink of the new configuration]
- [FDD - If the *E-DPCH Information IE* includes the *E-TFCS Information IE*, the DRNS shall use the *E-TFCS Information IE* for the E-DCH when reserving resources for the uplink of the new configuration. The DRNS shall apply the new TFCS in the uplink of the new configuration. If the *E-TFCS Information IE* contains the *E-DCH Minimum Set E-TFCI Validity Indicator IE* the DRNS shall ignore the value in *E-DCH Minimum Set E-TFCI IE*. If the *E-DCH Minimum Set E-TFCI validity indicator IE* is absent DRNS shall use the value for the related resource allocation operation.]
- [FDD - If the *E-TFCS Information IE* in the *E-DPCH Information IE* contains the *E-DPDCH Power Interpolation IE*, the DRNS shall use the value to determine the applicable E-DPDCH power formula defined in [10]. If the *E-DPDCH Power Interpolation IE* is not present, the DRNS shall use the E-DPDCH power extrapolation formula defined in [10] if the *E-DCH FDD Information IE* is included in the RADIO LINK RECONFIGURATION PREPARE message.]
- [FDD - If the *E-TFCS Information IE* in the *E-DPCH Information IE* contains the *E-TFCI Boost Information IE*, the DRNS shall use the information according to [10]. If the *E-TFCI Boost Information IE* is not present, the DRNS shall use the value "127" in the algorithm defined in [10] if the *E-DCH FDD Information IE* is included in the RADIO LINK RECONFIGURATION PREPARE message.]

- [FDD - If the *E-DPCH Information* IE includes the *E-TTI* IE, the DRNS shall use the value when the new configuration is being used.]
- [FDD - If the *E-DPCH Information* IE includes the *E-DPCCH Power Offset* IE, the DRNS shall use the value when the new configuration is being used.]
- [FDD - If the *E-DPCH Information* IE includes the *E-RGCH 2-Index-Step* IE, the DRNS shall use the value when the new configuration is being used.]
- [FDD - If the *E-DPCH Information* IE includes the *E-RGCH 3-Index-Step* IE, the DRNS shall use the value when the new configuration is being used.]
- [FDD - If the *E-DPCH Information* IE includes the *E-DCH HARQ Info* IE, the DRNS shall use the value when the new configuration is being used.]
- [FDD - If the *E-DPCH Information* IE includes the *HS-DSCH Configured Indicator* IE, the DRNS shall use the value when the new configuration is being used.]
- [FDD - If the *E-DPCH Information* IE includes the *Minimum Reduced E-DPDCH Gain Factor* IE, then the DRNS shall use the value to determine the applicable minimum gain factor ( $\beta_{ed,k, reduced, min}$ ) defined in [10]. For the case the *Minimum Reduced E-DPDCH Gain Factor* IE is not available for the UE Context, the DRNS may use the default value defined in [16].]

[FDD – If the RADIO LINK RECONFIGURATION PREPAR message includes the *Continuous Packet Connectivity DTX-DRX Information* IE, then:]

- [FDD – The DRNS shall configure the concerned UE Context for Continuous Packet Connectivity DTX operation according to [10].]
- [FDD – If *DRX Information* IE is included in the *Continuous Packet Connectivity DTX-DRX Information* IE, then the DRNS shall configure the concerned UE Context for Continuous Packet Connectivity DRX operation according to [10].]

[FDD – If the RADIO LINK RECONFIGURATION PREPARE message includes the *Continuous Packet Connectivity DTX-DRX Information To Modify* IE, then:]

- [FDD - If the *UE DTX DRX Offset* IE is included in the *Continuous Packet Connectivity DTX-DRX Information To Modify* IE, then the DRNS shall apply the indicated Offset in *UE DTX DRX Cycle* IE in the new configuration.]
- [FDD - If the *Enabling Delay* IE is included in the *Continuous Packet Connectivity DTX-DRX Information To Modify* IE, then the DRNS shall use this value to determine the beginning of uplink transmission in the new configuration according to [10].]
- [FDD - If the *DTX Information To Modify* IE is included in the *Continuous Packet Connectivity DTX-DRX Information To Modify* IE, then the DRNS shall use this information to modify the indicated DTX Information parameter in the new configuration. If the choice of *DTX Information To Modify* IE is "Deactivate", then DRX should be deactivated together with DTX.]
- [FDD - If the *DRX Information To Modify* IE is included in the *Continuous Packet Connectivity DTX-DRX Information To Modify* IE, then the DRNS shall use this information to modify the indicated DRX Information in the new configuration.]

[FDD – If the RADIO LINK RECONFIGURATION PREPARE message includes the *Continuous Packet Connectivity HS-SCCH less Information* IE, then:]

- [FDD – The DRNS shall configure the Serving HS-DSCH Radio Link indicated by the *HS-PDSCH RL ID* IE for Continuous Packet Connectivity HS-SCCH less operation according to [10].]
- [FDD – The DRNS shall allocate the HS-PDSCH codes needed for HS-SCCH less operation and include the *Continuous Packet Connectivity HS-SCCH less Information Response* IE in the RADIO LINK RECONFIGURATION READY message.]
- [FDD – If at least one of *HS-PDSCH Second Code Support* IE is set to "True", then the DRNC shall include *HS-PDSCH Second Code Index* IE in the RADIO LINK RECONFIGURATION READY message.]

[FDD- If the RADIO LINK RECONFIGURATION PREPARE message includes the *Continuous Packet Connectivity HS-SCCH less Deactivate Indicator* IE, then the DRNS shall deactivate the Continuous Packet Connectivity HS-SCCH less operation for the HS-DSCH Radio Link.]

[1.28 Mcps TDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *Continuous Packet Connectivity DRX Information LCR* IE, then the DRNS shall take account into these parameters to decide the DRX operation related parameters and configure the concerned UE Context for DRX operation according to [21] and include the parameter(s) in the *Continuous Packet Connectivity DRX Information Response LCR* IE in the RADIO LINK RECONFIGURATION READY message.]

[1.28 Mcps TDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *Continuous Packet Connectivity DRX Information To Modify LCR* IE, then:]

- [1.28 Mcps TDD - If the *UE DTX DRX Offset* IE is included in the *Continuous Packet Connectivity DRX Information To Modify LCR* IE, then the DRNS shall apply the indicated Offset in *UE DTX DRX Cycle* IE in the new configuration.]
- [1.28 Mcps TDD - If the *Enabling Delay* IE is included in the *Continuous Packet Connectivity DRX Information To Modify LCR* IE, then the DRNS shall use this value to determine the beginning of uplink transmission in the new configuration according to [21].]
- [1.28 Mcps TDD - If the *DRX Information To Modify* IE is included in the *Continuous Packet Connectivity DRX Information To Modify LCR* IE, then the DRNS shall use this information to modify the indicated DRX Information in the new configuration.]

[1.28 Mcps TDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *HS-DSCH Semi-Persistent scheduling Information LCR* IE, then:]

- [1.28 Mcps TDD - The DRNS shall configure the Serving HS-DSCH Radio Link indicated by the *HS-PDSCH RL ID* IE for HS-DSCH Semi-Persistent scheduling operation according to [21].]
- [1.28 Mcps TDD - The DRNS shall allocate the HS-SICH information needed for HS-DSCH Semi-Persistent scheduling operation and include the *HS-DSCH Semi-Persistent scheduling Information Response LCR* IE in the RADIO LINK RECONFIGURATION READY message.]
- [1.28 Mcps TDD - If the *HS-DSCH Semi-Persistent Resource Reservation Indicator* IE is included in the *HS-DSCH Semi-Persistent scheduling Information LCR* IE, then the DRNS shall include *Allcoated HS-PDSCH Semi-persistent resource* IE in the RADIO LINK RECONFIGURATION READY message.]

[1.28 Mcps TDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *E-DCH Semi-Persistent scheduling Information LCR* IE, then:]

- [1.28 Mcps TDD - The DRNS shall configure the Serving E-DCH Radio Link indicated by the *E-DCH Serving RL* IE for E-DCH Semi-Persistent scheduling operation according to [21].]
- [1.28 Mcps TDD - The DRNS shall allocate the E-PUCH codes needed for E-DCH Semi-Persistent scheduling operation and include the *E-DCH Semi-Persistent scheduling Information Response LCR* IE in the RADIO LINK RECONFIGURATION READY message.]

[1.28 Mcps TDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *HS-DSCH Semi-Persistent scheduling Information to modify LCR* IE, then:]

- [1.28 Mcps TDD - If the *Transport Block Size List* IE or/and *Repetition Period list* IE is/are included in the *HS-DSCH Semi-Persistent scheduling Information to modify LCR* IE, the DRNS shall modify the configuration of Serving HS-DSCH Radio Link indicated by the *HS-PDSCH RL ID* IE for HS-DSCH Semi-Persistent scheduling operation according to [21].]
- [1.28 Mcps TDD - The DRNS shall allocate the HS-SICH information needed for HS-DSCH Semi-Persistent scheduling operation and include the *HS-DSCH Semi-Persistent scheduling Information Response LCR* IE in the RADIO LINK RECONFIGURATION READY message.]
- [1.28 Mcps TDD - If the *HS-DSCH Semi-Persistent Resource Reservation Indicator* IE is included in the *HS-DSCH Semi-Persistent scheduling Information LCR* IE, then the DRNS shall include *Allcoated HS-PDSCH Semi-persistent resource* IE in the RADIO LINK RECONFIGURATION READY message.]

[1.28 Mcps TDD - If the *HS-DSCH Semi-Persistent scheduling operation Indicator* IE is included in the *HS-DSCH Semi-Persistent scheduling Information LCR* IE, then the DRNS shall apply this information for HS-DSCH Semi-Persistent scheduling operation.]

- [1.28 Mcps TDD - If the buffer size for HS-DSCH Semi-Persistent scheduling needs to be modified, then the DRNS shall include the *Buffer Size for HS-DSCH Semi-Persistent scheduling* IE in the RADIO LINK RECONFIGURATION READY message.]
- [1.28 Mcps TDD - If the number of processes for HS-DSCH Semi-Persistent scheduling needs to be modified, then the DRNS shall include the *Number of Processes for HS-DSCH Semi-Persistent scheduling* IE in the RADIO LINK RECONFIGURATION READY message.]

[1.28 Mcps TDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *E-DCH Semi-Persistent scheduling Information LCR* IE, then:]

- [1.28 Mcps TDD - If the *Repetition Period list* IE is included in the *E-DCH Semi-Persistent scheduling Information to modify LCR* IE, the DRNS shall modify the configuration of Serving E-DCH Radio Link indicated by the *E-DCH Serving RL* IE for E-DCH Semi-Persistent scheduling operation according to [21].

[1.28 Mcps TDD - If the *E-DCH Semi-Persistent scheduling Indicator* IE is included in the *E-DCH Semi-Persistent scheduling Information LCR* IE, then the DRNS shall apply this information for E-DCH Semi-Persistent scheduling operation.]

- [1.28 Mcps TDD - If the *Semi-Persistent E-DCH related E-HICH Information* IE is included in the *E-DCH Semi-Persistent scheduling Information LCR* IE, then the DRNS shall use this information to modify the configuration of Semi-Persistent E-DCH related E-HICH.]
- [1.28 Mcps TDD - The DRNS shall allocate the E-PUCH codes needed for E-DCH Semi-Persistent scheduling operation and include the *E-DCH Semi-Persistent scheduling Information Response LCR* IE in the RADIO LINK RECONFIGURATION READY message.]

[1.28 Mcps TDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *HS-DSCH Semi-Persistent scheduling Deactivate Indicator LCR* IE, then the DRNS shall deactivate the HS-DSCH Semi-Persistent scheduling operation for the HS-DSCH Radio Link.]

[1.28 Mcps TDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *E-DCH Semi-Persistent scheduling Deactivate Indicator LCR* IE, then the DRNS shall deactivate the E-DCH Semi-Persistent scheduling operation for the E-DCH Radio Link.]

#### **[TDD - UL/DL CCTrCH Modification]**

[TDD - If the RADIO LINK RECONFIGURATION PREPARE message includes any *UL CCTrCH To Modify* IEs or *DL CCTrCH To Modify* IEs, then the DRNS shall treat them each as follows:]

- [TDD - If any of the *UL CCTrCH To Modify* IEs or *DL CCTrCH To Modify* IEs includes any of the *TFCS* IE, *TFCI coding* IE, *Puncture limit* IE, or *TPC CCTrCH ID* IEs the DRNS shall apply these as the new values, otherwise the previous values specified for this CCTrCH are still applicable.]
- [TDD - If any of the following listed DPCH information IEs are modified in the new prepared configuration, the DRNC shall include in the RADIO LINK RECONFIGURATION READY message the IEs indicating the new values: *Repetition Period* IE, *Repetition Length* IE, *TDD DPCH Offset* IE, [3.84Mcps TDD - *UL Timeslot Information* IE,] [1.28Mcps TDD - *UL Timeslot Information LCR* IE,] [7.68 Mcps TDD - *UL Timeslot Information 7.68 Mcps* IE,] [3.84Mcps TDD - *DL Timeslot Information* IE,] [1.28Mcps TDD - *DL Timeslot Information LCR* IE,] [7.68 Mcps TDD - *DL Timeslot Information 7.68 Mcps* IE,] [3.84Mcps TDD - *Midamble Shift And Burst Type* IE,] [1.28Mcps TDD - *Midamble Shift LCR* IE,] [7.68 Mcps TDD - *Midamble Shift And Burst Type 7.68 Mcps* IE,] *TFCI Presence* IE, [3.84Mcps TDD - *TDD Channelisation Code* IE,] [1.28Mcps TDD - and/or *TDD Channelisation Code LCR* IE,] [7.68 Mcps TDD - *TDD Channelisation Code 7.68 Mcps* IE,] [1.28Mcps TDD - *TDD UL DPCH Time Slot Format LCR* IE or *TDD DL DPCH Time Slot Format LCR* IE,].]
- [1.28Mcps TDD - If the *UL CCTrCH To Modify* IE includes the *UL SIR Target* IE, the DRNS shall use the value for the UL inner loop power control according [12] and [22] in the new configuration.]
- [TDD - If any of the *DL CCTrCH To Modify* IEs includes any *TPC CCTrCH ID* IEs, the DRNS shall apply these as the new values, otherwise the previous values specified for this CCTrCH are still applicable.]

- [1.28Mcps TDD - If the *UL CcTrCH to Modify* IE includes the *TDD TPC Uplink Step Size* IE, the DRNS shall apply this value to the uplink TPC step size in the new configuration.]
- [TDD - If the *DL CcTrCH to Modify* IE includes the *TDD TPC Downlink Step Size* IE, the DRNS shall apply this value to the downlink TPC step size in the new configuration.]
- [1.28 Mcps TDD – if the DRNS modifies, deletes or grants a new PLCCCH assignment(s) to the UL CcTrCH, then the resulting PLCCCH assignment(s) shall be sent to the SRNC in the RADIO LINK RECONFIGURATION READY message.]

#### [TDD - UL/DL CcTrCH Addition]

[TDD - If the RADIO LINK RECONFIGURATION PREPARE message includes any *UL CcTrCH To Add* IEs or *DL CcTrCH To Add* IEs, the DRNS shall include this CcTrCH in the new configuration.]

[TDD - If the RADIO LINK RECONFIGURATION PREPARE message includes any *DCHs to Add* IEs, the DRNC shall include in the RADIO LINK RECONFIGURATION READY message the DPCH information in [3.84Mcps TDD - *UL DPCH to be Added* IE/*DL DPCH to be Added* IEs] [1.28Mcps TDD - *UL DPCH to be Added LCR* IE/*DL DPCH to be Added LCR* IEs] [7.68 Mcps TDD - *UL DPCH to be Added 7.68 Mcps* IE/*DL DPCH to be Added 7.68 Mcps* IEs]. [3.84Mcps TDD - If no UL DPCH is active before a reconfiguration which adds an UL DPCH, and if a valid Rx Timing Deviation measurement is known in DRNC, then the DRNC shall include the *Rx Timing Deviation* IE (or the *Rx Timing Deviation 3.84 Mcps Extended* IE if the cell containing the radio link is configured for extended timing advance) in the RADIO LINK RECONFIGURATION READY message]. [7.68 Mcps TDD - If no UL DPCH is active before a reconfiguration which adds an UL DPCH, and if a valid Rx Timing Deviation measurement is known in DRNC, then the DRNC shall include the *Rx Timing Deviation 7.68 Mcps* IE in the RADIO LINK RECONFIGURATION READY message].]

[TDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *TDD TPC Downlink Step Size* IE within a *DL CcTrCH To Add* IE, the DRNS shall set the TPC step size of that CcTrCH to that value, otherwise the DRNS shall use the same value as the lowest numbered DL CcTrCH in the current configuration.]

[1.28Mcps TDD - The DRNS shall use the *UL SIR Target* IE in the *UL CcTrCH To Add* IE as the UL SIR value for the inner loop power control for this CcTrCH according [12] and [22] in the new configuration.]

[TDD - If any of the *DL CcTrCH To Add* IEs includes any *TPC CcTrCH ID* IEs, the DRNS shall configure the identified UL CcTrCHs with TPC according to the parameters given in the message.]

[1.28Mcps TDD - If the *UL CcTrCH To Add* IE includes *TDD TPC Uplink Step Size* IE, the DRNS shall apply the uplink TPC step size in the new configuration.]

[1.28 Mcps TDD – if the DRNS grants a PLCCCH assignment(s) to the UL CcTrCH, then the resulting PLCCCH assignment(s) shall be sent to the SRNC in the RADIO LINK RECONFIGURATION READY message.]

#### [TDD - UL/DL CcTrCH Deletion]

[TDD - If the RADIO LINK RECONFIGURATION PREPARE message includes any *UL CcTrCH To Delete* IEs or *DL CcTrCH To Delete* IEs, the DRNS shall remove this CcTrCH in the new configuration, and the DRNC shall include in the RADIO LINK RECONFIGURATION READY message corresponding *UL DPCH to be Deleted* IEs and *DL DPCH to be Deleted* IEs.]

#### DL Power Control:

[FDD - If the *RL Information* IE includes the *DL Reference Power* IEs and power balancing is active, DRNS shall update the reference power of the power balancing in the indicated RL(s), if updating of power balancing parameters by the RADIO LINK RECONFIGURATION PREPARE message is supported, when the new configuration has been activated, according to subclause 8.3.15, using the *DL Reference Power* IE. If the CFN modulo the value of the *Adjustment Period* IE is not equal to 0, the power balancing continues with the old reference power until the end of the current adjustment period, and the updated reference power shall be used from the next adjustment period.]

[FDD - If updating of power balancing parameters by the RADIO LINK RECONFIGURATION PREPARE message is supported by the DRNS, the DRNC shall include the *DL Power Balancing Updated Indicator* IE in the *RL Information Response* IE for each affected RL in the RADIO LINK RECONFIGURATION READY message.]

#### [TDD – DSCH Addition/Modification/Deletion:]

[TDD - If the RADIO LINK RECONFIGURATION PREPARE message includes any *DSCH To Add*, *DSCH To Modify* or *DSCH To Delete* IEs, then the DRNS shall use this information to add/modify/delete the indicated DSCH channels to/from the radio link, in the same way as the DCH info is used to add/modify/release DCHs.]

[TDD - If the RADIO LINK RECONFIGURATION PREPARE message includes any *DSCH To Add* IE, then the DRNS shall use the *Allocation/Retention Priority* IE, *Scheduling Priority Indicator* IE and *TrCH Source Statistics Descriptor* IE to define a set of DSCH Priority classes each of which is associated with a set of supported MAC-c/sh SDU lengths.]

[TDD - The DRNC shall include in the RADIO LINK RECONFIGURATION READY message both the *Transport Layer Address* IE and the *Binding ID* IE for the transport bearer to be established for each added DSCH.]

[TDD - If the RADIO LINK RECONFIGURATION PREPARE message includes any *DSCH To Add* IE, then the DRNS may use the *Traffic Class* IE to determine the transport bearer characteristics to apply between DRNC and Node B for the related DSCHs.]

[TDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *TNL QoS* IE in the *DSCH TDD Information* IE and if ALCAP is not used, the DRNS may use the *TNL QoS* IE to determine the transport bearer characteristics to apply in the uplink for the related DSCH.]

[TDD - If the RADIO LINK RECONFIGURATION PREPARE message includes any *DSCH To Modify* IE, then the DRNS shall treat them each as follows:]

- [TDD - The DRNC shall include in the RADIO LINK RECONFIGURATION READY message both the *Transport Layer Address* IE and the *Binding ID* IE for any new transport bearer to be established for each modified DSCH.]
- [TDD - If the *DSCHs To Modify* IE includes the *CCTrCH ID* IE, then the DRNS shall map the DSCH onto the referenced DL CCTrCH.]
- [TDD - If the *DSCHs To Modify* IE includes any of the *Allocation/Retention Priority* IE, *Scheduling Priority Indicator* IE or *TrCH Source Statistics Descriptor* IE, the DRNS shall use them to update the set of DSCH Priority classes each of which is associated with a set of supported MAC-c/sh SDU lengths.]
- [TDD - If the *DSCHs To Modify* IE includes any of the *Transport Format Set* IE or *BLER* IE, the DRNS shall apply the parameters to the new configuration.]
- [TDD - If the *DSCHs To Modify* IE includes the *Traffic Class* IE, the DRNS may use this information to determine the transport bearer characteristics to apply between DRNC and Node B for the related DSCHs.]
- [TDD - If the *DSCHs To Modify* IE includes the *TNL QoS* IE and if ALCAP is not used, the DRNS may use the *TNL QoS* IE to determine the transport bearer characteristics to apply in the uplink for the related DSCH.]

[3.84 Mcps TDD - The DRNC shall include the *Secondary CCPCH Info TDD* IE in the RADIO LINK RECONFIGURATION READY message if a DSCH is added and at least one DCH exists in the new configuration. The DRNC shall also include the *Secondary CCPCH Info TDD* IE in the RADIO LINK RECONFIGURATION READY message if the SHCCH messages for this radio link will be transmitted over a different secondary CCPCH than selected by the UE from system information.]

[1.28 Mcps TDD - The DRNC shall include the *Secondary CCPCH Info TDD LCR* IE in the RADIO LINK RECONFIGURATION READY message if a DSCH is added and at least one DCH exists in the new configuration. The DRNC shall also include the *Secondary CCPCH Info TDD LCR* IE in the RADIO LINK RECONFIGURATION READY message if the SHCCH messages for this radio link will be transmitted over a different secondary CCPCH than selected by the UE from system information.]

[7.68 Mcps TDD - The DRNC shall include the *Secondary CCPCH Info 7.68 Mcps TDD* IE in the RADIO LINK RECONFIGURATION READY message if a DSCH is added and at least one DCH exists in the new configuration. The DRNC shall also include the *Secondary CCPCH Info 7.68 Mcps TDD* IE in the RADIO LINK RECONFIGURATION READY message if the SHCCH messages for this radio link will be transmitted over a different secondary CCPCH than selected by the UE from system information.]

[TDD - The DRNC shall include the *DSCH Initial Window Size* IE in the RADIO LINK RECONFIGURATION READY message for each DSCH, if the DRNS allows the SRNC to start transmission of MAC-c/sh SDUs before the DRNS has allocated capacity on user plane as described in [32].]

**[TDD USCH Addition/Modification/Deletion]**

[TDD - If the RADIO LINK RECONFIGURATION PREPARE message includes any *USCH To Modify*, *USCH To Add* or *USCH To Delete* IEs, then the DRNS shall use this information to add/modify/delete the indicated USCH channels to/from the radio link, in the same way as the DCH info is used to add/modify/release DCHs.]

[TDD - If the RADIO LINK RECONFIGURATION PREPARE message includes any *USCH To Add* IE, then, the DRNS shall use the *Allocation/Retention Priority* IE, *Scheduling Priority Indicator* IE and *TrCH Source Statistics Descriptor* IE to define a set of USCH Priority classes each of which is associated with a set of supported MAC-c/sh SDU lengths.]

[TDD - If the RADIO LINK RECONFIGURATION PREPARE message includes any *USCH To Add* IE, then the DRNS may use the *Traffic Class* IE to determine the transport bearer characteristics to apply between DRNC and Node B for the related USCHs.]

[TDD – If the RADIO LINK RECONFIGURATION PREPARE message includes any *USCH To Add* IE, if the *TNL QoS* IE is included and if ALCAP is not used, the DRNS may use the *TNL QoS* IE to determine the transport bearer characteristics to apply for the related USCHs.]

[TDD - The DRNC shall include in the RADIO LINK RECONFIGURATION READY message both the *Transport Layer Address* IE and the *Binding ID* IE for the transport bearer to be established for each added USCH.]

[TDD - If the RADIO LINK RECONFIGURATION PREPARE message includes any *USCH To Modify* IE, then the DRNS shall treat them each as follows:]

- [TDD - If the *USCH To Modify* IE includes any of the *Allocation/Retention Priority* IE, *Scheduling Priority Indicator* IE or *TrCH Source Statistics Descriptor* IE, the DRNS shall use them to update the set of USCH Priority classes.]
- [TDD - If the *USCH To Modify* IE includes any of the *CCTrCH ID* IE, *Transport Format Set* IE, *BLER* IE or *RB Info* IE, the DRNS shall apply the parameters to the new configuration.]
- [TDD - If the *USCHs To Modify* IE includes the *Traffic Class* IE, the DRNS may use this information to determine the transport bearer characteristics to apply between DRNC and Node B for the related USCHs.]
- [3.84Mcps TDD - The DRNC shall include the *Secondary CCPCH Info TDD* IE in the RADIO LINK RECONFIGURATION READY message if a USCH is added and at least one DCH exists in the new configuration. The DRNC shall also include the *Secondary CCPCH Info TDD* IE in the RADIO LINK RECONFIGURATION READY message if the SHCCH messages for this radio link will be transmitted over a different secondary CCPCH than selected by the UE from system information.]
- [1.28Mcps TDD - The DRNC shall include the *Secondary CCPCH Info TDD LCR* IE in the RADIO LINK RECONFIGURATION READY message if a USCH is added and at least one DCH exists in the new configuration. The DRNC shall also include the *Secondary CCPCH Info TDD LCR* IE in the RADIO LINK RECONFIGURATION READY message if the SHCCH messages for this radio link will be transmitted over a different secondary CCPCH than selected by the UE from system information.]
- [7.68Mcps TDD - The DRNC shall include the *Secondary CCPCH Info 7.68Mcps TDD* IE in the RADIO LINK RECONFIGURATION READY message if a USCH is added and at least one DCH exists in the new configuration. The DRNC shall also include the *Secondary CCPCH Info 7.68Mcps TDD* IE in the RADIO LINK RECONFIGURATION READY message if the SHCCH messages for this radio link will be transmitted over a different secondary CCPCH than selected by the UE from system information.]
- [TDD – if the *TNL QoS* IE is included and if ALCAP is not used, the DRNS may use the *TNL QoS* IE to determine the transport bearer characteristics to apply for the related USCHs.]
- [TDD - The DRNC shall include in the RADIO LINK RECONFIGURATION READY message both the *Transport Layer Address* IE and the *Binding ID* IE for any new transport bearer to be established for each modified USCH.]

**RL Information:**

[FDD - If the *RL Information* IE includes the *DL DPCH Timing Adjustment* IE, the DRNS shall adjust the timing of the radio link accordingly in the new configuration. If the UE Context is configured to use F-DPCH in the downlink in the

new configuration, the DRNC may include the *DL Code Information* IE in the RADIO LINK RECONFIGURATION READY message.]

### HS-DSCH Setup:

If the *HS-DSCH Information* IE is present in the RADIO LINK RECONFIGURATION PREPARE message, then:

- The DRNS shall setup the requested HS-PDSCH resources on the Serving HS-DSCH Radio Link indicated by the *HS-PDSCH RL ID* IE.
- The DRNC shall include the *HARQ Memory Partitioning* IE in the [FDD – *HS-DSCH FDD Information Response* IE] [TDD – *HS-DSCH TDD Information Response* IE] in the RADIO LINK RECONFIGURATION READY message. [FDD – The *HARQ Memory Partitioning* IE shall either contain the *HARQ Memory Partitioning Information Extension For MIMO* IE or the *Number of Processes* IE set to a value higher than "8", if the *MIMO Activation Indicator* IE is included in the *HS-DSCH Information* IE.] [1.28Mcps TDD– The *HARQ Memory Partitioning* IE shall either contain the *HARQ Memory Partitioning Information Extension For MIMO* IE or the *Number of Processes* IE set to a value higher than "8", if the *MIMO Activation Indicator* IE is included in the *HS-DSCH Information* IE.]
- The DRNC shall allocate an HS-DSCH-RNTI to the UE Context and include the *HS-DSCH-RNTI* IE in the RADIO LINK RECONFIGURATION READY message.
- The DRNS may use the *Traffic Class* IE for a specific HS-DSCH MAC-d flow to determine the transport bearer characteristics to apply between DRNC and Node B. If *TrCH Source Statistics Descriptor* IE is present with the value "RRC" in the *HS-DSCH MAC-d Flows Information* IE, then the DRNC should ignore the *Traffic Class* IE.
- If the *TNL QoS* IE is included for a MAC-d flow and if ALCAP is not used, the *TNL QoS* IE may be used by the DRNS to determine the transport bearer characteristics to apply in the uplink between the DRNS and the SRNC for the related MAC-d flow.
- If fields are to be included in the User Plane by the SRNC to handle TNL Congestion Control for HSDPA in the DRNS, then the DRNC shall include the *User Plane Congestion Fields Inclusion* IE in the *HS-DSCH Information Response* IE.
- If the RADIO LINK RECONFIGURATION PREPARE message includes the *MAC-hs Guaranteed Bit Rate* IE for a Priority Queue in the *HS-DSCH MAC-d Flows Information* IE in the *HS-DSCH Information* IE, then the DRNS shall use this information to optimise MAC-hs scheduling decisions for the related HSDPA Priority Queue.
- If the RADIO LINK RECONFIGURATION PREPARE message includes the *Discard Timer* IE for a Priority Queue in the *HS-DSCH MAC-d Flows Information* IE in the *HS-DSCH Information* IE, then the DRNS shall use this information to discard out-of-date MAC-hs SDUs from the related HSDPA Priority Queue.
- If the RADIO LINK RECONFIGURATION PREPARE message includes the *Maximum MAC-d PDU Size Extended* IE for a Priority Queue in the *HS-DSCH MAC-d Flows Information* IE in the *HS-DSCH Information* IE, then the DRNS shall ignore the *SID* IE and *MAC-d PDU Size* IE in the *MAC-d PDU Size Index* IE and use *Maximum MAC-d PDU Size Extended* IE to optimise capacity allocation for the related HSDPA Priority Queue.
- The DRNC shall include the *HS-DSCH Initial Capacity Allocation* IE in the [FDD – *HS-DSCH FDD Information Response* IE] [TDD – *HS-DSCH TDD Information Response* IE] in the RADIO LINK RECONFIGURATION READY message for every HS-DSCH MAC-d flow being established, if the DRNS allows the SRNC to start transmission of MAC-d PDUs before the DRNS has allocated capacity on user plane as described in [32] If RADIO LINK RECONFIGURATION PREPARE message includes *HS-DSCH MAC-d PDU Size Format* IE in the *HS-DSCH Information* IE set to "Flexible MAC-d PDU Size", then DRNC shall only set in the *HS-DSCH Initial Capacity Allocation* IE the values for the peer of *Scheduling Priority Indicator* IE and *Maximum MAC-d PDU Size Extended* IE to the values of the corresponding peer received in RADIO LINK RECONFIGURATION PREPARE in the *HS-DSCH MAC-d Flows Information* IE in the *HS-DSCH Information* IE for a Priority Queue including *Scheduling Priority Indicator* IE and *Maximum MAC-d PDU Size Extended* IE.
- [FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *HS-SCCH Power Offset* IE in the *HS-DSCH Information* IE, then the DRNS may use this value to determine the HS-SCCH power. The HS-SCCH Power Offset should be applied for any HS-SCCH transmission to this UE.]



- [FDD - The DRNC shall include the *Measurement Power Offset* IE in the *HS-DSCH Information Response* IE in the RADIO LINK RECONFIGURATION READY message.]
- [FDD - The DRNS shall allocate HS-SCCH codes corresponding to the HS-DSCH and the DRNC shall include the *HS-SCCH Specific Information Response* IE in the *HS-DSCH FDD Information Response* IE in the RADIO LINK RECONFIGURATION READY message.]
- [TDD - The DRNS shall allocate HS-SCCH parameters corresponding to the HS-DSCH and the DRNC shall include the [3.84Mcps TDD - *HS-SCCH Specific Information Response* IE] [1.28Mcps TDD - *HS-SCCH Specific Information Response LCR* IE] [7.68 Mcps TDD - *HS-SCCH Specific Information Response 7.68 Mcps* IE] in the *HS-DSCH TDD Information Response* IE in the RADIO LINK RECONFIGURATION READY message.]
- [FDD - The DRNC shall include the *HS-PDSCH And HS-SCCH Scrambling Code* IE in the *HS-DSCH FDD Information Response* IE in the RADIO LINK RECONFIGURATION READY message.]
- [FDD – If the RADIO LINK RECONFIGURATION PREPARE message includes the *HARQ Preamble Mode* IE in the *HS-DSCH Information* IE, then the DRNS shall use the indicated HARQ Preamble Mode as described in [10], if HS-DPCCH ACK/NACK preamble and postamble is supported. Then, in this case, if the mode 1 is applied, the DRNC shall include the *HARQ Preamble Mode Activation Indicator* IE in the *HS-DSCH Information Response* IE in the RADIO LINK RECONFIGURATION READY message. If the *HARQ Preamble Mode* IE is not included or if the mode 0 is applied, then the DRNC shall not include the *HARQ Preamble Mode Activation Indicator* IE in the *HS-DSCH Information Response* IE in the RADIO LINK RECONFIGURATION READY message.]
- If the RADIO LINK RECONFIGURATION PREPARE message includes the *HS-DSCH MAC-d PDU Size Format* IE in the *HS-DSCH Information* IE, then the DRNS shall use the indicated format in user plane frame structure for HS-DSCH channels [32] and MAC-hs [41].
- [FDD - If the *MIMO Activation Indicator* IE is included in the *HS-DSCH FDD Information* IE, then:]
  - [FDD - The DRNS shall activate the MIMO mode for the HS-DSCH Radio Link.]
  - [FDD – The DRNS shall decide the pilot configuration and the UE reporting configuration (N/M ratio) according to [10] for MIMO and include the *MIMO Information Response* IE in the *HS-DSCH FDD Information Response* IE in the RADIO LINK RECONFIGURATION READY message.]
  - [FDD – If the *Power Offset For S-CPICH for MIMO Request Indicator* IE is included, the DRNC shall, if supported and MIMO pilot configuration with Primary and Secondary CPICH is set up on the cell where the Serving HS-DSCH Radio Link is established, include the *Power Offset For S-CPICH for MIMO* IE in the *HS-DSCH FDD Information Response* IE in the RADIO LINK RECONFIGURATION READY message.]
- [1.28 Mcps TDD - If the *MIMO Activation Indicator* IE is included in the *HS-DSCH TDD Information* IE, then:]
  - [1.28 Mcps TDD - The DRNS shall activate the MIMO mode for the HS-DSCH Radio Link.]
  - [1.28 Mcps TDD - The DRNS shall decide the SF mode for HS-PDSCH dual stream and include the *MIMO SF Mode for HS-PDSCH dual stream* IE in the *HS-DSCH TDD Information Response* IE in the RADIO LINK RECONFIGURATION READY message.]
- [FDD - If the *Sixtyfour QAM Usage Allowed Indicator* IE is included in the *HS-DSCH FDD Information* IE, then the DRNS may if the value is set to "allowed" use 64 QAM for the HS-DSCH Radio Link, and the DRNS shall include the *SixtyfourQAM DL Usage Indicator* IE in the *HS-DSCH FDD Information Response* IE in the RADIO LINK RECONFIGURATION READY message.]
- [FDD - If the *Sixtyfour QAM Usage Allowed Indicator* IE is included in the *HS-DSCH FDD Information* IE with value set to "not allowed", then the DRNS shall not use 64 QAM for the HS-DSCH Radio Link.]
- [FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *HS-DSCH MAC-d PDU Size Format* IE set to "Flexible MAC-d PDU Size" and if Sixtyfour QAM will not be used, the DRNS shall include the *HS-DSCH TB Size Table Indicator* IE in the *HS-DSCH FDD Information Response* IE in the RADIO LINK RECONFIGURATION READY message if it decides to use the octet aligned table defined in [41] for HS-DSCH Transport Block Size signalling.]

- [FDD - If the *UE with enhanced HS-SCCH support indicator* IE is included in the *HS-DSCH FDD Information* IE, then the DRNS may use:]
  - [FDD - a different HS-SCCH in consecutive TTIs for this UE]
  - [FDD - HS-SCCH orders for the case of HS-SCCH-less operation to this UE]
- [FDD - If the *UE Support Indicator Extension* IE is included in the *HS-DSCH FDD Information* IE the DRNS may use the supported HSDPA functions for this UE.]
- [FDD - If secondary serving HS-DSCH is applied also in the new configuration, then any changes related to parameters that are common for both the serving and the secondary serving HS-DSCH should be applied also for the secondary serving HS-DSCH.]
- If the RADIO LINK RECONFIGURATION PREPARE message includes *DL RLC PDU Size Format* IE for a Priority Queue in the *HS-DSCH MAC-d Flows Information* IE in the *HS-DSCH Information* IE, the *DL RLC PDU Size Format* IE may be used by the DRNS to determine the allocated capacity on user plane as described in [32].

#### [FDD - Secondary Serving HS-DSCH Setup:]

[FDD - If the *C-ID* IE is present in the *Additional HS Cell Information RL Reconf Prep* IE in the RADIO LINK RECONFIGURATION PREPARE message, then:]

- [FDD - The DRNS shall setup the requested HS-PDSCH resources on the secondary serving HS-DSCH Radio Link indicated by the *HS-PDSCH RL ID* IE. Non cell specific secondary serving Radio Link and non cell specific secondary serving HS-DSCH parameters take the same values as for the serving HS-DSCH cell.]
- [FDD - The DRNC shall allocate an HS-DSCH-RNTI to the UE Context and include the *HS-DSCH-RNTI* IE in the *Additional HS Cell Information Response* IE in the RADIO LINK RECONFIGURATION READY message.]
- [FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *HS-SCCH Power Offset* IE in the *HS-DSCH FDD Secondary Serving Information* IE, then the DRNS may use this value to determine the HS-SCCH power. The HS-SCCH Power Offset should be applied for any secondary serving HS-SCCH transmission to this UE.]
- [FDD - The DRNC shall include the *Measurement Power Offset* IE in the *HS-DSCH FDD Secondary Serving Information Response* IE in the *Additional HS Cell Information Response* IE in the RADIO LINK RECONFIGURATION READY message.]
- [FDD - The DRNS shall allocate HS-SCCH codes corresponding to the secondary serving HS-DSCH and the DRNC shall include the *HS-SCCH Specific Secondary Serving Information Response* IE in the *HS-DSCH FDD Secondary Serving Information Response* IE in the *Additional HS Cell Information Response* IE in the RADIO LINK RECONFIGURATION READY message.]
- [FDD - The DRNC shall include the *HS-PDSCH And HS-SCCH Scrambling Code* IE in the *HS-DSCH FDD Secondary Serving Information Response* IE in the *Additional HS Cell Information Response* IE in the RADIO LINK RECONFIGURATION READY message.]
- [FDD - If the *Sixtyfour QAM Usage Allowed Indicator* IE is included in the *HS-DSCH FDD Secondary Serving Information* IE, then the DRNS may if the value is set to "allowed" use 64 QAM for the secondary serving HS-DSCH Radio Link, and the DRNS shall include the *SixtyfourQAM DL Usage Indicator* IE in the *HS-DSCH FDD Secondary Serving Information Response* IE in the *Additional HS Cell Information Response* IE in the RADIO LINK RECONFIGURATION READY message.]
- [FDD - If the *Sixtyfour QAM Usage Allowed Indicator* IE is included in the *HS-DSCH FDD Secondary Serving Information* IE with value set to "not allowed", then the DRNS shall not use 64 QAM for the secondary serving HS-DSCH Radio Link.]
- [FDD - If, in the new configuration, the UE context is configured not to use Sixtyfour QAM for the secondary serving HS-DSCH, then the DRNC shall include the *HS-DSCH TB Size Table Indicator* IE in the *HS-DSCH FDD Secondary Serving Information Response* IE in the *Additional HS Cell Information Response* IE in the RADIO LINK RECONFIGURATION READY message if it decides to use the octet aligned table defined in [41] for secondary serving HS-DSCH Transport Block Size signalling.]

- [FDD - If the *Diversity Mode* IE is included in the *HS-DSCH FDD Secondary Serving Information* IE, the DRNS shall apply cell specific transmit diversity configuration and if the *Diversity Mode* IE is not set to "None" the DRNS shall activate/deactivate the Transmit Diversity for the secondary serving HS-DSCH Radio Link in accordance with the *Transmit Diversity Indicator* IE in the *HS-DSCH FDD Secondary Serving Information* IE.]

#### Intra-DRNS Serving HS-DSCH Radio Link Change:

If the RADIO LINK RECONFIGURATION PREPARE message includes the *HS-PDSCH RL ID* IE, this indicates the new Serving HS-DSCH Radio Link:

- The DRNS shall release the HS-PDSCH resources on the old Serving HS-DSCH Radio Link and setup the HS-PDSCH resources on the new Serving HS-DSCH Radio Link.
- The DRNC may include the *HARQ Memory Partitioning* IE in the [FDD – *HS-DSCH FDD Information Response* IE] [TDD – *HS-DSCH TDD Information Response* IE] in the RADIO LINK RECONFIGURATION READY message. [FDD – The *HARQ Memory Partitioning* IE may contain the *HARQ Memory Partitioning Information Extension For MIMO* IE.] [1.28Mcps TDD – The *HARQ Memory Partitioning* IE may contain the *HARQ Memory Partitioning Information Extension For MIMO* IE.]
- If fields are to be included in the User Plane by the SRNC to handle TNL Congestion Control for HSDPA in the DRNS, then the DRNC shall include the *User Plane Congestion Fields Inclusion* IE in the *HS-DSCH Information Response* IE.

The DRNC shall allocate a new HS-DSCH-RNTI to the UE Context and include the *HS-DSCH-RNTI* IE in the RADIO LINK RECONFIGURATION READY message.

- If a reset of the MAC-hs is not required the DRNS shall include the *MAC-hs Reset Indicator* IE in the RADIO LINK RECONFIGURATION READY message.
  - [FDD - The DRNC shall include the *Measurement Power Offset* IE in the *HS-DSCH Information Response* IE in the RADIO LINK RECONFIGURATION READY message.]
  - [FDD - The DRNS shall allocate HS-SCCH codes corresponding to the HS-DSCH and the DRNC shall include the *HS-SCCH Specific Information Response* IE in the *HS-DSCH FDD Information Response* IE in the RADIO LINK RECONFIGURATION READY message.]
  - [TDD - The DRNS shall allocate HS-SCCH parameters corresponding to the HS-DSCH and the DRNC shall include the [3.84Mcps TDD - *HS-SCCH Specific Information Response* IE] [1.28Mcps TDD - *HS-SCCH Specific Information Response LCR* IE] [7.68 Mcps TDD - *HS-SCCH Specific Information Response 7.68 Mcps* IE] in the *HS-DSCH TDD Information Response* IE in the RADIO LINK RECONFIGURATION READY message.]
  - [TDD - The DRNC shall include the [3.84 Mcps TDD - *HS-PDSCH Timeslot Specific Information* IE] [1.28 Mcps TDD - *HS-PDSCH Timeslot Specific Information LCR* IE] [7.68 Mcps TDD - *HS-PDSCH Timeslot Specific Information 7.68 Mcps* IE] in the *HS-DSCH Information Response* IE in the RADIO LINK RECONFIGURATION READY message.]
- [FDD - The DRNC shall include the *HS-PDSCH And HS-SCCH Scrambling Code* IE in the *HS-DSCH FDD Information Response* IE in the RADIO LINK RECONFIGURATION READY message.]
- The DRNC may include the *Transport Layer Address* IE and the *Binding ID* IE for HS-DSCH MAC-d flow in the [FDD – *HS-DSCH FDD Information Response* IE] [TDD – *HS-DSCH TDD Information Response* IE] in the RADIO LINK RECONFIGURATION READY message.
  - If the *TNL QoS* IE is included for a MAC-d flow and if ALCAP is not used, the *TNL QoS* IE may be used by the DRNS to determine the transport bearer characteristics to apply in the uplink between the DRNS and the SRNC for the related MAC-d flow.
  - [FDD - If MAC-ehs is applied in the new configuration, and if Sixtyfour QAM will not be used, the DRNS shall include the *HS-DSCH TB Size Table Indicator* IE in the *HS-DSCH FDD Information Response* IE in the RADIO LINK RECONFIGURATION READY message if it decides to use the octet aligned table defined in [41] for HS-DSCH Transport Block Size signalling.]

- [FDD – If the power offset for S-CPICH for MIMO Request indicator and MIMO activation indicator have been configured in the new configuration and MIMO pilot configuration with Primary and Secondary CPICH is set up

on the cell where the Serving HS-DSCH Radio Link is established, the DRNC shall include the *Power Offset For S-CPICH for MIMO* IE in the *HS-DSCH FDD Information Response* IE in the RADIO LINK RECONFIGURATION READY message.]

#### [FDD - Intra-DRNS Secondary Serving HS-DSCH Radio Link Change:]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *C-ID* IE in the *Additional HS Cell Information RL Reconf Prep* IE and the secondary serving HS-DSCH Radio Link has been configured in the DRNS, the *HS-PDSCH RL ID* IE indicates the new Serving HS-DSCH Radio Link:]

- [FDD - The DRNS shall release the HS-PDSCH resources on the old secondary serving HS-DSCH Radio Link and setup the HS-PDSCH resources on the new secondary serving HS-DSCH Radio Link. The DRNS shall remove the old secondary serving HS-PDSCH Radio Link. Non cell specific secondary serving Radio Link and non cell specific secondary serving HS-DSCH parameters take the same values as for the serving HS-DSCH cell.]
- [FDD - The DRNC shall allocate an HS-DSCH-RNTI to the UE Context and include the *HS-DSCH-RNTI* IE in the *Additional HS Cell Information Response* IE in the RADIO LINK RECONFIGURATION READY message.]
- [FDD - The DRNC shall include the *Measurement Power Offset* IE in the *HS-DSCH FDD Secondary Serving Information Response* IE in the *Additional HS Cell Information Response* IE in the RADIO LINK RECONFIGURATION READY message.]
- [FDD - The DRNS shall allocate HS-SCCH codes corresponding to the secondary serving HS-DSCH and the DRNC shall include the *HS-SCCH Specific Secondary Serving Information Response* IE in the *HS-DSCH FDD Secondary Serving Information Response* IE in the *Additional HS Cell Information Response* IE in the RADIO LINK RECONFIGURATION READY message.]
- [FDD - The DRNC shall include the *HS-PDSCH And HS-SCCH Scrambling Code* IE in the *HS-DSCH FDD Secondary Serving Information Response* IE in the *Additional HS Cell Information Response* IE in the RADIO LINK RECONFIGURATION READY message.]
- [FDD - If, in the new configuration, the UE context is configured not to use Sixtyfour QAM for the secondary serving HS-DSCH, the DRNS shall include the *HS-DSCH TB Size Table Indicator* IE in the *HS-DSCH FDD Secondary Serving Information Response* IE in the *Additional HS Cell Information Response* IE in the RADIO LINK RECONFIGURATION READY message if it decides to use the octet aligned table defined in [41] for secondary serving HS-DSCH Transport Block Size signalling.]

#### HS-DSCH Modification:

If the RADIO LINK RECONFIGURATION PREPARE message includes the *HS-DSCH Information To Modify* IE, then:

- The DRNC shall include the *HS-DSCH Initial Capacity Allocation* IE for each HS-DSCH MAC-d flow being modified for which the establishment of one or several new Priority Queues was requested, if the DRNS allows the SRNC to start the transmission of MAC-d PDUs for the Priority Queue(s) being established before the DRNS has allocated capacity on user plane as described in [32]. If RADIO LINK RECONFIGURATION PREPARE message includes *HS-DSCH MAC-d PDU Size Format* IE in the *HS-DSCH Information To Modify* IE set to "Flexible MAC-d PDU Size", then DRNC shall only set in the *HS-DSCH Initial Capacity Allocation* IE the values for the peer of *Scheduling Priority Indicator* IE and *Maximum MAC-d PDU Size Extended* IE to the values of the corresponding peer received in RADIO LINK RECONFIGURATION PREPARE in the *HS-DSCH Information To Modify* IE for a Priority Queue including *Scheduling Priority Indicator* IE and *Maximum MAC-d PDU Size Extended* IE.
- If the RADIO LINK RECONFIGURATION PREPARE message includes the *Traffic Class* IE in the *HS-DSCH Information To Modify* IE for a specific HS-DSCH MAC-d flow, the DRNS may use this information to determine the transport bearer characteristics to apply between DRNC and Node B. The DRNC should ignore the *Traffic Class* IE if the *TrCH Source Statistics Descriptor* IE for this specific HS-DSCH MAC-d flow indicates the value "RRC".
- If the *TNL QoS* IE is included for a MAC-d flow and if ALCAP is not used, the *TNL QoS* IE may be used by the DRNS to determine the transport bearer characteristics to apply in the uplink between the DRNS and the SRNC for the related MAC-d flow.

- If the RADIO LINK RECONFIGURATION PREPARE message includes the *MAC-hs Guaranteed Bit Rate IE* in the *HS-DSCH Information To Modify IE*, the DRNS shall use this information to optimise MAC-hs scheduling decisions for the related HSDPA Priority Queue.
- If the RADIO LINK RECONFIGURATION PREPARE message includes the *Discard Timer IE* for a Priority Queue in the *HS-DSCH Information To Modify IE*, then the DRNS shall use this information to discard out-of-date MAC-hs SDUs from the related HSDPA Priority Queue.
- If the RADIO LINK RECONFIGURATION PREPARE message includes the *Maximum MAC-d PDU Size Extended IE* for a Priority Queue in the *HS-DSCH Information To Modify IE*, then the DRNS shall ignore the *SID IE* and *MAC-d PDU Size IE* in the *MAC-d PDU Size Index IE* and use *Maximum MAC-d PDU Size Extended IE* to optimise capacity allocation for the related HSDPA Priority Queue.
- If the RADIO LINK RECONFIGURATION PREPARE message includes the *MAC-hs Window Size IE* or *TI IE* in the *HS-DSCH Information To Modify IE*, then the DRNS shall use the indicated values in the new configuration for the related HSDPA Priority Queue.
- If the RADIO LINK RECONFIGURATION PREPARE message includes the *MAC-d PDU Size Index IE* in the *Modify Priority Queue* choice, the DRNS shall delete the previous list of MAC-d PDU Size Index values for the related HSDPA Priority Queue and use the MAC-d PDU Size Index values indicated in the *MAC-d PDU Size Index IE* in the new configuration.
- [FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *CQI Feedback Cycle k IE*, the *CQI Repetition Factor IE*, the *ACK-NACK Repetition Factor IE*, the *ACK Power Offset IE*, the *NACK Power Offset IE* or the *CQI Power Offset IE* in the *HS-DSCH Information To Modify IE*, then the DRNS shall use the indicated CQI Feedback Cycle k value, the CQI Repetition Factor or the ACK-NACK Repetition Factor, ACK Power Offset, the NACK Power Offset or the CQI Power Offset in the new configuration.]
- [FDD - If the *HS-SCCH Power Offset IE* is included in the *HS-DSCH Information To Modify IE*, the DRNS may use this value to determine the HS-SCCH power. The HS-SCCH Power Offset should be applied for any HS-SCCH transmission to this UE.]
- [TDD – If the RADIO LINK RECONFIGURATION PREPARE message includes the *TDD ACK NACK Power Offset IE* in the *HS-DSCH Information To Modify IE*, the DRNS shall use the indicated power offset in the new configuration.]
- [FDD - If the *HS-DSCH Information To Modify IE* includes the *HS-SCCH Code Change Grant IE*, then the DRNS may modify the HS-SCCH codes corresponding to the HS-DSCH. The DRNC shall then report the codes which are used in the new configuration specified in the *HS-SCCH Specific Information Response IE* in the RADIO LINK RECONFIGURATION READY message.]
- [FDD - If the *HS-DSCH Information To Modify IE* includes the *HS-PDSCH Code Change Grant IE*, then the DRNS may modify the HS-PDSCH codes corresponding to the HS-DSCH. The DRNC shall then report the codes which are used in the new configuration specified in the *Continuous Packet Connectivity HS-SCCH less Information Response IE* in the RADIO LINK RECONFIGURATION READY message. If the concerned DRNS is not in Continuous Packet Connectivity HS-SCCH less mode, the SRNC shall not include the *HS-PDSCH Code Change Grant IE* in the *HS-DSCH Information To Modify IE*.]
- [TDD - If the *HS-DSCH Information To Modify IE* includes the *HS-SCCH Code Change Grant IE*, then the DRNS may modify the HS-SCCH parameters corresponding to the HS-DSCH. The DRNC shall then report the values for the parameters which are used in the new configuration specified in the [3.84Mcps TDD - *HS-SCCH Specific Information Response IE*] [1.28Mcps TDD - *HS-SCCH Specific Information Response LCR IE*] [7.68 Mcps TDD - *HS-SCCH Specific Information Response 7.68 Mcps IE*] in the RADIO LINK RECONFIGURATION READY message.]
- [FDD – If the RADIO LINK RECONFIGURATION PREPARE message includes the *HARQ Preamble Mode IE* in the *HS-DSCH Information To Modify IE*, then the DRNS shall use the indicated HARQ Preamble Mode in the new configuration as described in [10], if HS-DPCCH ACK/NACK preamble and postamble is supported. Then, in this case, if the mode 1 is applied, the DRNC shall include the *HARQ Preamble Mode Activation Indicator IE* in the *HS-DSCH Information Response IE* in the RADIO LINK RECONFIGURATION READY message. If the *HARQ Preamble Mode IE* is not included or if the mode 0 is applied, then the DRNC shall not include the *HARQ Preamble Mode Activation Indicator IE* in the *HS-DSCH Information Response IE* in the RADIO LINK RECONFIGURATION READY message.]

- If the RADIO LINK RECONFIGURATION PREPARE message includes the *HS-DSCH MAC-d PDU Size Format* IE in the *HS-DSCH Information To Modify* IE, then the DRNS shall use, in the new configuration, the indicated format in user plane frame structure for HS-DSCH channels [32] and MAC-hs [41].
- [FDD – If the RADIO LINK RECONFIGURATION PREPARE message includes the *HS-DSCH Physical Layer Category* IE in the *HS-DSCH Information To Modify* IE, the DRNS shall use this information in the new configuration.]
- [FDD - If the *MIMO Mode Indicator* IE is included in the *HS-DSCH Information To Modify* IE, then:]
  - [FDD - The DRNS shall activate/deactivate the MIMO mode for the HS-DSCH Radio Link in the new configuration in accordance with the *MIMO Mode Indicator* IE.]
  - [FDD - If the *MIMO Mode Indicator* IE is set to "Activate", then the DRNS shall decide the pilot configuration and the UE reporting configuration (N/M ratio) according to [10] for MIMO and include the *MIMO Information Response* IE in the *HS-DSCH FDD Information Response* IE in the RADIO LINK RECONFIGURATION READY message.]
  - [FDD - If the *MIMO Mode Indicator* IE is set to "Activate" and *Power Offset For S-CPICH for MIMO Request Indicator* IE is included, the DRNC shall, if supported and MIMO pilot configuration with Primary and Secondary CPICH is set up on the cell where the Serving HS-DSCH Radio Link is established, include the *Power Offset For S-CPICH for MIMO* IE in the *HS-DSCH FDD Information Response* IE.]
- [FDD - The DRNC may include the *HARQ Memory Partitioning* IE in the RADIO LINK RECONFIGURATION READY message. The *HARQ Memory Partitioning* IE may contain the *HARQ Memory Partitioning Information Extension For MIMO* IE.]
- [FDD - If the *Sixtyfour QAM Usage Allowed Indicator* IE is included in the *HS-DSCH Information To Modify* IE, then the DRNS may if the value is set to "allowed" use 64 QAM for the HS-DSCH Radio Link, and the DRNS shall include the *SixtyfourQAM DL Usage Indicator* IE in the *HS-DSCH FDD Information Response* IE in the RADIO LINK RECONFIGURATION READY message.]
- [FDD - If the *Sixtyfour QAM Usage Allowed Indicator* IE is included in the *HS-DSCH Information To Modify* IE with value set to "not allowed", then the DRNS shall not use 64 QAM for the HS-DSCH Radio Link.]
- [FDD - If MAC-ehs is applied in the new configuration, and if Sixtyfour QAM will not be used, the DRNS shall include the *HS-DSCH TB Size Table Indicator* IE in the *HS-DSCH FDD Information Response* IE in the RADIO LINK RECONFIGURATION READY message if it decides to use the octet aligned table defined in [41] for HS-DSCH Transport Block Size signalling.]
- [1.28Mcps TDD - If the *MIMO Mode Indicator* IE is included in the *HS-DSCH Information To Modify* IE, then:]
  - [1.28Mcps TDD - The DRNS shall activate/deactivate the MIMO mode for the HS-DSCH Radio Link in the new configuration in accordance with the *MIMO Mode Indicator* IE.]
  - [1.28 Mcps TDD - If the *MIMO Mode Indicator* IE is set to "Activate", then the DRNS shall decide the SF mode for HS-PDSCH dual stream and include the *MIMO SF Mode for HS-PDSCH dual stream* IE in the *HS-DSCH TDD Information Response* IE in the RADIO LINK RECONFIGURATION READY message.]
- [1.28Mcps TDD - The DRNC may include the *HARQ Memory Partitioning* IE in the RADIO LINK RECONFIGURATION READY message. The *HARQ Memory Partitioning* IE may contain the *HARQ Memory Partitioning Information Extension For MIMO* IE.]
- [FDD - Any secondary serving HS-DSCH that was applied in the old configuration shall remain in the new configuration unless it is explicitly removed.]
- [FDD - If secondary serving HS-DSCH is applied also in the new configuration, then any changes related to parameters that are common for both the serving and the secondary serving HS-DSCH should be applied also for the secondary serving HS-DSCH.]
- If the RADIO LINK RECONFIGURATION PREPARE message includes *DL RLC PDU Size Format* IE for a Priority Queue in the in the *HS-DSCH Information To Modify* IE, the *DL RLC PDU Size Format* IE may be used by the DRNS to determine the allocated capacity on user plane as described in [32].

- [FDD - If the *UE Support Indicator Extension* IE is included in the *HS-DSCH Information To Modify* IE the DRNS may use the supported HSDPA functions for this UE.]

#### [FDD - Secondary Serving HS-DSCH Modification:]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *HS-DSCH FDD Secondary Serving Information To Modify* IE, then:]

- [FDD - If the *HS-SCCH Power Offset* IE is included in the *HS-DSCH FDD Secondary Serving Information To Modify* IE, the DRNS may use this value to determine the HS-SCCH power. The HS-SCCH Power Offset should be applied for any secondary serving HS-SCCH transmission to this UE.]
- [FDD - If the *HS-DSCH FDD Secondary Serving Information To Modify* IE includes the *HS-SCCH Code Change Grant* IE, then the DRNS may modify the HS-SCCH codes corresponding to the secondary serving HS-DSCH. The DRNC shall then report the codes which are used in the new configuration specified in the *HS-SCCH Specific Secondary Serving Information Response* IE in the *HS-DSCH FDD Secondary Serving Information Response* IE in the *Additional HS Cell Information Response* IE in the RADIO LINK RECONFIGURATION READY message.]
- [FDD - If the *Sixtyfour QAM Usage Allowed Indicator* IE is included in the *HS-DSCH FDD Secondary Serving Information To Modify* IE, then the DRNS may if the value is set to "allowed" use 64 QAM for the secondary serving HS-DSCH Radio Link, and the DRNS shall include the *SixtyfourQAM DL Usage Indicator* IE in the *HS-DSCH FDD Secondary Serving Information Response* IE in the *Additional HS Cell Information Response* IE in the RADIO LINK RECONFIGURATION READY message.]
- [FDD - If the *Sixtyfour QAM Usage Allowed Indicator* IE is included in the *HS-DSCH FDD Secondary Serving Information To Modify* IE with value set to "not allowed", then the DRNS shall not use 64 QAM for the secondary serving HS-DSCH Radio Link.]
- [FDD - If, in the new configuration, the UE context is configured not to use Sixtyfour QAM for the secondary serving HS-DSCH, then the DRNC shall include the *HS-DSCH TB Size Table Indicator* IE in the *HS-DSCH FDD Secondary Serving Information Response* IE in the *Additional HS Cell Information Response* IE in the RADIO LINK RECONFIGURATION READY message if it decides to use the octet aligned table defined in [41] for secondary serving HS-DSCH Transport Block Size signalling.]
- [FDD - If the *Diversity Mode* IE is included, then:]
  - [FDD- the DRNS shall apply cell specific transmit diversity configuration for the secondary serving HS-DSCH radio link according to *Diversity Mode* IE and *Transmit Diversity Indicator* IE in the *HS-DSCH FDD Secondary Serving Information To Modify* IE,]
  - [FDD - If the *Diversity Mode* IE is not set to "None", the DRNS shall apply diversity for the secondary serving HS-DSCH radio link according to the value given in the *Transmit Diversity Indicator* IE in the *HS-DSCH FDD Secondary Serving Information To Modify* IE.]
- [FDD - If the *Non Cell Specific Tx Diversity* IE equals "Tx Diversity" is included, the DRNS shall apply non cell specific transmit diversity configuration and reconfigure the transmit diversity setting for the secondary serving HS-DSCH radio link to the same value as defined for the serving HS-DSCH radio link in the new configuration.]

#### [FDD – Secondary Serving HS-DSCH Removal:]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *HS-DSCH Secondary Serving Remove* IE in the *Additional HS Cell Information RL Reconf Prep* IE, then the indicated secondary serving HS-DSCH Radio Link shall be removed.]

#### HS-DSCH MAC-d Flow Addition/Deletion:

If the RADIO LINK RECONFIGURATION PREPARE message includes any *HS-DSCH MAC-d Flows To Add* or *HS-DSCH MAC-d Flows To Delete* IEs, then the DRNS shall use this information to add/delete the indicated HS-DSCH MAC-d flows on the Serving HS-DSCH Radio Link. When an HS-DSCH MAC-d flow is deleted, all its associated Priority Queues shall also be removed.

If the RADIO LINK RECONFIGURATION PREPARE message includes an *HS-DSCH MAC-d Flows To Delete* IE requesting the deletion of all remaining HS-DSCH MAC-d flows for the UE Context, then the DRNC shall delete the HS-DSCH configuration from the UE Context and release the HS-PDSCH resources.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *HS-DSCH MAC-d Flows To Add* IE, then:

The DRNS may use the *Traffic Class* IE for a specific HS-DSCH MAC-d flow to determine the transport bearer characteristics to apply between DRNC and Node B. If *TrCH Source Statistics Descriptor* IE is present with the value "RRC" in the *HS-DSCH MAC-d Flows Information* IE, then the DRNC should ignore the *Traffic Class* IE.

If the *TNL QoS* IE is included for a MAC-d flow and if ALCAP is not used, the *TNL QoS* IE may be used by the DRNS to determine the transport bearer characteristics to apply in the uplink between the DRNS and the SRNC for the related MAC-d flow.

The DRNC shall include the *HS-DSH Initial Capacity Allocation* IE in the RADIO LINK RECONFIGURATION READY message for every HS-DSCH MAC-d flow being added, if the DRNS allows the SRNC to start transmission of MAC-d PDUs before the DRNS has allocated capacity on user plane as described in [32]. If the UE context is configured to use the "Flexible MAC-d PDU Size" format for the HS-DSCH, then DRNC shall only set in the *HS-DSCH Initial Capacity Allocation* IE the values for the peer of *Scheduling Priority Indicator* IE and *Maximum MAC-d PDU Size Extended* IE to the values of the corresponding peer received in RADIO LINK RECONFIGURATION PREPARE message in the *HS-DSCH MAC-d Flows To Add* IE for a Priority Queue including *Scheduling Priority Indicator* IE and *Maximum MAC-d PDU Size Extended* IE.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *MAC-hs Guaranteed Bit Rate* IE in the *HS-DSCH MAC-d Flows To Add* IE, the DRNS shall use this information to optimise MAC-hs scheduling decisions for the related HSDPA Priority Queue.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *Discard Timer* IE for a Priority Queue in the *HS-DSCH MAC-d Flows To Add* IE, then the DRNS shall use this information to discard out-of-date MAC-hs SDUs from the related HSDPA Priority Queue.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *Maximum MAC-d PDU Size Extended* IE for a Priority Queue in the *HS-DSCH MAC-d Flows To Add* IE, then the DRNC shall ignore the *SID* IE and *MAC-d PDU Size* IE in the *MAC-d PDU Size Index* IE and use *Maximum MAC-d PDU Size Extended* IE to optimise capacity allocation for the related HSDPA Priority Queue.

The DRNC may include the *HARQ Memory Partitioning* IE in the RADIO LINK RECONFIGURATION READY message. [FDD – The *HARQ Memory Partitioning* IE may contain the *HARQ Memory Partitioning Information Extension For MIMO* IE.]

- If the RADIO LINK RECONFIGURATION PREPARE message includes *DL RLC PDU Size Format* IE for a Priority Queue in the in the *HS-DSCH MAC-d Flows To Add* IE, the *DL RLC PDU Size Format* IE may be used by the DRNS to determine the allocated capacity on user plane as described in [32].

#### [FDD – Enhanced HS Serving Cell Change:]

[FDD – Upon receipt of the RADIO LINK RECONFIGURATION PREPARE message, if the Enhanced HS Serving Cell Change is preconfigured in the DRNS for the UE context, the DRNS may execute the Enhanced HS Serving Cell Change procedure according to [63.]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *Enhanced HS Serving CC Abort* IE in the *HS-DSCH Information To Modify* IE or the *HS-DSCH FDD Information* IE then the DRNS shall not execute the synchronized Enhanced HS Serving Cell Change procedure when performing the Serving HS-DSCH Radio Link Change or the HS-DSCH Setup.]

#### [FDD - E-DCH Setup:]

[FDD - If the *E-DCH FDD Information* IE is present in the RADIO LINK RECONFIGURATION PREPARE message then:]

- [FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *MAC-es Guaranteed Bit Rate* IE in the *E-DCH Logical Channel Information* IE in the *E-DCH FDD Information* IE, then the DRNS shall use this information to optimise MAC-e scheduling decisions.]



- [FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *Maximum MAC-d PDU Size Extended* IE for a E-DCH Logical Channel in the *E-DCH MAC-d Flows Information* IE in the *E-DCH FDD Information* IE, then the DRNS shall ignore the *MAC-d PDU Size* IE in the *MAC-d PDU Size List* IE and use *Maximum MAC-d PDU Size Extended* IE to optimise capacity allocation for the related E-DCH Logical Channel and use the indicated format in user plane frame structure for E-DCH channels [32] and MAC [41].]
- [FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *E-DCH MAC-d Flow Multiplexing List* IE for an E-DCH MAC-d flow the DRNS shall use this information for the related resource allocation operation.]
- [FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *HARQ Process Allocation For 2ms Scheduled Transmission Grant* IE, the DRNS shall use this information for the related resource allocation operation.]
- [FDD - If in the RADIO LINK RECONFIGURATION PREPARE message the E-DCH Grant Type is indicated as being "E-DCH Non-Scheduled Transmission Grant" for an E-DCH MAC-d flow the DRNS shall assume non-scheduled grants being configured for that E-DCH MAC-d flow and shall use the information within the *HARQ Process Allocation For 2ms Non-Scheduled Transmission Grant* IE, if included, for the related resource allocation operation.]
- [FDD - If in the RADIO LINK RECONFIGURATION PREPARE message the E-DCH Grant Type is indicated as being "E-DCH Scheduled Transmission Grant" for an E-DCH MAC-d flow the DRNS shall assume scheduled grants being configured for that E-DCH MAC-d flow.]
- [FDD - The DRNS may use the *Traffic Class* IE for a specific E-DCH MAC-d flow to determine the transport bearer characteristics to apply between DRNC and Node B. If *TrCH Source Statistics Descriptor* IE is present with the value "RRC" in the *E-DCH MAC-d Flows Information* IE, then the DRNC should ignore the *Traffic Class* IE.]
- [FDD - If the *TNL QoS* IE is included for an E-DCH MAC-d flow and if ALCAP is not used, the *TNL QoS* IE may be used by the DRNS to determine the transport bearer characteristics to apply in the uplink for the related MAC-d flow.]
- [FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *Bundling Mode Indicator* IE for a E-DCH MAC-d flow in the *E-DCH MAC-d Flow Specific Information* IE in the *E-DCH FDD Information* IE and the *Bundling Mode Indicator* IE is set to "Bundling" and the *E-TTI* IE is set to "2ms", then the DRNS shall use the bundling mode for the E-DCH UL data frames for the related MAC-d flow, otherwise the DRNS shall use the non-bundling mode for the E-DCH UL data frames for the related MAC-d flow.]
- [FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *E-DCH Maximum Bitrate* IE for an E-DCH, the DRNS shall use this information for the related resource allocation operation, and when applicable, for E-DCH scheduling.]
- [FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *E-DCH Processing Overload Level* IE, then if the DRNS could not decode the E-DPCCH/E-DPDCH for the last consecutive number of TTIs, indicated in the *E-DCH Processing Overload Level* IE, because of processing issue, the DRNS shall notify the SRNC by initiating the Radio Link Failure procedure.]
- [FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *E-DCH ReferencePower Offset* IE, then the DRNS may use this value as a default HARQ power offset if it is not able to decode the MAC-e PDU and to determine the value of the actual HARQ power offset.]
- [FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *E-DCH Power Offset for Scheduling Info* IE, then the DRNS shall use this value as a power offset for the transmission of scheduling information without any MAC-d PDUs.]
- [FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *E-AGCH Power Offset* IE in the *RL Specific E-DCH Information* IE, then the DRNS may use this value to determine the E-AGCH power. The E-AGCH Power Offset should be applied for any E-AGCH transmission to this UE.]
- [FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *E-RGCH Power Offset* IE in the *RL Specific E-DCH Information* IE, then the DRNS may use this value to determine the E-RGCH power for the RL. The E-RGCH Power Offset should be applied for any E-RGCH transmission to this UE.]

- [FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *E-HICH Power Offset* IE in the *RL Specific E-DCH Information* IE, then the DRNS may use this value to determine the E-HICH power for the RL. The E-HICH Power Offset should be applied for any E-HICH transmission to this UE.]
- [FDD – If the RADIO LINK RECONFIGURATION PREPARE message includes the *SixteenQAM UL Operation Indicator* IE, the DRNS shall activate/deactivate SixteenQAM UL Operation for the RL in accordance with the *SixteenQAM UL Operation Indicator* IE.]
  - [FDD – If SixteenQAM UL Operation is activated, then the DRNS shall base the handling of the Relative Grant signalling on Scheduling Grant Table 2 according to [41]. If SixteenQAM UL Operation is deactivated, then the DRNS shall base the handling of the Relative Grant signalling on Scheduling Grant Table 1 according to [41].]

#### [FDD – E-DCH Radio Link Handling:]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *E-DCH RL Indication* IE in the *RL Information* IE:]

- [FDD - The DRNC shall setup the E-DCH resources, as requested or as configured in the UE context, on the Radio Links indicated by the *E-DCH RL Indication* IE, set to "E-DCH", in the *RL Information* IE.]
- [FDD - The DRNC may include the *E-AGCH And E-RGCH/E-HICH FDD Scrambling Code* IE and shall include the *E-RGCH/E-HICH Channelisation Code* IE and the corresponding *E-HICH Signature Sequence* IE and the DRNC may include the corresponding *E-RGCH Signature Sequence* IE in the *E-DCH FDD DL Control Channel Information* IE in the RADIO LINK RECONFIGURATION READY message for every RL indicated by the *E-DCH RL Indication* IE, set to "E-DCH", in the *RL Information* IE.]
- [FDD - The DRNC shall remove the E-DCH resources, if any, on the Radio Links, that are indicated by the *E-DCH RL Indication* IE set to "Non E-DCH", in the *RL Information* IE.]
- [FDD - For each RL for which the *E-DCH RL Indication* IE is set to "E-DCH", and which has or can have a common generation of E-RGCH information with another RL (current or future) when the DRNS would contain the E-DCH serving RL, the DRNS shall include the *E-DCH RL Set ID* IE in the RADIO LINK RECONFIGURATION READY message. The value of the *E-DCH RL Set ID* IE shall allow the SRNC to identify the E-DCH RLs that have or can have a common generation of E-RGCH information.]

#### [FDD - Serving E-DCH Radio Link Change:]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *Serving E-DCH RL ID* IE, this indicates the new Serving E-DCH Radio Link:]

- [FDD - If the old Serving E-DCH RL is within this DRNS, the DRNS shall de-allocate the E-AGCH resources of the old Serving E-DCH Radio Link at the activation of the new configuration.]
- [FDD - If the new Serving E-DCH RL is within this DRNS:]
  - [FDD - the DRNS shall allocate a primary E-RNTI identifier or a secondary E-RNTI identifier or both for the new Serving E-DCH Radio Link and include these E-RNTI identifiers along with the channelisation code of the corresponding E-AGCH in the *E-DCH FDD DL Control Channel Information* IE in the *RL Information Response* IE for the indicated RL in the RADIO LINK RECONFIGURATION READY message.]
  - [FDD - The DRNS may include the *Serving Grant Value* IE and *Primary/Secondary Grant Selector* IE in the RADIO LINK RECONFIGURATION READY message for the initial grant for the new serving E-DCH RL.]
  - [FDD - If the E-DCH HARQ process allocation for 2ms TTI for scheduled and/or non-scheduled transmission shall be changed, the DRNS shall allocate resources according to the new/changed configuration and include the new/changed configuration in the *E-DCH FDD Information Response* IE in the RADIO LINK RECONFIGURATION READY message.]
  - [FDD - If a serving cell change is performed the RADIO LINK RECONFIGURATION READY message may contain invalid data (see 9.2.2.4C).]
  - [FDD - The DRNS may include the *Default Serving Grant in DTX Cycle 2* IE in the RADIO LINK RECONFIGURATION READY message for the new serving E-DCH RL.]

- [FDD – The DRNS may include the *E-RGCH/E-HICH Channelisation Code IE* and/or the *E-HICH Signature Sequence IE* and/or the *E-RGCH Signature Sequence IE* or may alternatively include the *E-RGCH Release Indicator IE* in the *E-DCH FDD DL Control Channel Information IE* in the RADIO LINK RECONFIGURATION READY message for every E-DCH Radio Links in the DRNS.]
- [FDD - If the DRNS has no valid data for the *E-RGCH and E-HICH Channelisation Code IE* in the *E-DCH FDD DL Control Channel Information IE* in the RADIO LINK RECONFIGURATION READY message, then it shall insert the *E-RGCH and E-HICH Channelisation Code Validity Indicator IE* in the *E-DCH FDD DL Control Channel Information IE*, to indicate that the *E-RGCH and E-HICH Channelisation Code IE* contains invalid data.]

**[FDD - E-DCH Modification:]**

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *E-DCH FDD Information To Modify IE*, then:]

- [FDD - If the *E-DCH FDD Information To Modify IE* contains a *E-DCH MAC-d Flow Specific Information IE* which includes the *Allocation/Retention Priority IE*, the DRNS shall apply the new Allocation/Retention Priority to this E-DCH in the new configuration according to Annex A.]
- [FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *E-DCH MAC-d PDU Size Format IE* in the *E-DCH FDD Information To Modify IE*, then the DRNS shall use the indicated format in user plane frame structure for E-DCH channels [32] and MAC [41].]
- [FDD - If the *TNL QoS IE* is included for an E-DCH MAC-d flow and if ALCAP is not used, the *TNL QoS IE* may be used by the DRNS to determine the transport bearer characteristics to apply in the uplink for the related MAC-d flow.]
- [FDD -If the *Traffic Class IE* is included for an E-DCH MAC-d flow then the DRNS may use the *Traffic Class IE* for a specific E-DCH MAC-d flow to determine the transport bearer characteristics to apply between DRNC and Node B. The DRNC should ignore the *Traffic Class IE* if the *TrCH Source Statistics Descriptor IE* for this specific E-DCH MAC-d flow indicates the value "RRC".]
- [FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *Data Description Indicator IE*, the DRNC shall use the DDI values indicated in the *Data Description Indicator IE* in the new configuration.]
- [FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *MAC-es Guaranteed Bit Rate IE* in the *E-DCH FDD Information To Modify IE*, the DRNS shall use this information to optimise MAC-e scheduling decisions.]
- [FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *Maximum MAC-d PDU Size Extended IE* for a E-DCH Logical Channel in the *E-DCH MAC-d Flows Information IE* in the *E-DCH FDD Information To Modify IE*, then the DRNS shall ignore the *MAC-d PDU Size IE* in the *MAC-d PDU Size List IE* and use *Maximum MAC-d PDU Size Extended IE* to optimise capacity allocation for the related E-DCH Logical Channel.]
- [FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *Maximum Number of Retransmissions for E-DCH IE* for an E-DCH MAC-d flow in the *E-DCH FDD Information To Modify IE*, then the DRNS shall use this information to report if the maximum number of retransmissions has been exceeded.]
- [FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *E-DCH HARQ Power Offset FDD IE* in the *E-DCH FDD Information To Modify IE* for an E-DCH MAC-d flow the DRNS shall use this information for calculating the unquantised gain factor for an E-TFC ( $\beta_{ed,j,uq}$ ) as defined in [10].]
- [FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *E-DCH MAC-d Flow Multiplexing List IE* for an E-DCH MAC-d flow the DRNS shall use this information for the related resource allocation operation.]
- [FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the E-DCH Grant Type and it is indicated as being "E-DCH Non-Scheduled Transmission Grant" for an E-DCH MAC-d flow the DRNS shall assume non-scheduled grants being configured for that E-DCH MAC-d flow and shall use the information within the *HARQ Process Allocation For 2ms Non-Scheduled Transmission Grant IE*, if included, for the related resource allocation operation.]

- [FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the E-DCH Grant Type and it is indicated as being "E-DCH Scheduled Transmission Grant" for an E-DCH MAC-d flow the DRNS shall assume scheduled grants being configured for that E-DCH MAC-d flow.]
- [FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *E-DCH Logical Channel To Add* or *E-DCH Logical Channel To Delete* IEs, the DRNS shall use this information to add/delete the indicated logical channels. When an logical channel is deleted, all its associated configuration data shall also be removed.]
- [FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *E-DCH Logical Channel To Modify* IE, the DRNS shall use this information to modify the indicated logical channels:
  - [FDD - If the *E-DCH Logical Channel To Modify* IE includes *Scheduling Priority Indicator* IE, the DRNS shall apply the values in the new configuration.]
  - [FDD - If the *E-DCH Logical Channel To Modify* IE includes *Scheduling Information* IE, the DRNS shall apply the values in the new configuration.]
  - [FDD - If the *E-DCH Logical Channel To Modify* IE includes the *Maximum MAC-d PDU Size Extended* IE, the DRNS shall apply the value in the new configuration.]
- [FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *Bundling Mode Indicator* IE for an E-DCH MAC-d flow in the *E-DCH MAC-d Flow Specific Information* IE in the *E-DCH FDD Information To Modify* IE and the *Bundling Mode Indicator* IE is set to "Bundling" and the *E-TTI* IE is set to "2ms", then the DRNS shall use the bundling mode for the E-DCH UL data frames for the related MAC-d flow, otherwise the DRNS shall use the non-bundling mode for the E-DCH UL data frames for the related MAC-d flow.]
- [FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *HARQ Process Allocation For 2ms Scheduled Transmission Grant* IE, the DRNS shall use this information for the related resource allocation operation.]
- [FDD - If the E-DCH serving RL is in this DRNS, the DRNS may choose to change the E-DCH HARQ process allocation for 2ms TTI for scheduled and/or non-scheduled transmission. In this case the DRNS shall allocate resources according to the new/changed configuration and include the new/changed configuration in the *E-DCH FDD Information Response* IE in the RADIO LINK RECONFIGURATION READY message.]
- [FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *E-DCH Maximum Bitrate* IE for an E-DCH, the DRNS shall use this information for the related resource allocation operation, and when applicable, for E-DCH scheduling.]
- [FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *E-DCH Processing Overload Level* IE, then if the DRNS could not decode the E-DPCCH/E-DPDCH for the last consecutive number of TTIs, indicated in the *E-DCH Processing Overload Level* IE, because of processing issue, the DRNS shall notify the SRNC by initiating the Radio Link Failure procedure.]
- [FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *E-DCH Reference Power Offset* IE, then the DRNS may use this value as a default HARQ power offset if it is not able to decode the MAC-e PDU and to determine the value of the actual HARQ power offset.]
- [FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *E-DCH Power Offset for Scheduling Info* IE, then the DRNS shall use this value as a power offset for the transmission of scheduling information without any MAC-d PDUs.]
- [FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *E-AGCH Power Offset* IE in the *RL Specific E-DCH Information* IE, then the DRNS may use this value to determine the E-AGCH power. The E-AGCH Power Offset should be applied for any E-AGCH transmission to this UE.]
- [FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *E-RGCH Power Offset* IE in the *RL Specific E-DCH Information* IE, then the DRNS may use this value to determine the E-RGCH power for the RL. The E-RGCH Power Offset should be applied for any E-RGCH transmission to this UE.]
- [FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *E-HICH Power Offset* IE in the *RL Specific E-DCH Information* IE, then the DRNS may use this value to determine the E-HICH power for the RL. The E-HICH Power Offset should be applied for any E-HICH transmission to this UE.]

- [FDD – If the RADIO LINK RECONFIGURATION PREPARE message includes the *MAC-e Reset Indicator IE* in the *E-DCH FDD Information To Modify IE*, then the DRNS shall use this value to determine whether MAC-e (or MAC-i) Reset is performed in the UE for sending the HARQ Failure Indication.]
- [FDD – If the RADIO LINK RECONFIGURATION PREPARE message includes the *SixteenQAM UL Operation Indicator IE* in the *E-DCH FDD Information To Modify IE*, the DRNS shall activate/deactivate SixteenQAM UL Operation for the RL in accordance with the *SixteenQAM UL Operation Indicator IE*]
- [FDD – If SixteenQAM UL Operation is activated, then the DRNS shall base the handling of the Relative Grant signalling on Scheduling Grant Table 2 according to [41]. If SixteenQAM UL Operation is deactivated, then the DRNS shall base the handling of the Relative Grant signalling on Scheduling Grant Table 1 according to [41].]
- [FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *E-DCH DL Control Channel Grant Information IE* in the *E-DCH FDD Information To Modify IE*, the DRNS may modify E-AGCH Channelisation Code, E-RGCH/E-HICH Channelisation Code, E-RGCH Signature Sequence and/or E-HICH Signature Sequence for the E-DCH RL indicated by the *E-DCH RL ID IE*. The DRNC shall then report the modified configuration which is used in the new configuration specified in the *E-DCH FDD DL Control Channel Information IE* for each E-DCH RL in the RADIO LINK RECONFIGURATION READY message.]

**[FDD - E-DCH MAC-d Flow Addition:]**

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes an *E-DCH MAC-d Flows To Add IE*, then the DRNS shall use this information to add the indicated E-DCH MAC-d flows.]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *Maximum MAC-d PDU Size Extended IE* for a E-DCH Logical Channel in the *E-DCH MAC-d Flows Information IE* in the *E-DCH MAC-d Flows To Add IE*, then the DRNS shall ignore the *MAC-d PDU Size IE* in the *MAC-d PDU Size List IE* and use *Maximum MAC-d PDU Size Extended IE* to optimise capacity allocation for the related E-DCH Logical Channel.]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *E-DCH MAC-d Flows To Add IE*, then:]

- [FDD - The DRNS may use the *Traffic Class IE* for a specific E-DCH MAC-d flow to determine the transport bearer characteristics to apply between DRNC and Node B. If *TrCH Source Statistics Descriptor IE* is present with the value "RRC" in the *E-DCH MAC-d Flows Information IE*, then the DRNC should ignore the *Traffic Class IE*.]
- [FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *MAC-es Guaranteed Bit Rate IE* in the *E-DCH Logical Channel Information IE* in the *E-DCH MAC-d Flows To Add IE*, the DRNS shall use this information to optimise MAC-e scheduling decisions.]

**[FDD - E-DCH MAC-d Flow Deletion:]**

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes an *E-DCH MAC-d Flows To Delete IE*s, then the DRNS shall use this information to delete the indicated E-DCH MAC-d flows. When an E-DCH MAC-d flow is deleted, all its associated configuration shall also be removed.]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes an *E-DCH MAC-d Flows To Delete IE* requesting the deletion of all remaining E-DCH MAC-d flows for the UE Context, then the DRNC shall delete the E-DCH configuration from the UE Context and release the E-DCH resources.]

**[1.28Mcps TDD - Uplink Synchronisation Parameters LCR:]**

[1.28Mcps TDD -If the *Uplink Synchronisation Parameters LCR IE* is present, the DRNC shall use the indicated values of *Uplink synchronisation stepsize IE* and *Uplink synchronisation frequency IE* when evaluating the timing of the UL synchronisation.]

**[1.28Mcps TDD - Shared physical channels Synchronisation Detection:]**

[1.28Mcps TDD - If HS-PDSCH and E-PUCH are configured but no DPCH is configured for the UE, then the DRNS shall include the *Out-of-sync Detection Window IE* in the *HS-DSCH TDD Information Response IE* in the RADIO LINK RECONFIGURATION READY message.]

**[1.28Mcps TDD - Uplink Timing Advance Control LCR:]**

[1.28Mcps TDD - The DRNC shall include the *Uplink Timing Advance Control LCR* IE in the RADIO LINK RECONFIGURATION READY message, if the Uplink Timing Advance Control parameters have been changed.]

**[1.28Mcps TDD - PowerControl GAP:]**

[1.28Mcps TDD - If applied in the DRNS, the DRNC may include the *PowerControl GAP* IE in the RADIO LINK RECONFIGURATION READY message.]

**[1.28Mcps TDD - E-UTRAN Inter-RAT measurement:]**

[1.28Mcps TDD - If the RADIO LINK RECONFIGURATION PREPARATION message includes the *Need for Idle Interval* IE set to "TRUE", if supported, the DRNC shall include the *Idle Interval Information* IE in the RADIO LINK RECONFIGURATION READY message. If the *Need for Idle Interval* IE is set to "FALSE", the DRNC shall delete the configuration related to E-UTRAN Inter-RAT measurement ]

**[1.28Mcps TDD - RNTI Allocation Indicator:]**

[1.28Mcps TDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *RNTI Allocation Indicator* IE, if supported, the DRNS may allocate an E-RNTI and/or an H-RNTI for UE to use in CELL\_FACH state.]

**[TDD - DSCH RNTI Addition/Deletion:]**

[TDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *PDSCH RL ID* IE, then the DRNS shall use it as the new RL identifier for PDSCH and PUSCH.]

- [TDD - If the indicated PDSCH RL ID is in the DRNS and there was no DSCH-RNTI allocated to the UE Context, the DRNC shall allocate a DSCH-RNTI to the UE Context and include the *DSCH-RNTI* IE in the RADIO LINK RECONFIGURATION READY message.]
- [TDD - If the indicated PDSCH RL ID is in the DRNS and there was a DSCH-RNTI allocated to the UE Context, the DRNC shall allocate a new DSCH-RNTI to the UE Context, release the old DSCH-RNTI and include the *DSCH-RNTI* IE in the RADIO LINK RECONFIGURATION READY message.]
- [TDD - If the indicated PDSCH RL ID is not in the DRNS and there was a DSCH-RNTI allocated to the UE Context, the DRNC shall release this DSCH-RNTI.]

[TDD - If the RADIO LINK RECONFIGURATION PREPARE message includes a *DSCHs To Delete* IE and/or a *USCHs To Delete* IE which results in the deletion of all DSCH and USCH resources for the UE Context, then the DRNC shall release the DSCH-RNTI allocated to the UE Context, if there was one.]

**[FDD – Phase Reference Handling:]**

[FDD – If Primary CPICH usage for channel estimation information has been reconfigured, the DRNC shall include the *Primary CPICH Usage For Channel Estimation* IE in the RADIO LINK RECONFIGURATION READY message.]

[FDD – If Secondary CPICH information for channel estimation has been reconfigured, the DRNC shall include the *Secondary CPICH Information Change* IE in the RADIO LINK RECONFIGURATION READY message.]

[FDD – If the RADIO LINK RECONFIGURATION PREPARE message includes *Phase Reference Update Indicator* IE, DRNC shall modify the channel estimation information according to [10] subclause 4.3.2.1 and set the value(s) in *Primary CPICH Usage For Channel Estimation* IE and/or *Secondary CPICH Information Change* IE in the RADIO LINK RECONFIGURATION READY message accordingly.]

[FDD – If the RADIO LINK RECONFIGURATION READY message includes the *Primary CPICH Usage For Channel Estimation* IE and/or the *Secondary CPICH Information Change* IE, the DRNC shall avoid the new configuration in which neither the Primary CPICH nor the Secondary CPICH is used as a Phase Reference for this Radio Link.]

**[FDD - Fast Reconfiguration:]**

[FDD – If the RADIO LINK RECONFIGURATION PREPARE message includes the *Fast Reconfiguration Mode* IE, the DRNS shall, if supported, and if it is possible to base the synchronization of the reconfiguration on the detection of the change in the uplink scrambling code for this reconfiguration, include the *Fast ReconfigurationPermission* IE in the RADIO LINK RECONFIGURATION READY message.]

**[TDD - Intra- DRNS Serving E-DCH Radio Link Change:]**

TDD- If the RADIO LINK RECONFIGURATION PREPARE message includes the *E-DCH Serving RL* IE, this indicates the new Serving E-DCH Radio Link:]

- [TDD - In the new configuration the DRNS shall de-allocate the E-DCH resources of the old Serving E-DCH Radio Link and allocate the E-DCH resources for the new Serving E-DCH Radio Link.]
- [3.84Mcps TDD - The DRNS shall allocate E-AGCH parameters corresponding to the E-DCH and include the *E-AGCH Specific Information Response* IE in the *E-DCH TDD Information Response* IE in the RADIO LINK RECONFIGURATION READY message.]
- [1.28Mcps TDD - The DRNS shall allocate E-AGCH parameters and E-HICH parameters corresponding to the E-DCH and include the *E-AGCH Specific Information Response* IE and the *E-HICH Specific Information Response* IE in the *E-DCH Information Response 1.28Mcps* IE in the RADIO LINK RECONFIGURATION READY message.]
- [7.68Mcps TDD - The DRNS shall allocate E-AGCH parameters corresponding to the E-DCH and include the *E-AGCH Specific Information Response 7.68Mcps* IE in the *E-DCH TDD Information Response 7.68Mcps* IE in the RADIO LINK RECONFIGURATION READY message.]
- [TDD - If the *TNL QoS* IE is included for a MAC-d flow and if ALCAP is not used, the *TNL QoS* IE may be used by the DRNS to determine the transport bearer characteristics to apply in the uplink for the related MAC-d flow.]

#### [TDD - E-PUCH Handling:]

[3.84Mcps TDD and 7.68Mcps TDD - If the RADIO LINK RECONFIGURATION PREPARE message includes an *E-PUCH Information* IE, the DRNS shall apply the parameters to the new configuration.]

[1.28Mcps TDD - If the RADIO LINK RECONFIGURATION PREPARE message includes an *E-PUCH Information LCR* IE, the DRNS shall apply the parameters to the new configuration]

[TDD - If the RADIO LINK RECONFIGURATION PREPARE message includes an *E-TFCS Information* IE, the DRNS shall apply the beta parameters to the new configuration.]

#### [3.84Mcps TDD - E-DCH Setup:]

[3.84Mcps TDD - the radio link may be reconfigured to support E-DCH by including the appropriate E-DCH information elements: *E-DCH Serving RL* IE, *E-PUCH Information* IE, *E-TFCS Information TDD* IE, *E-DCH MAC-d Flows to Add* IE and *E-DCH TDD Information* IE.]

#### [1.28Mcps TDD - E-DCH Setup:]

[1.28cps TDD - the radio link may be reconfigured to support E-DCH by including the appropriate E-DCH information elements: *E-DCH Serving RL* IE, *E-PUCH Information LCR* IE, *E-TFCS Information TDD* IE, *E-DCH MAC-d Flows to Add* IE and *E-DCH TDD Information LCR* IE.]

#### [7.68Mcps TDD - E-DCH Setup:]

[7.68Mcps TDD - the radio link may be reconfigured to support E-DCH by including the appropriate E-DCH information elements: *E-DCH Serving RL* IE, *E-PUCH Information* IE, *E-TFCS Information TDD* IE, *E-DCH MAC-d Flows to Add* IE and *E-DCH TDD Information 7.68Mcps* IE.]

#### [TDD- E-DCH MAC-d Flow Addition/Deletion:]

[TDD- If the RADIO LINK RECONFIGURATION PREPARE message includes any *E-DCH MAC-d Flows To Add* or *E-DCH MAC-d Flows To Delete* IEs, then the DRNS shall use this information to add/delete the indicated E-DCH MAC-d flows. When an E-DCH MAC-d flow is deleted, all its associated configuration data shall also be removed.]

[TDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *Maximum MAC-d PDU Size Extended* IE for a E-DCH Logical Channel in the *E-DCH MAC-d Flows Information TDD* IE in the *E-DCH MAC-d Flows To Add* IE, then the DRNS shall ignore the *MAC-d PDU Size* IE in the *MAC-d PDU Size List* IE and use *Maximum MAC-d PDU Size Extended* IE to optimise capacity allocation for the related E-DCH Logical Channel.]

[TDD- If the RADIO LINK RECONFIGURATION PREPARE message includes an *E-DCH MAC-d Flows To Delete* IE requesting the deletion of all remaining E-DCH MAC-d flows for the UE Context, then the DRNS shall delete the E-DCH configuration from the UE Context and release the E-DCH resources.]

[TDD- If the RADIO LINK RECONFIGURATION PREPARE message includes the *E-DCH MAC-d Flows To Add* IE, then:]

- [TDD- If the RADIO LINK RECONFIGURATION PREPARE message includes the *MAC-es Guaranteed Bit Rate* IE in the *E-DCH MAC-d Flows To Add* IE, the DRNS shall use this information to optimise MAC-e scheduling decisions.]
- [1.28Mcps TDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *MAC-es Maximum Bit Rate LCR* IE in the *E-DCH Logical Channel Information* IE in the *E-DCH MAC-d Flows To Add* IE, the DRNS shall use this information for the related resource allocation operation, and when applicable, for E-DCH scheduling.]

**[3.84Mcps TDD - E-DCH Non-scheduled allocations:]**

[3.84Mcps TDD - The DRNS shall determine any non-scheduled resource to be granted for the radio link, and return this in the *E-DCH Non-scheduled Grant Information TDD* IE in the *E-DCH Information Response* IE in the RADIO LINK RECONFIGURATION READY message.]

**[1.28Mcps TDD - E-DCH Non-scheduled allocations:]**

[1.28Mcps - The DRNS shall determine any non-scheduled resource to be granted for the radio link, and return this in the *E-DCH Non-scheduled Grant Information LCR TDD* IE in the *E-DCH Information Response 1.28Mcps* IE in the RADIO LINK RECONFIGURATION READY message.]

**[7.68Mcps TDD - E-DCH Non-scheduled allocations:]**

[7.68Mcps TDD - The DRNS shall determine any non-scheduled resource to be granted for the radio link, and return this in the *E-DCH Non-scheduled Grant Information 7.68Mcps TDD* IE in the *E-DCH Information Response 7.68Mcps* IE in the RADIO LINK RECONFIGURATION READY message.]

**[TDD - E-DCH Modification:]**

[TDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *Maximum MAC-d PDU Size Extended* IE for a E-DCH Logical Channel in the *E-DCH MAC-d Flows Information* IE in the *E-DCH TDD Information To Modify* IE, then the DRNS shall ignore the *MAC-d PDU Size* IE in the *MAC-d PDU Size List* IE and use *Maximum MAC-d PDU Size Extended* IE to optimise capacity allocation for the related E-DCH Logical Channel.]

[TDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *E-DCH MAC-d PDU Size Format* IE in the *E-DCH TDD Information To Modify* IE, then the DRNS shall use the indicated format in user plane frame structure for E-DCH channels [32] and MAC [41].]

**[3.84Mcps TDD - E-DCH Modification:]**

[3.84Mcps TDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *E-DCH TDD Information* IE, then:]

- [3.84Mcps TDD - If the *E-DCH TDD Information* IE includes the *E-DCH TDD Maximum Bitrate* IE for an E-DCH, the DRNS shall use this information for the related resource allocation operation, and when applicable, for E-DCH scheduling.]
- [3.84Mcps TDD - If the *E-DCH TDD Information* IE includes the *E-DCH Processing Overload Level* IE, then if the DRNS could not decode the E-PUCH for the last consecutive number of TTIs, indicated in the *E-DCH Processing Overload Level* IE, because of a processing issue, the DRNS shall notify the SRNC by initiating the Radio Link Failure procedure.]
- [3.84Mcps TDD – If the *E-DCH TDD Information* IE includes the *E-DCH Power Offset for Scheduling Info* IE, then the DRNS shall use this value as a power offset for the transmission of scheduling information without any MAC-d PDUs.]

**[1.28Mcps TDD - E-DCH Modification:]**

[1.28Mcps TDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *E-DCH TDD Information LCR* IE, then:]



- [1.28Mcps TDD - If the *E-DCH TDD Information LCR* IE includes the *E-DCH Physical Layer Category LCR* IE or *Extended E-DCH Physical Layer Category LCR* IE for an E-DCH, the DRNS shall use this information for the related resource allocation operation, and when applicable, for E-DCH scheduling.]
- [1.28Mcps TDD - If the *E-DCH TDD Information LCR* IE includes the *E-DCH Processing Overload Level* IE for an E-DCH, then if the DRNS could not decode the E-PUCH for the last consecutive number of TTIs, indicated in the *E-DCH Processing Overload Level* IE, because of a processing issue, the DRNS shall notify the SRNC by initiating the Radio Link Failure procedure.]
- [1.28Mcps TDD – If the *E-DCH TDD Information LCR* IE includes the *E-DCH Power Offset for Scheduling Info* IE, then the DRNS shall use this value as a power offset for the transmission of scheduling information without any MAC-d PDUs.]
- [1.28Mcps TDD - If the *E-DCH TDD Information LCR* IE includes the *Maximum Number of Retransmission for Scheduling Info LCR* IE and the *E-DCH Retransmission timer for Scheduling Info LCR* IE, then the DRNS shall use these parameters for the transmission of scheduling information without any MAC-d PDUs.]

**[7.68Mcps TDD - E-DCH Modification:]**

[7.68Mcps TDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *E-DCH TDD Information 7.68Mcps* IE, then:]

- [7.68Mcps TDD - If the *E-DCH TDD Information 7.68Mcps* IE includes the *E-DCH TDD Maximum Bitrate 7.68Mcps* IE for an E-DCH, the DRNS shall use this information for the related resource allocation operation, and when applicable, for E-DCH scheduling.]
- [7.68Mcps TDD - If the *E-DCH TDD Information 7.68Mcps* IE includes the *E-DCH Processing Overload Level* IE, then if the DRNS could not decode the E-PUCH for the last consecutive number of TTIs, indicated in the *E-DCH Processing Overload Level* IE, because of a processing issue, the DRNS shall notify the SRNC by initiating the Radio Link Failure procedure.]
- [7.68Mcps TDD – If the *E-DCH TDD Information 7.68Mcps* IE includes the *E-DCH Power Offset for Scheduling Info* IE, then the DRNS shall use this value as a power offset for the transmission of scheduling information without any MAC-d PDUs.]

[TDD- If the RADIO LINK RECONFIGURATION PREPARE message includes the *E-DCH TDD Information To Modify* IE, then:]

- [TDD- If the *E-DCH TDD Information To Modify* IE contains a *E-DCH MAC-d Flow Specific Information* IE which includes the *Allocation/Retention Priority* IE, the DRNS shall apply the new Allocation/Retention Priority to this E-DCH in the new configuration according to Annex A.]
- [TDD- If the *E-DCH TDD Information To Modify* IE contains a *TNL QoS* IE for an E-DCH MAC-d flow and if ALCAP is not used, the *TNL QoS* IE may be used by the DRNS to determine the transport bearer characteristics to apply in the uplink for the related MAC-d flow.]
- [TDD- If the *E-DCH TDD Information To Modify* IE includes the *Maximum Number of Retransmissions for E-DCH* IE for an E-DCH MAC-d flow then the DRNS shall use this information to report if the maximum number of retransmissions has been exceeded.]
  - [1.28Mcps TDD - If the *E-DCH TDD Information To Modify* IE includes the *E-DCH MAC-d Flow Retransmission Timer* IE for an E-DCH MAC-d flow then the DRNS shall use this information to set the retransmission timer.]
  - [TDD– If the *TNL QoS* IE is included in the *E-DCH TDD Information to Modify* IE for an E-DCH MAC-d flow and if ALCAP is not used, the *TNL QoS* IE may be used by the DRNS to determine the transport bearer characteristics to apply in the uplink for the related MAC-d flow.]
  - [TDD- If the *E-DCH TDD Information To Modify* IE includes the *E-DCH HARQ Power Offset TDD* IE for an E-DCH MAC-d flow the DRNS shall use this new power offset value.]
  - [TDD- If the *E-DCH TDD Information To Modify* IE includes the *E-DCH MAC-d Flow Multiplexing List* IE for an E-DCH MAC-d flow the DRNS shall use this information for the related resource allocation operation.]

- [TDD- If the *E-DCH TDD Information To Modify* IE contains the *E-DCH Grant Type* IE, the DRNS shall treat the E-DCH MAC-d flow as Scheduled or Non-scheduled accordingly.]
- [TDD- If the *E-DCH TDD Information To Modify* IE includes the *E-DCH Logical Channel To Add* or *E-DCH Logical Channel To Delete* IEs, the DRNS shall use this information to add/delete the indicated logical channels. When a logical channel is deleted, all its associated configuration data shall also removed.]
- [TDD- If the *E-DCH TDD Information To Modify* IE includes the *E-DCH Logical Channel To Modify* IE, the DRNS shall use this information to modify the indicated logical channels:]
  - [TDD - If the *E-DCH Logical Channel To Modify* IE includes *Scheduling Priority Indicator* IE, the DRNS shall apply the values in the new configuration.]
  - [TDD - If the *E-DCH Logical Channel To Modify* IE includes *Scheduling Information* IE, the DRNS shall apply the values in the new configuration.]
  - [TDD - If the *E-DCH Logical Channel To Modify* IE includes *MAC-es Guaranteed Bit Rate* IE, the DRNS shall apply the values in the new configuration.]
  - [TDD - If the *E-DCH Logical Channel To Modify* IE includes *E-DCH DDI Value* IE, the DRNS shall apply the values in the new configuration.]
  - [1.28Mcps TDD - If the *E-DCH Logical Channel To Modify* IE includes *MAC-es Maximum Bit Rate LCR* IE, the DRNS shall use this information for the related resource allocation operation, and when applicable, for E-DCH scheduling.]
  - [TDD - If the *E-DCH Logical Channel To Modify* IE includes the *Maximum MAC-d PDU Size Extended* IE, the DRNS shall apply the value in the new configuration.]
- [TDD- If the *E-DCH TDD Information To Modify* IE includes the *MAC-e Reset Indicator* IE, then the DRNS shall use this value to determine whether MAC-e (or MAC-i) Reset is performed in the UE for sending the HARQ Failure Indication.]

## General

If the requested modifications are allowed by the DRNC and the DRNC has successfully reserved the required resources for the new configuration of the Radio Link(s), it shall respond to the SRNC with the RADIO LINK RECONFIGURATION READY message. When this procedure has been completed successfully there exists a Prepared Reconfiguration, as defined in subclause 3.1.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *Transport Layer Address* IE and *Binding ID* IE in the [TDD - *DSCHs To Modify* IE, *DSCHs To Add* IE, *USCHs To Modify* IE, *USCHs To Add* IE], *HS-DSCH Information* IE, *HS-DSCH Information To Modify* IE, *HS-DSCH MAC-d Flows To Add* IE, [FDD - *RL Specific E-DCH Information* IE,] [TDD - *E-DCH MAC-d Flows to Add* IE,] [TDD - *E-DCH TDD Information to Modify* IE,] or in the *RL Specific DCH Information* IEs, the DRNC may use the transport layer address and the binding identifier received from the SRNC when establishing a transport bearer for any Transport Channel [FDD - for which the *Transport Bearer Not Requested Indicator* IE is not included], HS-DSCH MAC-d flow being added or E-DCH MAC-d flow [FDD - for which the *Transport Bearer Not Requested Indicator* IE is not included] being added, or any Transport Channel, HS-DSCH MAC-d flow or E-DCH MAC-d flow being modified for which a new transport bearer was requested with the *Transport Bearer Request Indicator* IE.

The DRNC shall include in the RADIO LINK RECONFIGURATION READY message the *Transport Layer Address* IE and the *Binding ID* IE for any Transport Channel [FDD - for which the *Transport Bearer Not Requested Indicator* IE is not included], HS-DSCH MAC-d flow being added or E-DCH MAC-d flow [FDD - for which the *Transport Bearer Not Requested Indicator* IE is not included] being added, or any Transport Channel [FDD - for which the *Transport Bearer Not Requested Indicator* IE was not included], HS-DSCH MAC-d flow or E-DCH MAC-d flow [FDD - for which the *Transport Bearer Not Requested Indicator* IE was not included] being modified for which a new transport bearer was requested with the *Transport Bearer Request Indicator* IE. In the case of a set of co-ordinated DCHs requiring a new transport bearer on the Iur interface, the *Transport Layer Address* IE and the *Binding ID* IE in the *DCH Information Response* IE shall be included [FDD - if the *Transport Bearer Not Requested Indicator* IE is not included for the corresponding DCH,] for only one of the DCHs in the set of co-ordinated DCHs.

[FDD - If the RADIO LINK RECONDIGURATION PREPARE message includes the *Transport Bearer Not Requested Indicator* IE set to "Transport Bearer Shall not be Established" for a DCH or an E-DCH MAC-d flow, then the DRNC shall not establish a transport bearer for the concerned DCH or E-DCH MAC-d flow and shall include the *Transport*

*Bearer Not Setup Indicator* IE for the corresponding DCH or E-DCH MAC-d flow in the RADIO LINK RECONFIGURATION READY message.]

[FDD - If the RADIO LINK RECONDIGURATION PREPARE message includes the *Transport Bearer Not Requested Indicator* IE set to "Transport Bearer may not be Established" for a DCH or an E-DCH MAC-d flow and:]

- [FDD - if the DRNC establishes a transport bearer for the concerned DCH or E-DCH MAC-d flow, the DRNC shall include in the RADIO LINK RECONFIGURATION READY message the *Binding ID* IE and *Transport Layer Address* IE for establishment of a transport bearer for the DCH or E-DCH MAC-d flow being established.]
- [FDD - if the DRNC does not establish a transport bearer for the concerned DCH or E-DCH MAC-d flow, the DRNC shall include the *Transport Bearer Not Setup Indicator* IE for the corresponding DCH or E-DCH MAC-d flow in the RADIO LINK RECONFIGURATION READY message.]

In the case of a Radio Link being combined with another Radio Link within the DRNS, the *Transport Layer Address* IE and the *Binding ID* IE in the *DCH Information Response* IE shall be included for only one of the combined Radio Links [FDD - if the *Transport Bearer Not Requested Indicator* IE is not included for this DCH of the Radio Link].

[FDD - In the case of an E-DCH RL being combined with another E-DCH RL within the DRNS, the *E-DCH FDD Information Response* IE shall be included only for one of the combined E-DCH RLs.]

Any allowed rate for the uplink of a modified DCH provided for the old configuration will not be valid for the new configuration. If the DRNS needs to limit the user rate in the uplink of a DCH due to congestion caused by the UL UTRAN Dynamic Resources (see subclause 9.2.1.79) in the new configuration for a Radio Link, the DRNC shall include in the RADIO LINK RECONFIGURATION READY message the *Allowed UL Rate* IE in the *DCH Information Response* IE for this Radio Link.

Any allowed rate for the downlink of a modified DCH provided for the old configuration will not be valid for the new configuration. If the DRNS needs to limit the user rate in the downlink of a DCH due to congestion caused by the DL UTRAN Dynamic Resources (see subclause 9.2.1.79) in the new configuration for a Radio Link, the DRNC shall include in the RADIO LINK RECONFIGURATION READY message the *Allowed DL Rate* IE in the *DCH Information Response* IE for this Radio Link.

The DRNS decides the maximum and minimum SIR for the uplink of the Radio Link(s) and the DRNC shall include in the RADIO LINK RECONFIGURATION READY message the *Maximum Uplink SIR* IE and *Minimum Uplink SIR* IE for each Radio Link when these values are changed.

[FDD - If the DL TX power upper or lower limit has been re-configured, the DRNC shall include in the RADIO LINK RECONFIGURATION READY message the *Maximum DL TX Power* IE and *Minimum DL TX Power* IE respectively. The DRNS shall not transmit with a higher power than indicated by the *Maximum DL TX Power* IE or lower than indicated by the *Minimum DL TX Power* IE on any DL DPCH or on the F-DPCH of the RL -except, if the UE Context is configured to use DPCH in the downlink, during compressed mode, when the  $\delta P_{curr}$ , as described in ref.[10] subclause 5.2.1.3, shall be added to the maximum DL power for the associated compressed frame.]

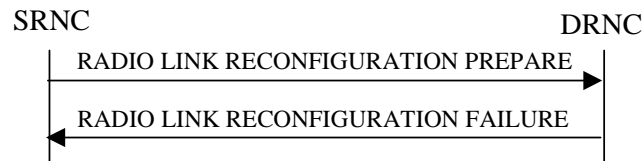
[3.84 Mcps TDD and 7.68 Mcps TDD - If the DL TX power upper or lower limit has been re-configured, the DRNC shall include the new value(s) in the *Maximum DL TX Power* IE and *Minimum DL TX Power* IE in the RADIO LINK RECONFIGURATION READY message. If the maximum or minimum power needs to be different for particular DCH type CCTrCHs, the DRNC shall include the new value(s) for that CCTrCH in the *CCTrCH Maximum DL TX Power* IE and *CCTrCH Minimum DL TX Power*. The DRNS shall not transmit with a higher power than indicated by the appropriate *Maximum DL TX Power* IE/*CCTrCH Maximum DL TX Power* IE or lower than indicated by the appropriate *Minimum DL TX Power* IE/*CCTrCH Minimum DL TX Power* IE on any DL DPCH within each CCTrCH of the RL.]

[1.28 Mcps TDD - If the DL TX power upper or lower limit has been re-configured, the DRNC shall include the new value(s) in the *Maximum DL TX Power* IE and *Minimum DL TX Power* IE in the RADIO LINK RECONFIGURATION READY message. If the maximum or minimum power needs to be different for particular timeslots within a DCH type CCTrCH, the DRNC shall include the new value(s) for that timeslot in the *Maximum DL TX Power* IE and *Minimum DL TX Power* within the *DL Timeslot Information LCR* IE. The DRNS shall not transmit with a higher power than indicated by the appropriate *Maximum DL TX Power* IE or lower than indicated by the appropriate *Minimum DL TX Power* IE on any DL DPCH within each timeslot of the RL.]

[TDD - If the [3.84Mcps TDD and 7.68 Mcps TDD - *DL Time Slot ISCP Info* IE][1.28Mcps TDD - *DL Time Slot ISCP Info LCR* IE] is present, the DRNS should use the indicated values when deciding the Initial DL TX Power.]

[TDD - If the *Primary CCPCH RSCP Delta* IE is included, the DRNS shall assume that the reported value for Primary CCPCH RSCP is in the negative range as per [24], and the value is equal to the *Primary CCPCH RSCP Delta* IE. If the *Primary CCPCH RSCP Delta* IE is not included and the *Primary CCPCH RSCP* IE is included, the DRNS shall assume that the reported value is in the non-negative range as per [24], and the value is equal to the *Primary CCPCH RSCP* IE. The DRNS shall use the indicated values when deciding the Initial DL TX Power.]

### 8.3.4.3 Unsuccessful Operation



**Figure 11: Synchronised Radio Link Reconfiguration Preparation procedure, Unsuccessful Operation**

If the DRNS cannot reserve the necessary resources for all the new DCHs of a set of co-ordinated DCHs requested to be added, it shall reject the Synchronised Radio Link Reconfiguration Preparation procedure as having failed.

If the requested Synchronised Radio Link Reconfiguration Preparation procedure fails for one or more RLs, the DRNC shall send the RADIO LINK RECONFIGURATION FAILURE message to the SRNC, indicating the reason for failure for each failed radio link in a *Cause* IE.

[FDD – If the *MIMO Activation Indicator* IE is included and the *Power Offset For S-CPICH for MIMO Request Indicator* IE is not included in the HS-DSCH FDD Information IE in the *HS-DSCH FDD Information* IE in the RADIO LINK RECONFIGURATION PREPARE message or MIMO is activated and the power offset for S-CPICH for MIMO Request indicator has not been configured in the new configuration but MIMO pilot configuration with Primary and Secondary CPICH is set up on the cell where the Serving HS-DSCH Radio Link is established, the setup of the serving HS-DSCH Radio Link, and/or activation of MIMO, shall be reported as failed and the DRNC shall include in the RADIO LINK RECONFIGURATION FAILURE message the *Cause* IE.]

Typical cause values are:

#### Radio Network Layer Causes:

- UL Scrambling Code Already in Use;
- DL Radio Resources not Available;
- UL Radio Resources not Available;
- Requested Configuration not Supported;
- Number of DL Codes not Supported;
- Number of UL Codes not Supported;
- Dedicated Transport Channel Type not Supported;
- DL Shared Channel Type not Supported;
- [TDD - UL Shared Channel Type not Supported;]
- [FDD - UL Spreading Factor not Supported;]
- [FDD - DL Spreading Factor not Supported;]
- CM not Supported;
- RL Timing Adjustment not Supported;
- E-DCH not supported;
- [FDD - F-DPCH not supported;]
- [FDD - Continuous Packet Connectivity DTX-DRX operation not Supported;]
- [FDD - Continuous Packet Connectivity HS-SCCH less operation not Supported;]
- [FDD - MIMO not supported;]
- [FDD - E-DCH TTI2ms not supported;]
- [FDD - Continuous Packet Connectivity DTX-DRX operation not available;]
- [FDD - Continuous Packet Connectivity UE DTX Cycle not available;]
- [FDD - MIMO not available;]
- [FDD - SixteenQAM UL not Supported;]
- HS-DSCH MAC-d PDU Size Format not supported;
- [FDD – F-DPCH Slot Format operation not supported;]
- E-DCH MAC-d PDU Size Format not available;
- [FDD - E-DPCCH Power Boosting not supported;]

[FDD - SixtyfourQAM DL and MIMO Combined not available;]  
 [FDD - Multi Cell operation not available;]  
 [FDD - Multi Cell operation not supported;]  
 [FDD - SixtyfourQAM DL and MIMO Combined not supported;]  
 [1.28Mcps TDD- MIMO not supported;]  
 [1.28Mcps TDD - MIMO not available;]  
 [1.28Mcps TDD - SixtyfourQAM DL and MIMO Combined not available.]  
 [FDD - TX diversity for MIMO UE on DL Control Channels not available;]  
 [FDD - Cell Specific Tx Diversity Handling For Multi Cell Operation Not Available;]  
 [FDD - Cell Specific Tx Diversity Handling For Multi Cell Operation Not Supported.]

#### Miscellaneous Causes:

Control Processing Overload;  
 Not enough User Plane Processing Resources.

#### 8.3.4.4 Abnormal Conditions

If only a subset of all the DCHs belonging to a set of co-ordinated DCHs is requested to be deleted, the DRNS shall reject the Synchronised Radio Link Reconfiguration Preparation procedure as having failed and shall send the RADIO LINK RECONFIGURATION FAILURE message to the SRNC.

If more than one DCH of a set of co-ordinated DCHs has the *QE-Selector* IE set to "selected" [TDD - or no DCH of a set of co-ordinated DCHs has the *QE-Selector* IE set to "selected"] the DRNS shall reject the Synchronised Radio Link Reconfiguration Preparation procedure and the DRNC shall respond with a RADIO LINK RECONFIGURATION FAILURE message.

If the RADIO LINK RECONFIGURATION PREPARE message includes a *DCHs To Modify* IE or *DCHs To Add* IE with multiple *DCH Specific Info* IEs, and if the DCHs in the *DCHs To Modify* IE or *DCHs To Add* IE do not have the same *Transmission Time Interval* IE in the *Semi-static Transport Format Information* IE, then the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.

[FDD - If the *RL Information* IE includes the *DL Reference Power* IE, but the power balancing is not active in the indicated RL(s), the DRNS shall reject the Synchronised Radio Link Reconfiguration Preparation procedure as having failed and the DRNC shall respond with the RADIO LINK RECONFIGURATION FAILURE message with the cause value "Power Balancing status not compatible".]

[FDD - If the power balancing is active with the Power Balancing Adjustment Type of the UE Context set to "Common" in the existing RL(s) but the RADIO LINK RECONFIGURATION PREPARE message includes more than one *DL Reference Power* IE, the DRNS shall reject the Synchronised Radio Link Reconfiguration Preparation procedure as having failed and the DRNC shall respond with the RADIO LINK RECONFIGURATION FAILURE message with the cause value "Power Balancing status not compatible".]

If the RADIO LINK RECONFIGURATION PREPARE message contains the *Transport Layer Address* IE or the *Binding ID* IE when establishing a transport bearer for any Transport Channel or HS-DSCH MAC-d flow being added, or any Transport Channel or HS-DSCH MAC-d flow being modified for which a new transport bearer was requested with the *Transport Bearer Request Indicator* IE., and not both are present for a transport bearer intended to be established, the DRNC shall reject the Synchronised Radio Link Reconfiguration Preparation procedure and the DRNC shall respond with a RADIO LINK RECONFIGURATION FAILURE message.

If the RADIO LINK RECONFIGURATION PREPARE message contains any of the *HS-DSCH Information To Modify* IE, *HS-DSCH MAC-d Flows To Add* IE or *HS-DSCH MAC-d Flows To Delete* IE in addition to the *HS-DSCH Information* IE, the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.

If the RADIO LINK RECONFIGURATION PREPARE message contains any of the *HS-DSCH Information To Modify* IE, *HS-DSCH MAC-d Flows To Add* IE, *HS-DSCH MAC-d Flows To Delete* IE or *HS-PDSCH RL ID* IE and the Serving HS-DSCH Radio Link is not in the DRNS, the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *HS-DSCH Information* IE and does not include the *HS-PDSCH RL-ID* IE, the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *HS-DSCH Information To Modify* IE deleting the last remaining Priority Queue of an HS-DSCH MAC-d Flow, the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *HS-PDSCH RL-ID* IE indicating a Radio Link not existing in the UE Context, the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.

If the RADIO LINK RECONFIGURATION PREPARE message contains any of the *HS-DSCH Information* IE, *HS-DSCH Information To Modify* IE, or *HS-DSCH MAC-d Flows To Add* IE and if in the new configuration the Priority Queues associated with the same *HS-DSCH MAC-d Flow ID* IE have the same *Scheduling Priority Indicator* IE value, the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.

If, in the new configuration, the concerned UE Context is configured to use "Indexed MAC-d PDU Size" for an HS-DSCH but there exist a priority queue of the MAC-d flows of the HS-DSCH that is configured to use Maximum MAC-d PDU Size Extended, the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.

If, in the new configuration, the concerned UE Context is configured to use "Flexible MAC-d PDU Size" for an HS-DSCH but there exist a priority queue of the MAC-d flows of the HS-DSCH that is configured to use MAC-d PDU Size Index, the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.

If, in the new configuration, the concerned UE Context is configured to use "Fixed MAC-d PDU Size" for an E-DCH and there exist a Logical Channel of the MAC-d flows of the E-DCH that is configured to use Maximum MAC-d PDU Size Extended, the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.

If, in the new configuration, the concerned UE Context is configured to use "Flexible MAC-d PDU Size" for an E-DCH and there exist a Logical Channel of the MAC-d flows of the E-DCH that is configured to use *MAC-d PDU Size List*, the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *F-DPCH Information* IE and the *DL DPCH Information* IE, then the DRNS shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.]

If the RADIO LINK RECONFIGURATION PREPARE message includes *HS-DSCH Information* IE and the HS-DSCH is already configured in the UE Context, the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.

[FDD - If the concerned UE Context is configured to use DPCH in the downlink in the old configuration and if the RADIO LINK RECONFIGURATION PREPARE message includes the *DL DPCH Power Information* IE, then the DRNS shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.]

[FDD - If the concerned UE Context is configured to use F-DPCH in the downlink in the old configuration and the RADIO LINK RECONFIGURATION PREPARE message includes at least one but not all of the *TFCS* IE, *DL DPCH Slot Format* IE, *TFCI Signalling Mode* IE, *Multiplexing Position* IE, *Limited Power Increase* IE and *DL DPCH Power Information* IE in the *DL DPCH Information* IE, then the DRNS shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.]

[FDD - If the *E-DCH FDD Information* IE is present in the RADIO LINK RECONFIGURATION PREPARE message, but the *E-DPCH Information* IE is not present or if any of the *Maximum Set of E-DPDCHs* IE, *Puncture Limit* IE, *E-TFCS Information* IE, *E-TTI* IE, *E-DPCCH Power Offset* IE, *E-RGCH 2-Index-Step Threshold* IE, *E-RGCH 3-Index-Step Threshold* IE, *HARQ Info for E-DCH* IE or *HS-DSCH Configured Indicator* IE are not present in the *E-DPCH Information* IE, then the DRNS shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *E-DCH RL Indication* IE set to "E-DCH", but no *E-DCH FDD Information* IE, and the UE Context is not configured for E-DCH, then the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *E-DCH FDD Information* IE but no *E-DCH RL Indication* IE set to "E-DCH", then the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.]

If the RADIO LINK RECONFIGURATION PREPARE message contains the *HS-PDSCH RL ID* IE and/or the *Serving E-DCH RL* IE and if both HS-DSCH and E-DCH are configured in the new configuration but the Serving HS-DSCH Radio Link and the Serving E-DCH Radio Link are not in the same cell then the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message contains the *HS-PDSCH RL ID* IE and the *E-DPCH Information* IE which includes the *HS-DSCH Configured Indicator* IE set as "HS-DSCH not configured" then the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message contains any of the *E-DCH FDD Information To Modify* IE, *E-DCH MAC-d Flows To Add* IE or *E-DCH MAC-d Flows To Delete* IE in addition to the *E-DCH FDD Information* IE, the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message contains any of the *E-DCH FDD Information To Modify* IE, *E-DCH MAC-d Flows To Add* IE, *E-DCH MAC-d Flows To Delete* IE and the UE Context is not configured for E-DCH, the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *E-DCH FDD Information To Modify* IE deleting the last remaining E-DCH Logical Channel of an E-DCH MAC-d Flow, the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes *E-DCH FDD Information* IE and the E-DCH is already configured in the UE Context, the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.]

[FDD – If the *Fast Reconfiguration* IE is included in the RADIO LINK RECONFIGURATION PREPARE message and the *UL Scrambling Code* IE does not indicate an uplink scrambling code different from the currently used uplink scrambling code the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *Continuous Packet Connectivity DTX-DRX Information To Modify* IE in addition to the *Continuous Packet Connectivity DTX-DRX Information* IE, then the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *Continuous Packet Connectivity HS-SCCH less Deactivate Indicator* IE in addition to the *Continuous Packet Connectivity HS-SCCH less Information* IE, the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message. ]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *Continuous Packet Connectivity HS-SCCH less Deactivate Indicator* IE while the Continuous Packet Connectivity HS-SCCH less configuration isn't configured in the DRNC, the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *Continuous Packet Connectivity DTX-DRX Information To Modify* IE while the Continuous Packet Connectivity DTX-DRX configuration isn't configured in the DRNC, the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *DRX Information To Modify* IE in *Continuous Packet Connectivity DTX-DRX Information To Modify* IE while the Continuous Packet Connectivity DRX configuration is not configured in the DRNC, the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.]

If the *DCHs to Modify* IE contains a *DCH Specific Info* IE which includes the *Unidirectional DCH Indicator* IE set to "Uplink DCH only" but no *Transport Format Set* IE for the uplink for this DCH and the DRNC had ignored the configuration of Transport Format Set for uplink, the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.

If the *DCHs to Modify* IE contains a *DCH Specific Info* IE which includes the *Unidirectional DCH Indicator* IE set to "Downlink DCH only" but no *Transport Format Set* IE for the downlink for this DCH and the DRNC had ignored the configuration of Transport Format Set for downlink, the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message contains the *Transport Bearer Not Requested Indicator* IE for a DCH or an E-DCH MAC-d flow but does not contain the corresponding *DCH ID* IE and the *Unidirectional DCH indicator* IE set to "Uplink DCH only" for the DCH in *DCH Information To Add* IE or does not contain the corresponding *E-DCH MAC-d Flow ID* IE in *E-DCH MAC-d Flows Information* IE, the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.]

[FDD - If the concerned UE Context is configured to apply UL DPCCH Slot Format 4 but is not configured to use F-DPCH, then the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.]

[FDD - If the concerned UE Context is configured to apply UL DPCCH Slot Format 0 or 2 and execute Continuous Packet Connectivity DTX-DRX operation, then the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.]

[FDD - If the concerned UE Context is configured to apply the "Closed loop mode 1" and if the concerned UE Context is not configured to apply UL DPCCH Slot Format 2 or 3, then the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.]

[FDD - If the concerned UE Context is configured to apply MIMO, allowed to apply 64QAM or establish the the secondary serving HS-DSCH Radio Link but is not configured to use flexible MAC-d PDU Size, then the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *Transport Bearer Not Requested Indicator* IE for a DCH in the *RL Specific DCH Information* IE but does not include the *DCH ID* IE for the DCH in the *DCHs to Add* IE, the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *Transport Bearer Not Requested Indicator* IE for an E-DCH MAC-d flow in the *RL Specific E-DCH Information* IE but does not include the *E-DCH MAC-d flow ID* IE for the E-DCH MAC-d flow in the *E-DCH MAC-d flows Information* IE, the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.]

[FDD – If the RADIO LINK RECONFIGURATION PREPARE message contains the *Continuous Packet Connectivity DTX-DRX Information* IE but does not contain the *F-DPCH Information* IE and the concerned UE Context is not previously configured to use F-DPCH, then the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message]

[FDD - If the concerned UE Context is configured to have the Serving E-DCH Radio Link but there is at least one E-DCH MAC-d flow which the transport bearer is not configured for the Serving E-DCH Radio Link in DRNS, the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *Transport Bearer Not Requested Indicator* IE for a DCH or an E-DCH MAC-d Flow for a specific RL and the specific RL is combined with existing RL which the transport bearer is established for the DCH or the E-DCH MAC-d Flow in the DRNS, the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.]

[FDD - If the RADIO LINK ADDITION PREPARE message contains a *MIMO Activation Indicator* IE and an *Additional HS Cell Information RL Reconf Prep* IE, then the DRNC shall reject the procedure using the RADIO LINK ADDITION FAILURE message.]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message contains an *Additional HS Cell Information RL Reconf Prep* IE and the concerned UE Context is configured to apply MIMO, then the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.]

[FDD – If the RADIO LINK RECONFIGURATION PREPARE message contains the *Additional HS Cell Information RL Reconf Prep* IE indicating a new secondary serving cell that is not in the same Node B as the serving HS-DSCH cell (or new serving in case of simultaneous serving HS-DSCH cell change), then the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message]

If ALCAP is not used, if the concerned UE Context is configured to establish a DCH, an E-DCH MAC-d flow and/or an HS-DSCH MAC-d flow but the RADIO LINK RECONFIGURATION PREPARE message does not include the *Transport Layer Address* IE and the *Binding ID* IE for the DCH, the E-DCH MAC-d flow and/or the HS-DSCH MAC-d flow, the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.

[TDD - If ALCAP is not used, if the concerned UE Context is configured to establish a DSCH and/or a USCH but the RADIO LINK RECONFIGURATION PREPARE message does not include the *Transport Layer Address* IE and the



*Binding ID IE* for the DSCH and/or the USCH, the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.]

If, in the new configuration, there exist a priority queue of the MAC-d flows of the HS-DSCH that is configured to use "Flexible RLC PDU Size" for an HS-DSCH but is not configured to use Maximum MAC-d PDU Size Extended, the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.

If, in the new configuration, the concerned UE Context is configured to use MAC-d PDU Size Index for an HS-DSCH but there exist a priority queue of the MAC-d flows of the HS-DSCH that is configured to use "Flexible RLC PDU Size", the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message contains the *Diversity Mode IE* in the *HS-DSCH FDD Secondary Serving Information IE* in the *Additional HS Cell Information RL Reconf Prep IE* and the secondary serving HS-DSCH is already configured in the UE Context, then the DRNS shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.]

[FDD - If the secondary serving HS-DSCH is not configured in the UE Context and if the RADIO LINK RECONFIGURATION PREPARE message contains in the *HS-DSCH FDD Secondary Serving Information IE* in the *Additional HS Cell Information RL Reconf Prep IE* the *Diversity Mode IE* not set to "None" but not the *Transmit Diversity Indicator* or contains the *Transmit Diversity Indicator* but not the *Diversity Mode IE* not set to "None", then the DRNS shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message contains the *Diversity Mode IE* in the *Secondary Serving Information To Modify IE* in the *Additional HS Cell Information RL Reconf Prep IE* and the *Non Cell Specific Tx Diversity IE*, the DRNS shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.]

## 8.3.5 Synchronised Radio Link Reconfiguration Commit

### 8.3.5.1 General

This procedure is used to order the DRNS to switch to the new configuration for the Radio Link(s) within the DRNS, previously prepared by the Synchronised Radio Link Reconfiguration Preparation procedure.

This procedure shall use the signalling bearer connection for the relevant UE Context.

### 8.3.5.2 Successful Operation



**Figure 12: Synchronised Radio Link Reconfiguration Commit procedure, Successful Operation**

The DRNS shall switch to the new configuration previously prepared by the Synchronised Radio Link Reconfiguration Preparation procedure at the "configuration switching point" occurring:

- [TDD – at the next coming CFN with a value equal to the value requested by the SRNC in the CFN IE (see ref.[17] subclause 9.4) when receiving the RADIO LINK RECONFIGURATION COMMIT message from the SRNC.]
- [FDD – if the Fast Reconfiguration IE is not included in the RADIO LINK RECONFIGURATION COMMIT message at the next coming CFN with a value equal to the value requested by the SRNC in the CFN IE (see ref.[17] subclause 9.4) when receiving the RADIO LINK RECONFIGURATION COMMIT message from the SRNC.]
- [FDD – if the *Fast Reconfiguration IE* is included in the RADIO LINK RECONFIGURATION COMMIT message as soon as the DRNS detects that the UE uses the new configuration in the uplink (e.g. the NodeB indicates that the UE uses the new scrambling code used for the uplink by sending the RADIO LINK RESTORATION message). In order to limit the period for the detection in the DRNS the CFN in the RADIO

LINK RECONFIGURATION COMMIT message indicates the earliest possible time instant at which the UE might use the new configuration.]

[FDD - If the *Active Pattern Sequence Information* IE is included in the RADIO LINK RECONFIGURATION COMMIT message, the *CM Configuration Change CFN* IE in the *Active Pattern Sequence Information* IE shall be ignored by the DRNS.]

[FDD – If the *Active Pattern Sequence Information* IE is not included in the RADIO LINK RECONFIGURATION COMMIT message and a new Compressed Mode Configuration exists in the prepared configuration, the DRNS shall behave as if an *Active Pattern Sequence Information* IE with an empty *Transmission Gap Pattern Sequence Status* IE was included.]

When this procedure has been completed the Prepared Reconfiguration does not exist any more, see subclause 3.1.

In the case of a Transport Channel or MAC-d flow modification for which a new transport bearer was requested and established, the switch to the new transport bearer shall also take place at the configuration switching point (defined above) indicated CFN.

The detailed frame protocol handling during transport bearer replacement is described in [4], subclause 5.10.1, and in [32], subclauses 5.3.1 and 5.3.2.

[FDD - If the RADIO LINK RECONFIGURATION COMMIT includes the *Active Pattern Sequence Information* IE, the DRNS shall deactivate all the ongoing Transmission Gap Pattern Sequences at the configuration switching point (defined above). From that moment on all Transmission Gap Pattern Sequences included in *Transmission Gap Pattern Sequence Status* IE repetitions shall be started when the indicated *TGCFN* IE elapses. The *CFN* IE and *TGCFN* IE for each sequence refer to the next coming CFN with that value. If the values of the *CFN* IE and the *TGCFN* IE are equal, the concerned Transmission Gap Pattern Sequence shall be started immediately at the CFN with a value equal to the value received in the *CFN* IE.]

[FDD - If the RADIO LINK RECONFIGURATION COMMIT message includes the *Active Pattern Sequence Information* IE and the concerned UE Context is configured to use F-DPCH in the downlink, the DRNS shall ignore, when activating the Transmission Gap Pattern Sequence(s), the downlink compressed mode method information, if existing, for the concerned Transmission Gap Pattern Sequence(s) in the Compressed Mode Configuration]

### 8.3.5.3 Abnormal Conditions

If a new transport bearer is required for the new configuration and it is not available at the requested configuration switching point (defined in sub-clause 8.3.3.2), the DRNS shall initiate the Radio Link Failure procedure.

[FDD – If the *Fast Reconfiguration* IE is included in the RADIO LINK RECONFIGURATION COMMIT message and the DRNC did not include the *Fast ReconfigurationPermission* IE in the RADIO LINK RECONFIGURATION READY message, the DRNC shall initiate the Radio Link Failure procedure.]

## 8.3.6 Synchronised Radio Link Reconfiguration Cancellation

### 8.3.6.1 General

This procedure is used to order the DRNS to release the new configuration for the Radio Link(s) within the DRNS, previously prepared by the Synchronised Radio Link Reconfiguration Preparation procedure.

This procedure shall use the signalling bearer connection for the relevant UE Context.

### 8.3.6.2 Successful Operation



Figure 13: Synchronised Radio Link Reconfiguration Cancellation procedure, Successful Operation

Upon receipt of the RADIO LINK RECONFIGURATION CANCEL message from the SRNC, the DRNS shall release the new configuration ([FDD - including the new Transmission Gap Pattern Sequence parameters (if existing)]) previously prepared by the Synchronised RL Reconfiguration Preparation procedure and continue using the old configuration. When this procedure has been completed the Prepared Reconfiguration does not exist any more, see subclause 3.1.

### 8.3.6.3 Abnormal Conditions

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## 8.3.7 Unsynchronised Radio Link Reconfiguration

### 8.3.7.1 General

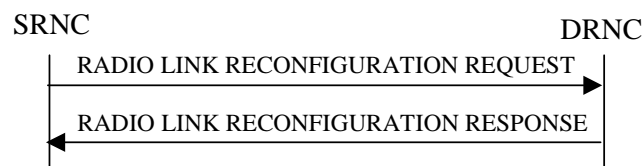
The Unsynchronised Radio Link Reconfiguration procedure is used to reconfigure Radio Link(s) related to one UE-UTRAN connection within a DRNS.

The procedure is used when there is no need to synchronise the time of the switching from the old to the new radio link configuration in the cells used by the UE-UTRAN connection within the DRNS.

This procedure shall use the signalling bearer connection for the relevant UE Context.

The Unsynchronised Radio Link Reconfiguration procedure shall not be initiated if a Prepared Reconfiguration exists, as defined in subclause 3.1.

### 8.3.7.2 Successful Operation



**Figure 14: Unsynchronised Radio Link Reconfiguration procedure, Successful Operation**

The Unsynchronised Radio Link Reconfiguration procedure is initiated by the SRNC by sending the RADIO LINK RECONFIGURATION REQUEST message to the DRNC.

Upon receipt, the DRNS shall modify the configuration of the Radio Link(s) according to the parameters given in the message. Unless specified below, the meaning of parameters is specified in other specifications.

If the RADIO LINK RECONFIGURATION REQUEST message includes the *Allowed Queuing Time* IE the DRNS may queue the request the time corresponding to the value of the *Allowed Queuing Time* IE before starting to execute the request.

The DRNS shall prioritise resource allocation for the RL to be modified according to Annex A.

#### **DCH Modification:**

If the RADIO LINK RECONFIGURATION REQUEST message includes any *DCHs To Modify* IEs, then the DRNS shall treat them as follows:

- If the *DCHs To Modify* IE includes multiple *DCH Specific Info* IEs, then the DRNS shall treat the DCHs as a set of co-ordinated DCHs. The DRNS shall include these DCHs in the new configuration only if it can include all of them in the new configuration.
- If the *DCHs To Modify* IE includes the *UL FP Mode* IE for a DCH or a set of co-ordinated DCHs to be modified, the DRNS shall apply the new FP Mode in the Uplink of the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.

- If the *DCHs To Modify* IE includes the *ToAWS* IE for a DCH or a set of co-ordinated DCHs to be modified, the DRNS shall apply the new *ToAWS* in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- If the *DCHs To Modify* IE includes the *ToAWE* IE for a DCH or a set of co-ordinated DCHs to be modified, the DRNS shall apply the new *ToAWE* in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- If the *DCHs To Modify* IE contains a *DCH Specific Info* IE which includes a *Transport Format Set* IE for the UL of a DCH to be modified, the DRNS shall apply the new *Transport Format Set* in the Uplink of this DCH in the new configuration.
- If the *DCHs To Modify* IE contains a *DCH Specific Info* IE which includes a *Transport Format Set* IE for the DL of a DCH to be modified, the DRNS shall apply the new *Transport Format Set* in the Downlink of this DCH in the new configuration.
- If the *DCHs To Modify* IE contains a *DCH Specific Info* IE which includes the *Frame Handling Priority* IE, the DRNS should store this information for this DCH in the new configuration. The received *Frame Handling Priority* should be used when prioritising between different frames in the downlink on the radio interface in congestion situations within the DRNS once the new configuration has been activated.
- If the *DCH Specific Info* IE includes the *Traffic Class* IE, the DRNC may use this information to determine the transport bearer characteristics to apply between DRNC and Node B for the related DCH or set of co-ordinated DCHs. The DRNC should ignore the *Traffic Class* IE if the *TrCH Source Statistics Descriptor* IE for this DCH indicates the value "RRC".
- [FDD - If the *DCHs to Modify* IE contains a *DCH Specific Info* IE which includes the *Unidirectional DCH indicator* IE set to "Uplink DCH only", the DRNS shall ignore the *Transport Format Set* IE for the downlink for this DCH. As a consequence this DCH is not included as a part of the downlink CCH.]
- [FDD - If the *DCHs to Modify* IE contains a *DCH Specific Info* IE which includes the *Unidirectional DCH indicator* IE set to "Downlink DCH only", the DRNS shall ignore the *Transport Format Set* IE for the uplink for this DCH. As a consequence this DCH is not included as a part of the uplink CCH.]
- If the *TNL QoS* IE is included for a DCH or a set of co-ordinated DCHs and if ALCAP is not used, the DRNS may use this information to determine the transport bearer characteristics to apply for the uplink for the related DCH or set of co-ordinated DCHs.
- If the *DCHs To Modify* IE contains a *DCH Specific Info* IE which includes the *Allocation/Retention Priority* IE, the DRNS shall apply the new *Allocation/Retention Priority* to this DCH in the new configuration according to Annex A.
- [TDD - If the *DCHs To Modify* IE contains a *DCH Specific Info* IE which includes the *CCH ID* IE for the UL, the DRNS shall map the DCH onto the referenced UL CCH in the new configuration.]
- [TDD - If the *DCHs To Modify* IE contains a *DCH Specific Info* IE which includes the *CCH ID* IE for the DL, the DRNS shall map the DCH onto the referenced DL CCH in the new configuration.]
- If the *DCHs To Modify* IE contains a *DCH Specific Info* IE which includes the *Guaranteed Rate Information* IE, the DRNS shall treat the included IEs according to the following:
  - If the *Guaranteed Rate Information* IE includes the *Guaranteed UL Rate* IE, the DRNS shall apply the new *Guaranteed Rate* in the uplink of this DCH in the new configuration. The DRNS may decide to request the SRNC to limit the user rate in the uplink of the DCH at any point in time after activating the new configuration. The DRNS may request the SRNC to reduce the user rate of the uplink of the DCH below the guaranteed bit rate, however, whenever possible the DRNS should request the SRNC to reduce the user rate between the maximum bit rate and the guaranteed bit rate.
  - If the *Guaranteed Rate Information* IE includes the *Guaranteed DL Rate* IE, the DRNS shall apply the new *Guaranteed Rate* in the downlink of this DCH in the new configuration. The DRNS may decide to request the SRNC to limit the user in the downlink of the DCH at any point in time after activating the new configuration. The DRNS may request the SRNC to reduce the user rate of the downlink of the DCH below the guaranteed bit rate, however, whenever possible the DRNS should request the SRNC to reduce the user rate between the maximum bit rate and the guaranteed bit rate.

**DCH Addition:**

If the RADIO LINK RECONFIGURATION REQUEST message includes any *DCHs To Add* IEs, then the DRNS shall treat them each as follows:

- The DRNS shall reserve necessary resources for the new configuration of the Radio Link(s) according to the parameters given in the message and include these DCH in the new configuration.
- If the *DCHs To Add* IE includes multiple DCH Specific Info IEs then the DRNS shall treat the DCHs in the *DCHs To Add* IE as a set of co-ordinated DCHs. The DRNS shall include these DCHs in the new configuration only if all of them can be in the new configuration.
- If the *DCH Specific Info* IE includes the *Unidirectional DCH Indicator* IE set to "Uplink DCH only", the DRNS shall ignore the *Transport Format Set* IE for the downlink for this DCH. As a consequence this DCH is not included as a part of the downlink CCTrCH.
- If the *DCH Specific Info* IE includes the *Unidirectional DCH Indicator* IE set to "Downlink DCH only", the DRNS shall ignore the *Transport Format Set* IE for the uplink for this DCH. As a consequence this DCH is not included as a part of the uplink CCTrCH.
- [FDD - For each DCH which does not belong to a set of co-ordinated DCHs, and which includes a *QE-Selector* IE set to "selected", the DRNS shall use the Transport channel BER from that DCH for the QE in the UL data frames. If no Transport channel BER is available for the selected DCH, the DRNS shall use the Physical channel BER for the QE, ref. [4]. If the *QE-Selector* IE is set to "non-selected", the DRNS shall use the Physical channel BER for the QE in the UL data frames, ref. [4].]
- For a set of co-ordinated DCHs, the DRNS shall use the Transport channel BER from the DCH with the *QE-Selector* IE set to "selected" for the QE in the UL data frames, ref. [4]. [FDD - If no Transport channel BER is available for the selected DCH, the DRNS shall use the Physical channel BER for the QE, ref. [4]. If all DCHs have the *QE-Selector* IE set to "non-selected", the DRNS shall use the Physical channel BER for the QE, ref. [4].] [TDD - If no Transport channel BER is available for the selected DCH, the DRNS shall use 0 for the QE, ref. [4].]
- The DRNS should store the *Frame Handling Priority* IE received for a DCH to be added in the new configuration. The received Frame Handling Priority should be used when prioritising between different frames in the downlink on the Uu interface in congestion situations within the DRNS once the new configuration has been activated.
- The *Traffic Class* IE may be used to determine the transport bearer characteristics to apply between DRNC and Node B for the related DCH or set of co-ordinated DCHs. The DRNC should ignore the *Traffic Class* IE if the *TrCH Source Statistics Descriptor* IE indicates the value "RRC".
- If the *TNL QoS* IE is included for a DCH or a set of co-ordinated DCHs and if ALCAP is not used, the DRNS may use this information to determine the transport bearer characteristics to apply for the uplink for the related DCH or set of co-ordinated DCHs.
- The DRNS shall use the included *UL FP Mode* IE for a DCH or a set of co-ordinated DCHs to be added as the new FP Mode in the Uplink of the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- The DRNS shall use the included *ToAWS* IE for a DCH or a set of co-ordinated DCHs to be added as the new Time of Arrival Window Startpoint in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- The DRNS shall use the included *ToAWE* IE for a DCH or a set of co-ordinated DCHs to be added as the new Time of Arrival Window Endpoint in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- If the *DCH Specific Info* IE includes the *Guaranteed Rate Information* IE, the DRNS shall treat the included IEs according to the following:
  - If the *Guaranteed Rate Information* IE includes the *Guaranteed UL Rate* IE, the DRNS shall apply the new Guaranteed Rate in the uplink of this DCH in the new configuration. The DRNS may decide to request the SRNC to limit the user rate of the uplink of the DCH at any point in time after activating the new configuration. The DRNS may request the SRNC to reduce the user rate of the uplink of the DCH below the

guaranteed bit rate, however, whenever possible the DRNS should request the SRNC to reduce the user rate between the maximum bit rate and the guaranteed bit rate. If the *DCH Specific Info* IE in the *DCH Information* IE does not include the *Guaranteed UL Rate* IE, the DRNS shall not limit the user rate of the uplink of the DCH.

- If the *Guaranteed Rate Information* IE includes the *Guaranteed DL Rate* IE, the DRNS shall apply the new Guaranteed Rate in the downlink of this DCH in the new configuration. The DRNS may decide to request the SRNC to limit the user rate of the downlink of the DCH at any point in time after activating the new configuration. The DRNS may request the SRNC to reduce the user rate of the downlink of the DCH below the guaranteed bit rate, however, whenever possible the DRNS should request the SRNC to reduce the user rate between the maximum bit rate and the guaranteed bit rate. If the *DCH Specific Info* IE in the *DCH Information* IE does not include the *Guaranteed DL Rate* IE, the DRNS shall not limit the user rate of the uplink of the DCH.

#### **DCH Deletion:**

If the RADIO LINK RECONFIGURATION REQUEST message includes any *DCHs To Delete* IEs, the DRNS shall not include the referenced DCHs in the new configuration.

If all of the DCHs belonging to a set of co-ordinated DCHs are requested to be deleted, the DRNS shall not include this set of co-ordinated DCHs in the new configuration.

#### **[FDD - Physical Channel Modification:]**

[FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes an *UL DPCH Information* IE, then the DRNS shall apply the parameters to the new configuration as follows: ]

- [FDD - If the *UL DPCH Information* IE includes the *TFCS* IE for the UL, the DRNS shall apply the new TFCS in the Uplink of the new configuration.]
- [FDD - If the *UL DPCH Information* IE includes the *UL DPDCH Indicator For E-DCH Operation* IE set to "UL DPDCH not present", the UL DPDCH resources shall be removed from the configuration.]

[FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes a *DL DPCH Information* IE, then the DRNS shall apply the parameters to the new configuration as follows:]

- [FDD - If the *DL DPCH Information* IE includes the *TFCS* IE for the DL, the DRNS shall apply the new TFCS in the Downlink of the new configuration.]
- [FDD - If the *DL DPCH Information* IE includes the *TFCI Signalling Mode* IE for the DL, the DRNS shall apply the new TFCI Signalling Mode in the Downlink of the new configuration.]
- [FDD - If the *DL DPCH Information* IE includes the *Limited Power Increase* IE and the IE is set to "Used", the DRNS shall, if supported, use Limited Power Increase according to ref. [10] subclause 5.2.1 for the inner loop DL power control in the new configuration.]
- [FDD - If the *DL DPCH Information* IE includes the *Limited Power Increase* IE and the IE is set to "Not Used", the DRNS shall not use Limited Power Increase for the inner loop DL power control in the new configuration.]

[FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *Transmission Gap Pattern Sequence Information* IE, the DRNS shall store the new information about the Transmission Gap Pattern Sequences to be used in the new Compressed Mode configuration. Any Transmission Gap Pattern Sequences already existing in the previous Compressed Mode Configuration are replaced by the new sequences once the new Compressed Mode Configuration has been activated. This new Compressed Mode Configuration shall be valid in the DRNS until the next Compressed Mode Configuration is configured in the DRNS or last Radio Link is deleted.]

[FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *Transmission Gap Pattern Sequence Information* IE, and if the *Downlink Compressed Mode Method* in one or more Transmission Gap Pattern Sequence within the *Transmission Gap Pattern Sequence Information* IE is set to "SF/2", the DRNC shall include the *DL Code Information* IE in the RADIO LINK RECONFIGURATION RESPONSE message, without changing any of the DL Channelisation Codes or DL Scrambling Codes, indicating for each DL Channelisation Code whether the alternative scrambling code shall be used or not.]

[FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes an *E-DPCH Information* IE which contains the *E-TFCS Information* IE, the DRNS shall use the *E-TFCS Information* IE for the E-DCH when reserving

resources for the uplink of the new configuration. The DRNS shall apply the new TFCS in the uplink of the new configuration. If the *E-TFCS Information* IE contains the *E-DCH Minimum Set E-TFCI Validity Indicator* IE the DRNS shall ignore the value in *E-DCH Minimum Set E-TFCI* IE. If the *E-DCH Minimum Set E-TFCI validity indicator* IE is absent DRNS shall use the value for the related resource allocation operation.]

[FDD - If the *E-TFCS Information* IE in the *E-DPCH Information* IE contains the *E-DPDCH Power Interpolation* IE, the DRNS shall use the value to determine the applicable E-DPDCH power formula defined in [10]. If the *E-DPDCH Power Interpolation* IE is not present, the DRNS shall use the E-DPDCH power extrapolation formula defined in [10] if the *E-DCH FDD Information* IE is included in the RADIO LINK RECONFIGURATION REQUEST message.]

FDD - If the *E-TFCS Information* IE in the *E-DPCH Information* IE contains the *E-TFCI Boost Information* IE, the DRNS shall use the information according to [10]. If the *E-TFCI Boost Information* IE is not present, the DRNS shall use the value "127" in the algorithm defined in [10] if the *E-DCH FDD Information* IE is included in the RADIO LINK RECONFIGURATION REQUEST message.]

[FDD - If the RADIO LINK RECONFIGURATION REQUEST includes an *E-DPCH Information* IE which contains the *E-DPCCH Power Offset* IE, the DRNS shall use the value when the new configuration is being used.]

[FDD - If the RADIO LINK RECONFIGURATION REQUEST includes an *E-DPCH Information* IE which contains the *E-RGCH 2-Index-Step* IE, the DRNS shall use the value when the new configuration is being used.]

[FDD - If the RADIO LINK RECONFIGURATION REQUEST includes an *E-DPCH Information* IE which contains the *E-RGCH 3-Index-Step* IE, the DRNS shall use the value when the new configuration is being used.]

[FDD - If the RADIO LINK RECONFIGURATION REQUEST includes an *E-DPCH Information* IE which contains the *HARQ Info for E-DCH* IE, the DRNS shall use the value when the new configuration is being used.]

[FDD - If the RADIO LINK RECONFIGURATION REQUEST includes an *E-DPCH Information* IE which contains the *Minimum Reduced E-DPDCH Gain Factor* IE, then the DRNS shall use the value to determine the applicable minimum gain factor ( $\beta_{ed,k, reduced, min}$ ) defined in [10]. For the case the *Minimum Reduced E-DPDCH Gain Factor* IE is not available for the UE Context, the DRNS may use the default value defined in [16]. ]

[FDD – If the RADIO LINK RECONFIGURATION REQUEST message includes the *Continuous Packet Connectivity DTX-DRX Information* IE, then:]

- [FDD – The DRNS shall configure the concerned UE Context for Continuous Packet Connectivity DTX operation according to [10].]
- [FDD – If *DRX Information* IE is included in the *Continuous Packet Connectivity DTX-DRX Information* IE, then the DRNS shall configure the concerned UE Context for Continuous Packet Connectivity DRX operation according to [10].]

[FDD – If the RADIO LINK RECONFIGURATION REQUEST message includes the *Continuous Packet Connectivity DTX-DRX Information To Modify* IE, then:]

- [FDD - If the *UE DTX DRX Offset* IE is included in the *Continuous Packet Connectivity DTX-DRX Information To Modify* IE, then the DRNS shall apply the indicated Offset in *UE DTX DRX Cycle* IE in the new configuration.]
- [FDD - If the *Enabling Delay* IE is included in the *Continuous Packet Connectivity DTX-DRX Information To Modify* IE, then the DRNS shall use this value to determine the beginning of uplink transmission in the new configuration according to [10]. ]
- [FDD - If the *DTX Information To Modify* IE is included in the *Continuous Packet Connectivity DTX-DRX Information To Modify* IE, then the DRNS shall use this information to modify the indicated DTX Information parameter in the new configuration. If the choice of *DTX Information To Modify* IE is "Deactivate", then DRX should be deactivated together with DTX.]
- [FDD - If the *DRX Information To Modify* IE is included in the *Continuous Packet Connectivity DTX-DRX Information To Modify* IE, then the DRNS shall use this information to modify the indicated DRX Information in the new configuration.]

[FDD – If the RADIO LINK RECONFIGURATION REQUEST message includes the *Continuous Packet Connectivity HS-SCCH less Information* IE, then:]

- [FDD – The DRNS shall configure the Serving HS-DSCH Radio Link indicated by the *HS-PDSCH RL ID* IE for Continuous Packet Connectivity HS-SCCH less operation according to [10].]
- [FDD – The DRNS shall allocate the HS-PDSCH codes needed for HS-SCCH less operation and include the *Continuous Packet Connectivity HS-SCCH less Information Response* IE in the RADIO LINK RECONFIGURATION RESPONSE message.]
- [FDD – If at least one of *HS-PDSCH Second Code Support* IE is set to "True", then the DRNC shall include *HS-PDSCH Second Code Index* IE in the RADIO LINK RECONFIGURATION RESPONSE message.]

[FDD- If the RADIO LINK RECONFIGURATION REQUEST message includes the *Continuous Packet Connectivity HS-SCCH less Deactivate Indicator* IE, then the DRNS shall deactivate the Continuous Packet Connectivity HS-SCCH less operation for the HS-DSCH Radio Link.]

[1.28 Mcps TDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *Continuous Packet Connectivity DRX Information LCR* IE, then the DRNS shall take account into these parameters to decide the DRX operation related parameters and configure the concerned UE Context for DRX operation according to [21] and include the parameter(s) in the *Continuous Packet Connectivity DRX Information Response LCR* IE in the RADIO LINK RECONFIGURATION RESPONSE message.]

[1.28 Mcps TDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *Continuous Packet Connectivity DRX Information To Modify LCR* IE, then:]

- [1.28 Mcps TDD - If the *UE DTX DRX Offset* IE is included in the *Continuous Packet Connectivity DRX Information To Modify LCR* IE, then the DRNS shall apply the indicated Offset in *UE DTX DRX Cycle* IE in the new configuration.]
- [1.28 Mcps TDD - If the *Enabling Delay* IE is included in the *Continuous Packet Connectivity DRX Information To Modify LCR* IE, then the DRNS shall use this value to determine the beginning of uplink transmission in the new configuration according to [21].]
- [1.28 Mcps TDD - If the *DRX Information To Modify* IE is included in the *Continuous Packet Connectivity DRX Information To Modify LCR* IE, then the DRNS shall use this information to modify the indicated DRX Information in the new configuration.]

[1.28 Mcps TDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *HS-DSCH Semi-Persistent scheduling Information LCR* IE, then:]

- [1.28 Mcps TDD - The DRNS shall configure the Serving HS-DSCH Radio Link indicated by the *HS-PDSCH RL ID* IE for HS-DSCH Semi-Persistent scheduling operation according to [21].]
- [1.28 Mcps TDD - The DRNS shall allocate the HS-SICH information needed for HS-DSCH Semi-Persistent scheduling operation and include the *HS-DSCH Semi-Persistent scheduling Information Response LCR* IE in the RADIO LINK RECONFIGURATION RESPONSE message.]
- [1.28 Mcps TDD - If the *HS-DSCH Semi-Persistent Resource Reservation Indicator* IE is included in the *HS-DSCH Semi-Persistent scheduling Information LCR* IE, then the DRNS shall include *Allcoated HS-PDSCH Semi-persistent resource* IE in the RADIO LINK RECONFIGURATION RESPONSE message.]

[1.28 Mcps TDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *E-DCH Semi-Persistent scheduling Information LCR* IE, then:]

- [1.28 Mcps TDD - The DRNS shall configure the Serving E-DCH Radio Link indicated by the *E-DCH Serving RL* IE for E-DCH Semi-Persistent scheduling operation according to [21].]
- [1.28 Mcps TDD - The DRNS shall allocate the E-PUCH codes needed for E-DCH Semi-Persistent scheduling operation and include the *E-DCH Semi-Persistent scheduling Information Response LCR* IE in the RADIO LINK RECONFIGURATION RESPONSE message.]

[1.28 Mcps TDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *HS-DSCH Semi-Persistent scheduling Information to modify LCR* IE, then:]

- [1.28 Mcps TDD - If the *Transport Block Size List* IE or/and *Repetition Period list* IE is/are included in the *HS-DSCH Semi-Persistent scheduling Information to modify LCR* IE, the DRNS shall modify the configuration of



Serving HS-DSCH Radio Link indicated by the *HS-PDSCH RL ID* IE for HS-DSCH Semi-Persistent scheduling operation according to [21].

- [1.28 Mcps TDD - The DRNS shall allocate the HS-SICH information needed for HS-DSCH Semi-Persistent scheduling operation and include the *HS-DSCH Semi-Persistent scheduling Information Response LCR* IE in the RADIO LINK RECONFIGURATION RESPONSE message.]
  - [1.28 Mcps TDD - If the *HS-DSCH Semi-Persistent Resource Reservation Indicator* IE is included in the *HS-DSCH Semi-Persistent scheduling Information LCR* IE, then the DRNS shall include *Allcoated HS-PDSCH Semi-persistent resource* IE in the RADIO LINK RECONFIGURATION RESPONSE message.]
- [1.28 Mcps TDD - If the *HS-DSCH Semi-Persistent scheduling operation Indicator* IE is included in the *HS-DSCH Semi-Persistent scheduling Information LCR* IE, then the DRNS shall apply this information for HS-DSCH Semi-Persistent scheduling operation.]
- [1.28 Mcps TDD - If the buffer size for HS-DSCH Semi-Persistent scheduling needs to be modified, then the DRNS shall include the *Buffer Size for HS-DSCH Semi-Persistent scheduling* IE in the RADIO LINK RECONFIGURATION RESPONSE message.]
  - [1.28 Mcps TDD - If the number of processes for HS-DSCH Semi-Persistent scheduling needs to be modified, then the DRNS shall include the *Number of Processes for HS-DSCH Semi-Persistent scheduling* IE in the RADIO LINK RECONFIGURATION RESPONSE message.]

[1.28 Mcps TDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *E-DCH Semi-Persistent scheduling Information LCR* IE, then:]

- [1.28 Mcps TDD - If the *Repetition Period list* IE is included in the *E-DCH Semi-Persistent scheduling Information to modify LCR* IE, the DRNS shall modify the configuration of Serving HS-DSCH Radio Link indicated by the *E-DCH Serving RL* IE for E-DCH Semi-Persistent scheduling operation according to [21].
- [1.28 Mcps TDD - If the *E-DCH Semi-Persistent scheduling Indicator* IE is included in the *E-DCH Semi-Persistent scheduling Information LCR* IE, then the DRNS shall apply this information for E-DCH Semi-Persistent scheduling operation.]
- [1.28 Mcps TDD - If the *Semi-Persistent E-DCH related E-HICH Information* IE is included in the *E-DCH Semi-Persistent scheduling Information LCR* IE, then the DRNS shall use this information to modify the configuration of Semi-Persistent E-DCH related E-HICH.]
  - [1.28 Mcps TDD - The DRNS shall allocate the E-PUCH codes needed for E-DCH Semi-Persistent scheduling operation and include the *E-DCH Semi-Persistent scheduling Information Response LCR* IE in the RADIO LINK RECONFIGURATION RESPONSE message.]

[1.28 Mcps TDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *HS-DSCH Semi-Persistent scheduling Deactivate Indicator LCR* IE, then the DRNS shall deactivate the HS-DSCH Semi-Persistent scheduling operation for the HS-DSCH Radio Link.]

[1.28 Mcps TDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *E-DCH Semi-Persistent scheduling Deactivate Indicator LCR* IE, then the DRNS shall deactivate the E-DCH Semi-Persistent scheduling operation for the E-DCH Radio Link.]

#### [TDD - UL/DL CCTrCH Modification]

[TDD - If the RADIO LINK RECONFIGURATION REQUEST message includes any *UL CCTrCH To Modify* IE or *DL CCTrCH To Modify* IE, the DRNS shall reserve necessary resources for the new configuration of the Radio Link(s) according to the parameters given in the message.]

[TDD - If the RADIO LINK RECONFIGURATION REQUEST message includes any *UL CCTrCH Information To Modify* IEs or *DL CCTrCH Information To Modify* IEs which contain a *TFCS* IE, the DRNS shall apply the included *TFCS* IE as the new value(s) to the referenced CCTrCH. Otherwise the DRNS shall continue to apply the previous value(s) specified for this CCTrCH.]

[1.28Mcps TDD - If the *UL CCTrCH To Modify* IE includes *UL SIR Target* IE, the DRNS shall apply this value as the new configuration and use it for the UL inner loop power control according [12] and [22].]

#### [TDD - UL/DL CCTrCH Deletion]

[TDD - If the RADIO LINK RECONFIGURATION REQUEST message includes any *UL CCTrCH Information To Delete* IEs or *DL CCTrCH Information To Delete* IEs, the DRNS shall not include the referenced CCTrCH in the new configuration.]

#### **DL Power Control:**

[FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *DL Reference Power Information* IE and the power balancing is active, the DRNS shall update the reference power of the power balancing in the indicated RL(s), if updating of power balancing parameters by the RADIO LINK RECONFIGURATION REQUEST message is supported, using the *DL Reference Power Information* IE in the RADIO LINK RECONFIGURATION REQUEST message. The updated reference power shall be used from the next adjustment period.]

[FDD - If updating of power balancing parameters by the RADIO LINK RECONFIGURATION REQUEST message is supported by the DRNS, the DRNC shall include the *DL Power Balancing Updated Indicator* IE in the *RL Information Response* IE for each affected RL in the RADIO LINK RECONFIGURATION RESPONSE message.]

#### **[1.28Mcps TDD - Uplink Synchronisation Parameters LCR:]**

[1.28Mcps TDD - If the *Uplink Synchronisation Parameters LCR* IE is present, the DRNC shall use the indicated values of *Uplink synchronisation stepsize* IE and *Uplink synchronisation frequency* IE when evaluating the timing of the UL synchronisation.]

#### **[1.28Mcps TDD - Shared physical channels Synchronisation Detection:]**

[1.28Mcps TDD - If HS-PDSCH and E-PUCH are configured but no DPCH is configured for the UE, then the DRNS shall include the *Out-of-sync Detection Window* IE in the *HS-DSCH TDD Information Response* IE in the RADIO LINK RECONFIGURATION RESPONSE message.]

#### **[1.28Mcps TDD - Uplink Timing Advance Control LCR:]**

[1.28Mcps TDD - The DRNC shall include the *Uplink Timing Advance Control LCR* IE in the RADIO LINK RECONFIGURATION RESPONSE message, if the Uplink Timing Advance Control parameters have been changed.]

#### **[1.28Mcps TDD - PowerControl GAP:]**

[1.28Mcps TDD - If applied in the DRNS, the DRNC may include the *PowerControl GAP* IE in the RADIO LINK RECONFIGURATION RESPONSE message.]

#### **[1.28Mcps TDD - E-UTRAN Inter-RAT measurement:]**

[1.28Mcps TDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *Need for Idle Interval* IE set to "TRUE", if supported, the DRNC shall include the *Idle Interval Information* IE in the RADIO LINK RECONFIGURATION RESPONSE message. If the *Need for Idle Interval* IE is set to "FALSE", the DRNC shall delete the configuration related to E-UTRAN Inter-RAT measurement ]

#### **[1.28Mcps TDD - RNTI Allocation Indicator:]**

[1.28Mcps TDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *RNTI Allocation Indicator* IE, if supported, the DRNS may allocate an E-RNTI and/or an H-RNTI for UE to use in CELL\_FACH state.]

#### **RL Information:**

[FDD. If the UE Context is configured for F-DPCH Slot Format operation, the DRNS shall include the *F-DPCH Slot Format* IE in the RADIO LINK RECONFIGURATION RESPONSE message.]

#### **HS-DSCH Setup:**

If the *HS-DSCH Information* IE is present in the RADIO LINK RECONFIGURATION REQUEST message, then:

The DRNS shall setup the requested HS-PDSCH resources on the Serving HS-DSCH Radio Link indicated by the *HS-PDSCH RL ID* IE.

The DRNC shall include the *HARQ Memory Partitioning* IE in the [FDD – *HS-DSCH FDD Information Response* IE] [TDD – *HS-DSCH TDD Information Response* IE] in the RADIO LINK RECONFIGURATION RESPONSE message. [FDD – The *HARQ Memory Partitioning* IE shall either contain the *HARQ Memory*

*Partitioning Information Extension For MIMO* IE or the *Number of Processes* IE set to a value higher than "8", if the *MIMO Activation Indicator* IE is included in the *HS-DSCH Information* IE.] [1.28Mcps TDD– The *HARQ Memory Partitioning* IE shall either contain the *HARQ Memory Partitioning Information Extension For MIMO* IE or the *Number of Processes* IE set to a value higher than "8", if the *MIMO Activation Indicator* IE is included in the *HS-DSCH Information* IE.]

The DRNC shall allocate an HS-DSCH-RNTI to the UE Context and include the *HS-DSCH-RNTI* IE in the RADIO LINK RECONFIGURATION RESPONSE message.

The DRNS may use the *Traffic Class* IE for a specific HS-DSCH MAC-d flow to determine the transport bearer characteristics to apply between DRNC and Node B. If *TrCH Source Statistics Descriptor* IE is present with the value "RRC" in the *HS-DSCH MAC-d Flows Information* IE, then the DRNC should ignore the *Traffic Class* IE.

If the *TNL QoS* IE is included for a MAC-d flow and if ALCAP is not used, the *TNL QoS* IE may be used by the DRNS to determine the transport bearer characteristics to apply in the uplink between the DRNS and the SRNC for the related MAC-d flow.

- If fields are to be included in the User Plane by the SRNC to handle TNL Congestion Control for HSDPA in the DRNS, then the DRNC shall include the *User Plane Congestion Fields Inclusion* IE in the *HS-DSCH Information Response* IE.

If the RADIO LINK RECONFIGURATION REQUEST message includes the *MAC-hs Guaranteed Bit Rate* IE for a Priority Queue in the *HS-DSCH MAC-d Flows Information* IE in the *HS-DSCH Information* IE, then the DRNS shall use this information to optimise MAC-hs scheduling decisions for the related HSDPA Priority Queue.

If the RADIO LINK RECONFIGURATION REQUEST message includes the *Discard Timer* IE for a Priority Queue in the *HS-DSCH MAC-d Flows Information* IE in the *HS-DSCH Information* IE, then the DRNS shall use this information to discard out-of-date MAC-hs SDUs from the related HSDPA Priority Queue.

If the RADIO LINK RECONFIGURATION REQUEST message includes the *Maximum MAC-d PDU Size Extended* IE for a Priority Queue in the *HS-DSCH MAC-d Flows Information* IE in the *HS-DSCH Information* IE, then the DRNS shall ignore the *SID* IE and *MAC-d PDU Size* IE in the *MAC-d PDU Size Index* IE and use *Maximum MAC-d PDU Size Extended* IE to optimise capacity allocation for the related HSDPA Priority Queue.

The DRNC shall include the *HS-DSCH Initial Capacity Allocation* IE in the [FDD – *HS-DSCH FDD Information Response* IE] [TDD – *HS-DSCH TDD Information Response* IE] in the RADIO LINK RECONFIGURATION RESPONSE message for every HS-DSCH MAC-d flow being established, if the DRNS allows the SRNC to start transmission of MAC-d PDUs before the DRNS has allocated capacity on user plane as described in [32]. If RADIO LINK RECONFIGURATION REQUEST message includes *HS-DSCH MAC-d PDU Size Format* IE in the *HS-DSCH Information* IE set to "Flexible MAC-d PDU Size", then DRNC shall only set in the *HS-DSCH Initial Capacity Allocation* IE the values for the peer of *Scheduling Priority Indicator* IE and *Maximum MAC-d PDU Size Extended* IE to the values of the corresponding peer received in RADIO LINK RECONFIGURATION REQUEST in the *HS-DSCH MAC-d Flows Information* IE in the *HS-DSCH Information* IE for a Priority Queue including *Scheduling Priority Indicator* IE and *Maximum MAC-d PDU Size Extended* IE.

[FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *HS-SCCH Power Offset* IE in the *HS-DSCH Information* IE, then the DRNS may use this value to determine the HS-SCCH power. The HS-SCCH Power Offset should be applied for any HS-SCCH transmission to this UE.]

[FDD - The DRNS shall allocate HS-SCCH codes corresponding to the HS-DSCH and the DRNC shall include the *HS-SCCH Specific Information Response* IE in the *HS-DSCH FDD Information Response* IE in the RADIO LINK RECONFIGURATION RESPONSE message.]

[TDD - The DRNS shall allocate HS-SCCH parameters corresponding to the HS-DSCH and the DRNC shall include the [3.84Mcps TDD - *HS-SCCH Specific Information Response* IE] [1.28Mcps TDD - *HS-SCCH Specific Information Response LCR* IE] [7.68Mcps TDD - *HS-SCCH Specific Information Response 7.68Mcps* IE] in the *HS-DSCH TDD Information Response* IE in the RADIO LINK RECONFIGURATION RESPONSE message.]

[FDD - The DRNC shall include the *HS-PDSCH And HS-SCCH Scrambling Code* IE in the *HS-DSCH FDD Information Response* IE in the RADIO LINK RECONFIGURATION RESPONSE message.]

[FDD – If the RADIO LINK RECONFIGURATION REQUEST message includes the *HARQ Preamble Mode* IE in the *HS-DSCH Information* IE, then the DRNS shall use the indicated HARQ Preamble Mode as described in [10], if HS-DPCCH ACK/NACK preamble and postamble is supported. Then, in this case, if the mode 1 is applied, the DRNC shall include the *HARQ Preamble Mode Activation Indicator* IE in the *HS-DSCH Information Response* IE in the RADIO LINK RECONFIGURATION RESPONSE message. If the *HARQ Preamble Mode* IE is not included or if the mode 0 is applied, then the DRNC shall not include the *HARQ Preamble Mode Activation Indicator* IE in the *HS-DSCH Information Response* IE in the RADIO LINK RECONFIGURATION RESPONSE message.]

If the RADIO LINK RECONFIGURATION REQUEST message includes the *HS-DSCH MAC-d PDU Size Format* IE in the *HS-DSCH Information* IE, then the DRNS shall use the indicated format in user plane frame structure for HS-DSCH channels [32] and MAC-hs [41].

[FDD - The DRNC shall include the *Measurement Power Offset* IE in the *HS-DSCH Information Response* IE in the RADIO LINK RECONFIGURATION RESPONSE message.]

- [FDD - If the *MIMO Activation Indicator* IE is included in the *HS-DSCH FDD Information* IE, then]
  - [FDD - The DRNS shall activate the MIMO mode for the HS-DSCH Radio Link.]
  - [FDD – The DRNS shall decide the pilot configuration and the UE reporting configuration (N/M ratio) according to [10] for MIMO and include the *MIMO Information Response* IE in the *HS-DSCH FDD Information Response* IE in the RADIO LINK RECONFIGURATION RESPONSE message.]
  - [FDD – If the *Power Offset For S-CPICH for MIMO Request Indicator* IE is included, the DRNC shall, if supported and MIMO pilot configuration with Primary and Secondary CPICH is set up on the cell where the Serving HS-DSCH Radio Link is established, include the *Power Offset For S-CPICH for MIMO* IE in the *HS-DSCH FDD Information Response* IE in the RADIO LINK RECONFIGURATION RESPONSE message.]
- [1.28 Mcps TDD - If the *MIMO Activation Indicator* IE is included in the *HS-DSCH TDD Information* IE, then]
  - [1.28 Mcps TDD - The DRNS shall activate the MIMO mode for the HS-DSCH Radio Link.]
  - [1.28 Mcps TDD - The DRNS shall decide the SF mode for HS-PDSCH dual stream and include the *MIMO SF Mode for HS-PDSCH dual stream* IE in the *HS-DSCH TDD Information Response* IE in the RADIO LINK RECONFIGURATION RESPONSE message.]
- [FDD - If the *Sixtyfour QAM Usage Allowed Indicator* IE is included in the *HS-DSCH FDD Information* IE, then the DRNS may if the value is set to "allowed" use 64 QAM for the HS-DSCH Radio Link, and the DRNS shall include the *Sixtyfour QAM DL Usage Indicator* IE in the *HS-DSCH FDD Information Response* IE in the RADIO LINK RECONFIGURATION RESPONSE message.]
- [FDD - If the *Sixtyfour QAM Usage Allowed Indicator* IE is included in the *HS-DSCH FDD Information* IE with value set to "not allowed", then the DRNS shall not use 64 QAM for the HS-DSCH Radio Link.]
- [FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *HS-DSCH MAC-d PDU Size Format* IE set to "Flexible MAC-d PDU Size" and if Sixtyfour QAM will not be used, the DRNS shall include the *HS-DSCH TB Size Table Indicator* IE in the *HS-DSCH FDD Information Response* IE in the RADIO LINK RECONFIGURATION RESPONSE message if it decides to use the octet aligned table defined in [41] for HS-DSCH Transport Block Size signalling.]
- [FDD - If the *UE with enhanced HS-SCCH support indicator* IE is included in the *HS-DSCH FDD Information* IE, then the DRNS may use:]
  - [FDD - a different HS-SCCH in consecutive TTIs for this UE]
  - [FDD - HS-SCCH orders for the case of HS-SCCH-less operation to this UE]
- [FDD - If the *UE Support Indicator Extension* IE is included in the *HS-DSCH FDD Information* IE the DRNS may use the supported HSDPA functions for this UE.]
- [FDD - If secondary serving HS-DSCH is applied also in the new configuration, then any changes related to parameters that are common for both the serving and the secondary serving HS-DSCH should be applied also for the secondary serving HS-DSCH.]

- If the RADIO LINK RECONFIGURATION REQUEST message includes *DL RLC PDU Size Format* IE for a Priority Queue in the *HS-DSCH MAC-d Flows Information* IE in the *HS-DSCH Information* IE, the *DL RLC PDU Size Format* IE may be used by the DRNS to determine the allocated capacity on user plane as described in [32].

#### [FDD - Secondary Serving HS-DSCH Setup:]

[FDD - If the *C-ID* IE is present in the RADIO LINK RECONFIGURATION REQUEST message, then:]

- [FDD - The DRNS shall setup the requested HS-PDSCH resources on the secondary serving HS-DSCH Radio Link indicated by the *HS-PDSCH RL ID* IE. Non cell specific secondary serving Radio Link and non cell specific secondary serving HS-DSCH parameters take the same values as for the serving HS-DSCH cell.]
- [FDD - The DRNC shall allocate an HS-DSCH-RNTI to the UE Context and include the *HS-DSCH-RNTI* IE in the *Additional HS Cell Information Response* IE in the RADIO LINK RECONFIGURATION RESPONSE message.]
- [FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *HS-SCCH Power Offset* IE in the *HS-DSCH FDD Secondary Serving Information* IE, then the DRNS may use this value to determine the HS-SCCH power. The HS-SCCH Power Offset should be applied for any secondary serving HS-SCCH transmission to this UE.]
- [FDD - The DRNS shall allocate HS-SCCH codes corresponding to the secondary serving HS-DSCH and the DRNC shall include the *HS-SCCH Specific Secondary Serving Information Response* IE in the *HS-DSCH FDD Secondary Serving Information Response* IE in the *Additional HS Cell Information Response* IE in the RADIO LINK RECONFIGURATION RESPONSE message.]
- [FDD - The DRNC shall include the *HS-PDSCH And HS-SCCH Scrambling Code* IE in the *HS-DSCH FDD Secondary Serving Information Response* IE in the *Additional HS Cell Information Response* IE in the RADIO LINK RECONFIGURATION RESPONSE message.]
- [FDD - The DRNC shall include the *Measurement Power Offset* IE in the *HS-DSCH FDD Secondary Serving Information Response* IE in the *Additional HS Cell Information Response* IE in the RADIO LINK RECONFIGURATION RESPONSE message.]
- [FDD - If the *Sixtyfour QAM Usage Allowed Indicator* IE is included in the *HS-DSCH FDD Secondary Serving Information* IE, then the DRNS may if the value is set to "allowed" use 64 QAM for the secondary serving HS-DSCH Radio Link, and the DRNS shall include the *Sixtyfour QAM DL Usage Indicator* IE in the *HS-DSCH FDD Secondary Serving Information Response* IE in the *Additional HS Cell Information Response* IE in the RADIO LINK RECONFIGURATION RESPONSE message.]
- [FDD - If the *Sixtyfour QAM Usage Allowed Indicator* IE is included in the *HS-DSCH FDD Secondary Serving Information* IE with value set to "not allowed", then the DRNS shall not use 64 QAM for the secondary serving HS-DSCH Radio Link.]
- [FDD - If, in the new configuration, the UE context is configured not to use Sixtyfour QAM for the secondary serving HS-DSCH, the DRNS shall include the *HS-DSCH TB Size Table Indicator* IE in the *HS-DSCH FDD Secondary Serving Information Response* IE in the *Additional HS Cell Information Response* IE in the RADIO LINK RECONFIGURATION RESPONSE message if it decides to use the octet aligned table defined in [41] for secondary serving HS-DSCH Transport Block Size signalling.]

#### Intra-DRNS Serving HS-DSCH Radio Link Change:

If the RADIO LINK RECONFIGURATION REQUEST message includes the *HS-PDSCH RL ID* IE, this indicates the new Serving HS-DSCH Radio Link:

The DRNS shall release the HS-PDSCH resources on the old Serving HS-DSCH Radio Link and setup the HS-PDSCH resources on the new Serving HS-DSCH Radio Link.

- If fields are to be included in the User Plane by the SRNC to handle TNL Congestion Control for HSDPA in the DRNS, then the DRNC shall include the *User Plane Congestion Fields Inclusion* IE in the *HS-DSCH Information Response* IE.

The DRNC may include the *HARQ Memory Partitioning* IE in the [FDD – *HS-DSCH FDD Information Response* IE] [TDD – *HS-DSCH TDD Information Response* IE] in the RADIO LINK RECONFIGURATION

RESPONSE message. [FDD – The *HARQ Memory Partitioning* IE may contain the *HARQ Memory Partitioning Information Extension For MIMO* IE.] [1.28Mcps TDD– The *HARQ Memory Partitioning* IE may contain the *HARQ Memory Partitioning Information Extension For MIMO* IE.]

The DRNC shall allocate a new HS-DSCH-RNTI to the UE Context and include the *HS-DSCH-RNTI* IE in the RADIO LINK RECONFIGURATION RESPONSE message.

If a reset of the MAC-hs is not required the DRNS shall include the *MAC-hs Reset Indicator* IE in the RADIO LINK RECONFIGURATION RESPONSE message.

[FDD - The DRNC shall include the *Measurement Power Offset* IE in the *HS-DSCH Information Response* IE in the RADIO LINK RECONFIGURATION RESPONSE message.]

[FDD - The DRNS shall allocate HS-SCCH codes corresponding to the HS-DSCH and the DRNC shall include the *HS-SCCH Specific Information Response* IE in the *HS-DSCH FDD Information Response* IE in the RADIO LINK RECONFIGURATION RESPONSE message.]

[TDD - The DRNS shall allocate HS-SCCH parameters corresponding to the HS-DSCH and the DRNC shall include the [3.84Mcps TDD - *HS-SCCH Specific Information Response* IE] [1.28Mcps TDD - *HS-SCCH Specific Information Response LCR* IE] [7.68 Mcps TDD - *HS-SCCH Specific Information Response 7.68 Mcps* IE] in the *HS-DSCH TDD Information Response* IE in the RADIO LINK RECONFIGURATION RESPONSE message.]

[TDD - The DRNC shall include the [3.84 Mcps TDD - *HS-PDSCH Timeslot Specific Information* IE] [1.28 Mcps TDD - *HS-PDSCH Timeslot Specific Information LCR* IE] [7.68 Mcps TDD - *HS-PDSCH Timeslot Specific Information 7.68 Mcps* IE] in the *HS-DSCH Information Response* IE in the RADIO LINK RECONFIGURATION RESPONSE message.]

[FDD - The DRNC shall include the *HS-PDSCH And HS-SCCH Scrambling Code* IE in the *HS-DSCH FDD Information Response* IE in the RADIO LINK RECONFIGURATION RESPONSE message.]

- The DRNC may include the *Transport Layer Address* IE and the *Binding ID* IE for HS-DSCH MAC-d flow in the [FDD – *HS-DSCH FDD Information Response* IE] [TDD – *HS-DSCH TDD Information Response* IE] in the RADIO LINK RECONFIGURATION RESPONSE message.
- If the *TNL QoS* IE is included for a MAC-d flow and if ALCAP is not used, the *TNL QoS* IE may be used by the DRNS to determine the transport bearer characteristics to apply in the uplink between the DRNS and the SRNC for the related MAC-d flow.
- [FDD - If MAC-ehs is applied in the new configuration, and if Sixtyfour QAM will not be used, the DRNS shall include the *HS-DSCH TB Size Table Indicator* IE in the *HS-DSCH FDD Information Response* IE in the RADIO LINK RECONFIGURATION RESPONSE message if it decides to use the octet aligned table defined in [41] for HS-DSCH Transport Block Size signalling.]
- [FDD – If the power offset for S-CPICH for MIMO Request indicator and MIMO activation indicator have been configured in the new configuration and MIMO pilot configuration with Primary and Secondary CPICH is set up on the cell where the Serving HS-DSCH Radio Link is established, the DRNC shall include the *Power Offset For S-CPICH for MIMO* IE in the *HS-DSCH FDD Information Response* IE in the RADIO LINK RECONFIGURATION RESPONSE message.]

#### **[FDD - Intra-DRNS Secondary Serving HS-DSCH Radio Link Change:]**

[FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *C-ID* IE in the *Additional HS Cell Information RL Reconf Req* IE and the secondary serving HS-DSCH Radio Link has been configured in the DRNS, the *HS-PDSCH RL ID* IE indicates the new Serving HS-DSCH Radio Link:]

- [FDD - The DRNS shall release the HS-PDSCH resources on the old secondary serving HS-DSCH Radio Link and setup the HS-PDSCH resources on the new secondary serving HS-DSCH Radio Link. The DRNS shall remove the old secondary serving HS-PDSCH Radio Link. Non cell specific secondary serving Radio Link and non cell specific secondary serving HS-DSCH parameters take the same values as for the serving HS-DSCH cell.]
- [FDD - The DRNC shall allocate a new HS-DSCH-RNTI to the UE Context and include the *HS-DSCH-RNTI* IE in the *Additional HS Cell Information Response* IE in the RADIO LINK RECONFIGURATION RESPONSE message.]

- [FDD - The DRNC shall include the *Measurement Power Offset* IE in the *HS-DSCH FDD Secondary Serving Information Response* IE in the *Additional HS Cell Information Response* IE in the RADIO LINK RECONFIGURATION RESPONSE message.]
- [FDD - The DRNS shall allocate HS-SCCH codes corresponding to the secondary serving HS-DSCH and the DRNC shall include the *HS-SCCH Specific Secondary Serving Information Response* IE in the *HS-DSCH FDD Secondary Serving Information Response* IE in the *Additional HS Cell Information Response* IE in the RADIO LINK RECONFIGURATION RESPONSE message.]
- [FDD - The DRNC shall include the *HS-PDSCH And HS-SCCH Scrambling Code* IE in the *HS-DSCH FDD Secondary Serving Information Response* IE in the *Additional HS Cell Information Response* IE in the RADIO LINK RECONFIGURATION RESPONSE message.]
- [FDD - If, in the new configuration, the UE context is configured not to use Sixtyfour QAM for the secondary serving HS-DSCH, the DRNS shall include the *HS-DSCH TB Size Table Indicator* IE in the *HS-DSCH FDD Secondary Serving Information Response* IE in the *Additional HS Cell Information Response* IE in the RADIO LINK RECONFIGURATION RESPONSE message if it decides to use the octet aligned table defined in [41] for secondary serving HS-DSCH Transport Block Size signalling.]

### HS-DSCH Modification:

If the RADIO LINK RECONFIGURATION REQUEST message includes the *HS-DSCH Information To Modify Unsynchronised* IE, then:

- The DRNC shall include the *HS-DSCH Initial Capacity Allocation* IE for each HS-DSCH MAC-d flow being modified for which the establishment of one or several new Priority Queues was requested, if the DRNS allows the SRNC to start the transmission of MAC-d PDUs for the Priority Queue(s) being established before the DRNS has allocated capacity on user plane as described in [32]. If UE context is configured to use "Flexible MAC-d PDU Size", then DRNC shall only set in the *HS-DSCH Initial Capacity Allocation* IE the values for the peer of *Scheduling Priority Indicator* IE and *Maximum MAC-d PDU Size Extended* IE to the values of the corresponding peer for the Priority Queue of UE context.
- If the RADIO LINK RECONFIGURATION REQUEST message includes the *Traffic Class* IE in the *HS-DSCH Information To Modify Unsynchronised* IE for a specific HS-DSCH MAC-d flow, the DRNS may use this information to determine the transport bearer characteristics to apply between DRNC and Node B. The DRNC should ignore the *Traffic Class* IE if the *TrCH Source Statistics Descriptor* IE for this specific HS-DSCH MAC-d flow indicates the value "RRC".
- If the *TNL QoS* IE is included for a MAC-d flow and if ALCAP is not used, the *TNL QoS* IE may be used by the DRNS to determine the transport bearer characteristics to apply in the uplink between the DRNS and the SRNC for the related MAC-d flow.
- If the RADIO LINK RECONFIGURATION REQUEST message includes the *MAC-hs Guaranteed Bit Rate* IE in the *HS-DSCH Information To Modify Unsynchronised* IE, the DRNS shall use this information to optimise MAC-hs scheduling decisions for the related HSDPA Priority Queue.
- If the RADIO LINK RECONFIGURATION REQUEST message includes the *Discard Timer* IE for a Priority Queue in the *HS-DSCH Information To Modify Unsynchronised* IE, then the DRNS shall use this information to discard out-of-date MAC-hs SDUs from the related HSDPA Priority Queue.
- [FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *ACK Power Offset* IE, the *NACK Power Offset* IE or the *CQI Power Offset* IE in the *HS-DSCH Information To Modify Unsynchronised* IE, then the DRNS shall use the indicated ACK Power Offset, the NACK Power Offset or the CQI Power Offset in the new configuration.]
- [FDD - If the *HS-SCCH Power Offset* IE is included in the *HS-DSCH Information To Modify Unsynchronised* IE, the DRNS may use this value to determine the HS-SCCH power. The HS-SCCH Power Offset should be applied for any HS-SCCH transmission to this UE.]
- [TDD – If the RADIO LINK RECONFIGURATION REQUEST message includes the *TDD ACK NACK Power Offset* IE in the *HS-DSCH Information To Modify Unsynchronised* IE, the DRNS shall use the indicated power offset in the new configuration.]
- [FDD – If the RADIO LINK RECONFIGURATION REQUEST message includes the *HARQ Preamble Mode* IE in the *HS-DSCH Information To Modify Unsynchronised* IE, then the DRNS shall use the indicated HARQ

Preamble Mode in the new configuration as described in [10], if HS-DPCCH ACK/NACK preamble and postamble is supported. Then, in this case, if the mode 1 is applied, the DRNC shall include the *HARQ Preamble Mode Activation Indicator* IE in the *HS-DSCH Information Response* IE in the RADIO LINK RECONFIGURATION RESPONSE message. If the *HARQ Preamble Mode* IE is not included or if the mode 0 is applied, then the DRNC shall not include the *HARQ Preamble Mode Activation Indicator* IE in the *HS-DSCH Information Response* IE in the RADIO LINK RECONFIGURATION RESPONSE message.]

- [FDD - If the *MIMO Mode Indicator To Modify* IE is included in the *HS-DSCH Information To Modify Unsynchronised* IE, then]
  - [FDD - The DRNS shall activate/deactivate the MIMO mode for the HS-DSCH Radio Link in the new configuration in accordance with the *MIMO Mode Indicator* IE.]
  - [FDD - If the *MIMO Mode Indicator* IE is set to "Activate", then the DRNS shall decide the pilot configuration and the UE reporting configuration (N/M ratio) according to [10] for MIMO and include the *MIMO Information Response* IE in the *HS-DSCH FDD Information Response* IE in the RADIO LINK RECONFIGURATION RESPONSE message.]
  - [FDD - If the *MIMO Mode Indicator* IE is set to "Activate" and *Power Offset For S-CPICH for MIMO Request Indicator* IE is included, the DRNC shall, if supported and MIMO pilot configuration with Primary and Secondary CPICH is set up on the cell where the Serving HS-DSCH Radio Link is established, include the *Power Offset For S-CPICH for MIMO* IE in the *HS-DSCH FDD Information Response* IE.]
- [FDD - The DRNC may include the *HARQ Memory Partitioning* IE in the RADIO LINK RECONFIGURATION RESPONSE message. The *HARQ Memory Partitioning* IE may contain the *HARQ Memory Partitioning Information Extension For MIMO* IE.]
- [FDD - If the *Sixtyfour QAM Usage Allowed Indicator* IE is included in the *HS-DSCH Information To Modify Unsynchronised* IE, then the DRNS may if the value is set to "allowed" use 64 QAM for the HS-DSCH Radio Link, and the DRNS shall include the *SixtyfourQAM DL Usage Indicator* IE in the *HS-DSCH FDD Information Response* IE in the RADIO LINK RECONFIGURATION RESPONSE message.]
- [FDD - If the *Sixtyfour QAM Usage Allowed Indicator* IE is included in the *HS-DSCH Information To Modify Unsynchronised* IE with value set to "not allowed", then the DRNS shall not use 64 QAM for the HS-DSCH Radio Link.]
- [FDD - If MAC-ehs is applied in the new configuration, and if Sixtyfour QAM will not be used, the DRNS shall include the *HS-DSCH TB Size Table Indicator* IE in the *HS-DSCH FDD Information Response* IE in the RADIO LINK RECONFIGURATION RESPONSE message if it decides to use the octet aligned table defined in [41] for HS-DSCH Transport Block Size signalling.]
- [1.28Mcps TDD- If the *MIMO Mode Indicator To Modify* IE is included in the *HS-DSCH Information To Modify Unsynchronised* IE, then]
  - [1.28Mcps TDD- The DRNS shall activate/deactivate the MIMO mode for the HS-DSCH Radio Link in the new configuration in accordance with the *MIMO Mode Indicator* IE.]
  - [1.28 Mcps TDD - If the *MIMO Mode Indicator* IE is set to "Activate", then the DRNS shall decide the SF mode for HS-PDSCH dual stream and include the *MIMO SF Mode for HS-PDSCH dual stream* IE in the *HS-DSCH TDD Information Response* IE in the RADIO LINK RECONFIGURATION RESPONSE message.]
- [FDD - Any secondary serving HS-DSCH that was applied in the old configuration shall remain in the new configuration unless it is explicitly removed.]
- [FDD - If secondary serving HS-DSCH is applied also in the new configuration, then any changes related to parameters that are common for both the serving and the secondary serving HS-DSCH should be applied also for the secondary serving HS-DSCH.]
- [FDD - If the *UE Support Indicator Extension* IE is included in the *HS-DSCH Information To Modify Unsynchronised* IE the DRNS may use the supported HSDPA functions for this UE.]

**[FDD - Secondary Serving HS-DSCH Modification:]**



[FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *HS-DSCH FDD Secondary Serving Information To Modify Unsynchronised* IE in the *Additional HS Cell Information RL Reconf Req* IE, then:]

- [FDD - If the *HS-SCCH Power Offset* IE is included in the *HS-DSCH FDD Secondary Serving Information To Modify Unsynchronised* IE, the DRNS may use this value to determine the HS-SCCH power. The HS-SCCH Power Offset should be applied for any secondary serving HS-SCCH transmission to this UE.]
- [FDD - If the *Sixtyfour QAM Usage Allowed Indicator* IE is included in the *HS-DSCH FDD Secondary Serving Information To Modify Unsynchronised* IE, then the DRNS may if the value is set to "allowed" use 64 QAM for the secondary serving HS-DSCH Radio Link, and the DRNS shall include the *SixtyfourQAM DL Usage Indicator* IE in the *HS-DSCH FDD Secondary Serving Information Response* IE in the *Additional HS Cell Information Response* IE in the RADIO LINK RECONFIGURATION RESPONSE message.]
- [FDD - If the *Sixtyfour QAM Usage Allowed Indicator* IE is included in the *HS-DSCH FDD Secondary Serving Information To Modify Unsynchronised* IE with value set to "not allowed", then the DRNS shall not use 64 QAM for the secondary serving HS-DSCH Radio Link.]
- [FDD - If, in the new configuration, the UE context is configured to use the "Flexible MAC-d PDU Size" format and if Sixtyfour QAM will not be used for the secondary serving HS-DSCH, then the DRNS shall include the *HS-DSCH TB Size Table Indicator* IE in the *HS-DSCH FDD Secondary Serving Information Response* IE in the *Additional HS Cell Information Response* IE in the RADIO LINK RECONFIGURATION RESPONSE message if it decides to use the octet aligned table defined in [41] for secondary serving HS-DSCH Transport Block Size signalling.]

#### [FDD – Secondary Serving HS-DSCH Removal:]

[FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *HS-DSCH Secondary Serving Remove* IE in the *Additional HS Cell Information RL Reconf Req* IE, then the indicated secondary serving HS-DSCH Radio Link shall be removed.]

#### HS-DSCH MAC-d Flow Addition/Deletion:

If the RADIO LINK RECONFIGURATION REQUEST message includes any *HS-DSCH MAC-d Flows To Add* or *HS-DSCH MAC-d Flows To Delete* IEs, then the DRNS shall use this information to add/delete the indicated HS-DSCH MAC-d flows on the Serving HS-DSCH Radio Link. When an HS-DSCH MAC-d flow is deleted, all its associated Priority Queues shall also be removed.

If the RADIO LINK RECONFIGURATION REQUEST message includes an *HS-DSCH MAC-d Flows To Delete* IE requesting the deletion of all remaining HS-DSCH MAC-d flows for the UE Context, then the DRNC shall delete the HS-DSCH configuration from the UE Context and release the HS-PDSCH resources.

If the RADIO LINK RECONFIGURATION REQUEST message includes the *HS-DSCH MAC-d Flows To Add* IE, then:

- The DRNS may use the *Traffic Class* IE for a specific HS-DSCH MAC-d flow to determine the transport bearer characteristics to apply between DRNC and Node B. If *TrCH Source Statistics Descriptor* IE is present with the value "RRC" in the *HS-DSCH MAC-d Flows Information* IE, then the DRNC should ignore the *Traffic Class* IE.
- If the *TNL QoS* IE is included for a MAC-d flow and if ALCAP is not used, the *TNL QoS* IE may be used by the DRNS to determine the transport bearer characteristics to apply in the uplink between the DRNS and the SRNC for the related MAC-d flow.
- The DRNC shall include the *HS-DSCH Initial Capacity Allocation* IE in the RADIO LINK RECONFIGURATION RESPONSE message for every HS-DSCH MAC-d flow being added, if the DRNS allows the SRNC to start transmission of MAC-d PDUs before the DRNS has allocated capacity on user plane as described in [32]. If the UE context is configured to use the "Flexible MAC-d PDU Size" format for the HS-DSCH, then DRNC shall only set in the *HS-DSCH Initial Capacity Allocation* IE the values for the peer of *Scheduling Priority Indicator* IE and *Maximum MAC-d PDU Size Extended* IE to the values of the corresponding peer received in RADIO LINK RECONFIGURATION REQUEST message in the *HS-DSCH MAC-d Flows To Add* IE for a Priority Queue including *Scheduling Priority Indicator* IE and *Maximum MAC-d PDU Size Extended* IE

- If the RADIO LINK RECONFIGURATION REQUEST message includes the *MAC-hs Guaranteed Bit Rate IE* in the *HS-DSCH MAC-d Flows To Add IE*, the DRNS shall use this information to optimise MAC-hs scheduling decisions for the related HSDPA Priority Queue.

If the RADIO LINK RECONFIGURATION REQUEST message includes the *Maximum MAC-d PDU Size Extended IE* for a Priority Queue in the *HS-DSCH MAC-d Flows To Add IE*, then the DRNC shall ignore the *SID IE* and *MAC-d PDU Size IE* in the *MAC-d PDU Size Index IE* and use *Maximum MAC-d PDU Size Extended IE* to optimise capacity allocation for the related HSDPA Priority Queue.

- If the RADIO LINK RECONFIGURATION REQUEST message includes *DL RLC PDU Size Format IE* for a Priority Queue in the in the *HS-DSCH MAC-d Flows To Add IE*, the *DL RLC PDU Size Format IE* may be used by the DRNS to determine the allocated capacity on user plane as described in [32].

If the RADIO LINK RECONFIGURATION REQUEST message includes the *Discard Timer IE* for a Priority Queue in the *HS-DSCH MAC-d Flows To Add IE*, then the DRNS shall use this information to discard out-of-date MAC-hs SDUs from the related HSDPA Priority Queue.

#### [FDD – Enhanced HS Serving Cell Change:]

[FDD --Upon receipt of the RADIO LINK RECONFIGURATION REQUEST message, if the Enhanced HS Serving Cell Change is preconfigured in the DRNS for the UE context, the DRNS may execute the Enhanced HS Serving Cell Change procedure according to [63]

[FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *Enhanced HS Serving CC Abort IE* in the *HS-DSCH Information To Modify Unsynchronised IE* or the *HS-DSCH FDD Information IE* then the DRNS shall not execute the unsynchronized Enhanced HS Serving Cell Change procedure when performing the Serving HS-DSCH Radio Link Change or the HS-DSCH Setup.]

[FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *No of Target Cell HS-SCCH Order IE* then the DRNS shall repeat the Target Cell HS-SCCH Order on the HS-SCCH the number of times defined in the IE.]

#### [FDD - E-DCH Setup:]

[FDD - If the *E-DCH FDD Information IE* is present in the RADIO LINK RECONFIGURATION REQUEST message then:]

- [FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *MAC-es Guaranteed Bit Rate IE* in the *E-DCH Logical Channel information IE* in the *E-DCH FDD Information IE*, then the DRNS shall use this information to optimise MAC-e scheduling decisions.]
- [FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *Maximum MAC-d PDU Size Extended IE* for a E-DCH Logical Channel in the *E-DCH MAC-d Flows Information IE* in the *E-DCH Information IE*, then the DRNS shall ignore the *MAC-d PDU Size IE* in the *MAC-d PDU Size List IE* and use *Maximum MAC-d PDU Size Extended IE* to optimise capacity allocation for the related E-DCH Logical Channel and use the indicated format in user plane frame structure for E-DCH channels [32] and MAC [41].]
- [FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *E-DCH MAC-d Flow Multiplexing List IE* for an E-DCH MAC-d flow the DRNS shall use this information for the related resource allocation operation.]
- [FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *HARQ Process Allocation For 2ms Scheduled Transmission Grant IE*, the DRNS shall use this information for the related resource allocation operation.]
- [FDD - If in the RADIO LINK RECONFIGURATION REQUEST message the E-DCH Grant Type is indicated as being "E-DCH Non-Scheduled Transmission Grant" for an E-DCH MAC-d flow the DRNS shall assume non-scheduled grants being configured for that E-DCH MAC-d flow and shall use the information within the *HARQ Process Allocation For 2ms Non-Scheduled Transmission Grant IE*, if included, for the related resource allocation operation.]
- [FDD - If in the RADIO LINK RECONFIGURATION REQUEST message the E-DCH Grant Type is indicated as being "E-DCH Scheduled Transmission Grant" for an E-DCH MAC-d flow the DRNS shall assume scheduled grants being configured for that E-DCH MAC-d flow.]

- [FDD - The DRNS may use the *Traffic Class* IE for a specific E-DCH MAC-d flow to determine the transport bearer characteristics to apply between DRNC and Node B. If *TrCH Source Statistics Descriptor* IE is present with the value "RRC" in the *E-DCH MAC-d Flows Information* IE, then the DRNC should ignore the *Traffic Class* IE.]
- [FDD - If the *TNL QoS* IE is included for an E-DCH MAC-d flow and if ALCAP is not used, the *TNL QoS* IE may be used by the DRNS to determine the transport bearer characteristics to apply in the uplink for the related MAC-d flow.]
- [FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *Bundling Mode Indicator* IE for a E-DCH MAC-d flow in the *E-DCH MAC-d Flow Specific Information* IE in the *E-DCH FDD Information* IE and the *Bundling Mode Indicator* IE is set to "Bundling" and the *E-TTI* IE is set to "2ms", then the DRNS shall use the bundling mode for the E-DCH UL data frames for the related Mac-d flow, otherwise the DRNS shall use the non-bundling mode for the E-DCH UL data frames for the related Mac-d flow.]
- [FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *E-DCH Maximum Bitrate* IE for an E-DCH, the DRNS shall use this information for the related resource allocation operation, and when applicable, for E-DCH scheduling.]
- [FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *E-DCH Processing Overload Level* IE, then if the DRNS could not decode the E-DPCCH/E-DPDCH for the last consecutive number of TTIs, indicated in the *E-DCH Processing Overload Level* IE, because of processing issue, the DRNS shall notify the SRNC by initiating the Radio Link Failure procedure.]
- [FDD – If the RADIO LINK RECONFIGURATION REQUEST message includes the *E-DCH ReferencePower Offset* IE, then the DRNS may use this value as a default HARQ power offset if it is not able to decode the MAC-e PDU and to determine the value of the actual HARQ power offset.]
- [FDD – If the RADIO LINK RECONFIGURATION REQUEST message includes the *E-DCH Power Offset for Scheduling Info* IE, then the DRNS shall use this value as a power offset for the transmission of scheduling information without any MAC-d PDUs.]
- [FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *E-AGCH Power Offset* IE in the *RL Specific E-DCH Information* IE, then the DRNS may use this value to determine the E-AGCH power. The E-AGCH Power Offset should be applied for any E-AGCH transmission to this UE.]
- [FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *E-RGCH Power Offset* IE in the *RL Specific E-DCH Information* IE, then the DRNS may use this value to determine the E-RGCH power for the RL. The E-RGCH Power Offset should be applied for any E-RGCH transmission to this UE.]
- [FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *E-HICH Power Offset* IE in the *RL Specific E-DCH Information* IE, then the DRNS may use this value to determine the E-HICH power for the RL. The E-HICH Power Offset should be applied for any E-HICH transmission to this UE.]
- [FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes an *E-DPCH Information* IE which contains the *HS-DSCH Configured Indicator* IE and/or the *Maximum Set of E-DPDCHs* IE, and/or the *Puncture Limit* IE and/or the *E-TTI* IE, the DRNS shall use and apply the value(s) in the new configuration.]
- [FDD – If the RADIO LINK RECONFIGURATION REQUEST message includes the *SixteenQAM UL Operation Indicator* IE, the DRNS shall activate/deactivate SixteenQAM UL Operation for the RL in accordance with the *SixteenQAM UL Operation Indicator* IE.]
  - [FDD – If SixteenQAM UL Operation is activated, then the DRNS shall base the handling of the Relative Grant signalling on Scheduling Grant Table 2 according to [41]. If SixteenQAM UL Operation is deactivated, then the DRNS shall base the handling of the Relative Grant signalling on Scheduling Grant Table 1 according to [41].]

#### [FDD – E-DCH Radio Link Handling:]

[FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *E-DCH RL Indication* IE in the *RL Information* IE:]

- [FDD - The DRNC shall setup the E-DCH resources, as requested or as configured in the UE context, on the Radio Links indicated by the *E-DCH RL Indication* IE, set to "E-DCH", in the *RL Information* IE.]

- [FDD - The DRNC may include the E-AGCH And E-RGCH/E-HICH FDD Scrambling Code IE and shall include the E-RGCH/E-HICH Channelisation Code IE and the corresponding E-HICH Signature Sequence IE and the DRNC may include the corresponding E-RGCH Signature Sequence IE in the E-DCH FDD DL Control Channel Information IE in the RADIO LINK RECONFIGURATION RESPONSE message for every RL indicated by the E-DCH RL Indication IE, set to "E-DCH", in the RL Information IE.]
- [FDD - The DRNC shall remove the E-DCH resources, if any, on the Radio Links, that are indicated by the *E-DCH RL Indication* set to "Non E-DCH".]
- [FDD - For each RL for which the *E-DCH RL Indication* IE is set to "E-DCH", and which has or can have a common generation of E-RGCH information with another RL (current or future) when the DRNS would contain the E-DCH serving RL, the DRNS shall include the *E-DCH RL Set ID* IE in the RADIO LINK RECONFIGURATION RESPONSE message. The value of the *E-DCH RL Set ID* IE shall allow the SRNC to identify the E-DCH RLs that have or can have a common generation of E-RGCH information.]

**[FDD - Serving E-DCH Radio Link Change:]**

[FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *Serving E-DCH RL* IE, this indicates the new Serving E-DCH Radio Link:]

- [FDD - If the old Serving E-DCH RL is within this DRNS, the DRNS shall de-allocate the E-AGCH resources of the old Serving E-DCH Radio Link.]
- [FDD - If the new Serving E-DCH RL is within this DRNS:]
  - [FDD - The DRNS shall allocate a primary E-RNTI identifier or a secondary E-RNTI identifier or both for the new Serving E-DCH Radio Link and include these E-RNTI identifiers along with the channelisation code of the corresponding E-AGCH in the *E-DCH FDD DL Control Channel Information* IE in the *RL Information Response* IE for the indicated RL in the RADIO LINK RECONFIGURATION RESPONSE message.]
  - [FDD - The DRNS may include the *Serving Grant Value* IE and *Primary/Secondary Grant Selector* IE in the RADIO LINK RECONFIGURATION RESPONSE message for the initial grant for the new serving E-DCH RL.]
  - [FDD - If the E-DCH HARQ process allocation for 2ms TTI for scheduled and/or non-scheduled transmission shall be changed, the DRNS shall allocate resources according to the new/changed configuration and include the new/changed configuration in the *E-DCH FDD Information Response* IE in the RADIO LINK RECONFIGURATION RESPONSE message.]
  - [FDD - If a serving cell change is performed the RADIO LINK RECONFIGURATION RESPONSE message may contain invalid data (see 9.2.2.4C).]
  - [FDD - The DRNS may include the *Default Serving Grant in DTX Cycle 2* IE in the RADIO LINK RECONFIGURATION RESPONSE message for the new serving E-DCH RL.]
- [FDD – The DRNS may include the *E-RGCH/E-HICH Channelisation Code* IE and/or the *E-HICH Signature Sequence* IE and/or the *E-RGCH Signature Sequence* IE or may alternatively include the *E-RGCH Release Indicator* IE in the *E-DCH FDD DL Control Channel Information* IE in the RADIO LINK RECONFIGURATION RESPONSE message for every E-DCH Radio Links in the DRNS.]
- [FDD - If the DRNS has no valid data for the *E-RGCH and E-HICH Channelisation Code* IE in the *E-DCH FDD DL Control Channel Information* IE in the RADIO LINK RECONFIGURATION RESPONSE message, then it shall insert the *E-RGCH and E-HICH Channelisation Code Validity Indicator* IE in the *E-DCH FDD DL Control Channel Information* IE, to indicate that the *E-RGCH and E-HICH Channelisation Code* IE contains invalid data.]

**[FDD - E-DCH Modification:]**

[FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *E-DCH FDD Information To Modify* IE, then:]

- [FDD - If the *E-DCH FDD Information To Modify* IE contains a *E-DCH MAC-d Flow Specific Information* IE which includes the *Allocation/Retention Priority* IE, the DRNS shall apply the new Allocation/Retention Priority to this E-DCH in the new configuration according to Annex A.]

- [FDD - If the *TNL QoS* IE is included for an E-DCH MAC-d flow and if ALCAP is not used, the *TNL QoS* IE may be used by the DRNS to determine the transport bearer characteristics to apply in the uplink for the related MAC-d flow.]
- [FDD - If *Traffic Class* IE is included for an E-DCH MAC-d flow the DRNS may use the *Traffic Class* IE for a specific E-DCH MAC-d flow to determine the transport bearer characteristics to apply between DRNC and Node B. The DRNC should ignore the *Traffic Class* IE if the *TrCH Source Statistics Descriptor* IE for this specific E-DCH MAC-d flow indicates the value "RRC".]
- [FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *Data Description Indicator* IE, the DRNC shall use the DDI values indicated in the *Data Description Indicator* IE in the new configuration.]
- [FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *MAC-es Guaranteed Bit Rate* IE in the *E-DCH FDD Information To Modify* IE, the DRNS shall use this information to optimise MAC-e scheduling decisions.]
- [FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *Maximum Number of Retransmissions for E-DCH* IE for an E-DCH MAC-d flow in the *E-DCH FDD Information To Modify* IE, then the DRNS shall use this information to report if the maximum number of retransmissions has been exceeded.]
- [FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *E-DCH HARQ Power Offset FDD* IE in the *E-DCH FDD Information To Modify* IE for an E-DCH MAC-d flow the DRNS shall use this information for calculating the unquantised gain factor for an E-TFC ( $\beta_{ed,j,uq}$ ) as defined in [10].]
- [FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the E-DCH MAC-d Flow Multiplexing List IE for an E-DCH MAC-d flow the DRNS shall use this information for the related resource allocation operation.]
- [FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the E-DCH Grant Type and it is indicated as being "E-DCH Non-Scheduled Transmission Grant" for an E-DCH MAC-d flow the DRNS shall assume non-scheduled grants being configured for that E-DCH MAC-d flow and shall use the information within the HARQ Process Allocation For 2ms Non-Scheduled Transmission Grant IE, if included, for the related resource allocation operation.]
- [FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the E-DCH Grant Type and it is indicated as being "E-DCH Scheduled Transmission Grant" for an E-DCH MAC-d flow the DRNS shall assume scheduled grants being configured for that E-DCH MAC-d flow.]
- [FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *E-DCH Logical Channel To Add* or *E-DCH Logical Channel To Delete* IEs, the DRNS shall use this information to add/delete the indicated logical channels. When an logical channel is deleted, all its associated configuration data shall also be removed.]
- [FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *E-DCH Logical Channel To Modify* IE, the DRNS shall use this information to modify the indicated logical channels.]
  - [FDD - If the *E-DCH Logical Channel To Modify* IE includes *Scheduling Priority Indicator* IE, the DRNS shall apply the values in the new configuration.]
  - [FDD - If the *E-DCH Logical Channel To Modify* IE includes *Scheduling Information* IE, the DRNS shall apply the values in the new configuration.]
  - [FDD - If the *E-DCH Logical Channel To Modify* IE includes the *Maximum MAC-d PDU Size Extended* IE, the DRNC shall apply the value in the new configuration.]
- [FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *Bundling Mode Indicator* IE for an E-DCH MAC-d flow in the *E-DCH MAC-d Flow Specific Information* IE in the *E-DCH FDD Information To Modify* IE and the *Bundling Mode Indicator* IE is set to "Bundling" and the *E-TTI* IE is set to "2ms", then the DRNS shall use the bundling mode for the E-DCH UL data frames for the related MAC-d flow, otherwise the DRNS shall use the non-bundling mode for the E-DCH UL data frames for the related MAC-d flow.]

- [FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *HARQ Process Allocation For 2ms Scheduled Transmission Grant IE*, the DRNS shall use this information for the related resource allocation operation.]
- [FDD - If the E-DCH serving RL is in this DRNS, the DRNS may choose to change the E-DCH HARQ process allocation for 2ms TTI for scheduled and/or non-scheduled transmission. In this case the DRNS shall allocate resources according to the new/changed configuration and include the new/changed configuration in the *E-DCH FDD Information Response IE* in the RADIO LINK RECONFIGURATION RESPONSE message.]
- [FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *E-DCH Maximum Bitrate IE* for an E-DCH, the DRNS shall use this information for the related resource allocation operation, and when applicable, for E-DCH scheduling.]
- [FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *E-DCH Processing Overload Level IE*, then if the DRNS could not decode the E-DPCCH/E-DPDCH for the last consecutive number of TTIs, indicated in the *E-DCH Processing Overload Level IE*, because of processing issue, the DRNS shall notify the SRNC by initiating the Radio Link Failure procedure.]
- [FDD – If the RADIO LINK RECONFIGURATION REQUEST message includes the *E-DCH ReferencePower Offset IE*, then the DRNS may use this value as a default HARQ power offset if it is not able to decode the MAC-e PDU and to determine the value of the actual HARQ power offset.]
- [FDD – If the RADIO LINK RECONFIGURATION REQUEST message includes the *E-AGCH Power Offset IE* in the *RL Specific E-DCH Information IE*, then the DRNS may use this value to determine the E-AGCH power. The E-AGCH Power Offset should be applied for any E-AGCH transmission to this UE.]
- [FDD – If the RADIO LINK RECONFIGURATION REQUEST message includes the *E-RGCH Power Offset IE* in the *RL Specific E-DCH Information IE*, then the DRNS may use this value to determine the E-RGCH power for the RL. The E-RGCH Power Offset should be applied for any E-RGCH transmission to this UE.]
- [FDD – If the RADIO LINK RECONFIGURATION REQUEST message includes the *E-HICH Power Offset IE* in the *RL Specific E-DCH Information IE*, then the DRNS may use this value to determine the E-HICH power for the RL. The E-HICH Power Offset should be applied for any E-HICH transmission to this UE.]
- [FDD – If the RADIO LINK RECONFIGURATION REQUEST message includes the *E-DCH Power Offset for Scheduling Info IE*, then the DRNS shall use this value as a power offset for the transmission of scheduling information without any MAC-d PDUs.]
- [FDD – If the RADIO LINK RECONFIGURATION REQUEST message includes the *SixteenQAM UL Operation Indicator IE* in the *E-DCH FDD Information To Modify IE*, the DRNS shall activate/deactivate SixteenQAM UL Operation for the RL in accordance with the *SixteenQAM UL Operation Indicator IE*.]
  - [FDD – If SixteenQAM UL Operation is activated, then the DRNS shall base the handling of the Relative Grant signalling on Scheduling Grant Table 2 according to [41]. If SixteenQAM UL Operation is deactivated, then the DRNS shall base the handling of the Relative Grant signalling on Scheduling Grant Table 1 according to [41].]
- [FDD – If the RADIO LINK RECONFIGURATION REQUEST message includes the *E-DCH DL Control Channel Grant Information IE* in the *E-DCH FDD Information To Modify IE*, the DRNS may modify E-AGCH Channelisation Code, E-RGCH/E-HICH Channelisation Code, E-RGCH Signature Sequence and/or E-HICH Signature Sequence for the E-DCH RL indicated by the *E-DCH RL ID IE*. The DRNS shall then report the modified configuration which is used in the new configuration specified in the *E-DCH FDD DL Control Channel Information IE* for each E-DCH RL in the RADIO LINK RECONFIGURATION RESPONSE message.]

**[FDD - E-DCH MAC-d Flow Addition:]**

[FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes an *E-DCH MAC-d Flows To Add IE*, then the DRNS shall use this information to add the indicated E-DCH MAC-d flows.]

[FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *Maximum MAC-d PDU Size Extended IE* for a E-DCH Logical Channel in the *E-DCH MAC-d Flows Information IE* in the *E-DCH MAC-d Flows To Add IE*, then the DRNS shall ignore the *MAC-d PDU Size IE* in the *MAC-d PDU Size List IE* and use *Maximum MAC-d PDU Size Extended IE* to optimise capacity allocation for the related E-DCH Logical Channel.]

[FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *E-DCH MAC-d Flows To Add* IE, then:]

- [FDD - The DRNS may use the *Traffic Class* IE for a specific E-DCH MAC-d flow to determine the transport bearer characteristics to apply between DRNC and Node B. If *TrCH Source Statistics Descriptor* IE is present with the value "RRC" in the *E-DCH MAC-d Flows Information* IE, then the DRNC should ignore the *Traffic Class* IE.]
- [FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *MAC-es Guaranteed Bit Rate* IE in the *E-DCH Logical Channel Information* IE in the *E-DCH MAC-d Flows To Add* IE, the DRNS shall use this information to optimise MAC-e scheduling decisions.]

#### [FDD - E-DCH MAC-d Flow Deletion:]

[FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes an *E-DCH MAC-d Flows To Delete* IEs, then the DRNS shall use this information to delete the indicated E-DCH MAC-d flows. When an E-DCH MAC-d flow is deleted, all its associated configuration shall also be removed.]

[FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes an *E-DCH MAC-d Flows To Delete* IE requesting the deletion of all remaining E-DCH MAC-d flows for the UE Context, then the DRNC shall delete the E-DCH configuration from the UE Context and release the E-DCH resources.]

#### [TDD - Intra- DRNS Serving E-DCH Radio Link Change:]

[TDD- If the RADIO LINK RECONFIGURATION REQUEST message includes the *E-DCH Serving RL* IE, this indicates the new Serving E-DCH Radio Link:]

- [TDD - In the new configuration the DRNS shall de-allocate the E-DCH resources of the old Serving E-DCH Radio Link and allocate the E-DCH resources for the new Serving E-DCH Radio Link.]
- [3.84Mcps TDD - The DRNS shall allocate E-AGCH parameters corresponding to the E-DCH and include the *E-AGCH Specific Information Response* IE in the *E-DCH TDD Information Response* IE in the RADIO LINK RECONFIGURATION RESPONSE message.]
- [1.28Mcps TDD - The DRNS shall allocate E-AGCH parameters and E-HICH parameters corresponding to the E-DCH and include the *E-AGCH Specific Information Response* IE and the *E-HICH Specific Information Response* IE in the *E-DCH Information Response 1.28Mcps* IE in the RADIO LINK RECONFIGURATION RESPONSE message.]
- [7.68Mcps TDD - The DRNS shall allocate E-AGCH parameters corresponding to the E-DCH and include the *E-AGCH Specific Information Response 7.68Mcps* IE in the *E-DCH TDD Information Response 7.68Mcps* IE in the RADIO LINK RECONFIGURATION READY message.]
- [TDD - If the *TNL QoS* IE is included for a MAC-d flow and if ALCAP is not used, the *TNL QoS* IE may be used by the DRNS to determine the transport bearer characteristics to apply in the uplink for the related MAC-d flow.]

#### [TDD - E-PUCH Handling:]

[3.84Mcps TDD and 7.68Mcps TDD - If the RADIO LINK RECONFIGURATION REQUEST message includes an *E-PUCH Information* IE, the DRNS shall apply the parameters to the new configuration.]

[1.28Mcps TDD - If the RADIO LINK RECONFIGURATION REQUEST message includes an *E-PUCH Information LCR* IE, the DRNS shall apply the parameters to the new configuration]

[TDD - If the RADIO LINK RECONFIGURATION REQUEST message includes an *E- TFCS Information* IE, the DRNS shall apply the beta parameters to the new configuration.]

#### [3.84Mcps TDD - E-DCH Setup:]

[3.84Mcps TDD - the radio link may be reconfigured to support E-DCH by including the appropriate E-DCH information elements: *E-DCH Serving RL* IE, *E-PUCH Information* IE, *E-TFCS Information TDD* IE, *E-DCH MAC-d Flows to Add* IE and *E-DCH TDD Information* IE.]

#### [1.28Mcps TDD - E-DCH Setup:]

[1.28Mcps TDD - the radio link may be reconfigured to support E-DCH by including the appropriate E-DCH information elements: *E-DCH Serving RL IE*, *E-PUCH Information LCR IE*, *E-TFCS Information TDD IE*, *E-DCH MAC-d Flows to Add IE* and *E-DCH TDD Information LCR IE*.]

**[7.68Mcps TDD - E-DCH Setup:]**

[7.68Mcps TDD - the radio link may be reconfigured to support E-DCH by including the appropriate E-DCH information elements: *E-DCH Serving RL IE*, *E-PUCH Information IE*, *E-TFCS Information TDD IE*, *E-DCH MAC-d Flows to Add IE* and *E-DCH TDD Information 7.68Mcps IE*.]

**[TDD- E-DCH MAC-d Flow Addition/Deletion:]**

[TDD- If the RADIO LINK RECONFIGURATION REQUEST message includes any *E-DCH MAC-d Flows To Add* or *E-DCH MAC-d Flows To Delete* IEs, then the DRNS shall use this information to add/delete the indicated E-DCH MAC-d flows. When an E-DCH MAC-d flow is deleted, all its associated configuration data shall also be removed.]

[TDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *Maximum MAC-d PDU Size Extended IE* for a E-DCH Logical Channel in the *E-DCH MAC-d Flows Information IE* in the *E-DCH TDD Information To Add IE*, then the DRNS shall ignore the *MAC-d PDU Size IE* in the *MAC-d PDU Size List IE* and use *Maximum MAC-d PDU Size Extended IE* to optimise capacity allocation for the related E-DCH Logical Channel.]

[TDD- If the RADIO LINK RECONFIGURATION REQUEST message includes an *E-DCH MAC-d Flows To Delete IE* requesting the deletion of all remaining E-DCH MAC-d flows for the UE Context, then the DRNS shall delete the E-DCH configuration from the UE Context and release the E-DCH resources.]

[TDD- If the RADIO LINK RECONFIGURATION REQUEST message includes the *E-DCH MAC-d Flows To Add IE*, then:]

- [TDD- If the RADIO LINK RECONFIGURATION REQUEST message includes the *MAC-es Guaranteed Bit Rate IE* in the *E-DCH MAC-d Flows To Add IE*, the DRNS shall use this information to optimise MAC-e scheduling decisions.]
- [1.28Mcps TDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *MAC-es Maximum Bit Rate LCR IE* in the *E-DCH Logical Channel Information IE* in the *E-DCH MAC-d Flows To Add IE*, the DRNS shall use this information for the related resource allocation operation, and when applicable, for E-DCH scheduling.]

**[3.84Mcps TDD - E-DCH Non-scheduled allocations:]**

[3.84Mcps TDD - The DRNS shall determine any non-scheduled resource to be granted for the radio link, and return this in the *E-DCH Non-scheduled Grant Information TDD IE* in the *E-DCH Information Response IE* in the RADIO LINK RECONFIGURATION RESPONSE message.]

**[1.28Mcps TDD - E-DCH Non-scheduled allocations:]**

[1.28Mcps - The DRNS shall determine any non-scheduled resource to be granted for the radio link, and return this in the *E-DCH Non-scheduled Grant Information LCR TDD IE* in the *E-DCH Information Response 1.28Mcps IE* in the RADIO LINK RECONFIGURATION RESPONSE message.]

**[7.68Mcps TDD - E-DCH Non-scheduled allocations:]**

[7.68Mcps TDD - The DRNS shall determine any non-scheduled resource to be granted for the radio link, and return this in the *E-DCH Non-scheduled Grant Information 7.68Mcps TDD IE* in the *E-DCH Information Response 7.68Mcps IE* in the RADIO LINK RECONFIGURATION RESPONSE message.]

**[3.84Mcps TDD - E-DCH Modification:]**

[3.84Mcps TDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *E-DCH TDD Information IE*, then:]

- [3.84Mcps TDD - If the *E-DCH TDD Information IE* includes the *E-DCH TDD Maximum Bitrate IE* for an E-DCH, the DRNS shall use this information for the related resource allocation operation, and when applicable, for E-DCH scheduling.]
- [3.84Mcps TDD - If the *E-DCH TDD Information IE* includes the *E-DCH Processing Overload Level IE*, then if the DRNS could not decode the E-PUCH for the last consecutive number of TTIs, indicated in the *E-DCH*



*Processing Overload Level* IE, because of a processing issue, the DRNS shall notify the SRNC by initiating the Radio Link Failure procedure.]

- [3.84Mcps TDD – If the *E-DCH TDD Information* IE includes the *E-DCH Power Offset for Scheduling Info* IE, then the DRNS shall use this value as a power offset for the transmission of scheduling information without any MAC-d PDUs.]

#### **[1.28Mcps TDD - E-DCH Modification:]**

[1.28Mcps TDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *E-DCH TDD Information LCR* IE, then:]

- [1.28Mcps TDD - If the *E-DCH TDD Information LCR* IE includes the *E-DCH Physical Layer Category LCR* IE or *Extended E-DCH Physical Layer Category LCR* IE for an E-DCH, the DRNS shall use this information for the related resource allocation operation, and when applicable, for E-DCH scheduling.]
- [1.28Mcps TDD - If the *E-DCH TDD Information LCR* IE includes the *E-DCH Processing Overload Level* IE, then if the DRNS could not decode the E-PUCH for the last consecutive number of TTIs, indicated in the *E-DCH Processing Overload Level* IE, because of a processing issue, the DRNS shall notify the SRNC by initiating the Radio Link Failure procedure.]
- [1.28Mcps TDD – If the *E-DCH TDD Information LCR* IE includes the *E-DCH Power Offset for Scheduling Info* IE, then the DRNS shall use this value as a power offset for the transmission of scheduling information without any MAC-d PDUs.]
- [1.28Mcps TDD - If the *E-DCH TDD Information LCR* IE includes the *Maximum Number of Retransmission for Scheduling Info LCR* IE and the *E-DCH Retransmission timer for Scheduling Info LCR* IE, then the DRNS shall use these parameters for the transmission of scheduling information without any MAC-d PDUs.]

#### **[7.68Mcps TDD - E-DCH Modification:]**

[7.68Mcps TDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *E-DCH TDD Information 7.68Mcps* IE, then:]

- [7.68Mcps TDD - If the *E-DCH TDD Information 7.68Mcps* IE includes the *E-DCH TDD Maximum Bitrate 7.68Mcps* IE for an E-DCH, the DRNS shall use this information for the related resource allocation operation, and when applicable, for E-DCH scheduling.]
- [7.68Mcps TDD - If the *E-DCH TDD Information 7.68Mcps* IE includes the *E-DCH Processing Overload Level* IE, then if the DRNS could not decode the E-PUCH for the last consecutive number of TTIs, indicated in the *E-DCH Processing Overload Level* IE, because of a processing issue, the DRNS shall notify the SRNC by initiating the Radio Link Failure procedure.]
- [7.68Mcps TDD – If the *E-DCH TDD Information 7.68Mcps* IE includes the *E-DCH Power Offset for Scheduling Info* IE, then the DRNS shall use this value as a power offset for the transmission of scheduling information without any MAC-d PDUs.]

[TDD- If the RADIO LINK RECONFIGURATION REQUEST message includes the *E-DCH TDD Information To Modify* IE, then:]

- [TDD- If the *E-DCH TDD Information To Modify* IE contains a *E-DCH MAC-d Flow Specific Information* IE which includes the *Allocation/Retention Priority* IE, the DRNS shall apply the new Allocation/Retention Priority to this E-DCH in the new configuration according to Annex A.]
- [TDD- If the *E-DCH TDD Information To Modify* IE contains a *TNL QoS* IE for an E-DCH MAC-d flow and if ALCAP is not used, the *TNL QoS* IE may be used by the DRNS to determine the transport bearer characteristics to apply in the uplink for the related MAC-d flow.]
- [TDD- If the *E-DCH TDD Information To Modify* IE includes the *Maximum Number of Retransmissions for E-DCH* IE for an E-DCH MAC-d flow then the DRNS shall use this information to report if the maximum number of retransmissions has been exceeded.]
- [1.28Mcps TDD - If the *E-DCH TDD Information To Modify* IE includes the *E-DCH MAC-d Flow Retransmission Timer* IE for an E-DCH MAC-d flow then the DRNS shall use this information to set the retransmission timer.]

- [TDD- If the *TNL QoS* IE is included in the *E-DCH TDD Information to Modify* IE for an E-DCH MAC-d flow and if ALCAP is not used, the *TNL QoS* IE may be used by the DRNS to determine the transport bearer characteristics to apply in the uplink for the related MAC-d flow.]
- [TDD- If the *E-DCH TDD Information To Modify* IE includes the *E-DCH HARQ Power Offset TDD* IE for an E-DCH MAC-d flow the DRNS shall use this new power offset value.]
- [TDD- If the *E-DCH TDD Information To Modify* IE includes the *E-DCH MAC-d Flow Multiplexing List* IE for an E-DCH MAC-d flow the DRNS shall use this information for the related resource allocation operation.]
- [TDD- If the *E-DCH TDD Information To Modify* IE contains the *E-DCH Grant Type* IE, the DRNS shall treat the E-DCH MAC-d flow as Scheduled or Non-scheduled accordingly.]
- [TDD- If the *E-DCH TDD Information To Modify* IE includes the *E-DCH Logical Channel To Add* or *E-DCH Logical Channel To Delete* IEs, the DRNS shall use this information to add/delete the indicated logical channels. When a logical channel is deleted, all its associated configuration data shall also removed.]
- [TDD- If the *E-DCH TDD Information To Modify* IE includes the *E-DCH Logical Channel To Modify* IE, the DRNS shall use this information to modify the indicated logical channels:]
  - [TDD - If the *E-DCH Logical Channel To Modify* IE includes *Scheduling Priority Indicator* IE, the DRNS shall apply the values in the new configuration.]
  - [TDD - If the *E-DCH Logical Channel To Modify* IE includes *Scheduling Information* IE, the DRNS shall apply the values in the new configuration.]
  - [TDD - If the *E-DCH Logical Channel To Modify* IE includes *MAC-es Guaranteed Bit Rate* IE, the DRNS shall apply the values in the new configuration.]
  - [TDD - If the *E-DCH Logical Channel To Modify* IE includes *E-DCH DDI Value* IE, the DRNS shall apply the values in the new configuration.]
  - [1.28Mcps TDD - If the *E-DCH Logical Channel To Modify* IE includes *MAC-es Maximum Bit Rate LCR* IE, the DRNS shall use this information for the related resource allocation operation, and when applicable, for E-DCH scheduling.]
  - [TDD - If the *E-DCH Logical Channel To Modify* IE includes the *Maximum MAC-d PDU Size Extended* IE, the DRNC shall apply the value in the new configuration.]
- [TDD- If the *E-DCH TDD Information To Modify* IE includes the *MAC-e Reset Indicator* IE, then the DRNS shall use this value to determine whether MAC-e (or MAC-i) Reset is performed in the UE for sending the HARQ Failure Indication.]

#### General:

If the requested modifications are allowed by the DRNS, and if the DRNS has successfully allocated the required resources and changed to the new configuration, the DRNC shall respond to the SRNC with the RADIO LINK RECONFIGURATION RESPONSE message.

If the RADIO LINK RECONFIGURATION REQUEST message includes the *RL Specific DCH Information* IE, *HS-DSCH Information* IE, *HS-DSCH Information To Modify Unsynchronised* IE, *HS-DSCH MAC-d Flows To Add* IE, [FDD - *RL Specific E-DCH Information* IE] [TDD - *E-DCH MAC-d Flows to Add* IE], the DRNC may use the transport layer address and the binding identifier received from the SRNC when establishing a transport bearer for any Transport Channel [FDD - for which the *Transport Bearer Not Requested Indicator* IE is not included], HS-DSCH MAC-d flow being added or E-DCH MAC-d flow [FDD - for which the *Transport Bearer Not Requested Indicator* IE is not included] being added, or any Transport Channel [FDD - for which the *Transport Bearer Not Requested Indicator* IE was not included] or HS-DSCH MAC-d flow being modified for which a new transport bearer was requested with the *Transport Bearer Request Indicator* IE.

The DRNC shall include the *Transport Layer Address* IE and the *Binding ID* IE in the RADIO LINK RECONFIGURATION RESPONSE message for any Transport Channel [FDD - for which the *Transport Bearer Not Requested Indicator* IE is not included], HS-DSCH MAC-d flow being added or E-DCH MAC-d flow [FDD - for which the *Transport Bearer Not Requested Indicator* IE is not included] being added, or any Transport Channel [FDD - for which the *Transport Bearer Not Requested Indicator* IE was not included], HS-DSCH MAC-d flow or E-DCH MAC-d flow [FDD - for which the *Transport Bearer Not Requested Indicator* IE was not included] being modified for which a

new transport bearer was requested with the *Transport Bearer Request Indicator* IE. The detailed frame protocol handling during transport bearer replacement is described in [4], subclause 5.10.1, and in [32], subclause 5.3.2.

- [FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *Transport Bearer Not Requested Indicator* IE set to "Transport Bearer Shall not be Established" for a DCH or an E-DCH MAC-d flow being added, then the DRNC shall not establish a transport bearer for the concerned DCH or E-DCH MAC-d flow and shall include the *Transport Bearer Not Setup Indicator* IE for the corresponding DCH or E-DCH MAC-d flow in the RADIO LINK RECONFIGURATION RESPONSE message.]
- [FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *Transport Bearer Not Requested Indicator* IE set to "Transport Bearer may not be Established" for a DCH or an E-DCH MAC-d flow being added and:]
  - [FDD - if the DRNC establishes a transport bearer for the concerned DCH or E-DCH MAC-d flow, the DRNC shall include in the RADIO LINK RECONFIGURATION RESPONSE message the *Binding ID* IE and *Transport Layer Address* IE for establishment of a transport bearer for the DCH or E-DCH MAC-d flow being established.]
  - [FDD - if the DRNC does not establish a transport bearer for the concerned DCH or E-DCH MAC-d flow, the DRNC shall include the *Transport Bearer Not Setup Indicator* IE for the corresponding DCH or E-DCH MAC-d flow in the RADIO LINK RECONFIGURATION RESPONSE message.]

In the case of a set of co-ordinated DCHs requiring a new transport bearer on the Iur interface, the DRNC shall include the *Transport Layer Address* IE and the *Binding ID* IE in the *DCH Information Response* IE only for one of the DCHs [FDD - for which the *Transport Bearer Not Requested Indicator* IE is not included] in the set of co-ordinated DCHs.

In the case of a Radio Link being combined with another Radio Link within the DRNS, the DRNC shall include the *Transport Layer Address* IE and the *Binding ID* IE [FDD for the concerned DCH for which the *Transport Bearer Not Requested Indicator* IE is not included] in the *DCH Information Response* IE in the RADIO LINK RECONFIGURATION RESPONSE message for only one of the combined Radio Links.

[FDD - In the case of an E-DCH RL being combined with another E-DCH RL within the DRNS, the *E-DCH FDD Information Response* IE shall be included only for one of the combined E-DCH RLs.]

Any allowed rate for the uplink of a modified DCH provided for the old configuration will not be valid for the new configuration. If the DRNS needs to limit the user rate in the uplink of a DCH due to congestion caused by the UL UTRAN Dynamic Resources (see subclause 9.2.1.79) in the new configuration for a Radio Link, the DRNC shall include in the RADIO LINK RECONFIGURATION RESPONSE message the *Allowed UL Rate* IE in the *DCH Information Response* IE for this Radio Link.

Any allowed rate for the downlink of a modified DCH provided for the old configuration will not be valid for the new configuration. If the DRNS needs to limit the user rate in the downlink of a DCH due to congestion caused by the DL UTRAN Dynamic Resources (see subclause 9.2.1.79) in the new configuration for a Radio Link, the DRNC shall include in the RADIO LINK RECONFIGURATION RESPONSE message the *Allowed DL Rate* IE in the *DCH Information Response* IE for this Radio Link.

The DRNS decides the maximum and minimum SIR for the uplink of the Radio Link(s), and the DRNC shall include in the RADIO LINK RECONFIGURATION RESPONSE message the *Maximum Uplink SIR* IE and *Minimum Uplink SIR* IE for each Radio Link when these values are changed.

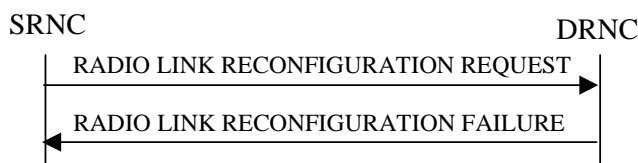
[FDD - If the DL TX power upper or lower limit has been re-configured, the DRNC shall include the new value(s) in the *Maximum DL TX Power* IE and *Minimum DL TX Power* IE in the RADIO LINK RECONFIGURATION RESPONSE message. The DRNS shall not transmit with a higher power than indicated by the *Maximum DL TX Power* IE or lower than indicated by the *Minimum DL TX Power* IE on any DL DPCH or on the F-DPCH of the RL except, if the UE Context is configured to use DPCH in the downlink, during compressed mode, when the  $\delta P_{curr}$ , as described in ref.[10] subclause 5.2.1.3, shall be added to the maximum DL power for the associated compressed frame.]

[3.84 Mcps TDD and 7.68 Mcps TDD - If the DL TX power upper or lower limit has been re-configured, the DRNC shall include the new value(s) in the *Maximum DL TX Power* IE and *Minimum DL TX Power* IE in the RADIO LINK RECONFIGURATION RESPONSE message. If the maximum or minimum power needs to be different for particular DCH type CCTrCHs, the DRNC shall include the new value(s) for that CCTrCH in the *CCTrCH Maximum DL TX Power* IE and *CCTrCH Minimum DL TX Power*. The DRNS shall not transmit with a higher power than indicated by the appropriate *Maximum DL TX Power* IE/*CCTrCH Maximum DL TX Power* IE or lower than indicated by the

appropriate *Minimum DL TX Power IE/CCTrCH Minimum DL TX Power IE* on any DL DPCH within each CCTrCH of the RL.]

[1.28 Mcps TDD - If the DL TX power upper or lower limit has been re-configured, the DRNC shall include the new value(s) in the *Maximum DL TX Power IE* and *Minimum DL TX Power IE* in the RADIO LINK RECONFIGURATION RESPONSE message. If the maximum or minimum power needs to be different for particular timeslots within a DCH type CCTrCH, the DRNC shall include the new value(s) for that timeslot in the *Maximum DL TX Power IE* and *Minimum DL TX Power IE* within the *DL Timeslot Information LCR IE*. The DRNS shall not transmit with a higher power than indicated by the appropriate *Maximum DL TX Power IE* or lower than indicated by the appropriate *Minimum DL TX Power IE* on any DL DPCH within each timeslot of the RL.]

### 8.3.7.3 Unsuccessful Operation



**Figure 15: Unsyncronised Radio Link Reconfiguration procedure, Unsuccessful Operation**

If the DRNS cannot allocate the necessary resources for all the new DCHs in a set of co-ordinated DCHs requested to be added, it shall reject the Unsyncronised Radio Link Reconfiguration procedure as having failed.

If the requested Unsyncronised Radio Link Reconfiguration procedure fails for one or more Radio Link(s), the DRNC shall send the RADIO LINK RECONFIGURATION FAILURE message to the SRNC, indicating the reason for failure.

[FDD – If the *MIMO Activation Indicator IE* is included and the *Power Offset For S-CPICH for MIMO Request Indicator IE* is not included in the *HS-DSCH FDD Information IE* in the *HS-DSCH Serving Cell Change Information IE* in the RADIO LINK RECONFIGURATION REQUEST message or MIMO is activated and the power offset for S-CPICH for MIMO Request indicator has not been configured in the UE Context but MIMO pilot configuration with Primary and Secondary CPICH is set up on the cell where the Serving HS-DSCH Radio Link is established, the setup of the serving HS-DSCH Radio Link, and/or activation of MIMO, shall be reported as failed and the DRNC shall include in the RADIO LINK RECONFIGURATION FAILURE message the *Cause IE*.]

Typical cause values are:

#### Radio Network Layer Causes:

- UL Scrambling Code Already in Use;
- DL Radio Resources not Available;
- UL Radio Resources not Available;
- Requested Configuration not Supported;
- CM not Supported;
- E-DCH not supported;
- [FDD - Continuous Packet Connectivity DTX-DRX operation not Supported;]
- [FDD - Continuous Packet Connectivity HS-SCCH less operation not Supported;]
- [FDD - MIMO not supported;]
- [FDD - E-DCH TTI2ms not supported;]
- [FDD - Continuous Packet Connectivity DTX-DRX operation not available;]
- [FDD - Continuous Packet Connectivity UE DTX Cycle not available;]
- [FDD - MIMO not available;]
- [FDD - SixteenQAM UL not Supported;]
- HS-DSCH MAC-d PDU Size Format not supported;
- E-DCH MAC-d PDU Size Format not available;
- [FDD - E-DPCCH Power Boosting not supported;]
- [FDD - SixtyfourQAM DL and MIMO Combined not available;]
- [FDD - Multi Cell operation not available;]
- [FDD - Multi Cell operation not supported;]
- [FDD - SixtyfourQAM DL and MIMO Combined not supported.]
- [1.28Mcps TDD - MIMO not available;]
- [1.28Mcps TDD- SixteenQAM UL not Supported;]

[1.28Mcps TDD - SixtyfourQAM DL and MIMO Combined not available;]

#### Miscellaneous Causes:

Control Processing Overload;  
Not enough User Plane Processing Resources.

### 8.3.7.4 Abnormal Conditions

If only a subset of all the DCHs belonging to a set of co-ordinated DCHs is requested to be deleted, the DRNS shall reject the Unsynchronised Radio Link Reconfiguration procedure as having failed, and the DRNC shall send the RADIO LINK RECONFIGURATION FAILURE message to the SRNC.

If more than one DCH of a set of co-ordinated DCHs has the *QE-Selector* IE set to "selected" [TDD - or no DCH of a set of co-ordinated DCHs has the *QE-Selector* IE set to "selected"], the DRNS shall reject the Unsynchronised Radio Link Reconfiguration procedure, and the DRNC shall respond with a RADIO LINK RECONFIGURATION FAILURE message.

If the RADIO LINK RECONFIGURATION REQUEST message includes a *DCHs To Modify* IE or *DCHs To Add* IE with multiple *DCH Specific Info* IEs, and if the DCHs in the *DCHs To Modify* IE or *DCHs To Add* IE do not have the same *Transmission Time Interval* IE in the *Semi-static Transport Format Information* IE, then the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.

[FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *DL Reference Power Information* IE, but the power balancing is not active in the indicated RL(s), the DRNS shall reject the Unsynchronised Radio Link Reconfiguration procedure as having failed and the DRNC shall respond the RADIO LINK RECONFIGURATION FAILURE message with the cause value "Power Balancing status not compatible".]

[FDD - If the power balancing is active with the Power Balancing Adjustment Type of the UE Context set to "Common" in the existing RL(s) but the *DL Reference Power Information* IE includes the *Individual DL Reference Power Information* IE, the DRNS shall reject the Unsynchronised Radio Link Reconfiguration procedure as having failed and the DRNC shall respond with the RADIO LINK RECONFIGURATION FAILURE message with the cause value "Power Balancing status not compatible".]

[FDD - If the power balancing is active with the Power Balancing Adjustment Type of the UE Context set to "Individual" in the existing RL(s) but the *DL Reference Power Information* IE includes the *Common DL Reference Power* IE, the DRNS shall reject the Unsynchronised Radio Link Reconfiguration procedure as having failed and the DRNC shall respond with the RADIO LINK RECONFIGURATION FAILURE message with the cause value "Power Balancing status not compatible".]

If the RADIO LINK RECONFIGURATION REQUEST message contains the *Transport Layer Address* IE or the *Binding ID* IE when establishing a transport bearer for any Transport Channel or HS-DSCH MAC-d flow being added, or any Transport Channel or HS-DSCH MAC-d flow being modified for which a new transport bearer was requested with the *Transport Bearer Request Indicator* IE., and not both are present for a transport bearer intended to be established, the DRNC shall reject the Unsynchronised Radio Link Reconfiguration procedure, and the DRNC shall respond with a RADIO LINK RECONFIGURATION FAILURE message.

If the RADIO LINK RECONFIGURATION REQUEST message contains any of the *HS-DSCH Information To Modify* IE, *HS-DSCH MAC-d Flows To Add* IE or *HS-DSCH MAC-d Flows To Delete* IE in addition to the *HS-DSCH Information* IE, the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.

If the RADIO LINK RECONFIGURATION REQUEST message contains any of the *HS-DSCH Information To Modify* IE, *HS-DSCH MAC-d Flows To Add* IE, *HS-DSCH MAC-d Flows To Delete* IE or *HS-PDSCH RL ID* IE and the Serving HS-DSCH Radio Link is not in the DRNS, the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.

If the RADIO LINK RECONFIGURATION REQUEST message includes the *HS-DSCH Information* IE and does not include the *HS-PDSCH RL-ID* IE, the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.

If the RADIO LINK RECONFIGURATION REQUEST message includes the *HS-PDSCH RL-ID* IE indicating a Radio Link not existing in the UE Context, the DRNS shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.

If the RADIO LINK RECONFIGURATION REQUEST message contains any of the *HS-DSCH Information IE*, *HS-DSCH Information To Modify IE*, or *HS-DSCH MAC-d Flows To Add IE* and if in the new configuration the Priority Queues associated with the same *HS-DSCH MAC-d Flow ID IE* have the same *Scheduling Priority Indicator IE* value, the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.

If, in the new configuration, the concerned UE Context is configured to use "Indexed MAC-d PDU Size" for an HS-DSCH but there exist a priority queue of the MAC-d flows of the HS-DSCH that is configured to use Maximum MAC-d PDU Size Extended, the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.

If, in the new configuration, the concerned UE Context is configured to use "Flexible MAC-d PDU Size" for an HS-DSCH but there exist a priority queue of the MAC-d flows of the HS-DSCH that is configured to use MAC-d PDU Size Index, the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.

If, in the new configuration, the UE Context is configured to use "Fixed MAC-d PDU Size" for an E-DCH and there exist a Logical Channel of the MAC-d flows of the E-DCH that is configured to use Maximum MAC-d PDU Size Extended, the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.

If, in the new configuration, the concerned UE Context is configured to use "Flexible MAC-d PDU Size" for an E-DCH and there exist a Logical Channel of the MAC-d flows of the E-DCH that is configured to use MAC-d PDU Size List, the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.

If the RADIO LINK RECONFIGURATION REQUEST message includes *HS-DSCH Information IE* and the HS-DSCH is already configured in the UE Context, the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.

[FDD - If the *E-DCH FDD Information IE* is present in the RADIO LINK RECONFIGURATION REQUEST message, but the *E-DPCH Information IE* is not present or if any of the *Maximum Set of E-DPDCHs IE*, *Puncture Limit IE*, *E-TFCS Information IE*, *E-TTI IE*, *E-DPCCH Power Offset IE*, *E-RGCH 2-Index-Step Threshold IE*, *E-RGCH 3-Index-Step Threshold IE*, *HARQ Info for E-DCH IE* or *HS-DSCH Configured Indicator IE* are not present in the *E-DPCH Information IE*, then the DRNS shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.]

[FDD - If any of the *HS-DSCH Configured Indicator IE*, *Maximum Set of E-DPDCHs IE*, *Puncture Limit IE* or *E-TTI IE* are present in the *E-DPCH Information IE* and the *E-DCH FDD Information IE* is not present in the RADIO LINK RECONFIGURATION REQUEST message, then the DRNS shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.]

[FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *E-DCH RL Indication IE* set to "E-DCH", but no *E-DCH FDD Information IE*, and the UE Context is not configured for E-DCH, then the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.]

[FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *E-DCH FDD Information IE* but no *E-DCH RL Indication IE* set to "E-DCH", then the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.]

If the RADIO LINK RECONFIGURATION REQUEST message contains the *HS-PDSCH RL ID IE* and/or the *Serving E-DCH RL IE* and if both HS-DSCH and E-DCH are configured in the new configuration but the Serving HS-DSCH Radio Link and the Serving E-DCH Radio Link are not in the same cell then the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.

[FDD - If the RADIO LINK RECONFIGURATION REQUEST message contains the *HS-PDSCH RL ID IE* and the *E-DPCH Information IE* which includes the *HS-DSCH Configured Indicator IE* set as "HS-DSCH not configured" then the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.]

[FDD - If the RADIO LINK RECONFIGURATION REQUEST message contains any of the *E-DCH FDD Information To Modify IE*, *E-DCH MAC-d Flows To Add IE* or *E-DCH MAC-d Flows To Delete IE* in addition to the *E-DCH FDD Information IE*, the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.]

[FDD - If the RADIO LINK RECONFIGURATION REQUEST message contains any of the *E-DCH FDD Information To Modify IE*, *E-DCH MAC-d Flows To Add IE*, *E-DCH MAC-d Flows To Delete IE* and the UE Context is not configured for E-DCH, the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.]

[FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *E-DCH FDD Information To Modify* IE deleting the last remaining E-DCH Logical Channel of an E-DCH MAC-d Flow, the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.]

[FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes *E-DCH FDD Information* IE and the E-DCH is already configured in the UE Context, the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.]

[FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *Continuous Packet Connectivity DTX-DRX Information To Modify* IE in addition to the *Continuous Packet Connectivity DTX-DRX Information* IE, then the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.]

[FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *Continuous Packet Connectivity HS-SCCH less Deactivate Indicator* IE in addition to the *Continuous Packet Connectivity HS-SCCH less Information* IE, the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message. ]

[FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *Continuous Packet Connectivity HS-SCCH less Deactivate Indicator* IE while the Continuous Packet Connectivity HS-SCCH less configuration isn't configured in the DRNC, the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.]

[FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *Continuous Packet Connectivity DTX-DRX Information To Modify* IE while the Continuous Packet Connectivity DTX-DRX configuration isn't configured in the DRNC, the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.]

[FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *DRX Information To Modify* IE in *Continuous Packet Connectivity DTX-DRX Information To Modify* IE while the Continuous Packet Connectivity DRX configuration is not configured in the DRNC, the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.]

If the *DCHs to Modify* IE contains a *DCH Specific Info* IE which includes the *Unidirectional DCH Indicator* IE set to "Uplink DCH only" but no *Transport Format Set* IE for the uplink for this DCH and the DRNC had ignored the configuration of Transport Format Set for uplink, the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.

If the *DCHs to Modify* IE contains a *DCH Specific Info* IE which includes the *Unidirectional DCH Indicator* IE set to "Downlink DCH only" but no *Transport Format Set* IE for the downlink for this DCH and the DRNC had ignored the configuration of Transport Format Set for downlink, the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.

[FDD - If the RADIO LINK RECONFIGURATION REQUEST message contains the *Transport Bearer Not Requested Indicator* IE for a DCH or an E-DCH MAC-d flow but does not contain the corresponding *DCH ID* IE and the *Unidirectional DCH indicator* IE set to "Uplink DCH only" for the DCH in *DCH Information To Add* IE or does not contain the corresponding *E-DCH MAC-d Flow ID* IE in *E-DCH MAC-d Flows Information* IE, the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.]

[FDD - If the concerned UE Context is configured to apply UL DPCCH Slot Format 0 or 2 and execute Continuous Packet Connectivity DTX-DRX operation, then the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.]

[FDD - If the concerned UE Context is configured to apply MIMO, allowed to apply 64QAM or or establish the the secondary serving HS-DSCH Radio Link but is not configured to use flexible MAC-d PDU Size, then the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.]

[FDD - If the RADIO LINK RECONFIGURATION REQUEST message contains a *MIMO Activation Indicator* IE and an *Additional HS Cell Information RL Reconf Req* IE, then the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.]

[FDD - If the RADIO LINK RECONFIGURATION REQUEST message contains an *Additional HS Cell Information RL Reconf Req* IE and the concerned UE Context is configured to apply MIMO, then the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.]

[FDD – If the RADIO LINK RECONFIGURATION REQUEST message contains the *Additional HS Cell Information RL Reconf Req* IE indicating a new secundary serving cell that is not in the same Node B as the serving HS-DSCH cell

(or new serving in case of simultaneous serving HS-DSCH cell change), then the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message]

[FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *Transport Bearer Not Requested Indicator* IE for a DCH in the *RL Specific DCH Information* IE but does not include the *DCH ID* IE for the DCH in the *DCHs to Add* IE, the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.]

[FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *Transport Bearer Not Requested Indicator* IE for an E-DCH MAC-d flow in the *RL Specific E-DCH Information* IE but does not include the *E-DCH MAC-d flow ID* IE for the E-DCH MAC-d flow in the *E-DCH MAC-d flows Information* IE, the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.]

[FDD – If the RADIO LINK RECONFIGURATION REQUEST message contains the *Continuous Packet Connectivity DTX-DRX Information* IE but the concerned UE Context is not previously configured to use F-DPCH, then the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message]

[FDD - If the concerned UE Context is configured to have the Serving E-DCH Radio Link but there is at least one E-DCH MAC-d flow which the transport bearer is not configured for the Serving E-DCH Radio Link in DRNS, the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.]

[FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *Transport Bearer Not Requested Indicator* IE for a DCH or an E-DCH MAC-d Flow for a specific RL and the specific RL is combined with existing RL which the transport bearer is established for the DCH or the E-DCH MAC-d Flow in the DRNS, the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.]

If ALCAP is not used, if the concerned UE Context is configured to establish a DCH, an E-DCH MAC-d flow and/or an HS-DSCH MAC-d flow but the RADIO LINK RECONFIGURATION REQUEST message does not include the *Transport Layer Address* IE and the *Binding ID* IE for the DCH, the E-DCH MAC-d flow and/or HS-DSCH MAC-d flow, the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.

If, in the new configuration, there exist a priority queue of the MAC-d flows of the HS-DSCH that is configured to use "Flexible RLC PDU Size" for an HS-DSCH but is not configured to use Maximum MAC-d PDU Size Extended, the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.

If, in the new configuration, the concerned UE Context is configured to use MAC-d PDU Size Index for an HS-DSCH but there exist a priority queue of the MAC-d flows of the HS-DSCH that is configured to use "Flexible RLC PDU Size", the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.

## 8.3.8 Physical Channel Reconfiguration

### 8.3.8.1 General

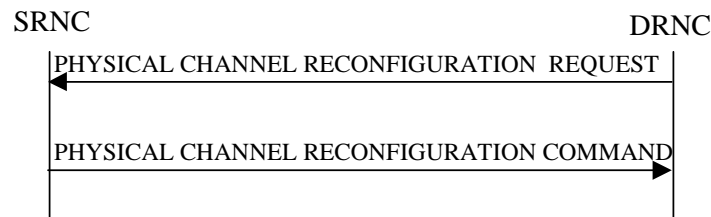
The Physical Channel Reconfiguration procedure is used by the DRNS to request the SRNC to reconfigure one of the configured physical channels.

This procedure shall use the signalling bearer connection for the relevant UE Context.

The DRNS shall not initiate the Physical Channel Reconfiguration procedure if a Prepared Reconfiguration exists as defined in subclause 3.1, or if a Synchronised Radio Link Reconfiguration Preparation procedure, Unsynchronised Radio Link Reconfiguration procedure or Radio Link Deletion procedure is ongoing for the relevant UE context.



### 8.3.8.2 Successful Operation



**Figure 16: Physical Channel Reconfiguration procedure, Successful Operation**

When the DRNC detects the need to modify one of its physical channels, it shall send a PHYSICAL CHANNEL RECONFIGURATION REQUEST to the SRNC.

The PHYSICAL CHANNEL RECONFIGURATION REQUEST message contains the new value(s) of the physical channel parameter(s) of the radio link for which the DRNC is requesting the reconfiguration.

[FDD - If compressed mode is prepared or active and at least one of the downlink compressed mode methods is "SF/2", the DRNC shall include the *Transmission Gap Pattern Sequence Scrambling Code Information IE* in the *DL Code Information IE* in the PHYSICAL CHANNEL RECONFIGURATION REQUEST message indicating for each DL Channelisation Code whether the alternative scrambling code will be used or not if the downlink compressed mode methods "SF/2" is activated.]

[TDD - The SRNC shall apply the new values for any of [3.84Mcps TDD - *UL Code Information IE*, *Midamble Shift And Burst Type IE*,] [1.28Mcps TDD - *UL Code Information LCR IE*, *Midamble Shift LCR IE*,] [7.68 Mcps TDD - *UL Code Information 7.68 Mcps IE*, *Midamble Shift And Burst Type 7.68 Mcps IE*,] *TDD DPCH Offset IE*, *Repetition Period IE*, *Repetition Length IE*, or *TFCI presence IE* included in the *UL DPCH Information IE* within the PHYSICAL CHANNEL RECONFIGURATION REQUEST message, otherwise the previous values specified for this DPCH shall still apply.]

[TDD - The SRNC shall apply the new values for any of [3.84Mcps TDD - *DL Code Information IE*, *Midamble Shift And Burst Type IE*,] [1.28Mcps TDD - *DL Code Information LCR IE*, *Midamble Shift LCR IE*,] [7.68 Mcps TDD - *DL Code Information 7.68 Mcps IE*, *Midamble Shift And Burst Type 7.68 Mcps IE*,] *TDD DPCH Offset IE* *Repetition Period IE*, *Repetition Length IE*, or *TFCI presence IE* included in the *DL DPCH Information IE* within the PHYSICAL CHANNEL RECONFIGURATION REQUEST message, otherwise the previous values specified for this DPCH shall still apply.]

[3.84 Mcps TDD - If the PHYSICAL CHANNEL RECONFIGURATION REQUEST includes *HS-PDSCH Timeslot Specific Information IE* the SRNC shall apply the values of the *Midamble Shift And Burst Type IE* for each HS-PDSCH timeslot.]

[1.28 Mcps TDD - If the PHYSICAL CHANNEL RECONFIGURATION REQUEST includes *HS-PDSCH Timeslot Specific Information LCR IE* the SRNC shall apply the values of the *Midamble Shift LCR IE* for each HS-PDSCH timeslot.]

[1.28 Mcps TDD – if the PHYSICAL CHANNEL RECONFIGURATION REQUEST includes the *PLCCH Information IE* the SRNC shall modify, delete or grant a new PLCCH assignment to the indicated timeslot of the indicated UL DCH-type CCTrCH according to its content.]

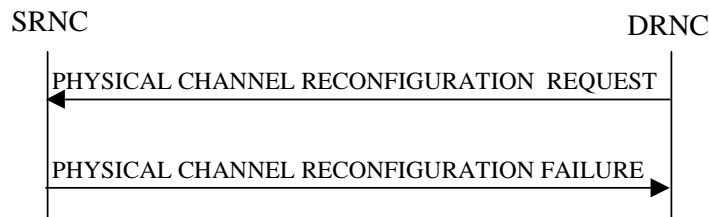
[7.68 Mcps TDD - If the PHYSICAL CHANNEL RECONFIGURATION REQUEST includes *HS-PDSCH Timeslot Specific Information 7.68 Mcps IE* the SRNC shall apply the values of the *Midamble Shift And Burst Type 7.68 Mcps IE* for each HS-PDSCH timeslot.]

[FDD - If the PHYSICAL CHANNEL RECONFIGURATION REQUEST includes *F-DPCH Slot Format IE* the SRNC shall apply the values of the *F-DPCH Slot Formats IE* for F-DPCH Slot Format operation.]

Upon receipt of the PHYSICAL CHANNEL RECONFIGURATION REQUEST, the SRNC shall decide an appropriate execution time for the change. The SRNC shall respond with a PHYSICAL CHANNEL RECONFIGURATION COMMAND message to the DRNC that includes the *CFN IE* indicating the execution time.

At the CFN, the DRNS shall switch to the new configuration that has been requested, and release the resources related to the old physical channel configuration.

### 8.3.8.3 Unsuccessful Operation



**Figure 17: Physical Channel Reconfiguration procedure, Unsuccessful Operation**

If the SRNC cannot accept the reconfiguration request it shall send the PHYSICAL CHANNEL RECONFIGURATION FAILURE message to the DRNC, including the reason for the failure in the *Cause* IE.

Typical cause values are:

**Radio Network Layer Causes:**

- Reconfiguration not Allowed.

### 8.3.8.4 Abnormal Conditions

While waiting for the PHYSICAL CHANNEL RECONFIGURATION COMMAND message, if the DRNC receives any of the RADIO LINK RECONFIGURATION PREPARE, RADIO LINK RECONFIGURATION REQUEST, or RADIO LINK DELETION REQUEST messages, the DRNC shall abort the Physical Channel Reconfiguration procedure. These messages thus override the DRNC request for physical channel reconfiguration.

When the SRNC receives a PHYSICAL CHANNEL RECONFIGURATION REQUEST message while a Synchronised Radio Link Reconfiguration procedure, Unsynchronised Radio Link Reconfiguration procedure or Radio Link Deletion procedure is ongoing, the SRNC shall ignore the request message and assume that receipt of any of the messages RADIO LINK RECONFIGURATION PREPARE, RADIO LINK RECONFIGURATION REQUEST or RADIO LINK DELETION REQUEST by the DRNC has terminated the Physical Channel Reconfiguration procedure. In this case the SRNC shall not send a PHYSICAL CHANNEL RECONFIGURATION FAILURE message to the DRNC.

## 8.3.9 Radio Link Failure

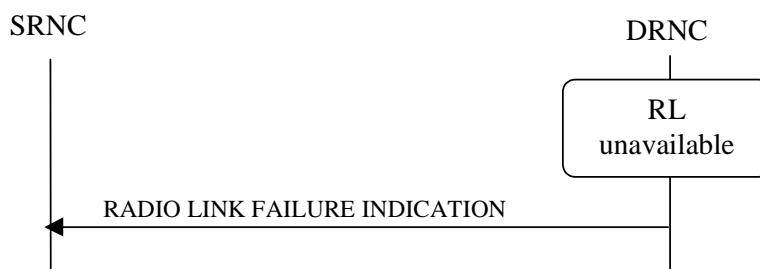
### 8.3.9.1 General

This procedure is started by the DRNS when one or more Radio Links [FDD - or Radio Link Sets][TDD - or CCTrCHs within a Radio Link] are no longer available.

This procedure shall use the signalling bearer connection for the relevant UE Context.

The DRNS may initiate the Radio Link Failure procedure at any time after establishing a Radio Link.

### 8.3.9.2 Successful Operation



**Figure 18: Radio Link Failure procedure, Successful Operation**

When the DRNC detects that one or more Radio Link(s) [FDD - or Radio Link Set(s)] [TDD - or CCTrCHs within a Radio Link] are no longer available, it shall send the RADIO LINK FAILURE INDICATION message to the SRNC. The message indicates the failed Radio Link(s) [FDD - or Radio Link Set(s)] [TDD - or CCTrCHs] with the most appropriate cause values defined in the *Cause* IE. If the failure concerns one or more individual Radio Links the DRNC shall include the affected Radio Link(s) using the *RL Information* IE. [FDD - If the failure concerns one or more Radio Link Set(s) the DRNC shall include the affected Radio Link Set(s) using the *RL Set Information* IE.] [TDD - If the failure concerns only the failure of one or more CCTrCHs within a radio link the DRNC shall include the affected CCTrCHs using the *CCTrCH ID* IE.]

When the RL Failure procedure is used to notify loss of UL synchronisation of a [FDD - Radio Link Set] [TDD - Radio Link or CCTrCHs within a Radio Link] on the Uu interface, the RADIO LINK FAILURE INDICATION message shall be sent with the *Cause* IE set to "Synchronisation Failure" when indicated by the UL synchronisation detection algorithm defined in ref. [10] subclause 4.3 and [22] subclause 4.4.2.

[FDD - When the Radio Link Failure procedure is used to indicate permanent failure in one or more Radio Link(s)/Radio Link Set(s) due to the occurrence of an UL or DL frame with more than one transmission gap caused by one or more compressed mode pattern sequences, the DL transmission shall be stopped and the RADIO LINK FAILURE INDICATION message shall be sent with the *Cause Value* IE set to "Invalid CM Settings". After sending the RADIO LINK FAILURE INDICATION message to notify the permanent failure, the DRNS shall not remove the Radio Link(s)/Radio Link Set(s) from the UE Context, or remove the UE Context itself.]

[FDD – When the Radio Link Failure Procedure is used to indicate E-DCH non serving cell processing issue, the RADIO LINK FAILURE INDICATION shall be sent, with the *Cause* IE set to "Not enough user plane processing resources".]

In the other cases the Radio Link Failure procedure is used to indicate that one or more Radio Link(s) [FDD - or Radio Link Set(s)] are permanently unavailable and cannot be restored. After sending the RADIO LINK FAILURE INDICATION message to notify the permanent failure, the DRNS shall not remove the Radio Link from the UE Context, or remove the UE Context itself. When applicable, the allocation retention priorities associated with the transport channels shall be used by the DRNS to prioritise which Radio Links to indicate as unavailable to the SRNC.

Typical cause values are:

**Radio Network Layer Causes:**

Synchronisation Failure;  
Invalid CM Settings.

**Transport Layer Causes:**

Transport Resources Unavailable.

**Miscellaneous Causes:**

Control Processing Overload;  
HW Failure;  
O&M Intervention;  
Not enough user plane processing resources.

### 8.3.9.3 Abnormal Conditions

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## 8.3.10 Radio Link Restoration

### 8.3.10.1 General

This procedure is used to notify establishment and re-establishment of UL synchronisation of one or more [FDD - RL Set(s)] [TDD - Radio Links or CCTrCH(s) in a Radio Link] on the Uu interface.

This procedure shall use the signalling bearer connection for the relevant UE Context.

The DRNC may initiate the Radio Link Restoration procedure at any time after establishing a Radio Link.

### 8.3.10.2 Successful Operation



**Figure 19: Radio Link Restoration procedure, Successful Operation**

The DRNC shall send the RADIO LINK RESTORE INDICATION message to the SRNC when and as specified by the UL Uu synchronisation detection algorithm defined in ref. [10] subclause 4.3 and [22] subclause 4.4.2 [FDD -, or when the *Fast Reconfiguration Mode* IE has been included in the RADIO LINK RECONFIGURATION COMMIT message and the DRNS has detected that the UE has changed to the new configuration. The algorithm in ref. [10] shall use the minimum value of the parameters N\_INSYNC\_IND that are configured in the cells supporting the radio links of the RL Set.]

[TDD - If the re-established UL Uu synchronisation concerns one or more individual Radio Links the DRNC shall include in the RADIO LINK RESTORE INDICATION message the *RL Information* IE to indicate the affected Radio Link(s). If the re-established synchronisation concerns one or more individual CCTrCHs within a radio link the DRNS shall include in the RADIO LINK RESTORE INDICATION message the *RL Information* IE to indicate the affected CCTrCHs.] [FDD - If the re-established UL Uu synchronisation concerns one or more Radio Link Sets the DRNC shall include in the RADIO LINK RESTORE INDICATION message the *RL Set Information* IE to indicate the affected Radio Link Set(s).]

[FDD – The DRNC shall send the RADIO LINK RESTORE INDICATION message when the E-DCH processing issue condition has ceased.]

### 8.3.10.3 Abnormal Conditions

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## 8.3.11 Dedicated Measurement Initiation

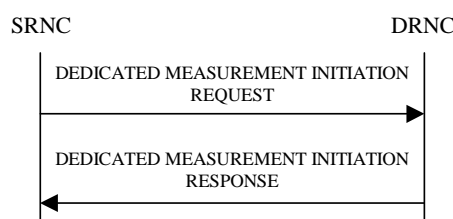
### 8.3.11.1 General

This procedure is used by an SRNS to request the initiation of dedicated measurements in a DRNS.

This procedure shall use the signalling bearer connection for the relevant UE Context.

The Dedicated Measurement Initiation procedure shall not be initiated if a Prepared Reconfiguration exists, as defined in subclause 3.1.

### 8.3.11.2 Successful Operation



**Figure 20: Dedicated Measurement Initiation procedure, Successful Operation**

The procedure is initiated with a DEDICATED MEASUREMENT INITIATION REQUEST message sent from the SRNC to the DRNC.

Upon receipt, the DRNC shall initiate the requested dedicated measurement according to the parameters given in the DEDICATED MEASUREMENT INITIATION REQUEST message.

If the Dedicated Measurement Object Type is indicated as being "RL" in the DEDICATED MEASUREMENT INITIATION REQUEST message, measurement results shall be reported for all the indicated Radio Links.

[FDD - If the Dedicated Measurement Object Type is indicated as being "RLS" in the DEDICATED MEASUREMENT INITIATION REQUEST message, measurement results shall be reported for all the indicated Radio Link Sets.]

[FDD - If the Dedicated Measurement Object Type is indicated as being "ALL RL" in the DEDICATED MEASUREMENT INITIATION REQUEST message, measurement results shall be reported for all current and future Radio Links within the UE Context.]

[TDD - If the Dedicated Measurement Object Type is indicated as being "ALL RL" in the DEDICATED MEASUREMENT INITIATION REQUEST message, measurement results shall be reported for one existing DPCH per CCTrCH in each used time slot of current and future Radio Links within the UE Context, provided the measurement type is applicable to the respective DPCH.]

[FDD - If the Dedicated Measurement Object Type is indicated as being "ALL RLS" in the DEDICATED MEASUREMENT INITIATION REQUEST message, measurement results shall be reported for all the existing and future Radio Link Sets within the UE Context.]

[TDD - If the *DPCH ID* IE or *DPCH ID 7.68Mcps* IE is provided within the RL Information, the measurement request shall apply for the requested physical channel individually. If no *DPCH ID* IE, *DPCH ID 7.68Mcps* IE or *HS-SICH ID* IE is provided within the RL Information the measurement request shall apply for one existing DPCH per CCTrCH in each used time slot of the Radio Link, provided the measurement type is applicable to this DPCH.]

[TDD - If the *HS-SICH Information* IE is provided within the RL Information, the measurement request shall apply for the requested physical channel individually.]

[TDD - If the *Dedicated Measurement Type* IE is set to "HS-SICH reception quality ", the DRNS shall initiate measurements of the failed, missed and total HS-SICH transmissions on all of the HS-SICH assigned to this UE Context. If either the failed or missed HS-SICH transmission satisfies the requested report characteristics, the DRNS shall report the result of both failed and missed transmission measurements along with the total number of transmissions.]

### Report characteristics

The *Report Characteristics* IE indicates how the reporting of the dedicated measurement shall be performed. See also Annex B.

If the *Report Characteristics* IE is set to "On Demand" and if the *CFN* IE is not provided, the DRNS shall report the measurement result immediately in the DEDICATED MEASUREMENT INITIATION RESPONSE message. If the *CFN* IE is provided, it indicates the frame for which the measurement value shall be provided. The provided measurement value shall be the one reported by the layer 3 filter, referred to as point C in the measurement model [26].

If the *Report Characteristics* IE is set to "Periodic" and if the *CFN* IE is not provided, the DRNS shall immediately and periodically initiate the Dedicated Measurement Reporting procedure for this measurement, with a frequency as specified by the *Report Periodicity* IE. If the *CFN* IE is provided, the DRNS shall initiate a Dedicated Measurement Reporting procedure for this measurement at the CFN indicated in the *CFN* IE, and shall repeat this initiation periodically thereafter with a frequency as specified by the *Report Periodicity* IE. The provided measurement value shall be the one reported by the layer 3 filter, referred to as point C in the measurement model [26].

If the *Report Characteristics* IE is set to "Event A", the DRNS shall initiate the Dedicated Measurement Reporting procedure when the measured entity rises above the requested threshold, as specified by the *Measurement Threshold* IE, and then stays above the threshold for the requested hysteresis time, as specified by the *Measurement Hysteresis Time* IE. If the *Measurement Hysteresis Time* IE is not included, the DRNC shall use the value zero for the hysteresis time.

If the *Report Characteristics* IE is set to "Event B", the DRNS shall initiate the Dedicated Measurement Reporting procedure when the measured entity falls below the requested threshold, as specified by the *Measurement Threshold* IE, and then stays below the threshold for the requested hysteresis time, as specified by the *Measurement Hysteresis Time* IE. If the *Measurement Hysteresis Time* IE is not included, the DRNC shall use the value zero for the hysteresis time.

If the *Report Characteristics* IE is set to "Event C", the DRNS shall initiate the Dedicated Measurement Reporting procedure when the measured entity rises more than the requested threshold specified by the *Measurement*

*Increase/Decrease Threshold* IE, and only when this rise occurs within the requested rising time specified by the *Measurement Change Time* IE. After reporting this type of event, DRNS shall not initiate the next C event reporting for the same measurement during the subsequent time specified by the *Measurement Change Time* IE.

If the *Report Characteristics* IE is set to "Event D", the DRNS shall initiate the Dedicated Measurement Reporting procedure when the measured entity falls more than the requested threshold specified by the *Measurement Increase/Decrease Threshold* IE, and only when this falls occurs within the requested falling time specified by the *Measurement Change Time* IE. After reporting this type of event, the DRNS shall not initiate the next D event reporting for the same measurement during the subsequent time specified by the *Measurement Change Time* IE.

If the *Report Characteristics* IE is set to "Event E", the DRNS shall initiate the Dedicated Measurement Reporting procedure when the measured entity rises above the *Measurement Threshold 1* IE and stays above the threshold for the *Measurement Hysteresis Time* IE (Report A). When the conditions for Report A are met and if the *Report Periodicity* IE is provided, the DRNS shall initiate the Dedicated Measurement Reporting procedure periodically with the requested report frequency specified by the *Report Periodicity* IE. If the conditions for Report A have been met and the measured entity falls below the *Measurement Threshold 2* IE and stays below the threshold for the *Measurement Hysteresis Time* IE, the DRNS shall initiate the Dedicated Measurement Reporting procedure (Report B) and shall terminate any corresponding periodic reporting. If the *Measurement Threshold 2* IE is not present, the DRNS shall use the value of the *Measurement Threshold 1* IE instead. If the *Measurement Hysteresis Time* IE is not included, the DRNC shall use the value zero as hysteresis times for both Report A and Report B.

If the *Report Characteristics* IE is set to "Event F", the DRNS shall initiate the Dedicated Measurement Reporting procedure when the measured entity falls below the *Measurement Threshold 1* IE and stays below the threshold for the *Measurement Hysteresis Time* IE (Report A). When the conditions for Report A are met and if the *Report Periodicity* IE is provided, the DRNS shall initiate the Dedicated Measurement Reporting procedure periodically with the requested report frequency specified by the *Report Periodicity* IE. If the conditions for Report A have been met and the measured entity rises above the *Measurement Threshold 2* IE and stays above the threshold for the *Measurement Hysteresis Time* IE, the DRNS shall initiate the Dedicated Measurement Reporting procedure (Report B) and shall terminate any corresponding periodic reporting. If the *Measurement Threshold 2* IE is not present, the DRNS shall use the value of the *Measurement Threshold 1* IE instead. If the *Measurement Hysteresis Time* IE is not included, the DRNC shall use the value zero as hysteresis times for both Report A and Report B.

If the *Report Characteristics* IE is not set to "On –Demand", the DRNS is required to perform reporting for a dedicated measurement object, in accordance with the conditions provided in the DEDICATED MEASUREMENT INITIATION REQUEST message, as long as the object exists. If no dedicated measurement object(s) for which a measurement is defined exists any more, the DRNS shall terminate the measurement locally without reporting this to the SRNC.

If at the start of the measurement, the reporting criteria are fulfilled for any of Event A, Event B, Event E or Event F, the DRNS shall initiate the Dedicated Measurement Reporting procedure immediately, and then continue with the measurements as specified in the DEDICATED MEASUREMENT INITIATION REQUEST message.

### Higher layer filtering

The *Measurement Filter Coefficient* IE indicates how filtering of the dedicated measurement values shall be performed before measurement event evaluation and reporting.

The averaging shall be performed according to the following formula.

$$F_n = (1 - a) \cdot F_{n-1} + a \cdot M_n$$

The variables in the formula are defined as follows:

$F_n$  is the updated filtered measurement result

$F_{n-1}$  is the old filtered measurement result

$M_n$  is the latest received measurement result from physical layer measurements, the unit used for  $M_n$  is the same unit as the reported unit in the DEDICATED MEASUREMENT INITIATION RESPONSE, DEDICATED MEASUREMENT REPORT messages or the unit used in the event evaluation (i.e. same unit as for  $F_n$ ).

$a = 1/2^{(k/2)}$ , where  $k$  is the parameter received in the *Measurement Filter Coefficient* IE. If the *Measurement Filter Coefficient* IE is not present,  $a$  shall be set to 1 (no filtering)

In order to initialise the averaging filter,  $F_0$  is set to  $M_1$  when the first measurement result from the physical layer measurement is received.

**Measurement Recovery Behavior:**

If the *Measurement Recovery Behavior* IE is included in the DEDICATED MEASUREMENT INITIATION REQUEST message, the DRNS shall, if Measurement Recovery Behavior is supported, include the *Measurement Recovery Support Indicator* IE in the DEDICATED MEASUREMENT INITIATION RESPONSE message and perform the Measurement Recovery Behavior as described in subclause 8.3.12.2.

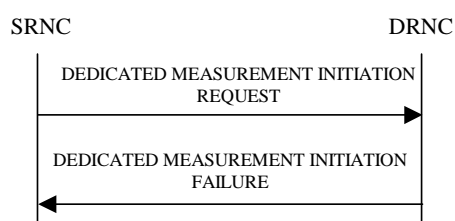
**Response message**

If the DRNS was able to initiate the measurement requested by the SRNS it shall respond with the DEDICATED MEASUREMENT INITIATION RESPONSE message. The message shall include the same Measurement ID that was used in the DEDICATED MEASUREMENT INITIATION REQUEST message.

In the case in which the *Report Characteristics* IE is set to "On Demand":

- The DRNC shall include the measurement result in the *Dedicated Measurement Value* IE within the DEDICATED MEASUREMENT INITIATION RESPONSE message.
- If the *CFN Reporting Indicator* IE is set to "FN Reporting Required", the *CFN* IE shall be included in the DEDICATED MEASUREMENT INITIATION RESPONSE message. The reported CFN shall be the CFN at the time when the dedicated measurement value was reported by the layer 3 filter, referred to as point C in the measurement model [26].
- [TDD - If the measurement was made on a particular DPCH, the DEDICATED MEASUREMENT INITIATION RESPONSE message shall include the DPCH ID of that DPCH in the [1.28Mcps TDD and 3.84Mcps TDD - *DPCH ID* IE] [7.68Mcps TDD - *DPCH ID 7.68Mcps* IE].]
- [TDD - If the measurement was made on a particular HS-SICH, the DEDICATED MEASUREMENT INITIATION RESPONSE message shall include the ID of that HS-SICH in the *HS-SICH ID* IE.]

[FDD – If the *Alternative Format Reporting Indicator* IE is set to "Alternative format is allowed" in the DEDICATED MEASUREMENT INITIATION REQUEST message, the DRNC may include the *Extended Round Trip Time* IE in the DEDICATED MEASUREMENT INITIATION RESPONSE message.]

**8.3.11.3 Unsuccessful Operation**

**Figure 21: Dedicated Measurement Initiation procedure, Unsuccessful Operation**

If the requested measurement cannot be initiated for one of the RL/RLS, the DRNC shall send a DEDICATED MEASUREMENT INITIATION FAILURE message. The message shall include the same *Measurement ID* IE that was used in the DEDICATED MEASUREMENT INITIATION REQUEST message and shall include the *Cause* IE set to an appropriate value.

If the DEDICATED MEASUREMENT INITIATION REQUEST message includes the *Partial Reporting Indicator* IE, the DRNS shall, if partial reporting is supported, separate the unsuccessful measurement initiations from the successful measurement initiations. For the successful measurement initiations on a RL or an RLS, the DRNS shall include the *Successful RL Information* IE or the *Successful RL Set Information* IE for the concerned RL or RLS if the *Report Characteristics* IE in the DEDICATED MEASUREMENT INITIATION REQUEST message was set to "On Demand". For the unsuccessful measurement initiations, the DRNS shall include the *Individual Cause* IE set to an appropriate value if it differs from the value of the *Cause* IE.

Typical cause values are:

**Radio Network Layer Causes:**

Measurement not Supported For The Object  
Measurement Temporarily not Available

#### Miscellaneous Causes:

Control Processing Overload  
HW Failure

### 8.3.11.4 Abnormal Conditions

The allowed combinations of the Dedicated Measurement Type and Report Characteristics Type are shown in the table below marked with "X". For not allowed combinations, the DRNS shall reject the Dedicated Measurement Initiation procedure using the DEDICATED MEASUREMENT INITIATION FAILURE message.

**Table 4: Allowed Dedicated Measurement Type and Report Characteristics Type combinations**

| Dedicated Measurement Type            | Report Characteristics Type |          |         |         |         |         |         |         | On Modification |
|---------------------------------------|-----------------------------|----------|---------|---------|---------|---------|---------|---------|-----------------|
|                                       | On Demand                   | Periodic | Event A | Event B | Event C | Event D | Event E | Event F |                 |
| SIR                                   | X                           | X        | X       | X       | X       | X       | X       | X       |                 |
| SIR Error                             | X                           | X        | X       | X       | X       | X       | X       | X       |                 |
| Transmitted Code Power                | X                           | X        | X       | X       | X       | X       | X       | X       |                 |
| RSCP                                  | X                           | X        | X       | X       | X       | X       | X       | X       |                 |
| Rx Timing Deviation                   | X                           | X        | X       | X       |         |         | X       | X       |                 |
| Round Trip Time                       | X                           | X        | X       | X       | X       | X       | X       | X       |                 |
| Rx Timing Deviation LCR               | X                           | X        | X       | X       |         |         | X       | X       |                 |
| HS-SICH Reception Quality             | X                           | X        | X       | X       |         |         | X       | X       |                 |
| Angle Of Arrival LCR                  | X                           | X        |         |         |         |         |         |         |                 |
| Rx Timing Deviation 7.68Mcps          | X                           | X        | X       | X       |         |         | X       | X       |                 |
| Rx Timing Deviation 3.84Mcps Extended | X                           | X        | X       | X       |         |         | X       | X       |                 |

If the Dedicated Measurement Type received in the *Dedicated Measurement Type* IE is not defined in ref. [11] or [14] to be measured on the Dedicated Measurement Object Type received in the DEDICATED MEASUREMENT INITIATION REQUEST message, the DRNS shall reject the Dedicated Measurement Initiation procedure.

If the *CFN* IE is included in the DEDICATED MEASUREMENT INITIATION REQUEST message and the *Report Characteristics* IE is other than "Periodic" or "On Demand", the DRNS shall reject the Dedicated Measurement Initiation procedure, and the DRNC shall send a DEDICATED MEASUREMENT INITIATION FAILURE message.

### 8.3.12 Dedicated Measurement Reporting

#### 8.3.12.1 General

This procedure is used by the DRNS to report the results of the successfully initiated measurements requested by the SRNS with the Dedicated Measurement Initiation procedure.

This procedure shall use the signalling bearer connection for the relevant UE Context.

The DRNC may initiate the Dedicated Measurement Reporting procedure at any time after establishing a Radio Link.



### 8.3.12.2 Successful Operation



**Figure 22: Dedicated Measurement Reporting procedure, Successful Operation**

If the requested measurement reporting criteria are met, the DRNS shall initiate the Dedicated Measurement Reporting procedure. If the measurement was initiated (by the Dedicated Measurement Initiation procedure) for multiple dedicated measurement objects, the DRNC may include dedicated measurement values in the *Dedicated Measurement Value Information* IE for multiple objects in the DEDICATED MEASUREMENT REPORT message.

The *Measurement ID* IE shall be set to the Measurement ID provided by the SRNC when initiating the measurement with the Dedicated Measurement Initiation procedure.

If the achieved measurement accuracy does not fulfil the given accuracy requirement specified in ref. [23] and [24] or the measurement is temporarily not available in case Measurement Recovery Behavior is supported, the Measurement not available shall be reported in the *Dedicated Measurement Value Information* IE in the DEDICATED MEASUREMENT REPORT message, otherwise the DRNC shall include the *Dedicated Measurement Value* IE within the *Dedicated Measurement Value Information* IE. If the DRNC was configured to perform the Measurement Recovery Behavior, the DRNC shall indicate Measurement Available to the SRNC when the achieved measurement accuracy again fulfils the given accuracy requirement (see ref. [23] and [24]) and include the *Measurement Recovery Report Indicator* IE in the DEDICATED MEASUREMENT REPORT message if the requested measurement reporting criteria are not met.

If the CFN Reporting Indicator when initiating the measurement with the Dedicated Measurement Initiation procedure was set to "FN Reporting Required", the DRNC shall include the *CFN* IE in the DEDICATED MEASUREMENT REPORT message. The reported CFN shall be the CFN at the time when the dedicated measurement value was reported by the layer 3 filter, referred to as point C in the measurement model [26].

[TDD - If the measurement was made on a particular DPCH, the DEDICATED MEASUREMENT REPORT message shall include the DPCH ID of that DPCH in the [1.28Mcps TDD and 3.84Mcps TDD - *DPCH ID* IE] [7.68Mcps TDD - *DPCH ID 7.68Mcps* IE].]

[TDD - If the measurement was made on a particular HS-SICH, the DEDICATED MEASUREMENT INITIATION RESPONSE message shall include the ID of that HS-SICH in the *HS-SICH ID* IE.]

[FDD – If the *Alternative Format Reporting Indicator* IE was set to "Alternative format is allowed" in the DEDICATED MEASUREMENT INITIATION REQUEST message setting up the measurement to be reported, the DRNC may include the *Extended Round Trip Time* IE in the DEDICATED MEASUREMENT REPORT message.]

### 8.3.12.3 Abnormal Conditions

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## 8.3.13 Dedicated Measurement Termination

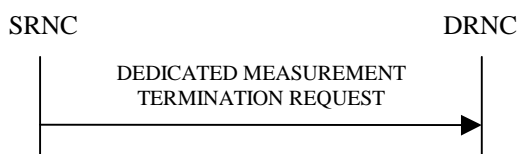
### 8.3.13.1 General

This procedure is used by the SRNS to terminate a measurement previously requested by the Dedicated Measurement Initiation procedure.

This procedure shall use the signalling bearer connection for the relevant UE Context.

The Dedicated Measurement Termination procedure shall not be initiated if a Prepared Reconfiguration exists, as defined in subclause 3.1.

### 8.3.13.2 Successful Operation



**Figure 23: Dedicated Measurement Termination procedure, Successful Operation**

This procedure is initiated with a DEDICATED MEASUREMENT TERMINATION REQUEST message, sent from the SRNC to the DRNC.

Upon receipt, the DRNS shall terminate reporting of dedicated measurements corresponding to the received *Measurement ID* IE.

### 8.3.13.3 Abnormal Conditions

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## 8.3.14 Dedicated Measurement Failure

### 8.3.14.1 General

This procedure is used by the DRNS to notify the SRNS that a measurement previously requested by the Dedicated Measurement Initiation procedure can no longer be reported. When partial reporting is allowed and supported, this procedure shall be used to report that measurement for one or more RL/RLS can no longer be reported.

This procedure shall use the signalling bearer connection for the relevant UE Context.

The DRNC may initiate the Dedicated Measurement Failure procedure at any time after establishing a Radio Link.

### 8.3.14.2 Successful Operation



**Figure 24: Dedicated Measurement Failure procedure, Successful Operation**

This procedure is initiated with a DEDICATED MEASUREMENT FAILURE INDICATION message, sent from the DRNC to the SRNC, to inform the SRNC that a previously requested dedicated measurement can no longer be reported. The DRNC has locally terminated the indicated measurement. The DRNC shall include in the DEDICATED MEASUREMENT FAILURE INDICATION message the reason for the failure in the *Cause* IE.

The DRNS shall include *Unsuccessful RL Information* IE or the *Unsuccessful RL Set Information* IE for the concerned RL or RLS if partial reporting is allowed and it is supported. The DRNS shall include the *Individual Cause* IE set to an appropriate value if it differs from the value of the *Cause* IE.

Typical cause values are:

#### Miscellaneous Causes:

- Control Processing Overload
- HW Failure

- O&M Intervention

### 8.3.14.3 Abnormal Conditions

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## 8.3.15 Downlink Power Control [FDD]

### 8.3.15.1 General

The purpose of this procedure is to balance the DL transmission powers of one or more radio links for one UE.

This procedure shall use the signalling bearer connection for the relevant UE Context.

The Downlink Power Control procedure may be initiated by the SRNC at any time after establishing a Radio Link. If the SRNC has initiated in this DRNS the deletion of the last Radio Link for this UE context, the Downlink Power Control procedure shall not be initiated.

### 8.3.15.2 Successful Operation



**Figure 25: Downlink Power Control procedure, Successful Operation**

The Downlink Power Control procedure is initiated by the SRNC sending a DL POWER CONTROL REQUEST message to the DRNC.

The *Power Adjustment Type* IE defines the characteristic of the power adjustment.

If the value of the *Power Adjustment Type* IE is "Common", the DRNS shall set the Power Balancing Adjustment Type of the UE Context set to "Common". As long as the Power Balancing Adjustment Type of the UE Context is set to "Common", the DRNS shall perform the power adjustment (see below) for all existing and future radio links for the UE Context and use a common DL reference power level.

If the value of the *Power Adjustment Type* IE is "Individual", the DRNS shall set the Power Balancing Adjustment Type of the UE Context set to "Individual". The DRNS shall perform the power adjustment (see below) for all radio links addressed in the message using the given DL Reference Power per RL. If the Power Balancing Adjustment Type of the UE Context was set to "Common" before this message was received, power balancing on all radio links not addressed by the DL POWER CONTROL REQUEST message shall remain to be executed in accordance with the existing power balancing parameters which are now considered RL individual parameters. Power balancing will not be started on future radio links without a specific request.

If the value of the *Power Adjustment Type* IE is "None", the DRNS shall set the Power Balancing Adjustment Type of the UE Context set to "None" and the DRNS shall suspend on going power adjustments for all radio links for the UE Context.

If the *Inner Loop DL PC Status* IE is present and set to "Active", the DRNS shall activate inner loop DL power control for all radio links for the UE Context. If the *Inner Loop DL PC Status* IE is present and set to "Inactive", the DRNS shall deactivate inner loop DL power control for all radio links for the UE Context according to ref. [10].

### Power Adjustment

The power balancing adjustment shall be superimposed on the inner loop power control adjustment (see ref. [10]) if activated. The power balancing adjustment shall be such that:

$$\sum P_{bal} = (1 - r)(P_{ref} + P_{P-CPICH} - P_{init}) \text{ with an accuracy of } \pm 0.5 \text{ dB}$$

where the sum is performed over an adjustment period corresponding to a number of frames equal to the value of the *Adjustment Period IE*,  $P_{ref}$  is the value of the *DL Reference Power IE*,  $P_{P-CPICH}$  is the power used on the primary CPICH,  $P_{init}$  is the code power of the last slot of the previous adjustment period and  $r$  is given by the *Adjustment Ratio IE*. If the last slot of the previous adjustment period is within a transmission gap due to compressed mode,  $P_{init}$  shall be set to the same value as the code power of the slot just before the transmission gap.

The adjustment within one adjustment period shall in any case be performed with the constraints given by the *Max Adjustment Step IE* and the DL TX power range set by the DRNC.

The power adjustments shall be started at the first slot of a frame with CFN modulo the value of *Adjustment Period IE* equal to 0 and shall be repeated for every adjustment period and shall be restarted at the first slot of a frame with CFN=0, until a new DL POWER CONTROL REQUEST message is received or the RL is deleted.

### 8.3.15.3 Abnormal Conditions

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## 8.3.16 Compressed Mode Command [FDD]

### 8.3.16.1 General

The Compressed Mode Command procedure is used to activate or deactivate the compressed mode in the DRNS for one UE-UTRAN connection. This procedure shall use the signalling bearer connection for the relevant UE Context.

The Compressed Mode Command procedure shall not be initiated if a Prepared Reconfiguration exists, as defined in subclause 3.1.

### 8.3.16.2 Successful Operation



**Figure 26: Compressed Mode Command procedure, Successful Operation**

The procedure is initiated by the SRNC sending a COMPRESSED MODE COMMAND message to the DRNC.

Upon receipt of the COMPRESSED MODE COMMAND message from the SRNC and at the CFN indicated in the *CM Configuration Change CFN IE*, the DRNS shall deactivate all the ongoing Transmission Gap Pattern Sequences. From that moment on all Transmission Gap Pattern Sequences included in *Transmission Gap Pattern Sequence Status IE* repetitions (if present) shall be started when the indicated *TGCFN IE* elapses. The *CM Configuration Change CFN IE* in the *Active Pattern Sequence Information IE* and *TGCFN IE* for each sequence refer to the next coming CFN with that value.

If the values of the *CM Configuration Change CFN IE* and the *TGCFN IE* are equal, the concerned Transmission Gap Pattern Sequence shall be started immediately at the CFN with a value equal to the value received in the *CM Configuration Change CFN IE*.

If the concerned UE Context is configured to use F-DPCH in the downlink, the DRNS shall ignore, when activating the Transmission Gap Pattern Sequence(s), the downlink compressed mode method information, if existing, for the concerned Transmission Gap Pattern Sequence(s) in the Compressed Mode Configuration.

### 8.3.16.3 Abnormal Conditions

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## 8.3.17 Downlink Power Timeslot Control [TDD]

### 8.3.17.1 General

The purpose of this procedure is to provide the DRNS with updated DL Timeslot ISCP values to use when deciding the DL TX Power for each timeslot.

This procedure shall use the signalling bearer connection for the relevant UE Context.

The Downlink Power Timeslot Control procedure can be initiated by the SRNC at any time after establishing a Radio Link. If the SRNC has initiated deletion of the last Radio Link in this DRNS, the Downlink Power Timeslot Control procedure shall not be initiated.

### 8.3.17.2 Successful Operation



**Figure 26A: Downlink Power Timeslot Control procedure, Successful Operation**

The Downlink Power Timeslot Control procedure is initiated by the SRNC sending a DL POWER TIMESLOT CONTROL REQUEST message to the DRNC.

Upon receipt of the DL POWER TIMESLOT CONTROL REQUEST message, the DRNS shall use the included [3.84Mcps TDD and 7.68 Mcps TDD - *DL Timeslot ISCP Info IE*] [1.28Mcps TDD - *DL Timeslot ISCP Info LCR IE*] value when deciding the DL TX Power for each timeslot as specified in [22], i.e. it shall reduce the DL TX power in those downlink timeslots of the radio link in which the interference is low, and increase the DL TX power in those timeslots in which the interference is high, while keeping the total downlink power in the radio link unchanged.

If the *Primary CCPCH RSCP Delta IE* is included, the DRNS shall assume that the reported value for Primary CCPCH RSCP is in the negative range as per [24], and the value is equal to the *Primary CCPCH RSCP Delta IE*. If the *Primary CCPCH RSCP Delta IE* is not included and the *Primary CCPCH RSCP IE* is included, the DRNS shall assume that the reported value is in the non-negative range as per [24], and the value is equal to the *Primary CCPCH RSCP IE*. The DRNS should use the indicated value for HS-DSCH scheduling and transmit power adjustment.

### 8.3.17.3 Abnormal Conditions

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## 8.3.18 Radio Link Pre-emption

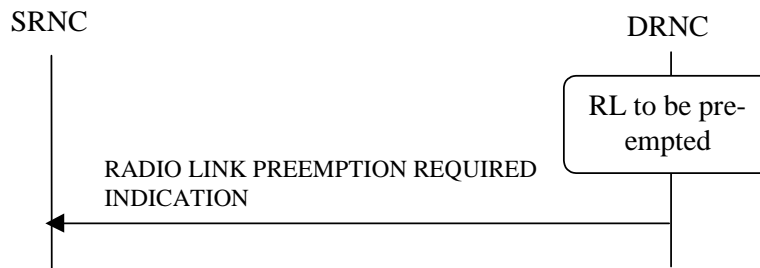
### 8.3.18.1 General

This procedure is started by the DRNS when resources need to be freed.

This procedure shall use the signalling bearer connection for the UE Context associated with the RL to be pre-empted.

The DRNS may initiate the Radio Link Pre-emption procedure at any time after establishing a Radio Link.

### 8.3.18.2 Successful Operation



**Figure 26B: Radio Link Pre-emption procedure, Successful Operation**

When DRNC detects that one or more Radio Link(s) should be pre-empted (see Annex A), it shall send the RADIO LINK PREEMPTION REQUIRED INDICATION message to the SRNC. If all Radio Links for a UE Context should be pre-empted, the *RL Information* IE shall not be included in the message. If one or several but not all Radio Link(s) should be pre-empted for an UE Context, the Radio Link(s) that should be pre-empted shall be indicated in the *RL Information* IE. The Radio Link(s) that should be pre-empted, should be deleted by the SRNC.

[FDD – If only the E-DCH traffic on a Radio Link should be pre-empted, the DRNC shall indicate the EDCH MAC-d flows that should be pre-empted by including the *E-DCH MAC-d Flow Specific Information* IE in the RADIO LINK PREEMPTION REQUIRED INDICATION message.]

When only the HS-DSCH traffic on a Radio Link should be pre-empted, the DRNC shall indicate the HS-DSCH MAC-d flow(s) that should be pre-empted by including the *HS-DSCH MAC-d Flow Specific Information* IE in the RADIO LINK PREEMPTION REQUIRED INDICATION message.

### 8.3.18.3 Abnormal Conditions

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## 8.3.19 Radio Link Congestion

### 8.3.19.1 General

This procedure is started by the DRNS when resource congestion is detected and the rate of one or more DCHs, corresponding to one or more radio links, is preferred to be limited in the UL and/or DL. This procedure is also used by the DRNC to indicate to the SRNC any change of the UL/DL resource congestion situation, affecting these radio links. This procedure shall use the signalling bearer connection for the relevant UE Context.

The Radio Link Congestion procedure shall not be initiated if a Prepared Reconfiguration exists, as defined in subclause 3.1.

### 8.3.19.2 Successful Operation



**Figure 26C: Radio Link Congestion procedure, Successful Operation**

#### Start of an UL/DL Resource Congestion Situation

When the DRNC detects the start of a UL/DL resource congestion situation and prefers the rate of one or more DCHs for one or more Radio Link(s) to be limited below the maximum rate currently configured in the UL/DL TFS, it shall send the RADIO LINK CONGESTION INDICATION message to the SRNC. The DRNC shall indicate the cause of the congestion in the *Congestion Cause* IE and shall indicate all the Radio Links for which the rate of a DCH needs to

be reduced. For each DCH within the RL with UL congestion, the DRNC shall indicate the desired maximum UL data rate with the *Allowed UL Rate IE* in the *Allowed Rate Information IE*. For each DCH within the RL with DL congestion, the DRNC shall indicate the desired maximum DL data rate with the *Allowed DL Rate IE* in the *Allowed Rate Information IE*.

[FDD – For each E-DCH MAC-d flow within the RL with UL congestion, the DRNC shall indicate all the MAC-d flows for which the rate cannot be fulfilled.]

When receiving the RADIO LINK CONGESTION INDICATION message the SRNC should reduce the rate in accordance with the *Congestion Cause IE* and the indicated *Allowed DL Rate IE* and/or *Allowed UL Rate IE* for a DCH.

[FDD – If the RADIO LINK CONGESTION INDICATION message includes the *DCH Indicator For E-DCH-HSDPA Operation IE*, then the SRNS shall ignore the *DCH Rate Information IE* in the RADIO LINK CONGESTION INDICATION message.]

### Change of UL/DL Resource Congestion Situation

The DRNC shall indicate any change of the UL/DL resource congestion situation by sending the RADIO LINK CONGESTION INDICATION message in which the new allowed rate(s) of the DCHs are indicated by the *Allowed Rate Information IE*. In the case that for at least one DCH the new allowed rate is lower than the previously indicated allowed rate for that DCH, the *Congestion Cause IE*, indicating the cause of the congestion, shall also be included.

When receiving a RADIO LINK CONGESTION INDICATION message indicating a further rate decrease on any DCH(s) on any RL, the SRNC should reduce the rate in accordance with the indicated congestion cause and the indicated allowed rate(s) for the DCH(s).

### End of UL/DL Resource Congestion Situation

The end of an UL resource congestion situation, affecting a specific RL, shall be indicated by including the TF corresponding to the highest data rate in the *Allowed UL Rate IE* in the *Allowed Rate Information IE* for the concerned RL. The end of a DL resource congestion situation, affecting a specific RL, shall be indicated by including the TF with the highest data rate in the *Allowed DL Rate IE* in the *Allowed Rate Information IE* for the concerned RL.

## 8.3.19.3 Abnormal Conditions

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## 8.3.20 Radio Link Activation

### 8.3.20.1 General

This procedure is used to activate or de-activate the DL transmission on the Uu interface regarding selected RLs.

### 8.3.20.2 Successful Operation



**Figure 26D: Radio Link Activation procedure**

This procedure is initiated by sending the RADIO LINK ACTIVATION COMMAND message from the SRNC to the DRNC. This procedure shall use the signalling bearer connection for the relevant UE Context.

Upon receipt, the DRNS shall for each concerned RL:

- if the *Delayed Activation Update IE* indicates "Activate":

- if the *Activation Type* IE equals "Unsynchronised":
  - [FDD - start transmission on the new RL after synchronisation is achieved in the DL user plane as specified in [4].]
  - [TDD - start transmission on the new RL immediately as specified in [4].]
- if the *Activation Type* IE equals "Synchronised":
  - [FDD - start transmission on the new RL after synchronisation is achieved in the DL user plane as specified in [4], however never before the CFN indicated in the *Activation CFN* IE.]
  - [TDD - start transmission on the new RL at the CFN indicated in the *Activation CFN* IE as specified in [4].]
- [FDD - the DRNS shall apply the power level indicated in the *Initial DL Tx Power* IE to the transmission on each DL DPCH or on the F-DPCH of the RL when starting transmission until either UL synchronisation on the Uu interface is achieved for the RLS or power balancing is activated. During this period no inner loop power control shall be performed and, unless activated by the DL POWER CONTROL REQUEST message, no power balancing shall be performed. The DL power shall then vary according to the inner loop power control (see ref.[10], subclause 5.2.1.2) and downlink power balancing adjustments (see 8.3.7).]
- [TDD - the DRNS shall apply the power level indicated in the *Initial DL Tx Power* IE to the transmission on each DL DPCH and on each Time Slot of the RL when starting transmission until the UL synchronisation on the Uu interface is achieved for the RL. No inner loop power control shall be performed during this period. The DL power shall then vary according to the inner loop power control (see ref.[22], subclause 4.2.3.3).]
- [FDD - if the *Propagation Delay* IE and optionally the *Extended Propagation Delay* IE are included, the DRNS may use this information to speed up the detection of UL synchronisation on the Uu interface.]
- [FDD - if the *First RLS Indicator* IE is included, it indicates if the concerned RL shall be considered part of the first RLS established towards this UE. The *First RLS Indicator* IE shall be used by the DRNS to determine the initial TPC pattern in the DL of the concerned RL and all RLs which are part of the same RLS, as described in [10], section 5.1.2.2.1.2.]
- if the *Delayed Activation Update* IE indicates "Deactivate":
  - stop DL transmission immediately if the Deactivation Type IE equals "Unsynchronised", or at the CFN indicated by the Deactivation CFN IE if the Deactivation Type IE equals "Synchronised".

### 8.3.20.3 Abnormal Conditions

[FDD - If the *Delayed Activation Update* IE is included in the RADIO LINK ACTIVATION COMMAND message, it indicates "Activate" and the *First RLS Indicator* IE is not included, the DRNC shall initiate the ERROR INDICATION procedure.]

## 8.3.21 Radio Link Parameter Update

### 8.3.21.1 General

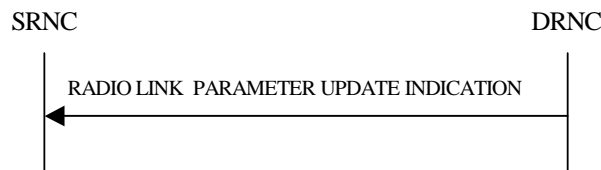
The Radio Link Parameter Update procedure is executed by the DRNS to update parameters related to HS-DSCH on a radio link for a UE-UTRAN connection or to update phase reference on a list of the radio links.

This procedure shall use the signalling bearer connection for the relevant UE context.

The Radio Link Parameter Update procedure shall not be initiated if a Prepared Reconfiguration exists, as defined in subclause 3.1.



### 8.3.21.2 Successful Operation



**Figure 26E: Radio Link Parameter Update Indication, Successful Operation**

The Radio Link Parameter Update procedure is initiated by the DRNS by sending the RADIO LINK PARAMETER UPDATE INDICATION message to the SRNC.

#### **HS-DSCH related Parameter(s) Updating:**

If RADIO LINK PARAMETER UPDATE INDICATION message is used to update the parameters related to HS-DSCH, it contains suggested value(s) of the HS-DSCH related parameter(s) that should be reconfigured on the radio link.

If the DRNS needs to update HS-DSCH related parameters, the DRNS shall initiate RADIO LINK PARAMETER UPDATE INDICATION message including [FDD - *HS-DSCH FDD Update Information IE*] [TDD - *HS-DSCH TDD Update Information IE*].

If the DRNS needs to allocate new HS-SCCH Codes, the DRNS shall initiate RADIO LINK PARAMETER UPDATE INDICATION message including *HS-SCCH Code Change Indicator IE*.

[FDD - If the DRNS needs to allocate new HS-PDSCH Codes, the DRNS shall initiate RADIO LINK PARAMETER UPDATE INDICATION message including *HS-PDSCH Code Change Indicator IE*.]

[FDD - If the DRNS needs to update the CQI Feedback Cycle  $k$ , CQI Repetition Factor, ACK-NACK Repetition Factor, CQI Power Offset, ACK Power Offset and/or NACK Power Offset, the DRNS shall initiate RADIO LINK PARAMETER UPDATE INDICATION message including *CQI Feedback Cycle  $k$  IE*, *CQI Repetition Factor IE*, *ACK-NACK Repetition Factor IE*, *CQI Power Offset IE*, *ACK Power Offset IE* and/or *NACK Power Offset IE*.]

[TDD - If the DRNS needs to update the TDD ACK-NACK Power Offset the DRNS shall initiate RADIO LINK PARAMETER UPDATE INDICATION message including *TDD ACK-NACK Power Offset IE*.]

#### **[FDD – Secondary Serving HS-DSCH related Parameter(s) Updating:]**

[FDD - If RADIO LINK PARAMETER UPDATE INDICATION message is used to update the parameters related to secondary serving HS-DSCH, it contains suggested value(s) of the secondary serving HS-DSCH related parameter(s) that should be reconfigured on the radio link.]

[FDD - If the DRNS needs to update secondary serving HS-DSCH related parameters, the DRNS shall initiate RADIO LINK PARAMETER UPDATE INDICATION message and include the *Additional HS Cell Information RL Param Upd IE*.]

- [FDD - If the DRNS needs to allocate new secondary serving HS-SCCH Codes, the DRNS shall include the HS-SCCH Code Change Indicator IE in the HS-DSCH FDD Secondary Serving Update Information IE.]

#### **[FDD – Phase Reference Handling:]**

[FDD – If DRNS needs to update phase reference for the channel estimation for one or several Radio Links, the DRNC shall initiate RADIO LINK PARAMETER UPDATE INDICATION message including *Phase Reference Update Information IE* for the concerned RL(s).]

#### **[FDD – E-DCH:]**

[FDD – If DRNS needs to update E-DCH related parameters, the DRNC shall initiate RADIO LINK PARAMETER UPDATE INDICATION message including *E-DCH FDD Update Information IE*.]

[FDD - If the DRNS needs to update the HARQ process allocation for non-scheduled transmission and/or HARQ process allocation for scheduled Transmission, the DRNS shall initiate RADIO LINK PARAMETER UPDATE

INDICATION message including the *HARQ Process Allocation For 2ms Non-Scheduled Transmission Grant IE* for the concerned MAC-d Flows and/or *HARQ Process Allocation For 2ms Scheduled Transmission Grant IE*.]

[FDD - If the DRNS needs to allocate new E-AGCH Channelisation Code, new E-RGCH/E-HICH Channelisation Code, new E-RGCH Signature Sequence and/or new E-HICH Signature Sequence, the DRNC shall initiate RADIO LINK PARAMETER UPDATE INDICATION message including *E-DCH DL Control Channel Change Information IE*.]

### 8.3.21.3 Abnormal Conditions

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## 8.3.22 UE Measurement Initiation [TDD]

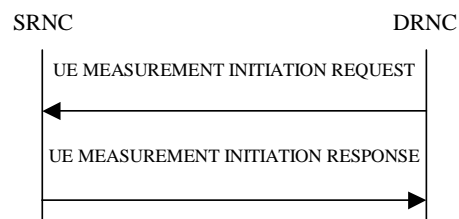
### 8.3.22.1 General

This procedure is used by a DRNC to request the initiation of UE measurements by the SRNC.

This procedure shall use the signalling bearer connection for the relevant UE Context.

The UE Measurement Initiation procedure shall not be initiated if a Prepared Reconfiguration exists, as defined in subclause 3.1.

### 8.3.22.2 Successful Operation



**Figure 26F: UE Measurement Initiation procedure, Successful Operation**

The procedure is initiated with a UE MEASUREMENT INITIATION REQUEST message sent from the DRNC to the SRNC.

Upon receipt the SRNC shall, provided that it determines that the measurement can be performed by the UE, initiate and forward the requested UE measurement according to the parameters given in the UE MEASUREMENT INITIATION REQUEST message. If the UE MEASUREMENT INITIATION REQUEST message includes the *UE Measurement Parameter Modification Allowed IE* with a value of "Parameter Modification Allowed" the *UE Measurement Report Characteristics IE* and the *Measurement Filter Coefficient IE*, if it is included, are suggested values, otherwise the values of these parameters must be fulfilled.

[3.84 Mcps TDD - If the *UE Measurement Timeslot Information HCR IE* is provided, the measurement request shall apply for the requested timeslot(s) individually. If the *UE Measurement Timeslot Information HCR IE* are not provided the SRNC may choose the timeslots for measurements that apply to individual timeslots.]

[1.28 Mcps TDD – If the *UE Measurement Timeslot Information LCR IE* is provided, the measurement request shall apply for the requested timeslot(s) individually. If the *UE Measurement Timeslot Information LCR IE* are not provided the SRNC may choose the timeslots for measurements that apply to individual timeslots.]

[7.68 Mcps TDD - If the *UE Measurement Timeslot Information 7.68 Mcps IE* is provided, the measurement request shall apply for the requested timeslot(s) individually. If the *UE Measurement Timeslot Information 7.68 Mcps IE* are not provided the SRNC may choose the timeslots for measurements that apply to individual timeslots.]

If the UE MEASUREMENT INITIATION REQUEST message includes the *Allowed Queuing Time IE* the SRNC may queue the request for a time period not to exceed the value of the *Allowed Queuing Time IE* before starting to execute the request.

The SRNC is required to perform reporting for a UE measurement object, in accordance with the conditions provided in the UE MEASUREMENT INITIATION REQUEST message, as long as the object exists. If no UE measurement object(s) for which a measurement is defined exists any more, the SRNC shall terminate the measurement locally without reporting this to the DRNC.

If at the start of the measurement, the reporting criteria are fulfilled for any of Event 1h, Event 1i, Event 6a, Event 6b, Event 6c, or Event 6d, the SRNC shall initiate the UE Measurement Reporting procedure immediately, and then continue with the measurements as specified in the UE MEASUREMENT INITIATION REQUEST message

At the start of a periodic measurement, the SRNC shall not initiate UE Measurement Reporting procedure until the next measurement is received from the UE, even if measurement data is available.

### Report characteristics

The *UE Measurement Report Characteristics* IE indicates how the reporting of the dedicated measurement shall be performed. See [16].

### Higher layer filtering

The *Measurement Filter Coefficient* IE indicates how filtering of the dedicated measurement values shall be performed before measurement event evaluation and reporting. If the *Measurement Filter Coefficient* IE is not present, *a* shall be set to 1 (no filtering). The use of the *Measurement Filter Coefficient* IE is shown in [16].

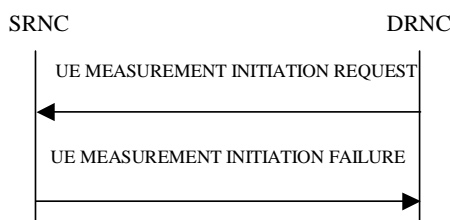
### Response message

If the SRNC was able to initiate the measurement requested by the DRNC it shall respond with the UE MEASUREMENT INITIATION RESPONSE message. The message shall include the same Measurement ID that was used in the UE MEASUREMENT INITIATION REQUEST message.

If the DRNC allowed parameter modification and the SRNC modified the *Measurement Filter Coefficient* IE the SRNC shall include the modified value in the UE MEASUREMENT INITIATION RESPONSE message.

If the DRNC allowed parameter modification and the SRNC modified the *UE Measurement Report Characteristics* IE the SRNC shall include the modified value in the UE MEASUREMENT INITIATION RESPONSE message.

## 8.3.22.3 Unsuccessful Operation



**Figure 26G: UE Measurement Initiation procedure, Unsuccessful Operation**

If the requested measurement cannot be initiated, the SRNC shall send a UE MEASUREMENT INITIATION FAILURE message. The message shall include the same *Measurement ID* IE that was used in the UE MEASUREMENT INITIATION REQUEST message and shall include the *Cause* IE set to an appropriate value.

Typical cause values are:

#### Radio Network Layer Causes:

- Measurement not Supported For The Object
- Measurement Temporarily not Available
- Measurement Repetition Rate not Compatible with Current Measurements
- UE not Capable to Implement Measurement

#### Miscellaneous Causes:

Control Processing Overload  
HW Failure

### 8.3.22.4 Abnormal Conditions

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## 8.3.23 UE Measurement Reporting [TDD]

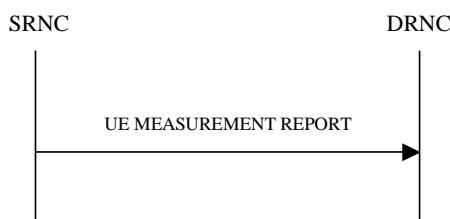
### 8.3.23.1 General

This procedure is used by the SRNC to report the results of the successfully initiated measurements requested by the DRNC with the UE Measurement Initiation procedure.

This procedure shall use the signalling bearer connection for the relevant UE Context.

The SRNC may initiate the UE Measurement Reporting procedure at any time after establishing a Radio Link.

### 8.3.23.2 Successful Operation



**Figure 26H: UE Measurement Reporting procedure, Successful Operation**

If the requested measurement reporting criteria was met in the UE and reported to the SRNC, the SRNC shall initiate the UE Measurement Reporting procedure. The *Measurement ID* IE shall be set to the Measurement ID provided by the DRNC when initiating the measurement with the UE Measurement Initiation procedure.

If Primary CCPCH RSCP is being reported:

- If the *Primary CCPCH RSCP Delta* IE is included, the DRNC shall assume that the reported value for Primary CCPCH RSCP is in the negative range as per [24], and the value is equal to the *Primary CCPCH RSCP Delta* IE.
- If the *Primary CCPCH RSCP Delta* IE is not included the DRNC shall assume that the reported value is in the non negative range as per [24], and the value is equal to the *Primary CCPCH RSCP* IE

If the achieved measurement accuracy does not fulfil the given accuracy requirement specified in ref. [24], the Measurement not available shall be reported in the *UE Measurement Value Information* IE in the UE MEASUREMENT REPORT message, otherwise the SRNC shall include the *UE Measurement Value* IE within the *UE Measurement Value Information* IE.

### 8.3.23.3 Abnormal Conditions

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## 8.3.24 UE Measurement Termination [TDD]

### 8.3.24.1 General

This procedure is used by the DRNC to terminate a measurement previously requested by the UE Measurement Initiation procedure.

This procedure shall use the signalling bearer connection for the relevant UE Context.

The UE Measurement Termination procedure shall not be initiated if a Prepared Reconfiguration exists, as defined in subclause 3.1.

### 8.3.24.2 Successful Operation



**Figure 26I: UE Measurement Termination procedure, Successful Operation**

This procedure is initiated with a UE MEASUREMENT TERMINATION REQUEST message, sent from the DRNC to the SRNC.

Upon receipt, the SRNC shall terminate forwarding of UE measurements corresponding to the received *Measurement ID* IE.

### 8.3.24.3 Abnormal Conditions

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## 8.3.25 UE Measurement Failure [TDD]

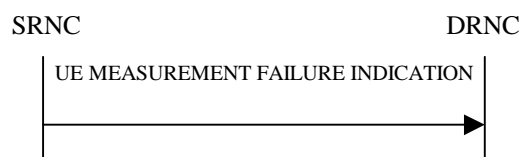
### 8.3.25.1 General

This procedure is used by the SRNC to notify the DRNC that a measurement previously requested by the UE Measurement Initiation procedure can no longer be reported.

This procedure shall use the signalling bearer connection for the relevant UE Context.

The SRNC may initiate the UE Measurement Failure procedure at any time after establishing a Radio Link.

### 8.3.25.2 Successful Operation



**Figure 26J: UE Measurement Failure procedure, Successful Operation**

This procedure is initiated with a UE MEASUREMENT FAILURE INDICATION message, sent from the SRNC to the DRNC, to inform the DRNC that a previously requested UE measurement can no longer be reported. The SRNC has locally terminated the forwarding of the indicated measurement. The SRNC shall include in the UE MEASUREMENT FAILURE INDICATION message the reason for the failure in the *Cause* IE.

Typical cause values are:

#### Miscellaneous Causes:

- Control Processing Overload
- HW Failure
- O&M Intervention

### 8.3.25.3 Abnormal Conditions

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## 8.3.26 Iur Invoke Trace

### 8.3.26.1 General

The purpose of the Iur Invoke Trace procedure is to inform the DRNC that it should begin a Trace Session for a given UE Context according to the Trace Parameters indicated by the SRNC. This procedure is used for Trace Parameter Propagation in the Signalling Based Activation mechanism as defined in [48] and [49].

This procedure shall use the signalling bearer mode specified below.

### 8.3.26.2 Successful Operation



**Figure 26K: Iur Invoke Trace procedure, Successful Operation**

The Iur Invoke Trace procedure is invoked by the SRNC by sending an IUR INVOKE TRACE message to the DRNC.

When the concerned UE is utilising one or more radio links in the DRNC the message shall be sent using the connection oriented service of the signalling bearer and no further identification of the UE Context in the DRNC is required. If on the other hand, the UE is not utilising any radio link the message shall be sent using the connectionless service of the signalling bearer and the *D-RNTI* IE shall be included in the message to identify the UE Context in the DRNC.

Upon receiving the IUR INVOKE TRACE message, the DRNC should begin a Trace Recording Session according to the parameters indicated in the IUR INVOKE TRACE message.

If the *List Of Interfaces To Trace* IE is included in the IUR INVOKE TRACE message, the DRNC shall trace, for the concerned UE Context, the interfaces indicated by the *List Of Interfaces To Trace* IE. Otherwise, the DRNC shall trace, for the concerned UE Context, the Iur and Iub interfaces.

The values of the *UE Identity* IE, *Trace Reference* IE and *Trace Recording Session Reference* IE are used to tag the Trace Record to allow simpler construction of the total record by the entity which combines Trace Records.

If the DRNC does not support the requested value "Minimum" or "Medium" of the *Trace Depth* IE, the DRNC should begin a Trace Recording Session with maximum Trace Depth.

The DRNC may not start a Trace Recording Session if there are insufficient resources available within the DRNC.

### 8.3.26.3 Abnormal Conditions

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## 8.3.27 Iur Deactivate Trace

### 8.3.27.1 General

The purpose of the Iur Deactivate Trace procedure is to inform the DRNC that it should stop a Trace Session for the concerned UE Context and the indicated Trace Reference. This procedure is used for the Signalling Based Deactivation mechanism as defined in [48] and [49].

This procedure shall use the signalling bearer mode specified below.

### 8.3.27.2 Successful Operation



**Figure 26L: Iur Invoke Trace procedure, Successful Operation**

The Iur Deactivate Trace procedure is invoked by the SRNC by sending an IUR DEACTIVATE TRACE message to the DRNC.

When the concerned UE is utilising one or more radio links in the DRNC the message shall be sent using the connection oriented service of the signalling bearer and no further identification of the UE Context in the DRNC is required. If on the other hand, the UE is not utilising any radio link the message shall be sent using the connectionless service of the signalling bearer and the *D-RNTI* IE shall be included in the message to identify the UE Context in the DRNC.

Upon receiving the IUR DEACTIVATE TRACE message, the DRNC shall stop for the concerned UE Context any ongoing Trace Recording Session for the Trace Session identified by the *Trace Reference* IE.

### 8.3.27.3 Abnormal Conditions

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## 8.3.28 Enhanced Relocation

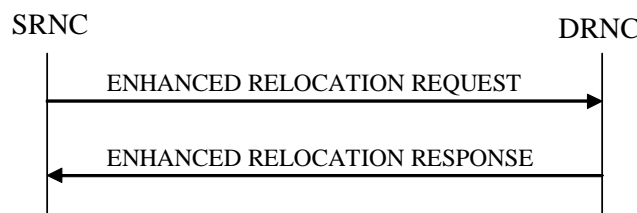
### 8.3.28.1 General

This procedure is used for relocation of SRNS in case the SRNC and DRNC connect to same CN node.

The connection-oriented service of the signalling bearer shall be established in conjunction with this procedure in case the relevant UE Context does not exist for the UE.

This procedure shall use the signalling bearer connection for the relevant UE Context in the UE Context exists. The Enhanced Relocation procedure shall not be initiated if a Prepared Reconfiguration exists, as defined in subclause 3.1.

### 8.3.28.2 Successful Operation

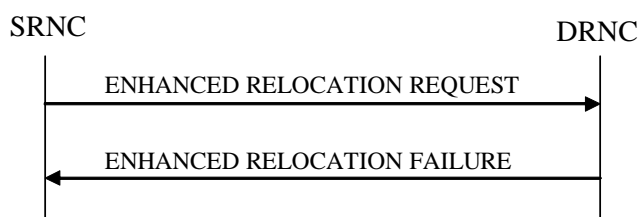


**Figure 26M: Enhanced Relocation procedure: Successful Operation**

The SRNC initiates the procedure by sending an ENHANCED RELOCATION REQUEST message. When the SRNC sends the ENHANCED RELOCATION REQUEST message, it shall start the timer  $T_{RELOC_{prep}}$ . The ENHANCED RELOCATION REQUEST message shall contain the *Cause* IE with an appropriate value e.g.: "Time critical Relocation", "Resource optimisation relocation", "Relocation desirable for radio reasons", "Directed Retry", "Reduce Load in Serving Cell", "No Iu CS UP relocation".

If the ENHANCED RELOCATION REQUEST message includes SRNC-ID, the DRNC shall create a UE Context for this UE, allocate a D-RNTI for the UE Context.

### 8.3.28.3 Unsuccessful Operation



**Figure 26N: Enhanced Relocation procedure: Unsuccessful Operation**

If the DRNC is not able to accept any of the RABs or a failure occurs during the procedure, the DRNC shall send the ENHANCED RELOCATION FAILURE message to the SRNC. The message shall contain the *Cause* IE with an appropriate value.

#### Interactions with Enhanced Relocation Cancel procedure:

If there is no response from the DRNC to the ENHANCED RELOCATION REQUEST message before timer  $T_{RELOCprep}$  expires in the DRNC, the SRNC should cancel the Enhanced Relocation procedure towards the DRNC by initiating the Enhanced Relocation Cancel procedure with the appropriate value for the *Cause* IE, e.g. " $T_{RELOCprep}$  expiry". The SRNC shall ignore any ENHANCED RELOCATION RESPONSE or ENHANCED RELOCATION FAILURE message received after the initiation of the Enhanced Relocation Cancel procedure and remove any reference and release any resources related to the concerned UE Context.

### 8.3.28.4 Abnormal Conditions

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## 8.3.29 Enhanced Relocation Cancel

### 8.3.29.1 General

This procedure is used to cancel an ongoing enhanced relocation or an already prepared relocation.

This procedure shall use the signalling bearer connection for the relevant UE Context.

### 8.3.29.2 Successful Operation



**Figure 26O: Enhanced Relocation Cancel procedure: Successful Operation**

The SRNC initiates the procedure by sending the ENHANCED RELOCATION CANCEL message to the DRNC. The SRNC shall indicate the reason for cancelling the relocation by means of an appropriate cause value. Typical cause values are " $T_{RELOCprep}$ Expiry", "Relocation Cancelled", "Traffic Load In The Target Cell Higher Than In The Source Cell".

At the reception of the ENHANCED RELOCATION CANCEL message, the DRNC shall remove any reference to, and release any resources previously reserved to the concerned UE context.

### 8.3.29.3 Unsuccessful Operation

Not applicable.



### 8.3.29.4 Abnormal Conditions

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## 8.3.30 Enhanced Relocation Signalling Transfer

### 8.3.30.1 General

The procedure is used by the SRNC to transfer DL L3 information to DRNC during enhanced relocation.

This procedure shall use the signalling bearer connection for the relevant UE Context.

### 8.3.30.2 Successful Operation



**Figure 26P: Enhanced Relocation Signalling Transfer procedure, Successful Operation**

The procedure consists of the ENHANCED RELOCATION SIGNALLING TRANSFER message sent by the SRNC to the DRNC.

The ENHANCED RELOCATION SIGNALLING TRANSFER message contains the L3 Information and after the receipt of the message, the DRNC shall send the L3 Information on the DCCH.

### 8.3.30.3 Abnormal Conditions

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## 8.3.31 Enhanced Relocation Release

### 8.3.31.1 General

The procedure is used by the DRNC to signal to the SRNC that resource for CN domain is released due to failure of the enhanced relocation.

This procedure shall use the signalling bearer connection for the relevant UE Context.

### 8.3.31.2 Successful Operation



**Figure 26Q: Enhanced Relocation Signalling Transfer procedure, Successful Operation**

The procedure consists of the ENHANCED RELOCATION RELEASE message sent by the DRNC to the SRNC.

Upon reception of the ENHANCED RELOCATION RELEASE message, the SRNC shall release related resources associated to indicated CN domain(s) by the *Released CN Domain* IE in the message for the UE context.

### 8.3.31.3 Abnormal Conditions

-

## 8.4 Common Transport Channel Procedures

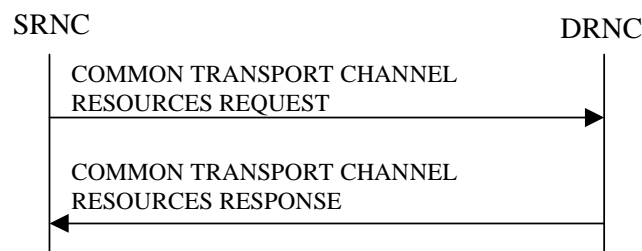
### 8.4.1 Common Transport Channel Resources Initialisation

#### 8.4.1.1 General

The Common Transport Channel Resources Initialisation procedure is used by the SRNC for the initialisation of the Common Transport Channel user plane towards the DRNC and/or for the initialisation of the Common Transport Channel resources in the DRNC to be used by a UE.

This procedure shall use the connectionless mode of the signalling bearer.

#### 8.4.1.2 Successful Operation



**Figure 27: Common Transport Channel Resources Initialisation procedure, Successful Operation**

The SRNC initiates the procedure by sending the message COMMON TRANSPORT CHANNEL RESOURCES REQUEST message to the DRNC.

If the value of the *Transport Bearer Request Indicator* IE is set to "Bearer Requested", the DRNC shall store the received *Transport Bearer ID* IE. The DRNC may use the *Transport Layer Address* and *Binding ID* IEs included in the COMMON TRANSPORT CHANNEL RESOURCES REQUEST message received from the SRNC when establishing a transport bearer for the common transport channel. In addition, the DRNC shall include its own *Binding ID* IE and *Transport Layer Address* IE in the COMMON TRANSPORT CHANNEL RESOURCES RESPONSE message.

If the *TNL QoS* IE is included and if ALCAP is not used, the *TNL QoS* IE may be used by the DRNC to determine the transport bearer characteristics to apply in the uplink between the DRNS and the SRNC for the related common transport channels.

If the value of the *Transport Bearer Request Indicator* IE is set to "Bearer not Requested", the DRNC shall use the transport bearer indicated by the *Transport Bearer ID* IE.

If the *C-ID* IE is included in the COMMON TRANSPORT CHANNEL RESOURCES REQUEST message, the DRNC shall allocate a C-RNTI for the indicated cell and include the *C-RNTI* IE in the COMMON TRANSPORT CHANNEL RESOURCES RESPONSE message.

If the *C-ID* IE is included in the COMMON TRANSPORT CHANNEL RESOURCES REQUEST message, the DRNC shall include the *FACH Info for UE Selected S-CCPCH* IE valid for the cell indicated by the *C-ID* IE and the corresponding *C-ID* IE in the COMMON TRANSPORT CHANNEL RESOURCES RESPONSE message. If the *C-ID* IE is not included in the COMMON TRANSPORT CHANNEL RESOURCES REQUEST message, the DRNC shall include the *FACH Info for UE Selected S-CCPCH* IE valid for the cell where the UE is located and the corresponding *C-ID* IE. The DRNC shall include the *FACH Scheduling Priority* IE and *FACH Initial Window Size* IE in the *FACH Flow Control Information* IE of the *FACH Info for UE Selected S-CCPCH* IE for each priority class that the DRNC has determined shall be used. The DRNC may include several *MAC-c/sh SDU Length* IEs for each priority class.

If the DRNS has any RACH and/or FACH [FDD - and/or HS-DSCH] [1.28Mcps TDD - and/or HS-DSCH] resources previously allocated for the UE in another cell than the cell in which resources are currently being allocated, the DRNS shall release the previously allocated RACH and/or FACH resources [FDD - and/or HS-DSCH] [1.28Mcps TDD - and/or HS-DSCH].

If the DRNS has successfully reserved the required resources, the DRNC shall respond to the SRNC with the COMMON TRANSPORT CHANNEL RESOURCES RESPONSE message.

If the *Permanent NAS UE Identity* IE is present in the COMMON TRANSPORT CHANNEL RESOURCES REQUEST message, the DRNS shall store the information for the considered UE Context for the lifetime of the UE Context.

If the COMMON TRANSPORT CHANNEL RESOURCES REQUEST message includes a *C-ID* IE corresponding to a cell reserved for operator use and the Permanent NAS UE Identity is available in the DRNC for the considered UE Context, the DRNC shall use this information to determine whether it can reserve resources on a common transport channel in this cell or not.

If the *MBMS Bearer Service List* IE is included in the COMMON TRANSPORT CHANNEL RESOURCES REQUEST message, the DRNC shall, if supported, perform the UE Linking as specified in [50], section 5.1.6. If an MBMS session for some MBMS bearer services contained in the UE Link is ongoing in the cell identified by the *C-ID* IE, the DRNC shall include in the *Active MBMS Bearer Service List* IE the *Transmission Mode* IE for each of these active MBMS bearer services in the COMMON TRANSPORT CHANNEL RESOURCES RESPONSE message.

[FDD - If the COMMON TRANSPORT CHANNEL RESOURCES REQUEST message includes an *Enhanced FACH Support Indicator* IE, the DRNC may include the *Enhanced FACH Information Response* IE in the COMMON TRANSPORT CHANNEL RESOURCES RESPONSE message. If a HS-DSCH RNTI was not previously allocated to the UE or a new HS-DSCH RNTI is allocated to the UE, the DRNC shall include the *HS-DSCH-RNTI* IE in the *Enhanced FACH Information Response* IE. And if Enhanced PCH operation is activated in the cell indicated by the *C-ID* IE, the DRNC shall include the *Priority Queue Information for Enhanced PCH* IE in the *Enhanced FACH Information Response* IE.]

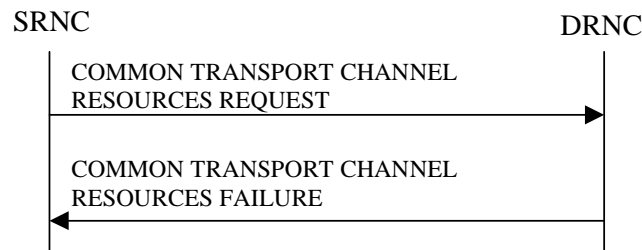
[1.28Mcps TDD - If the COMMON TRANSPORT CHANNEL RESOURCES REQUEST message includes an *Enhanced FACH Support Indicator* IE, the DRNC may include the *Enhanced FACH Information Response* IE in the COMMON TRANSPORT CHANNEL RESOURCES RESPONSE message. If a HS-DSCH RNTI was not previously allocated to the UE or a new HS-DSCH RNTI is allocated to the UE, the DRNC shall include the *HS-DSCH-RNTI* IE in the *Enhanced FACH Information Response* IE. And if Enhanced PCH operation is activated in the cell indicated by the *C-ID* IE, the DRNC shall include the *Priority Queue Information for Enhanced PCH* IE in the *Enhanced FACH Information Response* IE.]

[FDD - If the COMMON TRANSPORT CHANNEL RESOURCES REQUEST message includes an *Common E-DCH Support Indicator* IE, the DRNC may include the *Common E-DCH MAC-d Flow Specific Information* IE in the COMMON TRANSPORT CHANNEL RESOURCES RESPONSE message. If the E-DCH MAC-d Flow Multiplexing List for a Common E-DCH MAC-d Flow is configured in DRNC, the DRNC shall include the *E-DCH MAC-d Flow Multiplexing List* IE in the COMMON TRANSPORT CHANNEL RESOURCES RESPONSE message. If the COMMON TRANSPORT CHANNEL RESOURCES REQUEST message includes the *C-ID* IE and the *Common E-DCH Support Indicator* IE, the DRNC may include the *E-RNTI* IE in the COMMON TRANSPORT CHANNEL RESOURCES RESPONSE message.]

[1.28Mcps TDD - If the COMMON TRANSPORT CHANNEL RESOURCES REQUEST message includes a *Enhanced FACH Support Indicator* IE, the DRNC may include the *Common E-DCH MAC-d Flow Specific Information LCR* IE in the COMMON TRANSPORT CHANNEL RESOURCES RESPONSE message.]

If the COMMON TRANSPORT CHANNEL RESOURCES REQUEST message includes an *HS-DSCH physical layer category* IE, the DRNC may store the information for the considered UE Context for the lifetime of the UE Context.

### 8.4.1.3 Unsuccessful Operation



**Figure 28: Common Transport Channel Resources Initialisation procedure, Unsuccessful Operation**

If the *Transport Bearer Request Indicator* IE is set to "Bearer Requested" and the DRNC is not able to provide a Transport Bearer, the DRNC shall reject the procedure and respond to the SRNC with the COMMON TRANSPORT CHANNEL RESOURCES FAILURE message, including the reason for the failure in the *Cause* IE.

If the COMMON TRANSPORT CHANNEL RESOURCES REQUEST message contains a *C-ID* IE corresponding to a cell reserved for operator use and the Permanent NAS UE Identity is not available for the considered UE Context, the DRNC shall reject the procedure and send the COMMON TRANSPORT CHANNEL RESOURCES FAILURE message, including the reason for the failure in the *Cause* IE.

Typical cause values are:

**Radio Network Layer Causes:**

- Common Transport Channel Type not Supported;
- Cell reserved for operator use.

**Transport Layer Causes:**

- Transport Resource Unavailable.

### 8.4.1.4 Abnormal Conditions

If the COMMON TRANSPORT CHANNEL RESOURCES REQUEST message contains the *Transport Layer Address* IE or the *Binding ID* IE, and not both are present for a transport channel intended to be established, the DRNC shall reject the procedure using the COMMON TRANSPORT CHANNEL RESOURCES FAILURE message.

If ALCAP is not used, if the COMMON TRANSPORT CHANNEL RESOURCES REQUEST message contains the *Transport Bearer Request Indicator* IE set to "Bearer Requested" but does not contain the *Transport Layer Address* IE and the *Binding ID* IE, the DRNC shall reject the procedure using the COMMON TRANSPORT CHANNEL RESOURCES FAILURE message.

## 8.4.2 Common Transport Channel Resources Release

### 8.4.2.1 General

This procedure is used by the SRNC to request release of Common Transport Channel Resources for a given UE in the DRNS. The SRNC uses this procedure either to release the UE Context from the DRNC (and thus both the D-RNTI and the C-RNTI) or to release only the C-RNTI.

This procedure shall use the connectionless mode of the signalling bearer.

### 8.4.2.2 Successful Operation



**Figure 29: Common Transport Channel Resources Release procedure, Successful Operation**

The SRNC initiates the Common Transport Channel Resources Release procedure by sending the COMMON TRANSPORT CHANNEL RESOURCES RELEASE REQUEST message to the DRNC. Upon receipt of the message the DRNC shall release the UE Context identified by the D-RNTI and all its related RACH and/or FACH resources, unless the UE is using dedicated resources (DCH, [TDD - USCH and/or DSCH]) in the DRNS in which case the DRNC shall release only the C-RNTI and all its related RACH and/or FACH [FDD - and/or HS-DSCH] [1.28Mcps TDD - and/or HS-DSCH] resources allocated for the UE.

### 8.4.2.3 Abnormal Conditions

-

## 8.5 Global Procedures

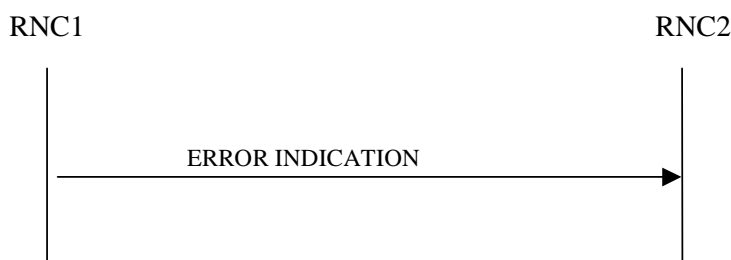
### 8.5.1 Error Indication

#### 8.5.1.1 General

The Error Indication procedure is initiated by a node to report detected errors in a received message, provided they cannot be reported by an appropriate response message.

This procedure shall use the signalling bearer mode specified below.

#### 8.5.1.2 Successful Operation



**Figure 30: Error Indication procedure, Successful Operation**

When the conditions defined in clause 10 are fulfilled, the Error Indication procedure is initiated by an ERROR INDICATION message sent from the receiving node. This message shall use the same mode of the signalling bearer and the same signalling bearer connection (if connection oriented) as the message that triggers the procedure.

When the ERROR INDICATION message is sent from a DRNC to an SRNC using connectionless mode of the signalling bearer, the *S-RNTI* IE shall be included in the message if the UE Context addressed by the *D-RNTI* IE which was received in the message triggering the Error Indication procedure exists. When the ERROR INDICATION message is sent from an SRNC to a DRNC using connectionless mode of the signalling bearer, the *D-RNTI* IE shall be included in the message if available.

When a message using connectionless mode of the signalling bearer is received in the DRNC and there is no UE Context in the DRNC as indicated by the *D-RNTI* IE, the DRNC shall include the D-RNTI from the received message in the *D-RNTI* IE and set the *Cause* IE to "Unknown RNTI" in the ERROR INDICATION message, unless another handling is specified in the procedure text for the affected procedure.

When a message using connectionless mode of the signalling bearer is received in the SRNC and there is no UE in the SRNC as indicated by the *S-RNTI* IE, the SRNC shall include the S-RNTI from the received message in the *S-RNTI* IE and set the *Cause* IE to "Unknown RNTI" in the ERROR INDICATION message, unless another handling is specified in the procedure text for the affected procedure.

The ERROR INDICATION message shall include either the *Cause* IE, or the *Criticality Diagnostics* IE, or both the *Cause* IE and the *Criticality Diagnostics* IE to indicate the reason for the error indication.

Typical cause values for the ERROR INDICATION message are:

**Protocol Causes:**

- Transfer Syntax Error
- Abstract Syntax Error (Reject)
- Abstract Syntax Error (Ignore and Notify)
- Message not Compatible with Receiver State
- Unspecified

#### 8.5.1.2.1 Successful Operation for lur-g

The RNC<sub>1</sub>/BSS<sub>1</sub> and RNC<sub>2</sub>/BSS<sub>2</sub> shall use the error indication procedure as specified in section 8.5.1.2.

#### 8.5.1.3 Abnormal Conditions

-

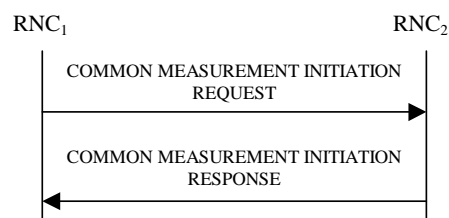
### 8.5.2 Common Measurement Initiation

#### 8.5.2.1 General

This procedure is used by an RNC to request the initiation of measurements of common resources to another RNC. The requesting RNC is referred to as RNC<sub>1</sub> and the RNC to which the request is sent is referred to as RNC<sub>2</sub>.

This procedure uses the signalling bearer connection for the relevant Distant RNC Context.

#### 8.5.2.2 Successful Operation



**Figure 30A: Common Measurement Initiation procedure, Successful Operation**

The procedure is initiated with a COMMON MEASUREMENT INITIATION REQUEST message sent from the RNC<sub>1</sub> to the RNC<sub>2</sub>.

Upon receipt, the RNC<sub>2</sub> shall initiate the requested measurement according to the parameters given in the request.

Unless specified below, the meaning of the parameters are given in other specifications.

[TDD - If the [3.84 Mcps TDD and 7.68 Mcps TDD - *Time Slot IE*] [1.28 Mcps - *Time Slot LCR IE*] is present in the COMMON MEASUREMENT INITIATION REQUEST message, the measurement request shall apply to the requested time slot individually.]

### Common measurement type

If the *Common Measurement Type IE* is set to "SFN-SFN Observed Time Difference", then:

- The RNC<sub>2</sub> shall initiate the SFN-SFN Observed Time Difference measurements between the reference cell identified by the *Reference Cell Identifier IE* and the neighbouring cells identified by the *UTRAN Cell Identifier IE (UC-ID)* in the *Neighbouring Cell Measurement Information IE*.
- [3.84 Mcps TDD - The RNC<sub>2</sub> shall perform the measurement using the time slot specified in the *Time Slot IE* in the *Neighbouring TDD Cell Measurement Information IE* and using the midamble shift and burst type specified in the *Midamble Shift And Burst Type IE* in the *Neighbouring TDD Cell Measurement Information IE*. If *Time Slot IE* and *Midamble Shift And Burst Type IE* are not available in the *Neighbouring TDD Cell Measurement Information IE*, the RNC<sub>2</sub> may use any appropriate time slots, midamble shifts and burst types to make the measurement.]
- [7.68 Mcps TDD - The RNC<sub>2</sub> shall perform the measurement using the time slot specified in the *Time Slot IE* in the *Neighbouring TDD Cell Measurement Information 7.68 Mcps IE* and using the midamble shift and burst type specified in the *Midamble Shift And Burst Type 7.68 Mcps IE* in the *Neighbouring TDD Cell Measurement Information 7.68 Mcps IE*. If *Time Slot IE* and *Midamble Shift And Burst Type 7.68 Mcps IE* are not available in the *Neighbouring TDD Cell Measurement Information 7.68 Mcps IE*, the RNC<sub>2</sub> may use any appropriate time slots, midamble shifts and burst types to make the measurement.]

If the *Common Measurement Type IE* is set to "load", the RNC<sub>2</sub> shall initiate measurements of uplink and downlink load on the measured object identified by the *Reference Cell Identifier IE*. If either uplink or downlink load satisfies the requested report characteristics, the RNC<sub>2</sub> shall report the result of both uplink and downlink measurements.

If the *Common Measurement Type IE* is set to "UTRAN GPS Timing of Cell Frames for UE Positioning", "UTRAN GANSS Timing of Cell Frames for UE Positioning", "transmitted carrier power", "received total wide band power", or "UL timeslot ISCP" the RNC<sub>2</sub> shall initiate measurements on the measured object identified by the *Reference Cell Identifier IE*.

If the *Common Measurement Type IE* is set to "UTRAN GANSS Timing of Cell Frames for UE Positioning", then the RNC<sub>2</sub> shall initiate the UTRAN GANSS Timing of Cell Frames measurements using the GNSS system time identified by *GANSS Time ID IE* included in the COMMON MEASUREMENT INITIATION REQUEST message.

- If the *Common Measurement Type IE* is set to "UTRAN GANSS Timing of Cell Frames for UE Positioning" and the *GANSS Time ID IE* is not included in the COMMON MEASUREMENT INITIATION REQUEST message, the RNC<sub>2</sub> shall assume that the corresponding GANSS time is "Galileo" system time.

If the *Common Measurement Type IE* is set to "RT load", the RNC<sub>2</sub> shall initiate measurements of uplink and downlink estimated share of RT (Real Time) traffic of the load of the measured object. If either uplink or downlink RT load satisfies the requested report characteristics, the RNC<sub>2</sub> shall report the result of both uplink and downlink measurements.

If the *Common Measurement Type IE* is set to "NRT load Information", the RNC<sub>2</sub> shall initiate measurements of uplink and downlink NRT (Non Real Time) load situation on the measured object. If either uplink or downlink NRT load satisfies the requested report characteristics, the RNC<sub>2</sub> shall report the result of both uplink and downlink measurements.

### Report characteristics

The *Report Characteristics IE* indicates how the reporting of the measurement shall be performed. See also Annex B.

If the *Report Characteristics IE* is set to "On Demand" and if the *SFN IE* is not provided, the RNC<sub>2</sub> shall report the result of the requested measurement immediately in the COMMON MEASUREMENT INITIATION RESPONSE message. If the *SFN IE* is provided, it indicates the frame for which the measurement value shall be provided. The provided measurement value shall be the one reported by the layer 3 filter, referred to as point C in the measurement model [26]. Furthermore, if the *SFN IE* is present and if the *Common Measurement Type IE* is set to "SFN-SFN

Observed Time Difference ", then the *SFN* IE relates to the Radio Frames of the Reference Cell identified by the *Reference Cell Identifier* IE.

If the *Report Characteristics* IE is set to "Periodic" and if the *SFN* IE is not provided, the RNC<sub>2</sub> shall immediately and periodically initiate a Common Measurement Reporting procedure for this measurement, with a frequency as specified by the *Report Periodicity* IE. If the *SFN* IE is provided, the RNC<sub>2</sub> shall initiate a Common Measurement Reporting procedure for this measurement at the SFN indicated in the *SFN* IE, and shall repeat this initiation periodically thereafter with a frequency as specified by the *Report Periodicity* IE. The provided measurement value shall be the one reported by the layer 3 filter, referred to as point C in the measurement model [26]. Furthermore, if the *SFN* IE is present and if the *Common Measurement Type* IE is set to "SFN-SFN Observed Time Difference ", then the *SFN* IE relates to the Radio Frames of the Reference Cell identified by the *Reference Cell Identifier* IE.

If the *Report Characteristics* IE is set to "Event A", the RNC<sub>2</sub> shall initiate the Common Measurement Reporting procedure when the measured entity rises above the requested threshold, as specified by the *Measurement Threshold* IE, and then stays above the threshold for the requested hysteresis time, as specified by the *Measurement Hysteresis Time* IE. If the *Measurement Hysteresis Time* IE is not included, the RNC<sub>2</sub> shall use the value zero for the hysteresis time.

If the *Report Characteristics* IE is set to "Event B", the RNC<sub>2</sub> shall initiate the Common Measurement Reporting procedure when the measured entity falls below the requested threshold, as specified by the *Measurement Threshold* IE, and then stays below the threshold for the requested hysteresis time, as specified by the *Measurement Hysteresis Time* IE. If the *Measurement Hysteresis Time* IE is not included, the RNC<sub>2</sub> shall use the value zero for the hysteresis time.

If the *Report Characteristics* IE is set to "Event C", the RNC<sub>2</sub> shall initiate the Common Measurement Reporting procedure when the measured entity rises more than the requested threshold specified by the *Measurement Increase/Decrease Threshold* IE, and only when this rise occurs within the requested rising time specified by the *Measurement Change Time* IE. After reporting this type of event, the RNC<sub>2</sub> shall not initiate the next C event reporting for the same measurement during the subsequent time specified by the *Measurement Change Time* IE.

If the *Report Characteristics* IE is set to "Event D", the RNC<sub>2</sub> shall initiate the Common Measurement Reporting procedure when the measured entity falls more than the requested threshold specified by the *Measurement Increase/Decrease Threshold* IE, and only when this fall occurs within the requested falling time specified by the *Measurement Change Time* IE. After reporting this type of event,, the RNC<sub>2</sub> shall not initiate the next D event reporting for the same measurement during the subsequent time specified by the *Measurement Change Time* IE.

If the *Report Characteristics* IE is set to "Event E", the RNC<sub>2</sub> shall initiate the Common Measurement Reporting procedure when the measured entity rises above the *Measurement Threshold 1* IE and stays above the threshold for the *Measurement Hysteresis Time* IE (Report A). When the conditions for Report A are met and if the *Report Periodicity* IE is provided, the RNC<sub>2</sub> shall initiate the Common Measurement Reporting procedure periodically with the requested report frequency specified by the *Report Periodicity* IE. If the conditions for Report A have been met and the measured entity falls below the *Measurement Threshold 2* IE and stays below the threshold for the *Measurement Hysteresis Time* IE, the RNC<sub>2</sub> shall initiate the Common Measurement Reporting procedure (Report B) and shall terminate any corresponding periodic reporting. If the *Measurement Threshold 2* IE is not present, the RNC<sub>2</sub> shall use the value of the *Measurement Threshold 1* IE instead. If the *Measurement Hysteresis Time* IE is not included, the RNC<sub>2</sub> shall use the value zero as hysteresis times for both Report A and Report B.

If the *Report Characteristics* IE is set to "Event F", the RNC<sub>2</sub> shall initiate the Common Measurement Reporting procedure when the measured entity falls below the *Measurement Threshold 1* IE and stays below the threshold for the *Measurement Hysteresis Time* IE (Report A). When the conditions for Report A are met and if the *Report Periodicity* IE is provided, the RNC<sub>2</sub> shall initiate the Measurement Reporting procedure periodically with the requested report frequency specified by the *Report Periodicity* IE. If the conditions for Report A have been met and the measured entity rises above the *Measurement Threshold 2* IE and stays above the threshold for the *Measurement Hysteresis Time* IE, the RNC<sub>2</sub> shall initiate the Common Measurement Reporting procedure (Report B) and shall terminate any corresponding periodic reporting. If the *Measurement Threshold 2* IE is not present, the RNC<sub>2</sub> shall use the value of the *Measurement Threshold 1* IE instead. If the *Measurement Hysteresis Time* IE is not included, the RNC<sub>2</sub> shall use the value zero as hysteresis times for both Report A and Report B.

If the *Report Characteristics* IE is set to "On Modification" and if the *SFN* IE is not provided, the RNC<sub>2</sub> shall report the result of the requested measurement immediately. If the *SFN* IE is provided, it indicates the frame for which the first measurement value shall be provided. The provided measurement value shall be the one reported by the layer 3 filter, referred to as point C in the measurement model [26]. Furthermore, if the *SFN* IE is present and if the *Common Measurement Type* IE is set to "SFN-SFN Observed Time Difference", then the *SFN* IE relates to the Radio Frames of the Reference Cell identified by the *Reference Cell Identifier* IE. Following the first measurement report, the RNC<sub>2</sub> shall initiate the Common Measurement Reporting procedure in accordance to the following conditions:



1. If the *Common Measurement Type* IE is set to "UTRAN GPS Timing of Cell Frames for UE Positioning":

- If the *T<sub>UTRAN-GPS</sub> Change Limit* IE is included in the *T<sub>UTRAN-GPS</sub> Measurement Threshold Information* IE, the RNC<sub>2</sub> shall calculate the change of T<sub>UTRAN-GPS</sub> value (F<sub>n</sub>) each time a new measurement result is received after point C in the measurement model [26]. The RNC<sub>2</sub> shall initiate the Common Measurement Reporting procedure and set n equal to zero when the absolute value of F<sub>n</sub> rises above the threshold indicated by the *T<sub>UTRAN-GPS</sub> Change Limit* IE. The change of T<sub>UTRAN-GPS</sub> value (F<sub>n</sub>) is calculated according to the following:

$$F_n=0 \quad \text{for } n=0$$

$$F_n = (M_n - M_{n-1}) \bmod 37158912000000 - ((SFN_n - SFN_{n-1}) \bmod 4096) * 10 * 3.84 * 10^3 * 16 + F_{n-1} \quad \text{for } n > 0$$

F<sub>n</sub> is the change of the T<sub>UTRAN-GPS</sub> value expressed in unit [1/16 chip] when n measurement results have been received after the first Common Measurement Reporting at initiation or after the last event was triggered.

M<sub>n</sub> is the latest measurement result received after point C in the measurement model [26], measured at SFN<sub>n</sub>.

M<sub>n-1</sub> is the previous measurement result received after point C in the measurement model [26], measured at SFN<sub>n-1</sub>.

M<sub>1</sub> is the first measurement result received after point C in the measurement model [26], after first Common Measurement Reporting at initiation or after the last event was triggered.

M<sub>0</sub> is equal to the value reported in the first Common Measurement Reporting at initiation or in the Common Measurement Reporting when the event was triggered.

- If the *Predicted T<sub>UTRAN-GPS</sub> Deviation Limit* IE is included in the *T<sub>UTRAN-GPS</sub> Measurement Threshold Information* IE, the RNC<sub>2</sub> shall update the P<sub>n</sub> and F each time a new measurement result is received after point C in the measurement model [26]. The RNC<sub>2</sub> shall initiate the Common Measurement Reporting procedure and set n equal to zero when F<sub>n</sub> rises above the threshold indicated by the *Predicted T<sub>UTRAN-GPS</sub> Deviation Limit* IE. The P<sub>n</sub> and F<sub>n</sub> are calculated according to the following:

$$P_n=b \quad \text{for } n=0$$

$$P_n = ((a/16) * ((SFN_n - SFN_{n-1}) \bmod 4096) / 100 + ((SFN_n - SFN_{n-1}) \bmod 4096) * 10 * 3.84 * 10^3 * 16 + P_{n-1}) \bmod 37158912000000 \quad \text{for } n > 0$$

$$F_n = \min((M_n - P_n) \bmod 37158912000000, (P_n - M_n) \bmod 37158912000000) \quad \text{for } n > 0$$

P<sub>n</sub> is the predicted T<sub>UTRAN-GPS</sub> value when n measurement results have been received after the first Common Measurement Reporting at initiation or after the last event was triggered.

a is the last reported T<sub>UTRAN-GPS</sub> Drift Rate value.

b is the last reported T<sub>UTRAN-GPS</sub> value.

F<sub>n</sub> is the deviation of the last measurement result from the predicted T<sub>UTRAN-GPS</sub> value (P<sub>n</sub>) when n measurements have been received after the first Common Measurement Reporting at initiation or after the last event was triggered.

M<sub>n</sub> is the latest measurement result received after point C in the measurement model [26], measured at SFN<sub>n</sub>.

M<sub>1</sub> is the first measurement result received after point C in the measurement model [26], after first Common Measurement Reporting at initiation or after the last event was triggered.

The T<sub>UTRAN-GPS</sub> Drift Rate is determined by the RNS<sub>2</sub> in an implementation-dependent way after point B (see model of physical layer measurements in [26]).

2. If the *Common Measurement Type* IE is set to "SFN-SFN Observed Time Difference":

- If the *SFN-SFN Change Limit* IE is included in the *SFN-SFN Measurement Threshold Information* IE, the RNC<sub>2</sub> shall calculate the change of SFN-SFN value (F<sub>n</sub>) each time a new measurement result is received after point C in the measurement model [26]. The RNC<sub>2</sub> shall initiate the Common Measurement Reporting procedure in order to report the particular SFN-SFN measurement which has triggered the event and set n

equal to zero when the absolute value of  $F_n$  rises above the threshold indicated by the *SFN-SFN Change Limit IE*. The change of the SFN-SFN value is calculated according to the following:

$$F_n=0 \text{ for } n=0$$

$$[FDD - F_n = (M_n - a) \bmod 614400 \quad \text{for } n>0]$$

$$[TDD - F_n = (M_n - a) \bmod 40960 \quad \text{for } n>0]$$

$F_n$  is the change of the SFN-SFN value expressed in unit [1/16 chip] when  $n$  measurement results have been received after the first Common Measurement Reporting at initiation or after the last event was triggered.

$a$  is the last reported SFN-SFN.

$M_n$  is the latest measurement result received after point C in the measurement model [26], measured at SFN <sub>$n$</sub> .

$M_1$  is the first measurement result received after point C in the measurement model [26], after the first Common Measurement Reporting at initiation or after the last event was triggered.

- If the *Predicted SFN-SFN Deviation Limit IE* is included in the *SFN-SFN Measurement Threshold Information IE*, the RNC<sub>2</sub> shall each time a new measurement result is received after point C in the measurement model [26], update the  $P_n$  and  $F_n$ . The RNC<sub>2</sub> shall initiate the Common Measurement Reporting procedure in order to report the particular SFN-SFN measurement which has triggered the event and set  $n$  equal to zero when  $F_n$  rises above the threshold indicated by the *Predicted SFN-SFN Deviation Limit IE*. The  $P_n$  and  $F_n$  are calculated according to the following:

$$P_n=b \quad \text{for } n=0$$

$$[FDD - P_n = ((a/16) * ((SFN_n - SFN_{n-1}) \bmod 4096)/100 + P_{n-1}) \bmod 614400 \quad \text{for } n>0]$$

$$[FDD - F_n = \min((M_n - P_n) \bmod 614400, (P_n - M_n) \bmod 614400) \quad \text{for } n>0]$$

$$[TDD - P_n = ((a/16) * (15 * (SFN_n - SFN_{n-1}) \bmod 4096 + (TS_n - TS_{n-1}))/1500 + P_{n-1}) \bmod 40960 \quad \text{for } n>0]$$

$$[TDD - F_n = \min((M_n - P_n) \bmod 40960, (P_n - M_n) \bmod 40960) \quad \text{for } n>0]$$

$P_n$  is the predicted SFN-SFN value when  $n$  measurement results have been received after the first Common Measurement Reporting at initiation or after the last event was triggered.

$a$  is the last reported SFN-SFN Drift Rate value.

$b$  is the last reported SFN-SFN value.

$F_n$  is the deviation of the last measurement result from the predicted SFN-SFN value ( $P_n$ ) when  $n$  measurements have been received after first Common Measurement Reporting at initiation or after the last event was triggered.

$M_n$  is the latest measurement result received after point C in the measurement model [26], measured at the [TDD - the Time Slot TS <sub>$n$</sub>  of] the Frame SFN <sub>$n$</sub> .

$M_1$  is the first measurement result received after point C in the measurement model [26], after first Common Measurement Reporting at initiation or after the last event was triggered.

The SFN-SFN Drift Rate is determined by the RNS<sub>2</sub> in an implementation-dependent way after point B (see model of physical layer measurements in [26]).

### 3. If the *Common Measurement Type IE* is set to "UTRAN GANSS Timing of Cell Frames for UE Positioning":

- If the  $T_{UTRAN-GANSS}$  *Change Limit IE* is included in the  $T_{UTRAN-GANSS}$  *Measurement Threshold Information IE*, the RNC<sub>2</sub> shall calculate the change of  $T_{UTRAN-GANSS}$  value ( $F_n$ ) each time a new measurement result is received after point C in the measurement model [26]. The RNC<sub>2</sub> shall initiate the Common Measurement Reporting procedure and set  $n$  equal to zero when the absolute value of  $F_n$  rises above the threshold indicated by the  $T_{UTRAN-GANSS}$  *Change Limit IE*. The change of  $T_{UTRAN-GANSS}$  value ( $F_n$ ) is calculated according to the following:

$$F_n=0 \quad \text{for } n=0$$

$$F_n = (GAM_n - GAM_{n-1}) \bmod 5308416000000 - ((SFN_n - SFN_{n-1}) \bmod 4096) * 10 * 3.84 * 10^3 * 16 + F_{n-1}$$

for  $n > 0$

$F_n$  is the change of the T<sub>UTRAN-GANSS</sub> value expressed in unit [1/16 chip] when  $n$  measurement results have been received after the first Common Measurement Reporting at initiation or after the last event was triggered.

$GAM_n$  is the latest GANSS measurement result received after point C in the GANSS measurement model, measured at  $SFN_n$ .

$GAM_{n-1}$  is the previous GANSS measurement result received after point C in the GANSS measurement model, measured at  $SFN_{n-1}$ .

$GAM_1$  is the first GANSS measurement result received after point C in the GANSS measurement model, after the first Common Measurement Reporting at initiation or after the last event was triggered.

$GAM_0$  is equal to the value reported in the first Common Measurement Reporting at initiation or in the Common Measurement Reporting when the event was triggered.

GANSS measurement model is the timing between cell  $j$  and GANSS Time Of Day.  $T_{UE-GANSS_j}$  is defined as the time of occurrence of a specified UTRAN event according to GANSS time. The specified UTRAN event is the beginning of a particular frame (identified through its SFN) in the first detected path (in time) of the cell  $j$  CPICH, where cell  $j$  is a cell chosen by the UE. The reference point for  $T_{UE-GANSS_j}$  shall be the antenna connector of the UE.

- If the *Predicted  $T_{UTRAN-GANSS}$  Deviation Limit* IE is included in the  *$T_{UTRAN-GANSS}$  Measurement Threshold Information* IE, the RNC<sub>2</sub> shall update the  $P_n$  and  $F$  each time a new measurement result is received after point C in the measurement model [26]. The RNC<sub>2</sub> shall initiate the Common Measurement Reporting procedure and set  $n$  equal to zero when  $F_n$  rises above the threshold indicated by the *Predicted  $T_{UTRAN-GANSS}$  Deviation Limit* IE. The  $P_n$  and  $F_n$  are calculated according to the following:

$$P_n = b \quad \text{for } n=0$$

$$P_n = ((a/16) * ((SFN_n - SFN_{n-1}) \bmod 4096) / 100 + ((SFN_n - SFN_{n-1}) \bmod 4096) * 10 * 3.84 * 10^3 * 16 + P_{n-1}) \bmod 5308416000000 \quad \text{for } n > 0$$

$$F_n = \min((GAM_n - P_n) \bmod 5308416000000, (P_n - GAM_n) \bmod 5308416000000) \quad \text{for } n > 0$$

$P_n$  is the predicted  $T_{UTRAN-GANSS}$  value when  $n$  measurement results have been received after the first Common Measurement Reporting at initiation or after the last event was triggered.

$a$  is the last reported  $T_{UTRAN-GANSS}$  Drift Rate value.

$b$  is the last reported  $T_{UTRAN-GANSS}$  value.

$F_n$  is the deviation of the last measurement result from the predicted  $T_{UTRAN-GANSS}$  value ( $P_n$ ) when  $n$  measurements have been received after the first Common Measurement Reporting at initiation or after the last event was triggered.

$GAM_n$  is the latest GANSS measurement result received after point C in the GANSS measurement model, measured at  $SFN_n$ .

$GAM_1$  is the first GANSS measurement result received after point C in the GANSS measurement model, after the first Common Measurement Reporting at initiation or after the last event was triggered.

The  $T_{UTRAN-GANSS}$  Drift Rate is determined by the RNS<sub>2</sub> in an implementation-dependent way after point B (see model of physical layer measurements in [26]).

If the *Report Characteristics* IE is not set to "On Demand", the RNC<sub>2</sub> is required to perform reporting for a common measurement object, in accordance with the conditions provided in the COMMON MEASUREMENT INITIATION REQUEST message, as long as the object exists. If no common measurement object(s) for which a measurement is defined exists any more, the RNC<sub>2</sub> shall terminate the measurement locally without reporting this to RNC<sub>1</sub>.

If at the start of the measurement, the reporting criteria are fulfilled for any of Event A, Event B, Event E or Event F, the RNC<sub>2</sub> shall initiate a Measurement Reporting procedure immediately, and then continue with the measurements as specified in the COMMON MEASUREMENT INITIATION REQUEST message.

### Common measurement accuracy

If the *Common Measurement Type* IE is set to "UTRAN GPS Timing of Cell Frames for UE Positioning", then the RNC<sub>2</sub> shall use the *T<sub>UTRAN-GPS</sub> Measurement Accuracy Class* IE included in the *Common Measurement Accuracy* IE according to the following:

- If the *T<sub>UTRAN-GPS</sub> Measurement Accuracy Class* IE indicates "Class A", then the concerned RNC<sub>2</sub> shall perform the measurement with the highest supported accuracy within the accuracy classes A, B or C.
- If the *T<sub>UTRAN-GPS</sub> Measurement Accuracy Class* IE indicates the "Class B", then the concerned RNC<sub>2</sub> shall perform the measurements with the highest supported accuracy within the accuracy classes B and C.
- If the *T<sub>UTRAN-GPS</sub> Measurement Accuracy Class* IE indicates "Class C", then the concerned RNC<sub>2</sub> shall perform the measurements with the highest supported accuracy according to class C.

If the *Common Measurement Type* IE is set to "SFN-SFN Observed Time Difference", then the concerned RNC<sub>2</sub> shall initiate the SFN-SFN observed Time Difference measurements between the reference cell identified by *UC-ID* IE and the neighbouring cells identified by their UC-ID. The *Report Characteristics* IE applies to each of these measurements.

If the *Common Measurement Type* IE is set to "UTRAN GANSS Timing of Cell Frames for UE positioning", then the RNC<sub>2</sub> shall use the *T<sub>UTRAN-GANSS</sub> Measurement Accuracy Class* IE included in the *Common Measurement Accuracy* IE according to the following:

- If the *T<sub>UTRAN-GANSS</sub> Measurement Accuracy Class* IE indicates "Class A", then the concerned RNC<sub>2</sub> shall perform the measurement with the highest supported accuracy within the accuracy classes A, B or C.
- If the *T<sub>UTRAN-GANSS</sub> Measurement Accuracy Class* IE indicates the "Class B", then the concerned RNC<sub>2</sub> shall perform the measurements with the highest supported accuracy within the accuracy classes B and C.
- If the *T<sub>UTRAN-GANSS</sub> Measurement Accuracy Class* IE indicates "Class C", then the concerned RNC<sub>2</sub> shall perform the measurements with the highest supported accuracy according to class C.

### Higher layer filtering

The *Measurement Filter Coefficient* IE indicates how filtering of the measurement values shall be performed before measurement event evaluation and reporting.

The averaging shall be performed according to the following formula.

$$F_n = (1 - a) \cdot F_{n-1} + a \cdot M_n$$

The variables in the formula are defined as follows

$F_n$  is the updated filtered measurement result

$F_{n-1}$  is the old filtered measurement result

$M_n$  is the latest received measurement result from physical layer measurements, the unit used for  $M_n$  is the same unit as the reported unit in the COMMON MEASUREMENT INITIATION RESPONSE, COMMON MEASUREMENT REPORT messages or the unit used in the event evaluation (i.e. same unit as for  $F_n$ ).

$a = 1/2^{(k/2)}$  -, where  $k$  is the parameter received in the *Measurement Filter Coefficient* IE. If the *Measurement Filter Coefficient* IE is not present,  $a$  shall be set to 1 (no filtering).

In order to initialise the averaging filter,  $F_0$  is set to  $M_1$  when the first measurement result from the physical layer measurement is received.

### Measurement Recovery Behavior:

If the *Measurement Recovery Behavior* IE is included in the COMMON MEASUREMENT INITIATION REQUEST message, the RNC<sub>2</sub> shall, if Measurement Recovery Behavior is supported, include the *Measurement Recovery Support Indicator* IE in the COMMON MEASUREMENT INITIATION RESPONSE message and perform the Measurement Recovery Behavior as described in subclause 8.5.3.2.

**Response message**

If the RNC<sub>2</sub> was able to initiate the measurement requested by RNC, it shall respond with the COMMON MEASUREMENT INITIATION RESPONSE message. The message shall include the same Measurement ID that was used in the COMMON MEASUREMENT INITIATION REQUEST message.

In the case in which the *Report Characteristics* IE is set to "On Demand" or "On Modification":

- The COMMON MEASUREMENT INITIATION RESPONSE message shall include the *Common Measurement Object Type* IE containing the measurement result. It shall also include the *Common Measurement Achieved Accuracy* IE if the *Common Measurement Type* IE is set to "UTRAN GPS Timing of Cell Frames for UE positioning" or "UTRAN GANSS Timing of Cell Frames for UE positioning".
- If the *Common Measurement Type* IE is not set to "SFN-SFN Observed Time Difference" and if the *SFN Reporting Indicator* IE is set to "FN Reporting Required", then the RNC<sub>2</sub> shall include the *SFN* IE in the COMMON MEASUREMENT INITIATION RESPONSE message. The reported SFN shall be the SFN at the time when the measurement value was reported by the layer 3 filter, referred to as point C in the measurement model [26]. If the *Common Measurement Type* IE is set to "SFN-SFN Observed Time Difference", then the *SFN Reporting Indicator* IE is ignored.
- If the *Common Measurement Type* IE is set to "SFN-SFN Observed Time Difference", then the RNC<sub>2</sub> shall report all the available measurements in the *Successful Neighbouring cell SFN-SFN Observed Time Difference Measurement Information* IE, and the RNC<sub>2</sub> shall report the neighbouring cells with no measurement result available in the *Unsuccessful Neighbouring cell SFN-SFN Observed Time Difference Measurement Information* IE. For all available measurement results, the RNC<sub>2</sub> shall include in the *Successful Neighbouring Cell SFN-SFN Observed Time Difference Measurement Information* IE the *SFN-SFN Quality* IE and the *SFN-SFN Drift Rate Quality* IE, if available.

If the *Common Measurement Type* IE is set to "UTRAN GPS Timing of Cell Frames for UE Positioning" and the *Report Characteristics* IE is set to "On Demand" or "On Modification", the RNC<sub>2</sub> shall include in the *T<sub>UTRAN-GPS</sub> Measurement Value Information* IE the *T<sub>UTRAN-GPS</sub> Quality* IE and the *T<sub>UTRAN-GPS</sub> Drift Rate Quality* IE, if available.

If the *Common Measurement Type* IE is set to "UTRAN GANSS Timing of Cell Frames for UE Positioning" and the *Report Characteristics* IE is set to "On Demand" or "On Modification", the RNC<sub>2</sub> shall include in the *T<sub>UTRAN-GANSS</sub> Measurement Value Information* IE, the *T<sub>UTRAN-GANSS</sub> Quality* IE and the *T<sub>UTRAN-GANSS</sub> Drift Rate Quality* IE, if available.

**8.5.2.2.1 Successful Operation for Iur-g**

The procedure is initiated with a COMMON MEASUREMENT INITIATION REQUEST message sent from the RNC<sub>1</sub> to the BSS<sub>2</sub> or from the BSS<sub>1</sub> to the RNC<sub>2</sub>/BSS<sub>2</sub>.

Upon receipt, the RNC<sub>2</sub>/BSS<sub>2</sub> shall initiate the requested measurement according to the parameters given in the request.

**Common measurement type on Iur-g**

If the *Common Measurement Type* IE is set to "load", the RNC<sub>2</sub>/BSS<sub>2</sub> shall initiate measurements and report results as described in section 8.5.2.2.

If the *Common Measurement Type* IE is set to "RT load", the RNC<sub>2</sub>/BSS<sub>2</sub> shall initiate measurements and report results as described in section 8.5.2.2.

If the *Common Measurement Type* IE is set to "NRT load Information", the RNC<sub>2</sub>/BSS<sub>2</sub> shall initiate measurements and report results as described in section 8.5.2.2.

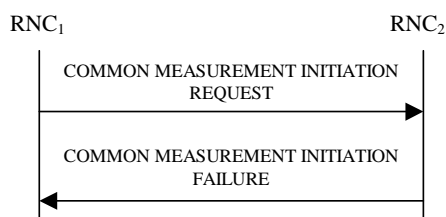
**Report characteristics on Iur-g**

The *Report Characteristics* IE indicates how the reporting of the measurement shall be performed. This IE is used as described in section 8.5.2.2.

**Response message for Iur-g**

If the RNC<sub>2</sub>/BSS<sub>2</sub> was able to initiate the measurement requested by RNC<sub>1</sub>/BSS<sub>1</sub> it shall respond with the COMMON MEASUREMENT INITIATION RESPONSE message sent. The message shall include the same Measurement ID that was used in the measurement request. Only in the case when the *Report Characteristics* IE is set to "On Demand", the COMMON MEASUREMENT INITIATION RESPONSE message shall contain the measurement result.

### 8.5.2.3 Unsuccessful Operation



**Figure 30B: Common Measurement Initiation procedure, Unsuccessful Operation**

If the requested measurement cannot be initiated, the RNC<sub>2</sub> shall send a COMMON MEASUREMENT INITIATION FAILURE message. The message shall include the same *Measurement ID* IE that was used in the COMMON MEASUREMENT INITIATION REQUEST message and shall include the *Cause* IE set to an appropriate value.

Typical cause values are as follows:

#### Radio Network Layer Cause

- Measurement not supported for the object.
- Measurement Temporarily not Available

### 8.5.2.4 Abnormal Conditions

If the COMMON MEASUREMENT INITIATION REQUEST message contains the *SFN-SFN Measurement Threshold Information* IE (in the *Measurement Threshold* IE contained in the *Report Characteristics* IE) and it does not contain at least one IE, the RNC<sub>2</sub> shall reject the procedure using the COMMON MEASUREMENT INITIATION FAILURE message.

If the COMMON MEASUREMENT INITIATION REQUEST message contains the *T<sub>UTRAN-GPS</sub> Measurement Threshold Information* IE (in the *Measurement Threshold* IE contained in the *Report Characteristics* IE) and it does not contain at least one IE, the RNC<sub>2</sub> shall reject the procedure using the COMMON MEASUREMENT INITIATION FAILURE message.

If the COMMON MEASUREMENT INITIATION REQUEST message contains the *T<sub>UTRAN-GANSS</sub> Measurement Threshold Information* IE (in the *Measurement Threshold* IE contained in the *Report Characteristics* IE) and it does not contain at least one IE, the RNC<sub>2</sub> shall reject the procedure using the COMMON MEASUREMENT INITIATION FAILURE message.

If the *Common Measurement Type* IE is set to "UTRAN GPS Timing of Cell Frames for UE positioning", but the *T<sub>UTRAN-GPS</sub> Measurement Accuracy Class* IE in the *Common Measurement Accuracy* IE is not included in the COMMON MEASUREMENT INITIATION REQUEST message, the RNC<sub>2</sub> shall reject the Common Measurement Initiation procedure using the COMMON MEASUREMENT INITIATION FAILURE message.

If the *Common Measurement Type* IE is set to "UTRAN GANSS Timing of Cell Frames for UE positioning", but the *T<sub>UTRAN-GANSS</sub> Measurement Accuracy Class* IE in the *Common Measurement Accuracy* IE is not included in the COMMON MEASUREMENT INITIATION REQUEST message, the RNC<sub>2</sub> shall reject the Common Measurement Initiation procedure using the COMMON MEASUREMENT INITIATION FAILURE message.

If the Common Measurement Type received in the *Common Measurement Type* IE is not "load", "RT load" or "NRT load Information", and if the Common Measurement Type received in the *Common Measurement Type* IE is not defined in ref. [11] or [15] to be measured on the Common Measurement Object Type indicated in the COMMON MEASUREMENT INITIATION REQUEST message the RNC<sub>2</sub> shall reject the Common Measurement Initiation procedure using the COMMON MEASUREMENT INITIATION FAILURE message.

If the *Common Measurement Type* IE is set to "SFN-SFN Observed Time Difference", but the *Neighbouring Cell Measurement Information* IE is not received in the COMMON MEASUREMENT INITIATION REQUEST message, the RNC<sub>2</sub> shall reject the Common Measurement Initiation procedure using the COMMON MEASUREMENT INITIATION FAILURE message.

The allowed combinations of the Common Measurement Type and Report Characteristics Type are shown in the table below marked with "X". For not allowed combinations, the RNC<sub>2</sub> shall reject the Common Measurement Initiation procedure using the COMMON MEASUREMENT INITIATION FAILURE message.

**Table 5: Allowed Common Measurement Type and Report Characteristics Type Combinations**

| Common measurement type                              | Report characteristics type |          |         |         |         |         |         |         |                 |
|--|-----------------------------|----------|---------|---------|---------|---------|---------|---------|-----------------|
|  | On Demand                   | Periodic | Event A | Event B | Event C | Event D | Event E | Event F | On Modification |
| Received total wide band power                       | X                           | X        | X       | X       | X       | X       | X       | X       |                 |
| Transmitted Carrier Power                            | X                           | X        | X       | X       | X       | X       | X       | X       |                 |
| UL Timeslot ISCP                                     | X                           | X        | X       | X       | X       | X       | X       | X       |                 |
| Load   | X                           | X        | X       | X       | X       | X       | X       | X       |                 |
| UTRAN GPS Timing of Cell Frames for UE Positioning   | X                           | X        |         |         |         |         |         |         | X               |
| SFN-SFN Observed Time Difference                     | X                           | X        |         |         |         |         |         |         | X               |
| RT load  | X                           | X        | X       | X       | X       | X       | X       | X       |                 |
| NRT load Information                                 | X                           | X        | X       | X       | X       | X       | X       | X       |                 |
| UpPTS interference                                   | X                           | X        | X       | X       | X       | X       | X       | X       |                 |
| UTRAN GANSS Timing of Cell Frames for UE Positioning | X                           | X        |         |         |         |         |         |         | X               |

[TDD - If the Common Measurement Type requires the Time Slot Information but the [3.84Mcps TDD and 7.68 Mcps TDD - *Time Slot IE*] [1.28Mcps TDD – *Time Slot LCR IE*] is not provided in the COMMON MEASUREMENT INITIATION REQUEST message the RNS<sub>2</sub> shall reject the Common Measurement Initiation procedure using the COMMON MEASUREMENT INITIATION FAILURE message.]

If the *SFN IE* is included in the COMMON MEASUREMENT INITIATION REQUEST message and the *Report Characteristics IE* is other than "Periodic", "On Demand" or "On Modification", the RNS<sub>2</sub> shall reject the Common Measurement Initiation procedure using the COMMON MEASUREMENT INITIATION FAILURE message.

#### 8.5.2.4.1 Abnormal Conditions for Iur-g

The measurements which can be requested on the Iur and Iur-g interfaces are shown in the table below marked with "X".

**Table 6: Allowed Common measurement type on Iur and Iur-g interfaces**

| Common Measurement Type                              | Interface |       |
|--|-----------|-------|
|  | Iur       | Iur-g |
| Received total wide band power                       | X         |       |
| Transmitted Carrier Power                            | X         |       |
| UL Timeslot ISCP                                     | X         |       |
| Load   | X         | X     |
| UTRAN GPS Timing of Cell Frames for LCS              | X         |       |
| SFN-SFN Observed Time Difference                     | X         |       |
| RT load  | X         | X     |
| NRT load Information                                 | X         | X     |
| UTRAN GANSS Timing of Cell Frames for UE Positioning | X         |       |

If the RNC<sub>2</sub> receives from the BSS<sub>1</sub> a COMMON MEASUREMENT INITIATION REQUEST message in which a measurement, which is not applicable on the Iur-g interface, is requested, the RNC<sub>2</sub> shall reject the Common Measurement Initiation procedure.

If the BSS<sub>2</sub> receives from the BSS<sub>1</sub> / RNC<sub>1</sub> a COMMON MEASUREMENT INITIATION REQUEST message in which a measurement, which is not applicable on the Iur-g interface, is requested, the BSS<sub>2</sub> shall reject the Common Measurement Initiation procedure.

If the RNC<sub>2</sub> receives from the BSS<sub>1</sub> a COMMON MEASUREMENT INITIATION REQUEST message in which the *SFN reporting indicator* IE is set to "FN Reporting Required", the RNC<sub>2</sub> shall ignore that IE.

If the BSS<sub>2</sub> receives from the BSS<sub>1</sub> / RNC<sub>1</sub> a COMMON MEASUREMENT INITIATION REQUEST message in which the *SFN reporting indicator* IE is set to "FN Reporting Required", the BSS<sub>2</sub> shall ignore that IE.

The allowed combinations of the Common measurement type and Report characteristics type are shown in the table in section 8.5.2.4 marked with "X". For not allowed combinations, the RNC<sub>2</sub>/BSS<sub>2</sub> shall reject the Common Measurement Initiation procedure.

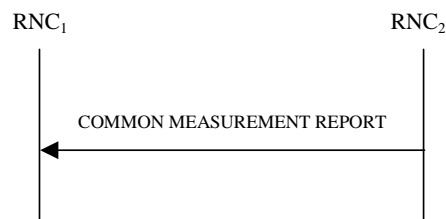
## 8.5.3 Common Measurement Reporting

### 8.5.3.1 General

This procedure is used by an RNC to report the result of measurements requested by another RNC using the Common Measurement Initiation.

This procedure uses the signalling bearer connection for the relevant Distant RNC Context.

### 8.5.3.2 Successful Operation



**Figure 30C: Common Measurement Reporting procedure, Successful Operation**

If the requested measurement reporting criteria are met, the RNC<sub>2</sub> shall initiate the Common Measurement Reporting procedure. Unless specified below, the meaning of the parameters are given in other specifications.

The *Measurement ID* IE shall be set to the Measurement ID provided by RNC<sub>1</sub> when initiating the measurement with the Common Measurement Initiation procedure.

If the achieved measurement accuracy does not fulfil the given accuracy requirement (see ref. [23] and [24]) or the measurement is temporarily not available in case Measurement Recovery Behavior is supported, the *Common Measurement Value Information* IE shall indicate Measurement not Available. If the RNC<sub>2</sub> was configured to perform the Measurement Recovery Behavior, the RNC<sub>2</sub> shall indicate Measurement Available to the RNC<sub>1</sub> when the achieved measurement accuracy again fulfils the given accuracy requirement (see ref. [23] and [24]) and include the *Measurement Recovery Report Indicator* IE in the COMMON MEASUREMENT REPORT message if the requested measurement reporting criteria are not met.

For measurements included in the *Successful Neighbouring Cell SFN-SFN Observed Time Difference Measurement Information* IE, the RNC<sub>2</sub> shall include the *SFN-SFN Quality* IE and the *SFN-SFN Drift Rate Quality* IE if available.

If the Common Measurement Type provided by RNC<sub>1</sub> when initiating the measurement with the Common Measurement Initiation procedure was "UTRAN GPS Timing of Cell Frames for UE Positioning", then the RNC<sub>2</sub> shall include in the *T<sub>UTRAN-GPS</sub> Measurement Value Information* IE the *T<sub>UTRAN-GPS</sub> Quality* IE and the *T<sub>UTRAN-GPS</sub> Drift Rate Quality* IE, if available.

If the Common Measurement Type provided by RNC<sub>1</sub> when initiating the measurement with the Common Measurement Initiation procedure was "UTRAN GANSS Timing of Cell Frames for UE Positioning", then the RNC<sub>2</sub>



shall include in the  $T_{UTRAN-GANSS}$  *Measurement Value Information* IE the  $T_{UTRAN-GANSS}$  *Quality* IE and the  $T_{UTRAN-GANSS}$  *Drift Rate Quality* IE, if available.

#### 8.5.3.2.1 Successful Operation for lur-g

If the requested measurement reporting criteria are met, the RNC<sub>2</sub>/BSS<sub>2</sub> shall initiate a Measurement Reporting procedure. Unless specified below, the meaning of the parameters are given in other specifications.

The *Common Measurement ID* IE shall be set to the Common Measurement ID provided by RNC<sub>1</sub>/BSS<sub>1</sub> when initiating the measurement with the Common Measurement Initiation procedure.

If the Common measurement type provided by RNC<sub>1</sub> when initiating the measurement with the Common Measurement Initiation procedure was "SFN-SFN Observed Time Difference", then RNC<sub>2</sub> shall include in the COMMON MEASUREMENT REPORT all the available measurements in the *Successful Neighbouring cell SFN-SFN Observed Time Difference Measurement Information* IE and shall include the neighbouring cells with no measurement result available in the *Unsuccessful Neighbouring cell SFN-SFN Observed Time Difference Measurement Information* IE.

If the Common measurement type provided by RNC<sub>1</sub> when initiating the measurement with the Common Measurement Initiation procedure was not set to "SFN-SFN Observed Time Difference" and the SFN Reporting Indicator when initiating the measurement was set to "FN Reporting Required", the RNC<sub>2</sub> shall include the *SFN* IE in the COMMON MEASUREMENT REPORT message. The reported SFN shall be the SFN at the time when the measurement value was reported by the layer 3 filter, referred to as point C in the measurement model [26]. If the *Common Measurement Type* IE is set to "SFN-SFN Observed Time Difference", then the *SFN Reporting Indicator* IE is ignored.

#### 8.5.3.3 Abnormal Conditions

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### 8.5.4 Common Measurement Termination

#### 8.5.4.1 General

This procedure is used by an RNC to terminate a measurement previously requested by the Common Measurement Initiation procedure.

This procedure uses the signalling bearer connection for the relevant Distant RNC Context.

#### 8.5.4.2 Successful Operation



**Figure 30D: Common Measurement Termination procedure, Successful Operation**

This procedure is initiated with a COMMON MEASUREMENT TERMINATION REQUEST message.

Upon receipt, RNC<sub>2</sub> shall terminate reporting of common measurements corresponding to the received *Measurement ID* IE.

#### 8.5.4.2.1 Successful Operation for lur-g

The RNC<sub>1</sub>/BSS<sub>1</sub> and RNC<sub>2</sub>/BSS<sub>2</sub> shall use the Common Measurement Termination procedure as specified in section 8.5.4.2.

#### 8.5.4.3 Abnormal Conditions

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## 8.5.5 Common Measurement Failure

### 8.5.5.1 General

This procedure is used by an RNC to notify another RNC that a measurement previously requested by the Common Measurement Initiation procedure can no longer be reported.

This procedure uses the signalling bearer connection for the relevant Distant RNC Context.

### 8.5.5.2 Successful Operation



**Figure 30E: Common Measurement Failure procedure, Successful Operation**

This procedure is initiated with a COMMON MEASUREMENT FAILURE INDICATION message, sent from RNC<sub>2</sub> to RNC<sub>1</sub> to inform the RNC<sub>1</sub> that a previously requested measurement can no longer be reported. RNC<sub>2</sub> has locally terminated the indicated measurement. The RNC<sub>2</sub> shall include in the COMMON MEASUREMENT FAILURE INDICATION message the reason for the failure in the *Cause IE*.

#### 8.5.5.2.1 Successful Operation for Iur-g

The RNC<sub>1</sub>/BSS<sub>1</sub> and RNC<sub>2</sub>/BSS<sub>2</sub> shall use the Common Measurement Failure procedure as specified in section 8.5.5.2.

### 8.5.5.3 Abnormal Conditions

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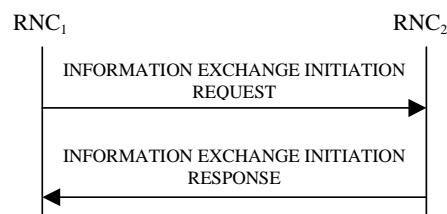
## 8.5.6 Information Exchange Initiation

### 8.5.6.1 General

This procedure is used by an RNC to request the initiation of an information exchange with another RNC.

This procedure uses the signalling bearer connection for the relevant Distant RNC Context.

### 8.5.6.2 Successful Operation



**Figure 30F: Information Exchange Initiation procedure, Successful Operation**

The procedure is initiated with an INFORMATION EXCHANGE INITIATION REQUEST message sent from RNC<sub>1</sub> to RNC<sub>2</sub>.

Upon receipt, the RNC<sub>2</sub> shall provide the requested information according to the parameters given in the request. Unless specified below, the meaning of the parameters are given in other specifications.

If the *Information Exchange Object Type* is set to "MBMS Bearer Service" and the *Information Type Item IE* is set to "MBMS Bearer Service Full Address", the RNC<sub>2</sub> shall report for each TMGI included in the received *MBMS Bearer Service Identifiers List IE*, the Access Point Name and the IP Multicast Address corresponding to this TMGI in the *MBMS Bearer Service Identifiers List IE* in the INFORMATION EXCHANGE INITIATION RESPONSE message.

[FDD - If the *Information Exchange Object Type* is set to "MBMS Bearer Service in MBMS Cell" and the *Information Type Item IE* is set to "MBMS Counting Information", the RNC<sub>2</sub> shall perform counting in cells as defined in [50] and report in the *Counting Result IE* for each TMGI included in the received *MBMS Bearer Service Identifiers List IE* for each cell included in the received *MBMS Cell List IE* either the counting information or, if relevant counting information is not available in RNC<sub>2</sub> [50], the value "0". in the INFORMATION EXCHANGE INITIATION RESPONSE message.]

[FDD - If the *Information Exchange Object Type* is set to "MBMS Bearer Service in MBMS Cell" and the *Information Type Item IE* is set to "MBMS Transmission Mode", the RNC<sub>2</sub> shall report for each TMGI included in the received *MBMS Bearer Service Identifiers List IE* for each cell included in the received *MBMS Cell List IE*, the transmission mode for each TMGI in the cells of RNC<sub>2</sub> that have a neighbour relation to the cells received in *MBMS Cell List IE* as defined in [50] in the INFORMATION EXCHANGE INITIATION RESPONSE message. If no cells of RNC<sub>2</sub> have a neighbour relation to a cell received in *MBMS Cell List IE* for a TMGI the value "Not Provided" shall be used]

[FDD - If the *Information Exchange Object Type* is set to "MBMS Cell" and the *Information Type Item IE* is set to "MBMS Neighbouring Cell Information", the RNC<sub>2</sub> shall report for each cell included in the received *MBMS Cell List IE*, the MBMS radio bearer information for each cells in the in the INFORMATION EXCHANGE INITIATION RESPONSE message.]

[FDD - If the *Information Exchange Object Type* is set to "MBMS Bearer Service in MBMS Cell" and the *Information Type Item IE* is set to "MBMS RLC Sequence Number", the RNC<sub>2</sub> shall report for each TMGI included in the received *MBMS Bearer Service Identifiers List IE* for each cell included in the received *MBMS Cell List IE*, the RLC sequence number for each TMGI for the indicated cells in the in the INFORMATION EXCHANGE INITIATION RESPONSE message.]

If the *Information Type IE* contains a *GANSS Generic Data IE*, at least one of the *GANSS Navigation Model And Time Recovery*, *GANSS Time Model GNSS-GNSS*, *GANSS UTC Model*, *GANSS Almanac*, *GANSS Real Time Integrity*, *GANSS Data Bit Assistance*, *GANSS Additional Navigation Models And Time Recovery*, *GANSS Additional UTC Models*, *GANSS Auxiliary Information IEs* shall be present in the *GANSS Generic Data IE*.

- If the *GANSS Generic Data IE* does not contain the *GANSS ID IE*, the RNC<sub>2</sub> shall assume that the corresponding GANSS is "Galileo".

### Information Report Characteristics:

The *Information Report Characteristics IE* indicates how the reporting of the information shall be performed.

If the *Information Report Characteristics IE* is set to "On Demand", the RNC<sub>2</sub> shall report the requested information immediately.

If the *Information Report Characteristics IE* is set to "Periodic", the RNC<sub>2</sub> shall report the requested information immediately and then shall periodically initiate the Information Reporting procedure for all the requested information, with the report frequency indicated by the *Information Report Periodicity IE*.

If the *Information Report Characteristics IE* is set to "On Modification", the RNC<sub>2</sub> shall report the requested information immediately if available. If the requested information is not available at the moment of receiving the INFORMATION EXCHANGE INITIATION REQUEST message, but expected to become available after some acquisition time, the RNC<sub>2</sub> shall initiate the Information Reporting procedure when the requested information becomes available. The RNC<sub>2</sub> shall then initiate the Information Reporting procedure in accordance to the following conditions:

- If the *Information Type Item IE* is set to "IPDL Parameters", the RNC<sub>2</sub> shall initiate the Information Reporting procedure when any change in the parameters occurs.
- If the *Information Type Item IE* is set to "DGPS Corrections", the RNC<sub>2</sub> shall initiate the Information Reporting procedure for this specific Information Type when either the PRC has drifted from the previously reported value more than the threshold indicated in the *PRC Deviation IE* in the *Information Threshold IE* or a change has occurred in the IODE.
- If the *Information Type Item IE* is set to "GPS Information" and the *GPS Information Item IE* includes "GPS Navigation Model & Recovery Assistance", the RNC<sub>2</sub> shall initiate the Information Reporting procedure for this

specific GPS Information Item when a change has occurred regarding either the IODC or the list of visible satellites, identified by the *Sat ID* IEs.

- If the *Information Type Item* IE is set to "GPS Information" and the *GPS Information Item* IE includes "GPS Ionospheric Model", the RNC<sub>2</sub> shall initiate the Information Reporting procedure for this specific GPS Information Item when any change has occurred.
- If the *Information Type Item* IE is set to "GPS Information" and the *GPS Information Item* IE includes "GPS UTC Model", the RNC<sub>2</sub> shall initiate the Information Reporting procedure for this specific GPS Information Item when a change has occurred in the  $t_{ot}$  or  $WN_t$  parameter.
- If the *Information Type Item* IE is set to "GPS Information" and the *GPS Information Item* IE includes "GPS Almanac", the RNC<sub>2</sub> shall initiate the Information Reporting procedure for this specific GPS Information Item when a change in the  $t_{oa}$  or  $WN_a$  parameter has occurred.
- If the *Information Type Item* IE is set to "GPS Information" and the *GPS Information Item* IE includes "GPS Real-Time Integrity", the RNC<sub>2</sub> shall initiate the Information Reporting procedure for this specific GPS Information Item when any change has occurred.
- If the *Information Type* IE is set to "Cell Capacity Class", the RNC<sub>2</sub> shall initiate the Information Reporting procedure for uplink and downlink cell capacity class when any change has occurred. If either uplink or downlink cell capacity class satisfies the requested report characteristics, the RNC<sub>2</sub> shall report the result of both uplink and downlink cell capacity information.
- If any of the above *Information Type* IEs becomes temporarily unavailable, the RNC<sub>2</sub> shall initiate the Information Reporting procedure for this specific Information Item by indicating "Information Not Available" in the *Requested Data Value Information* IE. If the Information becomes available again, the RNC<sub>2</sub> shall initiate the Information Reporting procedure for this specific Information.
- If the *Information Type* IE is set to "NACC related data", the RNC<sub>2</sub> shall initiate the Information Reporting procedure for NACC related data if any change has occurred.
- If the *Information Type* IE is set to "Inter-frequency Cell Information", the RNC<sub>2</sub> shall initiate the Information Reporting procedure for this specific Information Item when any change has occurred to the inter-frequency cell information broadcasted in the SIB11 or SIB12.
- If the *Information Type Item* IE is set to "DGANSS Corrections", the RNC<sub>2</sub> shall initiate the Information Reporting procedure for this specific Information Type when either the PRC has drifted from the previously reported value more than the threshold indicated in the *PRC Deviation* IE in the *Information Threshold* IE or a change has occurred in the IODE.
- If the *Information Type Item* IE is set to "GANSS Information" and the *GANSS Information* IE includes the *GANSS Navigation Model And Time Recovery* IE, the RNC<sub>2</sub> shall initiate the Information Reporting procedure for this specific GANSS Information Item when a change has occurred regarding either the IOD or the list of visible satellites, identified by the *Sat ID* IEs.
- If the *Information Type Item* IE is set to "GANSS Information" and the *GANSS Information* IE includes the *GANSS Ionospheric Model* IE, the RNC<sub>2</sub> shall initiate the Information Reporting procedure for this specific GANSS Information Item when any change has occurred.
- If the *Information Type Item* IE is set to "GANSS Information" and the *GANSS Information* IE includes the *GANSS UTC Model* IE, the RNC<sub>2</sub> shall initiate the Information Reporting procedure for this specific GANSS Information Item when a change has occurred in the  $t_{ot}$  or  $WN_t$  parameter.
- If the *Information Type Item* IE is set to "GANSS Information" and the *GANSS Information* IE includes the *GANSS Almanac* IE, the RNC<sub>2</sub> shall initiate the Information Reporting procedure for this specific GANSS Information Item when a change in the  $T_{oa}$ ,  $IOD_a$ , or Week Number parameter has occurred.
- If the *Information Type Item* IE is set to "GANSS Information" and the *GANSS Information* IE includes the *GANSS Real Time Integrity* IE, the RNC<sub>2</sub> shall initiate the Information Reporting procedure for this specific GANSS Information Item when any change has occurred.
- If the *Information Type Item* IE is set to "GANSS Information" and the *GANSS Information* IE includes the *GANSS Data Bit Assistance* IE, the RNC<sub>2</sub> shall initiate the Information Reporting procedure for this specific GANSS Information Item when any change has occurred.

- If the *Information Type Item* IE is set to "MBMS Transmission Mode", the RNC<sub>2</sub> shall initiate the Information Reporting procedure when any change in the parameter occurs.
- If the *Information Type Item* IE is set to "MBMS Neighbouring Cell Information", the RNC<sub>2</sub> shall initiate the Information Reporting procedure when any change in the parameters occurs.
- If the *Information Type Item* IE is set to "GANSS Information" and the *GANSS Information* IE includes the *GANSS Additional Navigation Models And Time Recovery* IE, the RNC<sub>2</sub> shall initiate the Information Reporting procedure for this specific GANSS Information item when a change has occurred regarding either the IOD or the list of visible satellites, identified by the *Sat ID* IEs.
- If the *Information Type Item* IE is set to "GANSS Information" and the *GANSS Information* IE includes the *GANSS Additional Ionospheric Model* IE, the RNC<sub>2</sub> shall initiate the Information Reporting procedure for this specific GANSS Information item when any change has occurred.
- If the *Information Type Item* IE is set to "GANSS Information" and the *GANSS Information* IE includes the *GANSS Additional UTC Models* IE, the RNC<sub>2</sub> shall initiate the Information Reporting procedure for this specific GANSS Information item when a change has occurred in the  $t_{ot}$ ,  $WN_{ot}$ ,  $WN_t$ , or  $N^A$  parameter.
- If the *Information Type Item* IE is set to "GANSS Information" and the *GANSS Information* IE includes the *GANSS Earth Orientation Parameters* IE, the RNC<sub>2</sub> shall initiate the Information Reporting procedure for this specific GANSS Information item when a change has occurred in the  $t_{EOP}$  parameter.
- If the *Information Type Item* IE is set to "GANSS Information" and the *GANSS Information* IE includes the *GANSS Auxiliary Information* IE, the RNC<sub>2</sub> shall initiate the Information Reporting procedure for this specific GANSS Information item when a change has occurred in the *Signals Available* or *Channel Number* IE parameter.

#### Response message:

If the RNC<sub>2</sub> is able to determine the information requested by the RNC<sub>1</sub>, it shall respond with the INFORMATION EXCHANGE INITIATION RESPONSE message. The message shall include the *Information Exchange ID* IE set to the same value that was included in the INFORMATION EXCHANGE INITIATION REQUEST message. When the *Report Characteristics* IE is set to or "On Modification" or "Periodic", the INFORMATION EXCHANGE INITIATION RESPONSE message shall contain the *Requested Data Value* IE if the data are available. When the *Report Characteristics* IE is set to "On Demand", the INFORMATION EXCHANGE INITIATION RESPONSE message shall contain the *Requested Data Value* IE.

If the *Requested Data Value* IE contains the *GANSS Common Data* IE, at least one of the *GANSS Ionospheric Model*, *GANSS RX Pos*, *GANSS Additional Ionospheric Model*, or *GANSS Earth Orientation Parameters* IEs shall be present.

Any *GANSS Generic Data* IE associated with a given GANSS included in the *Requested Data Value* IE shall contain at least one of the *DGANSS Corrections*, *GANSS Navigation Model And Time Recovery*, *GANSS Time Model*, *GANSS UTC Model*, *GANSS Almanac*, *GANSS Real Time Integrity*, *GANSS Data Bit Assistance*, *GANSS Additional Time Models*, *GANSS Additional Navigation Models And Time Recovery*, *GANSS Additional UTC Models*, or *GANSS Auxiliary Information* IEs.

- If the *GANSS Generic Data* IE does not contain the *GANSS ID* IE, the corresponding GANSS is "Galileo".
- The *DGANSS Corrections* IE contains one or several *DGANSS Information* IE(s), each of them associated with a GANSS Signal. A *DGANSS Information* IE for a particular GANSS that does not contain the *GANSS Signal ID* IE is by default associated with the default signal defined in [16], clause 10.3.3.45a.
- The *GANSS Real Time Integrity* IE contains one or several *Satellite Information* IEs, each of them associated with a satellite and a GANSS Signal. A *Satellite Information* IE for a particular GANSS that does not contain the *Bad GANSS Signal ID* IE is by default associated with all the signals of the corresponding satellite (see [53, 55, 56, 57, 58, 59, 60]).

If the *Information Type Item* IE is set to "GANSS Information" and the *GANSS Information* IE includes the *GANSS Time Model GNSS-GNSS* IE with exactly one bit set to value "1", the RNC<sub>2</sub> shall include the *GANSS Time Model* IE in the *Requested Data Value* IE with the requested time information.

If the *Information Type Item* IE is set to "GANSS Information" and the *GANSS Information* IE includes the *GANSS Time Model GNSS-GNSS* IE with more than one bit set to value "1", the RNC<sub>2</sub> shall include the *GANSS Additional Time Models* IE in *Requested Data Value* IE with the requested time information for each GANSS.

### 8.5.6.2.1 Successful Operation for Iur-g

The procedure is initiated with an INFORMATION EXCHANGE INITIATION REQUEST message sent from BSS<sub>1</sub> to BSS<sub>2</sub>/RNC<sub>2</sub> or by RNC<sub>1</sub> to BSS<sub>2</sub>.

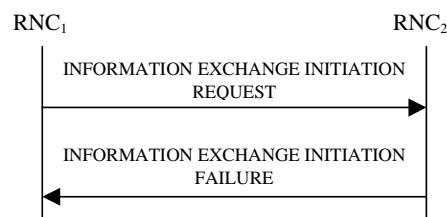
Upon receipt, the BSS<sub>2</sub>/RNC<sub>2</sub> shall provide the requested information according to the parameters given in the request. Unless specified below, the meaning of the parameters are given in other specifications.

#### Information Report Characteristics on Iur-g:

If the *Information Type Item* IE is set to "Cell Capacity Class", the RNC<sub>2</sub>/BSS<sub>2</sub> shall initiate measurements and report results as described in section 8.5.6.2.

The *Information Report Characteristics* IE indicates how the reporting of the information shall be performed. This IE is used as described in section 8.5.6.2.

### 8.5.6.3 Unsuccessful Operation



**Figure 30G: Information Exchange Initiation procedure, Unsuccessful Operation**

If the requested Information Type received in the *Information Type* IE indicates a type of information that RNC<sub>2</sub> cannot provide, the RNC<sub>2</sub> shall reject the Information Exchange Initiation procedure.

If the requested information provision cannot be accessed, the RNC<sub>2</sub> shall reject the procedure and shall send the INFORMATION EXCHANGE INITIATION FAILURE message.

The message shall include the *Information Exchange ID* IE set to the same value that was used in the INFORMATION EXCHANGE INITIATION REQUEST message and the *Cause* IE set to an appropriate value.

Typical cause values are as follows:

#### Radio Network Layer Cause:

- Information temporarily not available.
- Information Provision not supported for the object.

### 8.5.6.4 Abnormal Conditions

If the *Information Report Characteristics* IE is set to "On Modification", and the *Information Type Item* IE is set to "DGPS Corrections", but the *Information Threshold* IE is not received in the INFORMATION EXCHANGE INITIATION REQUEST message, the RNC<sub>2</sub> shall reject the Information Exchange Initiation procedure and shall send the INFORMATION EXCHANGE INITIATION FAILURE message.

If the *Information Exchange Object Type* IE is set to a value other than "GSM Cell" and the *Information Type Item* IE is set to "NACC related data" the RNC<sub>2</sub> shall reject the Information Exchange Initiation procedure and shall send the INFORMATION EXCHANGE INITIATION FAILURE message.

If the *Information Type Item* IE is set to the value "MBMS Bearer Service Full Address" and the *Information Exchange Object Type* IE is not set to "MBMS Bearer Service", the RNC<sub>2</sub> shall reject the Information Exchange Initiation procedure and shall send the INFORMATION EXCHANGE INITIATION FAILURE message.

The allowed combinations of the Information type and Information Report Characteristics type are shown in the table below marked with "X". For not allowed combinations, the RNC<sub>2</sub> shall reject the Information Exchange Initiation procedure using the INFORMATION EXCHANGE INITIATION FAILURE message.

**Table 6a: Allowed Information Type and Information Report Characteristics type combinations**

| Type  | Information Report Characteristics Type |          |                 |
|---|---|----------|-----------------|
|   | On Demand                               | Periodic | On Modification |
| UTRAN Access Point Position with Altitude Information | X                                       |          |                 |
| UTRAN Access Point Position                           | X                                       |          |                 |
| IPDL Parameters                                       | X                                       | X        | X               |
| GPS Information                                       | X                                       | X        | X               |
| DGPS Corrections                                      | X                                       | X        | X               |
| GPS RX Pos  | X                                       |          |                 |
| SFN-SFN Measurement Reference Point Position          | X                                       |          |                 |
| Cell Capacity Class                                   | X                                       |          | X               |
| NACC related data                                     | X                                       |          | X               |
| MBMS Bearer Service Full Address                      | X                                       |          |                 |
| Inter-frequency Cell Information                      | X                                       |          | X               |
| GANSS Information                                     | X                                       | X        | X               |
| DGANSS Corrections                                    | X                                       | X        | X               |
| GANSS RX Pos  | X                                       |          |                 |
| MBMS Counting Information [FDD only]                  | X                                       |          |                 |
| MBMS Transmission Mode [FDD only]                     |   |          | X               |
| MBMS Neighbouring Cell Information [FDD only]         | X                                       |          | X               |
| MBMS RLC Sequence Number [FDD only]                   | X                                       |          |                 |

#### 8.5.6.4.1 Abnormal Conditions for Iur-g

The information types that can be requested on the Iur and Iur-g interfaces are shown in the table below marked with "X". For information types that are not applicable on the Iur-g interface, the BSS shall reject the Information Exchange Initiation procedure.

**Table 7: Allowed Information types on Iur and Iur-g interfaces**

| Information Type                                      | Interface |       |
|---|-----------|-------|
|   | Iur       | Iur-g |
| UTRAN Access Point Position with Altitude Information | X         |       |
| UTRAN Access Point Position                           | X         |       |
| IPDL Parameters                                       | X         |       |
| DGPS Corrections                                      | X         |       |
| GPS Information                                       | X         |       |
| GPS RX Pos  | X         |       |
| SFN-SFN Measurement Reference Point Position          | X         |       |
| Cell Capacity Class                                   | X         | X     |
| NACC related data                                     | X         |       |
| MBMS Bearer Service Full Address                      | X         |       |
| Inter-frequency Cell Information                      | X         |       |
| DGANSS Corrections                                    | X         |       |
| GANSS Information                                     | X         |       |
| GANSS RX Pos  | X         |       |
| MBMS Counting Information [FDD only]                  | X         |       |
| MBMS Transmission Mode [FDD only]                     | X         |       |
| MBMS Neighbouring Cell Information [FDD only]         | X         |       |
| MBMS RLC Sequence Number [FDD only]                   | X         |       |

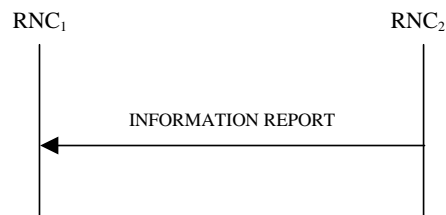
## 8.5.7 Information Reporting

### 8.5.7.1 General

This procedure is used by a RNC to report the result of information requested by another RNC using the Information Exchange Initiation.

This procedure uses the signalling bearer connection for the relevant Distant RNC Context.

### 8.5.7.2 Successful Operation



**Figure 30H: Information Reporting procedure, Successful Operation**

If the requested information reporting criteria are met, the RNC<sub>2</sub> shall initiate an Information Reporting procedure. Unless specified below, the meaning of the parameters are given in other specifications.

The *Information Exchange ID* IE shall be set to the Information Exchange ID provided by the RNC<sub>1</sub> when initiating the information exchange with the Information Exchange Initiation procedure.

The *Requested Data Value* IE shall include at least one IE containing the data to be reported.

#### 8.5.7.2.1 Successful Operation for Iur-g

The RNC<sub>1</sub>/BSS<sub>1</sub> and RNC<sub>2</sub>/BSS<sub>2</sub> shall use the Information Reporting procedure as specified in section 8.5.7.2.

### 8.5.7.3 Abnormal Conditions

-

## 8.5.8 Information Exchange Termination

### 8.5.8.1 General

This procedure is used by a RNC to terminate the information exchange requested using the Information Exchange Initiation.

This procedure uses the signalling bearer connection for the relevant Distant RNC Context.

### 8.5.8.2 Successful Operation



**Figure 30I: Information Exchange Termination procedure, Successful Operation**

This procedure is initiated with a INFORMATION EXCHANGE TERMINATION REQUEST message.



Upon receipt, the RNC<sub>2</sub> shall terminate the information exchange corresponding to the *Information Exchange ID IE* provided by the RNC<sub>1</sub> when initiating the information exchange with the Information Exchange Initiation procedure.

#### 8.5.8.2.1 Successful Operation for lur-g

The RNC<sub>1</sub>/BSS<sub>1</sub> and RNC<sub>2</sub>/BSS<sub>2</sub> shall use the Information Exchange Termination procedure as specified in section 8.5.8.2.

#### 8.5.8.3 Abnormal Conditions

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### 8.5.9 Information Exchange Failure

#### 8.5.9.1 General

This procedure is used by a RNC to notify another that the information exchange it previously requested using the Information Exchange Initiation can no longer be reported.

This procedure uses the signalling bearer connection for the relevant Distant RNC Context.

#### 8.5.9.2 Successful Operation



**Figure 30J: Information Exchange Failure procedure, Successful Operation**

This procedure is initiated with a INFORMATION EXCHANGE FAILURE INDICATION message, sent from the RNC<sub>2</sub> to the RNC<sub>1</sub>, to inform the RNC<sub>1</sub> that information previously requested by the Information Exchange Initiation procedure can no longer be reported. The RNC<sub>2</sub> shall include in the INFORMATION EXCHANGE FAILURE INDICATION message the *Information Exchange ID IE* set to the same value provided by the RNC<sub>1</sub> when initiating the information exchange with the Information Exchange Initiation procedure, and the RNC<sub>2</sub> shall include the *Cause IE* set to an appropriate value.

Typical cause values are as follows:

#### **Radio Network Layer Cause:**

Information temporarily not available.

#### 8.5.9.2.1 Successful Operation for lur-g

The RNC<sub>1</sub>/BSS<sub>1</sub> and RNC<sub>2</sub>/BSS<sub>2</sub> shall use the Information Exchange Failure procedure as specified in section 8.5.9.2.

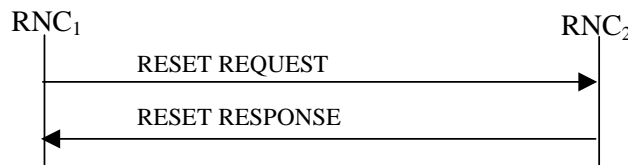
### 8.5.10 Reset

#### 8.5.10.1 General

The purpose of the reset procedure is to align the resources in RNC<sub>1</sub> and RNC<sub>2</sub> in the event of an abnormal failure.

The procedure uses connectionless signalling.

### 8.5.10.2 Successful Operation



**Figure 30K: Reset procedure, Successful Operation**

The procedure is initiated with a RESET REQUEST message sent from the RNC<sub>1</sub> to the RNC<sub>2</sub>.

If the *Reset Indicator* IE is set to "Context", then:

- For all indicated UE Contexts identified by the *S-RNTI* IE, the RNC<sub>1</sub> in the role of DRNC, shall remove all the indicated UE Contexts and all the radio resources allocated for these UE Contexts. In addition, the RNC<sub>2</sub> shall take actions according to Annex D.2.
- For all indicated UE Contexts identified by the *D-RNTI* IE, the RNC<sub>2</sub> in the role of SRNC, shall remove the information related to the RNC<sub>1</sub> for all indicated UE Contexts and the radio resources allocated for these UE Contexts.

If the *Reset Indicator* IE is set to "Context Group", then:

- For all indicated UE Context Groups identified by the *S-RNTI Group* IE, the RNC<sub>2</sub> in the role of DRNC, shall remove all the indicated UE Contexts and all the radio resources allocated for these UE Contexts. In addition, the RNC<sub>2</sub> shall take actions according to Annex D.2.

If the *Reset Indicator* IE is set to "All Contexts", then the RNC<sub>2</sub> shall:

- In the role of DRNC, remove all the UE Contexts for which the RNC<sub>1</sub> is the SRNC and all the radio resources allocated for these UE Contexts. In addition, the RNC<sub>2</sub> shall take actions according to Annex D.2.
- In the role of SRNC, remove the information related to the RNC<sub>1</sub> for all the UE Contexts and all the radio resources allocated for these UE Contexts.

For all the removed UE Contexts and for all the UE Contexts for which the RNC<sub>2</sub> has removed information related to the RNC<sub>1</sub>, the RNC<sub>2</sub> shall also initiate release of the dedicated or common user plane resources that were involved in these UE Contexts. After clearing all related resources, the RNC<sub>2</sub> shall return the RESET RESPONSE message to the RNC<sub>1</sub>.

### 8.5.10.3 Abnormal Conditions

If the RESET message is received, any other ongoing procedure (except another Reset procedure) on same Iur interface related to a context indicated explicitly or implicitly in the message shall be aborted.

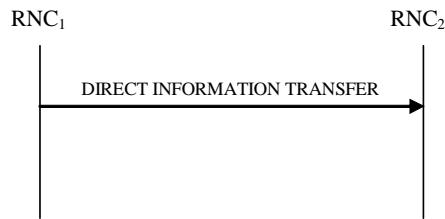
## 8.5.11 Direct Information Transfer

### 8.5.11.1 General

This procedure is used by an RNC to transfer information to another RNC spontaneously.

This procedure shall use the connectionless mode of signalling bearer.

### 8.5.11.2 Successful Operation



**Figure 30L: Direct Information Transfer procedure, Successful Operation**

The procedure is initiated with an DIRECT INFORMATION TRANSFER message sent from RNC<sub>1</sub> to RNC<sub>2</sub>.

If the initiating RNC of this procedure is RNC<sub>1</sub>, RNC<sub>1</sub> shall provide appropriate information in the *Provided Information IE*.

#### **MBMS Channel Type Indication:**

At the start time of a session for an MBMS bearer service, if the RNC<sub>1</sub> is in the DRNC role for some UEs whose UE Link contains the concerned MBMS bearer service and whose SRNC is RNC<sub>2</sub> and if the channel type is determined by the RNC<sub>1</sub> for certain cells in the DRNS, the procedure shall be initiated by the RNC<sub>1</sub> to the RNC<sub>2</sub>. In this case, the RNC<sub>1</sub> shall include in the *Provided Information IE* the *Channel Type Information IE* in the DIRECT INFORMATION TRANSFER message.

During a session of an MBMS bearer service, if the RNC<sub>1</sub> is in the DRNC role for some UEs whose UE Link contains the concerned MBMS bearer service and whose SRNC is RNC<sub>2</sub>, then the RNC<sub>1</sub> may initiate this procedure to indicate channel type change for the MBMS bearer service in certain cells. In this case, the RNC<sub>1</sub> shall include in the *Provided Information IE* the *Channel Type Information IE* in the DIRECT INFORMATION TRANSFER message.

The RNC<sub>1</sub> shall include the available information within the *PTM Cell List IE*, the *PTP Cell List IE* and/or the *Not Provided Cell List IE* in the *Channel Type Information IE*.

#### **MBMS Preferred Frequency Layer Indication:**

At the start time of a session for an MBMS bearer service, if the RNC<sub>1</sub> is in the DRNC role for at least one CELL\_DCH UE whose UE Link contains the concerned MBMS bearer service and whose SRNC is RNC<sub>2</sub> and if the preferred frequency layer is determined by the RNC<sub>1</sub> for certain cells that host at least one of these CELL\_DCH UEs whose SRNC is RNC<sub>2</sub>, the procedure shall be initiated by the RNC<sub>1</sub> to the RNC<sub>2</sub>. In this case, the RNC<sub>1</sub> shall include in the *Provided Information IE* the *Preferred Frequency Layer Information IE* in the DIRECT INFORMATION TRANSFER message.

If some of the cells controlled by RNC<sub>1</sub> that host at least one of these CELL\_DCH UEs whose SRNC is RNC<sub>2</sub> are configured with different preferred frequencies, the *Additional Preferred Frequency IE* as well as *Default Preferred Frequency IE* shall be included in the *Preferred Frequency Layer Information IE*. In this case, for each preferred frequency different from the *Default Preferred Frequency IE*, one *Additional Preferred Frequency IE* shall be included containing at least one *Corresponding Cells IE*.

## 8.6 MBMS Procedures

### 8.6.1 MBMS Attach

#### 8.6.1.1 General

The MBMS Attach procedure is used by the SRNC to either create a UE Link/URA Link in the DRNC or inform the DRNC about any addition of one or several MBMS bearer services in an already stored UE Link or URA Link.

This procedure shall use the signalling bearer mode specified below.

### 8.6.1.2 Successful Operation



**Figure 31: MBMS Attach procedure, Successful Operation**

The SRNC initiates the procedure by sending the message MBMS ATTACH COMMAND message to the DRNC.

When the UE is utilising one or more radio links in the DRNC, the message shall be sent using the connection oriented service of the signalling bearer and no further identification of the UE Context in the DRNC is required. If the UE is not utilising any radio link, the message shall be sent using the connectionless service of the signalling bearer.

If no *UE State* IE is included in the message or the *UE State* IE is set to "CELL\_FACH/CELL\_PCH", the DRNC shall perform the UE Linking as specified in [50], section 5.1.6.

If the *UE State* IE is set to "URA\_PCH", the DRNC shall perform the URA Linking as specified in [50], section 5.1.10.

### 8.6.1.3 Abnormal Conditions

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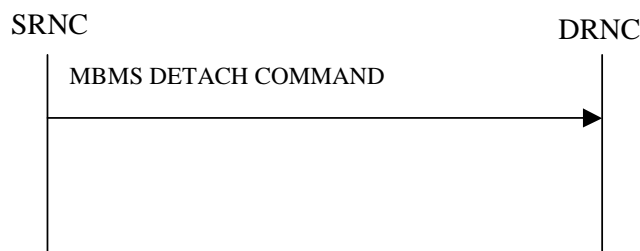
## 8.6.2 MBMS Detach

### 8.6.2.1 General

The MBMS Detach procedure is used by the SRNC to either delete a UE Link/URA Link in the DRNC or to inform DRNC about any removal of one or several MBMS bearer services in an already stored UE link or URA Link.

This procedure shall use the signalling bearer mode specified below.

### 8.6.2.2 Successful Operation



**Figure 32: MBMS Detach procedure, Successful Operation**

The SRNC initiates the procedure by sending the message MBMS DETACH COMMAND message to the DRNC.

When the UE is utilising one or more radio links in the DRNC, the message shall be sent using the connection oriented service of the signalling bearer and no further identification of the UE Context in the DRNC is required. If the UE is not utilising any radio link, the message shall be sent using the connectionless service of the signalling bearer.

If no *UE State* IE is included in the message or the *UE State* IE is set to "CELL\_FACH/CELL\_PCH", the DRNC shall perform the UE De-linking as specified in [50], section 5.1.6.

If the *UE State* IE is set to "URA\_PCH", the DRNC shall perform the URA De-linking as specified in [50], section 5.1.10.

### 8.6.2.3 Abnormal Conditions

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## 9 Elements for RNSAP Communication

### 9.1 Message Functional Definition and Content

#### 9.1.1 General

This subclause defines the structure of the messages required for the RNSAP protocol in tabular format. The corresponding ASN.1 definition is presented in subclause 9.3. In case there is contradiction between the tabular format in subclause 9.1 and the ASN.1 definition, the ASN.1 shall take precedence, except for the definition of conditions for the presence of conditional IEs, in which the tabular format shall take precedence.

NOTE: The messages have been defined in accordance to the guidelines specified in [28].

#### 9.1.2 Message Contents

##### 9.1.2.1 Presence

An information element can be of the following types:

|          |  |
|----------|--|
| <b>M</b> | IEs marked as Mandatory (M) shall always be included in the message.   |
| <b>O</b> | IEs marked as Optional (O) may or may not be included in the message.  |
| <b>C</b> | IEs marked as Conditional (C) shall be included in a message only if the condition is satisfied. Otherwise the IE shall not be included. |

In the case of an Information Element group, the group is preceded by a name for the info group (in bold). It is also indicated how many times a group may be repeated in the message and whether the group is conditional. Each group may be also repeated within one message. The presence field of the Information Elements inside one group defines if the Information Element is mandatory, optional or conditional if the group is present.

##### 9.1.2.2 Criticality

Each information element or Group of information elements may have criticality information applied to it. Following cases are possible:

|               |   |
|---------------|---|
| –             | No criticality information is applied explicitly.   |
| <b>YES</b>    | Criticality information is applied. 'YES' is usable only for non-repeatable information elements.   |
| <b>GLOBAL</b> | The information element and all its repetitions together have one common criticality information. 'GLOBAL' is usable only for repeatable information elements.  |
| <b>EACH</b>   | Each repetition of the information element has its own criticality information. It is not allowed to assign different criticality values to the repetitions. 'EACH' is usable only for repeatable information elements. |

##### 9.1.2.3 Range

The Range column indicates the allowed number of copies of repetitive IEs/IE groups.

##### 9.1.2.4 Assigned Criticality

This column provides the actual criticality information as defined in subclause 10.3.2, if applicable.

## 9.1.3 RADIO LINK SETUP REQUEST

### 9.1.3.1 FDD Message

| IE/Group Name                           | Presence      | Range | IE Type and Reference    | Semantics Description   | Criticality | Assigned Criticality |
|---|---------------|-------|--------------------------|---|-------------|----------------------|
| Message Type                            | M             |       | 9.2.1.40                 |   | YES         | reject               |
| Transaction ID                          | M             |       | 9.2.1.59                 |   | –           |                      |
| SRNC-ID                                 | M             |       | RNC-ID<br>9.2.1.50       | If the <i>Extended SRNC-ID</i> IE is included in the message, the <i>SRNC-ID</i> IE shall be ignored. | YES         | reject               |
| S-RNTI                                  | M             |       | 9.2.1.53                 |   | YES         | reject               |
| D-RNTI                                  | O             |       | 9.2.1.24                 |   | YES         | reject               |
| Allowed Queuing Time                    | O             |       | 9.2.1.2                  |   | YES         | reject               |
| <b>UL DPCH Information</b>              |               | 1     |                          |   | YES         | reject               |
| >UL Scrambling Code                     | M             |       | 9.2.2.53                 |   | –           |                      |
| >Min UL Channelisation Code Length      | M             |       | 9.2.2.25                 |   | –           |                      |
| >Max Number of UL DPDCHs                | C – CodeLen   |       | 9.2.2.24                 |   | –           |                      |
| >Puncture Limit                         | M             |       | 9.2.1.46                 | For the UL.   | –           |                      |
| >TFCS                                   | M             |       | 9.2.1.63                 |   | –           |                      |
| >UL DPCCCH Slot Format                  | M             |       | 9.2.2.52                 |   | –           |                      |
| >Uplink SIR Target                      | O             |       | Uplink SIR<br>9.2.1.69   |   | –           |                      |
| >Diversity mode                         | M             |       | 9.2.2.8                  |   | –           |                      |
| >Not Used                               | O             |       | NULL                     |   | –           |                      |
| >Not Used                               | O             |       | NULL                     |   | –           |                      |
| >DPC Mode                               | O             |       | 9.2.2.12A                |   | YES         | reject               |
| >UL DPDCH Indicator for E-DCH operation | O             |       | 9.2.2.52A                | This IE may be present without the presence of the <i>E-DPCH Information</i> IE                       | YES         | reject               |
| <b>DL DPCH Information</b>              |               | 0..1  |                          |   | YES         | reject               |
| >TFCS                                   | M             |       | 9.2.1.63                 |   | –           |                      |
| >DL DPCH Slot Format                    | M             |       | 9.2.2.9                  |   | –           |                      |
| >Number of DL Channelisation Codes      | M             |       | 9.2.2.26A                |   | –           |                      |
| >TFCI Signalling Mode                   | M             |       | 9.2.2.46                 |   | –           |                      |
| >TFCI Presence                          | C- SlotFormat |       | 9.2.1.55                 |   | –           |                      |
| >Multiplexing Position                  | M             |       | 9.2.2.26                 |   | –           |                      |
| <b>&gt;Power Offset Information</b>     |               | 1     |                          |   | –           |                      |
| >>PO1                                   | M             |       | Power Offset<br>9.2.2.30 | Power offset for the TFCI bits.   | –           |                      |
| >>PO2                                   | M             |       | Power Offset<br>9.2.2.30 | Power offset for the TPC bits.  | –           |                      |
| >>PO3                                   | M             |       | Power Offset<br>9.2.2.30 | Power offset for the pilot bits.  | –           |                      |
| >FDD TPC Downlink Step Size             | M             |       | 9.2.2.16                 |   | –           |                      |

| IE/Group Name                                 | Presence              | Range                          | IE Type and Reference                | Semantics Description | Criticality | Assigned Criticality |
|---|-----------------------|--------------------------------|--------------------------------------|-----------------------|-------------|----------------------|
| >Limited Power Increase                       | M                     |                                | 9.2.2.21A                            |                       | –           |                      |
| >Inner Loop DL PC Status                      | M                     |                                | 9.2.2.21a                            |                       | –           |                      |
| DCH Information                               | M                     |                                | DCH FDD Information<br>9.2.2.4A      |                       | YES         | reject               |
| <b>RL Information</b>                         |                       | <i>1..&lt;maxno ofRLs&gt;</i>  |                                      |                       | EACH        | notify               |
| >RL ID  | M                     |                                | 9.2.1.49                             |                       | –           |                      |
| >C-ID   | M                     |                                | 9.2.1.6                              |                       | –           |                      |
| >First RLS Indicator                          | M                     |                                | 9.2.2.16A                            |                       | –           |                      |
| >Frame Offset                                 | M                     |                                | 9.2.1.30                             |                       | –           |                      |
| >Chip Offset                                  | M                     |                                | 9.2.2.1                              |                       | –           |                      |
| >Propagation Delay                            | O                     |                                | 9.2.2.33                             |                       | –           |                      |
| >Diversity Control Field                      | C –<br>NotFirstRL     |                                | 9.2.1.20                             |                       | –           |                      |
| >Initial DL TX Power                          | O                     |                                | DL Power<br>9.2.1.21A                |                       | –           |                      |
| >Primary CPICH Ec/No                          | O                     |                                | 9.2.2.32                             |                       | –           |                      |
| >Not Used                                     | O                     |                                | NULL                                 |                       | –           |                      |
| >Transmit Diversity Indicator                 | C –<br>Diversity mode |                                | 9.2.2.48                             |                       | –           |                      |
| >Enhanced Primary CPICH Ec/No                 | O                     |                                | 9.2.2.13l                            |                       | YES         | ignore               |
| >RL Specific DCH Information                  | O                     |                                | 9.2.1.49A                            |                       | YES         | ignore               |
| >Delayed Activation                           | O                     |                                | 9.2.1.19Aa                           |                       | YES         | reject               |
| >Cell Portion ID                              | O                     |                                | 9.2.2.E                              |                       | YES         | ignore               |
| >RL specific E-DCH Information                | O                     |                                | 9.2.2.35a                            |                       | YES         | reject               |
| >E-DCH RL Indication                          | O                     |                                | 9.2.2.4E                             |                       | YES         | reject               |
| >Extended Propagation Delay                   | O                     |                                | 9.2.2.33a                            |                       | YES         | ignore               |
| >Synchronisation Indicator                    | O                     |                                | 9.2.2.45A                            |                       | YES         | reject               |
| >HS-DSCH Preconfiguration Setup               | O                     |                                | 9.2.2.100                            |                       | YES         | ignore               |
| Transmission Gap Pattern Sequence Information | O                     |                                | 9.2.2.47A                            |                       | YES         | reject               |
| Active Pattern Sequence Information           | O                     |                                | 9.2.2.A                              |                       | YES         | reject               |
| Permanent NAS UE Identity                     | O                     |                                | 9.2.1.73                             |                       | YES         | ignore               |
| DL Power Balancing Information                | O                     |                                | 9.2.2.10A                            |                       | YES         | ignore               |
| HS-DSCH Information                           | O                     |                                | HS-DSCH FDD Information<br>9.2.2.19a |                       | YES         | reject               |
| HS-PDSCH RL ID                                | C –<br>InfoHSDSCH     |                                | RL ID<br>9.2.1.49                    |                       | YES         | reject               |
| <b>MBMS Bearer Service List</b>               |                       | <i>0..&lt;maxno ofMBMS&gt;</i> |                                      |                       | GLOBAL      | notify               |
| >TMGI   | M                     |                                | 9.2.1.80                             |                       | –           |                      |
| <b>E-DPCH Information</b>                     |                       | <i>0..1</i>                    |                                      |                       | YES         | reject               |
| >Maximum Set of E-DPDCHs                      | M                     |                                | 9.2.2.24e                            |                       | –           |                      |
| >Puncture Limit                               | M                     |                                | 9.2.1.46                             |                       | –           |                      |
| >E-TFCS Information                           | M                     |                                | 9.2.2.4G                             |                       | –           |                      |
| >E-TTI  | M                     |                                | 9.2.2.4J                             |                       | –           |                      |
| >E-DPCCH Power Offset                         | M                     |                                | 9.2.2.4K                             |                       | –           |                      |
| >E-RGCH 2-Index-Step Threshold                | M                     |                                | 9.2.2.64                             |                       | –           |                      |
| >E-RGCH 3-Index-Step Threshold                | M                     |                                | 9.2.2.65                             |                       | –           |                      |

| IE/Group Name   | Presence   | Range                  | IE Type and Reference        | Semantics Description  | Criticality | Assigned Criticality |
|---|------------|------------------------|------------------------------|--|-------------|----------------------|
| >HARQ Info for E-DCH                                    | M          |                        | 9.2.2.66                     |  | –           |                      |
| >HS-DSCH Configured Indicator                           | M          |                        | 9.2.2.19C                    |  | –           |                      |
| > Minimum Reduced E-DPDCH Gain Factor                   | O          |                        | 9.2.2.102                    |  | YES         | ignore               |
| E-DCH FDD Information                                   | C-EDCHInfo |                        | 9.2.2.4B                     |  | YES         | reject               |
| Serving E-DCH RL  | O          |                        | 9.2.2.38C                    |  | YES         | reject               |
| <b>F-DPCH Information</b>                               |            | 0..1                   |                              |  | YES         | reject               |
| <b>&gt;Power Offset Information</b>                     |            | 1                      |                              |  | –           |                      |
| >>PO2   | M          |                        | Power Offset<br>9.2.2.30     | This IE shall be ignored by DRNS.  | –           |                      |
| >FDD TPC Downlink Step Size                             | M          |                        | 9.2.2.16                     |  | –           |                      |
| >Limited Power Increase                                 | M          |                        | 9.2.2.21A                    |  | –           |                      |
| >Inner Loop DL PC Status                                | M          |                        | 9.2.2.21a                    |  | –           |                      |
| >F-DPCH Slot Format Support Request                     | O          |                        | 9.2.2.86                     |  | YES         | reject               |
| >F-DPCH Slot Format                                     | O          |                        | 9.2.2.85                     |  | YES         | Ignore               |
| Initial DL DPCH Timing Adjustment Allowed               | O          |                        | 9.2.2.21b                    |  | YES         | ignore               |
| DCH Indicator For E-DCH-HSDPA Operation                 | O          |                        | 9.2.2.67                     |  | YES         | reject               |
| Serving Cell Change CFN                                 | O          |                        | CFN<br>9.2.1.9               |  | YES         | reject               |
| Continuous Packet Connectivity DTX-DRX Information      | O          |                        | 9.2.2.72                     |  | YES         | reject               |
| Continuous Packet Connectivity HS-SCCH less Information | O          |                        | 9.2.2.74                     |  | YES         | reject               |
| Extended SRNC-ID  | O          |                        | Extended RNC-ID<br>9.2.1.50a | The <i>Extended SRNC-ID</i> IE shall be used if the RNC identity has a value larger than 4095. | YES         | reject               |
| <b>Additional HS Cell Information RL Setup</b>          |            | 0..<maxno ofHSDSC H-1> |                              | For secondary serving HS-DSCH cell. Max 1 in this 3GPP release.                                | EACH        | reject               |
| >HS-PDSCH RL ID   | M          |                        | RL ID<br>9.2.1.49            |  | –           |                      |
| >C-ID   | M          |                        | 9.2.1.6                      |  | –           |                      |
| >HS-DSCH Secondary Serving Information                  | M          |                        | 9.2.2.19aa                   |  | –           |                      |



| Condition      | Explanation  |
|----------------|--|
| CodeLen        | The IE shall be present if <i>Min UL Channelisation Code length</i> IE equals to 4                           |
| SlotFormat     | The IE shall be present if the <i>DL DPCH Slot Format</i> IE is equal to any of the values from 12 to 16.    |
| NotFirstRL     | The IE shall be present if the RL is not the first one in the <i>RL Information</i> IE.                      |
| Diversity mode | The IE shall be present if <i>Diversity Mode</i> IE in <i>UL DPCH Information</i> IE is not equal to "none". |
| InfoHSDSCH     | This IE shall be present if <i>HS-DSCH Information</i> IE is present.  |
| EDCHInfo       | This IE shall be present if <i>E-DPCH Information</i> IE is present.   |

| Range bound            | Explanation   |
|------------------------|---|
| <i>maxnoofRLs</i>      | Maximum number of RLs for one UE.                             |
| <i>maxnoofMBMS</i>     | Maximum number of MBMS bearer services that a UE can join.    |
| <i>maxnoofHSDSCH-1</i> | Maximum number of Secondary Serving HS-DSCH cells for one UE. |

### 9.1.3.2 TDD Message

| IE/Group Name  | Presence | Range | IE Type and Reference | Semantics Description   | Criticality | Assigned Criticality |
|--|----------|-------|-----------------------|---|-------------|----------------------|
| Message Type   | M        |       | 9.2.1.40              |   | YES         | reject               |
| Transaction ID                                       | M        |       | 9.2.1.59              |   | –           |                      |
| SRNC-ID  | M        |       | RNC-ID<br>9.2.1.50    | If the <i>Extended SRNC-ID</i> IE is included in the message, the <i>SRNC-ID</i> IE shall be ignored. | YES         | reject               |
| S-RNTI   | M        |       | 9.2.1.53              |   | YES         | reject               |
| D-RNTI   | O        |       | 9.2.1.24              |   | YES         | reject               |
| <b>UL Physical Channel Information</b>               |          | 1     |                       |   | YES         | reject               |
| >Maximum Number of Timeslots                         | M        |       | 9.2.3.3A              | For the UL  | –           |                      |
| >Minimum Spreading Factor                            | M        |       | 9.2.3.4A              | For the UL  | –           |                      |
| >Maximum Number of UL Physical Channels per Timeslot | M        |       | 9.2.3.3B              |   | –           |                      |
| >Support of 8PSK                                     | O        |       | 9.2.3.7H              | Applicable to 1.28Mcps TDD only   | YES         | ignore               |
| >Minimum Spreading Factor 7.68Mcps                   | O        |       | 9.2.3.19              | Applicable to 7.68Mcps TDD only   | YES         | ignore               |
| <b>DL Physical Channel Information</b>               |          | 1     |                       |   | YES         | reject               |
| >Maximum Number of Timeslots                         | M        |       | 9.2.3.3A              | For the DL  | –           |                      |
| >Minimum Spreading Factor                            | M        |       | 9.2.3.4A              | For the DL  | –           |                      |
| >Maximum Number of DL Physical Channels              | M        |       | 9.2.3.3C              |   | –           |                      |
| >Maximum Number of DL Physical Channels per Timeslot | O        |       | 9.2.3.3D              |   | YES         | ignore               |
| >Support of 8PSK                                     | O        |       | 9.2.3.7H              | Applicable to 1.28Mcps TDD only   | YES         | ignore               |
| >Support of PLCCH                                    | O        |       | 9.2.3.16              | Applicable to 1.28Mcps TDD only   | YES         | ignore               |

|   |   |                                   |                               |  |      |        |
|---|---|-----------------------------------|-------------------------------|--|------|--------|
| >Minimum Spreading Factor 7.68Mcps                            | O |                                   | 9.2.3.19                      | Applicable to 7.68Mcps TDD only  | YES  | ignore |
| >Maximum Number of DL Physical Channels 7.68Mcps              | O |                                   | 9.2.3.20                      | Applicable to 7.68Mcps TDD only  | YES  | ignore |
| >Maximum Number of DL Physical Channels per Timeslot 7.68Mcps | O |                                   | 9.2.3.21                      | Applicable to 7.68Mcps TDD only  | YES  | ignore |
| Allowed Queuing Time  | O |                                   | 9.2.1.2                       |  | YES  | reject |
| <b>UL CCTrCH Information</b>                                  |   | <i>0..&lt;maxno ofCCTrCHs&gt;</i> |                               | For DCH and USCH   | EACH | notify |
| >CCTrCH ID  | M |                                   | 9.2.3.2                       |  | –    |        |
| >TFCS   | M |                                   | 9.2.1.63                      | For the UL.  | –    |        |
| >TFCI Coding  | M |                                   | 9.2.3.11                      |  | –    |        |
| >Puncture Limit   | M |                                   | 9.2.1.46                      |  | –    |        |
| >TDD TPC Uplink Step Size                                     | O |                                   | 9.2.3.10a                     | Mandatory for 1.28Mcps TDD, not applicable to 3.84Mcps TDD or 7.68Mcps TDD | YES  | reject |
| <b>DL CCTrCH Information</b>                                  |   | <i>0..&lt;maxno ofCCTrCHs&gt;</i> |                               | For DCH and DSCH   | EACH | notify |
| >CCTrCH ID  | M |                                   | 9.2.3.2                       |  | –    |        |
| >TFCS   | M |                                   | 9.2.1.63                      | For the DL.  | –    |        |
| >TFCI Coding  | M |                                   | 9.2.3.11                      |  | –    |        |
| >Puncture Limit   | M |                                   | 9.2.1.46                      |  | –    |        |
| >TDD TPC Downlink Step Size                                   | M |                                   | 9.2.3.10                      |  | –    |        |
| <b>&gt;TPC CCTrCH List</b>                                    |   | <i>0..&lt;maxno CCTrCHs&gt;</i>   |                               | List of uplink CCTrCH which provide TPC                                    | –    |        |
| >>TPC CCTrCH ID   | M |                                   | CCTrCH ID 9.2.3.2             |  | –    |        |
| DCH Information   | O |                                   | DCH TDD Information 9.2.3.2A  |  | YES  | reject |
| DSCH Information  | O |                                   | DSCH TDD Information 9.2.3.3a |  | YES  | reject |
| USCH Information  | O |                                   | 9.2.3.15                      |  | YES  | reject |
| <b>RL Information</b>   |   | 1                                 |                               |  | YES  | reject |
| >RL ID  | M |                                   | 9.2.1.49                      |  | –    |        |
| >C-ID   | M |                                   | 9.2.1.6                       |  | –    |        |
| >Frame Offset   | M |                                   | 9.2.1.30                      |  | –    |        |
| >Special Burst Scheduling                                     | M |                                   | 9.2.3.7D                      |  | –    |        |
| >Primary CCPCH RSCP   | O |                                   | 9.2.3.5                       |  | –    |        |
| >DL Time Slot ISCP Info                                       | O |                                   | 9.2.3.2D                      | Applicable to 3.84Mcps TDD and 7.68Mcps TDD only                           | –    |        |
| >DL Time Slot ISCP Info LCR                                   | O |                                   | 9.2.3.2F                      | Applicable to 1.28Mcps TDD only  | YES  | reject |
| >TSTD Support Indicator                                       | O |                                   | 9.2.3.13F                     | Applicable to 1.28Mcps TDD only  | YES  | ignore |
| >RL Specific DCH Information                                  | O |                                   | 9.2.1.49A                     |  | YES  | ignore |
| >Delayed Activation   | O |                                   | 9.2.1.19Aa                    |  | YES  | reject |

|  |                |                   |                                   |  |        |        |
|--|----------------|-------------------|-----------------------------------|--|--------|--------|
| >UL Synchronisation Parameters LCR                 |                | 0..1              |                                   | Mandatory for 1.28Mcps TDD. Not Applicable to 3.84Mcps TDD or 7.68Mcps TDD.                    | YES    | reject |
| >>Uplink Synchronisation Step Size                 | M              |                   | 9.2.3.13J                         |  | –      |        |
| >>Uplink Synchronisation Frequency                 | M              |                   | 9.2.3.13I                         |  | –      |        |
| >Primary CCPCH RSCP Delta                          | O              |                   | 9.2.3.5a                          |  | YES    | ignore |
| >Idle Interval Configuration Indicator             | O              |                   | NULL                              | TDD only   | YES    | ignore |
| Permanent NAS UE Identity                          | O              |                   | 9.2.1.73                          |  | YES    | ignore |
| HS-DSCH Information                                | O              |                   | HS-DSCH TDD Information 9.2.3.3aa |  | YES    | reject |
| HS-PDSCH RL ID                                     | C - InfoHSDSCH |                   | RL ID 9.2.1.49                    |  | YES    | reject |
| PDSCH-RL-ID  | O              |                   | RL ID 9.2.1.49                    |  | YES    | ignore |
| <b>MBMS Bearer Service List</b>                    |                | 0..<maxno ofMBMS> |                                   |  | GLOBAL | notify |
| >TMGI  | M              |                   | 9.2.1.80                          |  | –      |        |
| <b>E-DCH Information</b>                           |                | 0..1              |                                   | 3.84Mcps TDD only  | YES    | reject |
| >E-PUCH Information                                | M              |                   | 9.2.3.36                          |  | –      |        |
| >E-TFCS Information TDD                            | M              |                   | 9.2.3.37                          |  | –      |        |
| >E-DCH MAC-d Flows Information TDD                 | M              |                   | 9.2.3.38                          |  | –      |        |
| >E-DCH TDD Information                             | M              |                   | 9.2.3.40                          |  | –      |        |
| E-DCH Serving RL                                   | O              |                   | 9.2.1.49                          | TDD only   | YES    | reject |
| <b>E-DCH Information 7.68Mcps</b>                  |                | 0..1              |                                   | 7.68Mcps TDD only  | YES    | reject |
| >E-PUCH Information                                | M              |                   | 9.2.3.36                          |  | –      |        |
| >E-TFCS Information TDD                            | M              |                   | 9.2.3.37                          |  | –      |        |
| >E-DCH MAC-d Flows Information TDD                 | M              |                   | 9.2.3.38                          |  | –      |        |
| >E-DCH TDD Information 7.68Mcps                    | M              |                   | 9.2.3.51                          |  | –      |        |
| <b>E-DCH Information 1.28Mcps</b>                  |                | 0..1              |                                   | 1.28Mcps TDD only  | YES    | reject |
| >E-PUCH Information LCR                            | M              |                   | 9.2.3.36a                         |  | –      |        |
| >E-TFCS Information TDD                            | M              |                   | 9.2.3.37                          |  | –      |        |
| >E-DCH MAC-d Flows Information TDD                 | M              |                   | 9.2.3.38                          |  | –      |        |
| >E-DCH TDD Information LCR                         | M              |                   | 9.2.3.40a                         |  | –      |        |
| Extended SRNC-ID                                   | O              |                   | Extended RNC-ID 9.2.1.50a         | The <i>Extended SRNC-ID</i> IE shall be used if the RNC identity has a value larger than 4095. | YES    | reject |
| Continuous Packet Connectivity DRX Information LCR | O              |                   | 9.2.3.61                          | 1.28 Mcps TDD only   | YES    | reject |
| HS-DSCH Semi-Persistent scheduling Information LCR | O              |                   | 9.2.3.64                          | 1.28 Mcps TDD only   | YES    | reject |
| E-DCH Semi-Persistent                              | O              |                   | 9.2.3.66                          | 1.28 Mcps  | YES    | reject |

|                            |   |  |                   |                       |     |        |
|----------------------------|---|--|-------------------|-----------------------|-----|--------|
| scheduling Information LCR |   |  |                   | TDD only              |     |        |
| RNTI Allocation Indicator  | 0 |  | ENUMERATED (True) | 1.28 Mcps<br>TDD only | YES | ignore |

| Condition  | Explanation   |
|------------|---|
| InfoHSDSCH | This IE shall be present if <i>HS-DSCH Information</i> IE is present. |

| Range bound           | Explanation  |
|-----------------------|--|
| <i>maxnoofCCTrCHs</i> | Maximum number of CCTrCH for one UE.                       |
| <i>maxnoofMBMS</i>    | Maximum number of MBMS bearer services that a UE can join. |

## 9.1.4 RADIO LINK SETUP RESPONSE

### 9.1.4.1 FDD Message

| IE/Group Name                       | Presence | Range                         | IE Type and Reference                | Semantics Description             | Criticality | Assigned Criticality |
|-------------------------------------|----------|-------------------------------|--------------------------------------|-----------------------------------|-------------|----------------------|
| Message Type                        | M        |                               | 9.2.1.40                             |                                   | YES         | reject               |
| Transaction ID                      | M        |                               | 9.2.1.59                             |                                   | –           |                      |
| D-RNTI                              | O        |                               | 9.2.1.24                             |                                   | YES         | ignore               |
| CN PS Domain Identifier             | O        |                               | 9.2.1.12                             |                                   | YES         | ignore               |
| CN CS Domain Identifier             | O        |                               | 9.2.1.11                             |                                   | YES         | ignore               |
| <b>RL Information Response</b>      |          | <i>1..&lt;maxno ofRLs&gt;</i> |                                      |                                   | EACH        | ignore               |
| >RL ID                              | M        |                               | 9.2.1.49                             |                                   | –           |                      |
| >RL Set ID                          | M        |                               | 9.2.2.35                             |                                   | –           |                      |
| >URA Information                    | O        |                               | 9.2.1.70B                            |                                   | –           |                      |
| >SAI                                | M        |                               | 9.2.1.52                             |                                   | –           |                      |
| >Cell GAI                           | O        |                               | 9.2.1.5A                             |                                   | –           |                      |
| >UTRAN Access Point Position        | O        |                               | 9.2.1.70A                            |                                   | –           |                      |
| >Received Total Wide Band Power     | M        |                               | 9.2.2.35A                            |                                   | –           |                      |
| >Not Used                           | O        |                               | NULL                                 |                                   | –           |                      |
| >DL Code Information                | M        |                               | FDD DL Code Information<br>9.2.2.14A |                                   | –           |                      |
| >CHOICE <i>Diversity Indication</i> | M        |                               |                                      |                                   | –           |                      |
| >> <i>Combining</i>                 |          |                               |                                      |                                   | –           |                      |
| >>>RL ID                            | M        |                               | 9.2.1.49                             | Reference RL ID for the combining | –           |                      |
| >>>DCH Information Response         | O        |                               | 9.2.1.16A                            |                                   | YES         | ignore               |
| >>>E-DCH FDD Information Response   | O        |                               | 9.2.2.4C                             |                                   | YES         | ignore               |
| >> <i>Non Combining or First RL</i> |          |                               |                                      |                                   | –           |                      |
| >>>DCH Information Response         | M        |                               | 9.2.1.16A                            |                                   | –           |                      |
| >>>E-DCH FDD Information Response   | O        |                               | 9.2.2.4C                             |                                   | YES         | ignore               |
| >SSDT Support Indicator             | M        |                               | 9.2.2.43                             |                                   | –           |                      |
| >Maximum Uplink SIR                 | M        |                               | Uplink SIR<br>9.2.1.69               |                                   | –           |                      |
| >Minimum Uplink SIR                 | M        |                               | Uplink SIR<br>9.2.1.69               |                                   | –           |                      |
| >Closed Loop Timing Adjustment Mode | O        |                               | 9.2.2.3A                             |                                   | –           |                      |
| >Maximum Allowed UL Tx Power        | M        |                               | 9.2.1.35                             |                                   | –           |                      |
| >Maximum DL TX Power                | M        |                               | DL Power<br>9.2.1.21A                |                                   | –           |                      |
| >Minimum DL TX Power                | M        |                               | DL Power<br>9.2.1.21A                |                                   | –           |                      |
| >Primary Scrambling Code            | O        |                               | 9.2.1.45                             |                                   | –           |                      |
| >UL UARFCN                          | O        |                               | UARFCN<br>9.2.1.66                   | Corresponds to Nu in ref. [6]     | –           |                      |
| >DL UARFCN                          | O        |                               | UARFCN<br>9.2.1.66                   | Corresponds to Nd in ref. [6]     | –           |                      |
| >Primary CPICH Power                | M        |                               | 9.2.1.44                             |                                   | –           |                      |

| IE/Group Name  | Presence | Range                                | IE Type and Reference                                  | Semantics Description   | Criticality | Assigned Criticality |
|--|----------|--------------------------------------|--|---|-------------|----------------------|
| >Not Used  | O        |                                      | NULL   |   | –           |                      |
| >Neighbouring UMTS Cell Information                              | O        |                                      | 9.2.1.41A  |   | –           |                      |
| >Neighbouring GSM Cell Information                               | O        |                                      | 9.2.1.41C  |   | –           |                      |
| >PC Preamble   | M        |                                      | 9.2.2.27a  |   | –           |                      |
| >SRB Delay   | M        |                                      | 9.2.2.39A  |   | –           |                      |
| >Cell GA Additional Shapes                                       | O        |                                      | 9.2.1.5B   |   | YES         | ignore               |
| >DL Power Balancing Activation Indicator                         | O        |                                      | 9.2.2.10B  |   | YES         | ignore               |
| >HCS Prio  | O        |                                      | 9.2.1.30N  |   | YES         | ignore               |
| >Primary CPICH Usage For Channel Estimation                      | O        |                                      | 9.2.2.32A  |   | YES         | ignore               |
| >Secondary CPICH Information                                     | O        |                                      | 9.2.2.38A  |   | YES         | ignore               |
| <b>&gt;Active MBMS Bearer Service List</b>                       |          | <i>0..&lt;maxno ofActiveMBMS&gt;</i> |  |   | GLOBAL      | ignore               |
| >>TMGI   | M        |                                      | 9.2.1.80   |   | –           |                      |
| >>Transmission Mode  | O        |                                      | 9.2.1.81   |   | –           |                      |
| >>Preferred Frequency Layer                                      | O        |                                      | UARFCN<br>9.2.1.66                                     |   | –           |                      |
| >E-DCH RL Set ID   | O        |                                      | RL Set ID<br>9.2.2.35                                  |   | YES         | ignore               |
| >E-DCH FDD DL Control Channel Information                        | O        |                                      | 9.2.2.4D   |   | YES         | ignore               |
| >Initial DL DPCH Timing Adjustment                               | O        |                                      | DL DPCH<br>Timing<br>Adjustment<br>9.2.2.9A            |   | YES         | ignore               |
| >F-DPCH Slot Format  | O        |                                      | 9.2.2.85   |   | YES         | ignore               |
| >Frame Offset  | O        |                                      | 9.2.1.30   |   | YES         | ignore               |
| >Chip Offset   | O        |                                      | 9.2.2.1  |   | YES         | ignore               |
| >Neighbouring E-UTRA Cell Information                            | O        |                                      | 9.2.1.41De   |   | YES         | ignore               |
| >HS-DSCH Preconfiguration Info                                   | O        |                                      | 9.2.2.99   |   | YES         | ignore               |
| Uplink SIR Target  | O        |                                      | Uplink SIR<br>9.2.1.69                                 |   | YES         | ignore               |
| Criticality Diagnostics  | O        |                                      | 9.2.1.13   |   | YES         | ignore               |
| HS-DSCH-RNTI   | O        |                                      | 9.2.1.30P  |   | YES         | ignore               |
| HS-DSCH Information Response                                     | O        |                                      | HS-DSCH<br>FDD<br>Information<br>Response<br>9.2.2.19b |   | YES         | ignore               |
| Continuous Packet Connectivity HS-SCCH less Information Response | O        |                                      | 9.2.2.75   |   | YES         | ignore               |
| SixtyfourQAM DL Support Indicator                                | O        |                                      | 9.2.1.123  |   | YES         | ignore               |
| <b>Additional HS Cell Information Response</b>                   |          | <i>0..&lt;maxno ofHSDSCH H-1&gt;</i> |  | For secondary serving HS-DSCH cell. Max 1 in this 3GPP release. | EACH        | ignore               |
| >HS-PDSCH RL ID  | M        |                                      | RL ID<br>9.2.1.49                                      |   | –           |                      |
| >HS-DSCH-RNTI  | M        |                                      | 9.2.1.30P  |   | –           |                      |
| >HS-DSCH FDD Secondary Serving Information Response              | M        |                                      | 9.2.2.19ba   |   | –           |                      |

| IE/Group Name                      | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|------------------------------------|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| >SixtyfourQAM DL Support Indicator | O        |       | 9.2.1.123             |                       | –           |                      |

| Range bound              | Explanation   |
|--------------------------|---|
| <i>maxnoofRLs</i>        | Maximum number of RLs for one UE.                                   |
| <i>maxnoofActiveMBMS</i> | Maximum number of MBMS bearer services that are active in parallel. |
| <i>maxnoofHSDSCH-1</i>   | Maximum number of Secondary Serving HS-DSCH cells for one UE.       |

## 9.1.4.2 TDD Message

| IE/Group Name                      | Presence | Range                | IE Type and Reference  | Semantics Description   | Criticality | Assigned Criticality |
|------------------------------------|----------|----------------------|------------------------|---|-------------|----------------------|
| Message Type                       | M        |                      | 9.2.1.40               |   | YES         | reject               |
| Transaction ID                     | M        |                      | 9.2.1.59               |   | –           |                      |
| D-RNTI                             | O        |                      | 9.2.1.24               |   | YES         | ignore               |
| CN PS Domain Identifier            | O        |                      | 9.2.1.12               |   | YES         | ignore               |
| CN CS Domain Identifier            | O        |                      | 9.2.1.11               |   | YES         | ignore               |
| <b>RL Information Response</b>     |          | 0..1                 |                        | Mandatory for 3.84Mcps TDD , not applicable to 1.28Mcps TDD or 7.68Mcps TDD | YES         | ignore               |
| >RL ID                             | M        |                      | 9.2.1.49               |   | –           |                      |
| >URA Information                   | O        |                      | 9.2.1.70B              |   | –           |                      |
| >SAI                               | M        |                      | 9.2.1.52               |   | –           |                      |
| >Cell GAI                          | O        |                      | 9.2.1.5A               |   | –           |                      |
| >UTRAN Access Point Position       | O        |                      | 9.2.1.70A              |   | –           |                      |
| >UL Time Slot ISCP Info            | M        |                      | 9.2.3.13D              |   | –           |                      |
| >Maximum Uplink SIR                | M        |                      | Uplink SIR<br>9.2.1.69 |   | –           |                      |
| >Minimum Uplink SIR                | M        |                      | Uplink SIR<br>9.2.1.69 |   | –           |                      |
| >Maximum Allowed UL Tx Power       | M        |                      | 9.2.1.35               |   | –           |                      |
| >Maximum DL TX Power               | M        |                      | DL Power<br>9.2.1.21A  |   | –           |                      |
| >Minimum DL TX Power               | M        |                      | DL Power<br>9.2.1.21A  |   | –           |                      |
| >UARFCN                            | O        |                      | UARFCN<br>9.2.1.66     | Corresponds to Nt in ref. [7]   | –           |                      |
| >Cell Parameter ID                 | O        |                      | 9.2.1.8                |   | –           |                      |
| >Sync Case                         | O        |                      | 9.2.1.54               |   | –           |                      |
| >SCH Time Slot                     | C-Case2  |                      | 9.2.1.51               |   | –           |                      |
| >SCTD Indicator                    | O        |                      | 9.2.1.78               |   | –           |                      |
| >PCCPCH Power                      | M        |                      | 9.2.1.43               |   | –           |                      |
| >Timing Advance Applied            | M        |                      | 9.2.3.12A              |   | –           |                      |
| >Alpha Value                       | M        |                      | 9.2.3.a                |   | –           |                      |
| >UL PhysCH SF Variation            | M        |                      | 9.2.3.13B              |   | –           |                      |
| >Synchronisation Configuration     | M        |                      | 9.2.3.7E               |   | –           |                      |
| >Secondary CCPCH Info TDD          | O        |                      | 9.2.3.7B               |   | –           |                      |
| <b>&gt;UL CCTrCH Information</b>   |          | 0..<maxno ofCCTrCHs> |                        | For DCH   | GLOBAL      | ignore               |
| >>CCTrCH ID                        | M        |                      | 9.2.3.2                |   | –           |                      |
| <b>&gt;&gt;UL DPCH Information</b> |          | 0..1                 |                        |   | YES         | ignore               |
| >>>Repetition Period               | M        |                      | 9.2.3.7                |   | –           |                      |
| >>>Repetition Length               | M        |                      | 9.2.3.6                |   | –           |                      |
| >>>TDD DPCH Offset                 | M        |                      | 9.2.3.8A               |   | –           |                      |
| >>>UL Timeslot Information         | M        |                      | 9.2.3.13C              |   | –           |                      |
| >>Uplink SIR Target CCTrCH         | O        |                      | Uplink SIR<br>9.2.1.69 |   | YES         | ignore               |
| <b>&gt;DL CCTrCH Information</b>   |          | 0..<maxno ofCCTrCHs> |                        | For DCH   | GLOBAL      | ignore               |



| IE/Group Name                         | Presence | Range                | IE Type and Reference | Semantics Description  | Criticality | Assigned Criticality |
|---------------------------------------|----------|----------------------|-----------------------|--|-------------|----------------------|
| >>CCTrCH ID                           | M        |                      | 9.2.3.2               |  | –           |                      |
| <b>&gt;&gt;DL DPCH Information</b>    |          | 0..1                 |                       |  | YES         | ignore               |
| >>>Repetition Period                  | M        |                      | 9.2.3.7               |  | –           |                      |
| >>>Repetition Length                  | M        |                      | 9.2.3.6               |  | –           |                      |
| >>>TDD DPCH Offset                    | M        |                      | 9.2.3.8A              |  | –           |                      |
| >>>DL Timeslot Information            | M        |                      | 9.2.3.2C              |  |             |                      |
| >>CCTrCH Maximum DL TX Power          | O        |                      | DL Power 9.2.1.21A    | Maximum allowed power on DPCH  | YES         | ignore               |
| >>CCTrCH Minimum DL TX Power          | O        |                      | DL Power 9.2.1.21A    | Minimum allowed power on DPCH  | YES         | ignore               |
| >DCH Information Response             | O        |                      | 9.2.1.16A             |  | YES         | ignore               |
| <b>&gt;DSCH Information Response</b>  |          | 0 .. <maxnoof DSCHs> |                       |  | GLOBAL      | ignore               |
| >>DSCH ID                             | M        |                      | 9.2.3.3ae             |  | –           |                      |
| >>DSCH Flow Control Information       | M        |                      | 9.2.3.3ag             |  | –           |                      |
| >>Binding ID                          | O        |                      | 9.2.1.3               |  | –           |                      |
| >>Transport Layer Address             | O        |                      | 9.2.1.62              |  | –           |                      |
| >>Transport Format Management         | M        |                      | 9.2.3.13              |  | –           |                      |
| <b>&gt;USCH Information Response</b>  |          | 0 .. <maxnoof USCHs> |                       |  | GLOBAL      | ignore               |
| >>USCH ID                             | M        |                      | 9.2.3.14              |  | –           |                      |
| >>Binding ID                          | O        |                      | 9.2.1.3               |  | –           |                      |
| >>Transport Layer Address             | O        |                      | 9.2.1.62              |  | –           |                      |
| >>Transport Format Management         | M        |                      | 9.2.3.13              |  | –           |                      |
| >Neighbouring UMTS Cell Information   | O        |                      | 9.2.1.41A             |  | –           |                      |
| >Neighbouring GSM Cell Information    | O        |                      | 9.2.1.41C             |  | –           |                      |
| >Cell GA Additional Shapes            | O        |                      | 9.2.1.5B              |  | YES         | ignore               |
| >HCS Prio                             | O        |                      | 9.2.1.30N             |  | YES         | ignore               |
| >Time Slot for SCH                    | C-Case1  |                      | Time Slot 9.2.1.56    |  | YES         | ignore               |
| >Neighbouring E-UTRA Cell Information | O        |                      | 9.2.1.41De            |  | YES         | ignore               |
| Uplink SIR Target                     | M        |                      | Uplink SIR 9.2.1.69   |  | YES         | ignore               |
| Criticality Diagnostics               | O        |                      | 9.2.1.13              |  | YES         | ignore               |
| <b>RL Information Response LCR</b>    |          | 0..1                 |                       | Mandatory for 1.28Mcps TDD, not applicable to 3.84Mcps TDD or 7.68Mcps TDD | YES         | ignore               |
| >RL ID                                | M        |                      | 9.2.1.49              |  | –           |                      |
| >URA Information                      | M        |                      | 9.2.1.70B             |  | –           |                      |
| >SAI                                  | M        |                      | 9.2.1.52              |  | –           |                      |
| >Cell GAI                             | O        |                      | 9.2.1.5A              |  | –           |                      |
| >UTRAN Access Point Position          | O        |                      | 9.2.1.70A             |  | –           |                      |
| >UL Time Slot ISCP Info               | M        |                      | 9.2.3.13H             |  | –           |                      |

| IE/Group Name                            | Presence | Range                                  | IE Type and Reference  | Semantics Description         | Criticality | Assigned Criticality |
|--|----------|--|------------------------|-------------------------------|-------------|----------------------|
| LCR                                      |          |  |                        |                               |             |                      |
| >Maximum Uplink SIR                      | M        |  | Uplink SIR<br>9.2.1.69 |                               | –           |                      |
| >Minimum Uplink SIR                      | M        |  | Uplink SIR<br>9.2.1.69 |                               | –           |                      |
| >Maximum Allowed UL Tx Power             | M        |  | 9.2.1.35               |                               | –           |                      |
| >Maximum DL TX Power                     | M        |  | DL Power<br>9.2.1.21A  |                               | –           |                      |
| >Minimum DL TX Power                     | M        |  | DL Power<br>9.2.1.21A  |                               | –           |                      |
| >UARFCN                                  | O        |  | UARFCN<br>9.2.1.66     | Corresponds to Nt in ref. [7] | –           |                      |
| >Cell Parameter ID                       | O        |  | 9.2.1.8                |                               | –           |                      |
| >SCTD Indicator                          | O        |  | 9.2.1.78               |                               | –           |                      |
| >PCCPCH Power                            | M        |  | 9.2.1.43               |                               | –           |                      |
| >Alpha Value                             | M        |  | 9.2.3.a                |                               | –           |                      |
| >UL PhysCH SF Variation                  | M        |  | 9.2.3.13B              |                               | –           |                      |
| >Synchronisation Configuration           | M        |  | 9.2.3.7E               |                               | –           |                      |
| >Secondary CCPCH Info TDD LCR            | O        |  | 9.2.3.7F               |                               | –           |                      |
| <b>&gt;UL CCTrCH Information LCR</b>     |          | <i>0..&lt;maxno of CCTrCHs LCR&gt;</i> |                        | For DCH                       | GLOBAL      | ignore               |
| >>CCTrCH ID                              | M        |  | 9.2.3.2                |                               | –           |                      |
| <b>&gt;&gt;UL DPCH Information LCR</b>   |          | <i>0..1</i>                            |                        |                               | YES         | ignore               |
| >>>Repetition Period                     | M        |  | 9.2.3.7                |                               | –           |                      |
| >>>Repetition Length                     | M        |  | 9.2.3.6                |                               | –           |                      |
| >>>TDD DPCH Offset                       | M        |  | 9.2.3.8A               |                               | –           |                      |
| >>>UL Timeslot Information LCR           | M        |  | 9.2.3.13G              |                               | –           |                      |
| >>Uplink SIR Target CCTrCH               | O        |  | Uplink SIR<br>9.2.1.69 |                               | YES         | ignore               |
| <b>&gt;DL CCTrCH Information LCR</b>     |          | <i>0..&lt;maxno of CCTrCHs LCR&gt;</i> |                        | For DCH                       | GLOBAL      | ignore               |
| >>CCTrCH ID                              | M        |  | 9.2.3.2                |                               | –           |                      |
| <b>&gt;&gt;DL DPCH Information LCR</b>   |          | <i>0..1</i>                            |                        |                               | YES         | ignore               |
| >>>Repetition Period                     | M        |  | 9.2.3.7                |                               | –           |                      |
| >>>Repetition Length                     | M        |  | 9.2.3.6                |                               | –           |                      |
| >>>TDD DPCH Offset                       | M        |  | 9.2.3.8A               |                               | –           |                      |
| >>>DL Timeslot Information LCR           | M        |  | 9.2.3.2E               |                               | –           |                      |
| >>>TSTD Indicator                        | M        |  | 9.2.3.13E              |                               | –           |                      |
| >DCH Information Response                | O        |  | 9.2.1.16A              |                               | YES         | ignore               |
| <b>&gt;DSCH Information Response LCR</b> |          | <i>0 .. &lt;maxno of DSCHs LCR&gt;</i> |                        |                               | GLOBAL      | ignore               |
| >>DSCH ID                                | M        |  | 9.2.3.3ae              |                               | –           |                      |
| >>DSCH Flow Control Information          | M        |  | 9.2.3.3ag              |                               | –           |                      |
| >>Binding ID                             | O        |  | 9.2.1.3                |                               | –           |                      |
| >>Transport Layer Address                | O        |  | 9.2.1.62               |                               | –           |                      |
| >>Transport Format Management            | M        |  | 9.2.3.13               |                               | –           |                      |
| <b>&gt;USCH Information Response LCR</b> |          | <i>0 .. &lt;maxno of USCHs LCR&gt;</i> |                        |                               | GLOBAL      | ignore               |

| IE/Group Name                           | Presence | Range                                 | IE Type and Reference                      | Semantics Description   | Criticality | Assigned Criticality |
|---|----------|---------------------------------------|--|---|-------------|----------------------|
| >>USCH ID                               | M        |                                       | 9.2.3.14                                   |   | –           |                      |
| >>Binding ID                            | O        |                                       | 9.2.1.3                                    |   | –           |                      |
| >>Transport Layer Address               | O        |                                       | 9.2.1.62                                   |   | –           |                      |
| >>Transport Format Management           | M        |                                       | 9.2.3.13                                   |   | –           |                      |
| >Neighbouring UMTS Cell Information     | O        |                                       | 9.2.1.41A                                  |   | –           |                      |
| >Neighbouring GSM Cell Information      | O        |                                       | 9.2.1.41C                                  |   | –           |                      |
| >HCS Prio                               | O        |                                       | 9.2.1.30N                                  |   | YES         | ignore               |
| >Cell GA Additional Shapes              | O        |                                       | 9.2.1.5B                                   |   | YES         | ignore               |
| >Uplink Timing Advance Control LCR      | M        |                                       | 9.2.3.13K                                  |   | YES         | ignore               |
| >PowerControl GAP                       | O        |                                       | INTEGER (1..255)                           | Unit: umber of subframes Applicable to 1.28Mcps TDD only                    | YES         | ignore               |
| >SixtyfourQAM DL Support Indicator      | O        |                                       | 9.2.1.123                                  | Applicable to 1.28Mcps TDD only   | YES         | ignore               |
| >Neighbouring E-UTRA Cell Information   | O        |                                       | 9.2.1.41De                                 |   | YES         | ignore               |
| >Idle Interval Information              | O        |                                       | 9.2.3.60                                   | TDD only  | YES         | ignore               |
| HS-DSCH-RNTI                            | O        |                                       | 9.2.1.30P                                  |   | YES         | ignore               |
| HS-DSCH Information Response            | O        |                                       | HS-DSCH TDD Information Response 9.2.3.3ab |   | YES         | ignore               |
| DSCH-RNTI                               | O        |                                       | 9.2.3.3ah                                  |   | YES         | ignore               |
| <b>Active MBMS Bearer Service List</b>  |          | <i>0..&lt;maxno ofActiveM BMS&gt;</i> |  |   | GLOBAL      | ignore               |
| >TMGI                                   | M        |                                       | 9.2.1.80                                   |   | –           |                      |
| >Transmission Mode                      | O        |                                       | 9.2.1.81                                   |   | –           |                      |
| >Preferred Frequency Layer              | O        |                                       | UARFCN 9.2.1.66                            |   | –           |                      |
| <b>RL Information Response 7.68Mcps</b> |          | <i>0..1</i>                           |  | Mandatory for 7.68Mcps TDD , not applicable to 1.28Mcps TDD or 3.84Mcps TDD | YES         | ignore               |
| >RL ID                                  | M        |                                       | 9.2.1.49                                   |   | –           |                      |
| >URA Information                        | O        |                                       | 9.2.1.70B                                  |   | –           |                      |
| >SAI                                    | M        |                                       | 9.2.1.52                                   |   | –           |                      |
| >Cell GAI                               | O        |                                       | 9.2.1.5A                                   |   | –           |                      |
| >UTRAN Access Point Position            | O        |                                       | 9.2.1.70A                                  |   | –           |                      |
| >UL Time Slot ISCP Info                 | M        |                                       | 9.2.3.13D                                  |   | –           |                      |
| >Maximum Uplink SIR                     | M        |                                       | Uplink SIR 9.2.1.69                        |   | –           |                      |
| >Minimum Uplink SIR                     | M        |                                       | Uplink SIR 9.2.1.69                        |   | –           |                      |
| >Maximum Allowed UL Tx Power            | M        |                                       | 9.2.1.35                                   |   | –           |                      |
| >Maximum DL TX Power                    | M        |                                       | DL Power 9.2.1.21A                         |   | –           |                      |

| IE/Group Name                                  | Presence | Range                              | IE Type and Reference | Semantics Description         | Criticality | Assigned Criticality |
|--|----------|------------------------------------|-----------------------|-------------------------------|-------------|----------------------|
| >Minimum DL TX Power                           | M        |                                    | DL Power 9.2.1.21A    |                               | –           |                      |
| >UARFCN  | O        |                                    | UARFCN 9.2.1.66       | Corresponds to Nt in ref. [7] | –           |                      |
| >Cell Parameter ID                             | O        |                                    | 9.2.1.8               |                               | –           |                      |
| >Sync Case                                     | O        |                                    | 9.2.1.54              |                               | –           |                      |
| >SCH Time Slot                                 | C-Case2  |                                    | 9.2.1.51              |                               | –           |                      |
| >SCTD Indicator                                | O        |                                    | 9.2.1.78              |                               | –           |                      |
| >PCCPCH Power                                  | M        |                                    | 9.2.1.43              |                               | –           |                      |
| >Timing Advance Applied                        | M        |                                    | 9.2.3.12A             |                               | –           |                      |
| >Alpha Value                                   | M        |                                    | 9.2.3.a               |                               | –           |                      |
| >UL PhysCH SF Variation                        | M        |                                    | 9.2.3.13B             |                               | –           |                      |
| >Synchronisation Configuration                 | M        |                                    | 9.2.3.7E              |                               | –           |                      |
| >Secondary CCPCH Info 7.68Mcps TDD             | O        |                                    | 9.2.3.22              |                               | –           |                      |
| <b>&gt;UL CCTrCH Information 7.68 Mcps</b>     |          | <i>0..&lt;maxno of CCTrCHs&gt;</i> |                       | For DCH                       | GLOBAL      | ignore               |
| >>CCTrCH ID                                    | M        |                                    | 9.2.3.2               |                               | –           |                      |
| <b>&gt;&gt;UL DPCH Information</b>             |          | <i>0..1</i>                        |                       |                               | YES         | ignore               |
| >>>Repetition Period                           | M        |                                    | 9.2.3.7               |                               | –           |                      |
| >>>Repetition Length                           | M        |                                    | 9.2.3.6               |                               | –           |                      |
| >>>TDD DPCH Offset                             | M        |                                    | 9.2.3.8A              |                               | –           |                      |
| >>>UL Timeslot Information 7.68Mcps            | M        |                                    | 9.2.3.26              |                               | –           |                      |
| >>Uplink SIR Target CCTrCH                     | O        |                                    | Uplink SIR 9.2.1.69   |                               | –           |                      |
| <b>&gt;DL CCTrCH Information 7.68 Mcps</b>     |          | <i>0..&lt;maxno of CCTrCHs&gt;</i> |                       | For DCH                       | GLOBAL      | ignore               |
| >>CCTrCH ID                                    | M        |                                    | 9.2.3.2               |                               | –           |                      |
| <b>&gt;&gt;DL DPCH Information</b>             |          | <i>0..1</i>                        |                       |                               | YES         | ignore               |
| >>>Repetition Period                           | M        |                                    | 9.2.3.7               |                               | –           |                      |
| >>>Repetition Length                           | M        |                                    | 9.2.3.6               |                               | –           |                      |
| >>>TDD DPCH Offset                             | M        |                                    | 9.2.3.8A              |                               | –           |                      |
| >>>DL Timeslot Information 7.68Mcps            | M        |                                    | 9.2.3.28              |                               | –           |                      |
| >>CCTrCH Maximum DL TX Power                   | O        |                                    | DL Power 9.2.1.21A    | Maximum allowed power on DPCH | –           |                      |
| >>CCTrCH Minimum DL TX Power                   | O        |                                    | DL Power 9.2.1.21A    | Minimum allowed power on DPCH | –           |                      |
| >DCH Information Response                      | O        |                                    | 9.2.1.16A             |                               | YES         | ignore               |
| <b>&gt;DSCH Information Response 7.68 Mcps</b> |          | <i>0 .. &lt;maxno of DSCHs&gt;</i> |                       |                               | GLOBAL      | ignore               |
| >>DSCH ID                                      | M        |                                    | 9.2.3.3ae             |                               | –           |                      |
| >>DSCH Flow Control Information                | M        |                                    | 9.2.3.3ag             |                               | –           |                      |
| >>Binding ID                                   | O        |                                    | 9.2.1.3               |                               | –           |                      |
| >>Transport Layer Address                      | O        |                                    | 9.2.1.62              |                               | –           |                      |
| >>Transport Format Management                  | M        |                                    | 9.2.3.13              |                               | –           |                      |
| <b>&gt;USCH Information Response 7.68 Mcps</b> |          | <i>0 .. &lt;maxno of USCHs&gt;</i> |                       |                               | GLOBAL      | ignore               |
| >>USCH ID                                      | M        |                                    | 9.2.3.14              |                               | –           |                      |
| >>Binding ID                                   | O        |                                    | 9.2.1.3               |                               | –           |                      |
| >>Transport Layer                              | O        |                                    | 9.2.1.62              |                               | –           |                      |

| IE/Group Name   | Presence | Range | IE Type and Reference  | Semantics Description | Criticality | Assigned Criticality |
|---|----------|-------|--|-----------------------|-------------|----------------------|
| Address   |          |       |  |                       |             |                      |
| >>Transport Format Management                                     | M        |       | 9.2.3.13   |                       | –           |                      |
| >Neighbouring UMTS Cell Information                               | O        |       | 9.2.1.41A  |                       | –           |                      |
| >Neighbouring GSM Cell Information                                | O        |       | 9.2.1.41C  |                       | –           |                      |
| >Cell GA Additional Shapes  | O        |       | 9.2.1.5B   |                       | –           |                      |
| >HCS Prio   | O        |       | 9.2.1.30N  |                       | –           |                      |
| >Time Slot for SCH  | C-Case1  |       | Time Slot<br>9.2.1.56  |                       | –           |                      |
| >Neighbouring E-UTRA Cell Information                             | O        |       | 9.2.1.41De   |                       | YES         | ignore               |
| E-DCH Information Response  | O        |       | E-DCH<br>TDD<br>Information<br>Response<br>9.2.3.41              | 3.84Mcps<br>TDD only  | YES         | ignore               |
| E-DCH Information Response<br>7.68Mcps                            | O        |       | E-DCH<br>TDD<br>Information<br>Response<br>7.68Mcps<br>9.2.3.52  | 7.68Mcps<br>TDD only  | YES         | ignore               |
| E-DCH Information Response<br>1.28Mcps                            | O        |       | E-DCH<br>TDD<br>Information<br>Response<br>1.28Mcps<br>9.2.3.41a | 1.28Mcps<br>TDD only  | YES         | ignore               |
| Continuous Packet<br>Connectivity DRX Information<br>Response LCR | O        |       | 9.2.3.63   | 1.28 Mcps<br>TDD only | YES         | ignore               |
| HS-DSCH Semi-Persistent<br>scheduling Information<br>Response LCR | O        |       | 9.2.3.68   | 1.28 Mcps<br>TDD only | YES         | ignore               |
| E-DCH Semi-Persistent<br>scheduling Information<br>Response LCR   | O        |       | 9.2.3.69   | 1.28 Mcps<br>TDD only | YES         | ignore               |
| E-RNTI for FACH   | O        |       | E-RNTI<br>9.2.1.94   | 1.28 Mcps<br>TDD only | YES         | ignore               |
| H-RNTI for FACH   | O        |       | HS-DSCH-<br>RNTI<br>9.2.1.30P                                    | 1.28 Mcps<br>TDD only | YES         | ignore               |

| Condition | Explanation  |
|-----------|--|
| Case2     | The IE shall be present if <i>Sync Case</i> IE is equal to "Case2".  |
| Case1     | This IE shall be present if <i>Sync Case</i> IE is equal to "Case1". |

| Range bound              | Explanation   |
|--------------------------|---|
| <i>maxnoofDSCHs</i>      | Maximum number of DSCHs for one UE for 3.84Mcps TDD or 7.68Mcps TDD.  |
| <i>maxnoofUSCHs</i>      | Maximum number of USCHs for one UE for 3.84Mcps TDD or 7.68Mcps TDD.  |
| <i>maxnoofCCTrCHs</i>    | Maximum number of CCTrCH for one UE for 3.84Mcps TDD or 7.68Mcps TDD. |
| <i>maxnoofDSCHsLCR</i>   | Maximum number of DSCHs for one UE for 1.28Mcps TDD.                  |
| <i>maxnoofUSCHsLCR</i>   | Maximum number of USCHs for one UE for 1.28Mcps TDD.                  |
| <i>maxnoofCCTrCHsLCR</i> | Maximum number of CCTrCH for one UE for 1.28Mcps TDD.                 |
| <i>maxnoofActiveMBMS</i> | Maximum number of MBMS bearer services that are active in parallel.   |

## 9.1.5 RADIO LINK SETUP FAILURE

### 9.1.5.1 FDD Message

| IE/Group Name                          | Presence                  | Range              | IE Type and Reference             | Semantics Description             | Criticality | Assigned Criticality |
|--|---------------------------|--------------------|-----------------------------------|-----------------------------------|-------------|----------------------|
| Message Type                           | M                         |                    | 9.2.1.40                          |                                   | YES         | reject               |
| Transaction ID                         | M                         |                    | 9.2.1.59                          |                                   | –           |                      |
| D-RNTI                                 | O                         |                    | 9.2.1.24                          |                                   | YES         | ignore               |
| CN PS Domain Identifier                | O                         |                    | 9.2.1.12                          |                                   | YES         | ignore               |
| CN CS Domain Identifier                | O                         |                    | 9.2.1.11                          |                                   | YES         | ignore               |
| CHOICE Cause Level                     | M                         |                    |                                   |                                   | YES         | ignore               |
| >General                               |                           |                    |                                   |                                   | –           |                      |
| >>Cause                                | M                         |                    | 9.2.1.5                           |                                   | –           |                      |
| >RL Specific                           |                           |                    |                                   |                                   | –           |                      |
| >>Unsuccessful RL Information Response |                           | 1..<maxno ofRLs>   |                                   |                                   | EACH        | ignore               |
| >>>RL ID                               | M                         |                    | 9.2.1.49                          |                                   | –           |                      |
| >>>Cause                               | M                         |                    | 9.2.1.5                           |                                   | –           |                      |
| >>>Max UE DTX Cycle                    | C-DTX-CycleNotA available |                    | 9.2.2.87                          |                                   | YES         | ignore               |
| >>Successful RL Information Response   |                           | 0..<maxno ofRLs-1> |                                   |                                   | EACH        | ignore               |
| >>>RL ID                               | M                         |                    | 9.2.1.49                          |                                   | –           |                      |
| >>>RL Set ID                           | M                         |                    | 9.2.2.35                          |                                   | –           |                      |
| >>>URA Information                     | O                         |                    | 9.2.1.70B                         |                                   | –           |                      |
| >>>SAI                                 | M                         |                    | 9.2.1.52                          |                                   | –           |                      |
| >>>Cell GAI                            | O                         |                    | 9.2.1.5A                          |                                   | –           |                      |
| >>>UTRAN Access Point Position         | O                         |                    | 9.2.1.70A                         |                                   | –           |                      |
| >>>Received Total Wide Band Power      | M                         |                    | 9.2.2.35A                         |                                   | –           |                      |
| >>>Not Used                            | O                         |                    | NULL                              |                                   | –           |                      |
| >>>DL Code Information                 | M                         |                    | FDD DL Code Information 9.2.2.14A |                                   | –           |                      |
| >>>CHOICE Diversity Indication         | M                         |                    |                                   |                                   | –           |                      |
| >>>>Combining                          |                           |                    |                                   |                                   | –           |                      |
| >>>>>RL ID                             | M                         |                    | 9.2.1.49                          | Reference RL ID for the combining | –           |                      |
| >>>>>DCH Information Response          | O                         |                    | 9.2.1.16A                         |                                   | YES         | ignore               |
| >>>>>E-DCH FDD Information Response    | O                         |                    | 9.2.2.4C                          |                                   | YES         | ignore               |
| >>>>Non Combining or First RL          |                           |                    |                                   |                                   | –           |                      |
| >>>>>DCH Information Response          | M                         |                    | 9.2.1.16A                         |                                   | –           |                      |
| >>>>>E-DCH FDD Information Response    | O                         |                    | 9.2.2.4C                          |                                   | YES         | ignore               |
| >>>SSDT Support Indicator              | M                         |                    | 9.2.2.43                          |                                   | –           |                      |
| >>>Maximum Uplink SIR                  | M                         |                    | Uplink SIR 9.2.1.69               |                                   | –           |                      |
| >>>Minimum Uplink SIR                  | M                         |                    | Uplink SIR 9.2.1.69               |                                   | –           |                      |
| >>>Closed Loop Timing Adjustment Mode  | O                         |                    | 9.2.2.3A                          |                                   | –           |                      |
| >>>Maximum Allowed UL Tx Power         | M                         |                    | 9.2.1.35                          |                                   | –           |                      |

| IE/Group Name  | Presence | Range                    | IE Type and Reference                      | Semantics Description         | Criticality | Assigned Criticality |
|--|----------|--------------------------|--|-------------------------------|-------------|----------------------|
| >>>Maximum DL TX Power   | M        |                          | DL Power 9.2.1.21A                         |                               | –           |                      |
| >>>Minimum DL TX Power   | M        |                          | DL Power 9.2.1.21A                         |                               | –           |                      |
| >>>Primary CPICH Power   | M        |                          | 9.2.1.44                                   |                               | –           |                      |
| >>>Primary Scrambling Code   | O        |                          | 9.2.1.45                                   |                               | –           |                      |
| >>>UL UARFCN   | O        |                          | UARFCN 9.2.1.66                            | Corresponds to Nu in ref. [6] | –           |                      |
| >>>DL UARFCN   | O        |                          | UARFCN 9.2.1.66                            | Corresponds to Nd in ref. [6] | –           |                      |
| >>>Not Used  | O        |                          | NULL                                       |                               | –           |                      |
| >>>Neighbouring UMTS Cell Information                              | O        |                          | 9.2.1.41A                                  |                               | –           |                      |
| >>>Neighbouring GSM Cell Information                               | O        |                          | 9.2.1.41C                                  |                               | –           |                      |
| >>>PC Preamble   | M        |                          | 9.2.2.27a                                  |                               | –           |                      |
| >>>SRB Delay   | M        |                          | 9.2.2.39A                                  |                               | –           |                      |
| >>>Cell GA Additional Shapes                                       | O        |                          | 9.2.1.5B                                   |                               | YES         | ignore               |
| >>>DL Power Balancing Activation Indicator                         | O        |                          | 9.2.2.10B                                  |                               | YES         | ignore               |
| >>>HCS Prio  | O        |                          | 9.2.1.30N                                  |                               | YES         | ignore               |
| >>>Primary CPICH Usage For Channel Estimation                      | O        |                          | 9.2.2.32A                                  |                               | YES         | ignore               |
| >>>Secondary CPICH Information                                     | O        |                          | 9.2.2.38A                                  |                               | YES         | ignore               |
| >>>Active MBMS Bearer Service List                                 |          | 0..<maxno ofActiveM BMS> |  |                               | GLOBAL      | ignore               |
| >>>>TMGI   | M        |                          | 9.2.1.80                                   |                               | –           |                      |
| >>>>Transmission Mode  | O        |                          | 9.2.1.81                                   |                               | –           |                      |
| >>>>Preferred Frequency Layer                                      | O        |                          | UARFCN 9.2.1.66                            |                               | –           |                      |
| >>>E-DCH RL Set ID   | O        |                          | RL Set ID 9.2.2.35                         |                               | YES         | ignore               |
| >>>E-DCH FDD DL Control Channel Information                        | O        |                          | 9.2.2.4D                                   |                               | YES         | ignore               |
| >>>Initial DL DPCH Timing Adjustment                               | O        |                          | DL DPCH Timing Adjustment 9.2.2.9A         |                               | YES         | ignore               |
| >>>Neighbouring E-UTRA Cell Information                            | O        |                          | 9.2.1.41De                                 |                               | YES         | ignore               |
| >>> HS-DSCH Preconfiguration Info                                  | O        |                          | 9.2.2.99                                   |                               | YES         | ignore               |
| >>>F-DPCH Slot Format  | O        |                          | 9.2.2.85                                   |                               | YES         | ignore               |
| >>HS-DSCH-RNTI   | O        |                          | 9.2.1.30P                                  |                               | YES         | ignore               |
| >>HS-DSCH Information Response                                     | O        |                          | HS-DSCH FDD Information Response 9.2.2.19b |                               | YES         | ignore               |
| >>Continuous Packet Connectivity HS-SCCH less Information Response | O        |                          | 9.2.2.75                                   |                               | YES         | ignore               |

| IE/Group Name   | Presence | Range                   | IE Type and Reference | Semantics Description   | Criticality | Assigned Criticality |
|---|----------|-------------------------|-----------------------|---|-------------|----------------------|
| >>SixtyfourQAM DL Support Indicator                   | O        |                         | 9.2.1.123             |   | YES         | ignore               |
| >>>Additional HS Cell Information Response            | O        | 0..<maxno ofHSDSCH H-1> |                       | For secondary serving HS-DSCH cell. Max 1 in this 3GPP release. | EACH        | ignore               |
| >>>HS-PDSCH RL ID                                     | M        |                         | RL ID 9.2.1.49        |   | –           |                      |
| >>>HS-DSCH-RNTI                                       | M        |                         | 9.2.1.30P             |   | –           |                      |
| >>>HS-DSCH FDD Secondary Serving Information Response | M        |                         | 9.2.2.19ba            |   | –           |                      |
| >>>SixtyfourQAM DL Support Indicator                  | O        |                         | 9.2.1.123             |   | –           |                      |
| Uplink SIR Target                                     | O        |                         | Uplink SIR 9.2.1.69   |   | YES         | ignore               |
| Criticality Diagnostics                               | O        |                         | 9.2.1.13              |   | YES         | ignore               |

| Condition             | Explanation   |
|-----------------------|---|
| DTX-CycleNotAvailable | The IE shall be present if the <i>Cause</i> IE is set to Continuous Packet Connectivity UE DTX Cycle not Available ". |

| Range bound              | Explanation   |
|--------------------------|---|
| <i>maxnoofRLs</i>        | Maximum number of RLs for one UE.                                   |
| <i>maxnoofActiveMBMS</i> | Maximum number of MBMS bearer services that are active in parallel. |
| <i>maxnoofHSDSCH-1</i>   | Maximum number of Secondary Serving HS-DSCH cells for one UE.       |

### 9.1.5.2 TDD Message

| IE/Group Name                           | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|---|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| Message Type                            | M        |       | 9.2.1.40              |                       | YES         | reject               |
| Transaction ID                          | M        |       | 9.2.1.59              |                       | –           |                      |
| CHOICE <i>Cause Level</i>               | M        |       |                       |                       | YES         | ignore               |
| > <i>General</i>                        |          |       |                       |                       | –           |                      |
| >> <i>Cause</i>                         | M        |       | 9.2.1.5               |                       | –           |                      |
| > <i>RL Specific</i>                    |          |       |                       |                       | –           |                      |
| >>>Unsuccessful RL Information Response |          | 1     |                       |                       | YES         | ignore               |
| >>>RL ID                                | M        |       | 9.2.1.49              |                       | –           |                      |
| >>> <i>Cause</i>                        | M        |       | 9.2.1.5               |                       | –           |                      |
| >>SixtyfourQAM DL Support Indicator     | O        |       | 9.2.1.123             |                       | YES         | ignore               |
| Criticality Diagnostics                 | O        |       | 9.2.1.13              |                       | YES         | ignore               |



## 9.1.6 RADIO LINK ADDITION REQUEST

## 9.1.6.1 FDD Message

| IE/Group Name                                | Presence | Range                                    | IE Type and Reference  | Semantics Description  | Criticality | Assigned Criticality |
|--|----------|--|------------------------|--|-------------|----------------------|
| Message Type                                 | M        |  | 9.2.1.40               |  | YES         | reject               |
| Transaction ID                               | M        |  | 9.2.1.59               |  | –           |                      |
| Uplink SIR Target                            | M        |  | Uplink SIR<br>9.2.1.69 |  | YES         | reject               |
| <b>RL Information</b>                        |          | <i>1..&lt;maxn<br/>oofRLs-<br/>1&gt;</i> |                        |  | EACH        | notify               |
| >RL ID                                       | M        |  | 9.2.1.49               |  | –           |                      |
| >C-ID  | M        |  | 9.2.1.6                |  | –           |                      |
| >Frame Offset                                | M        |  | 9.2.1.30               |  | –           |                      |
| >Chip Offset                                 | M        |  | 9.2.2.1                |  | –           |                      |
| >Diversity Control Field                     | M        |  | 9.2.1.20               |  | –           |                      |
| >Primary CPICH Ec/No                         | O        |  | 9.2.2.32               |  | –           |                      |
| >Not Used                                    | O        |  | NULL                   |  | –           |                      |
| >Transmit Diversity Indicator                | O        |  | 9.2.2.48               |  | –           |                      |
| >DL Reference Power                          | O        |  | DL Power<br>9.2.1.21A  | Power on<br>DPCH or on<br>F-DPCH   | YES         | ignore               |
| >Enhanced Primary CPICH<br>Ec/No             | O        |  | 9.2.2.13l              |  | YES         | ignore               |
| >RL Specific DCH<br>Information              | O        |  | 9.2.1.49A              |  | YES         | ignore               |
| >Delayed Activation                          | O        |  | 9.2.1.19Aa             |  | YES         | reject               |
| >RL specific E-DCH<br>Information            | O        |  | 9.2.2.35a              |  | YES         | reject               |
| >E-DCH RL Indication                         | O        |  | 9.2.2.4E               |  | YES         | reject               |
| >Synchronisation Indicator                   | O        |  | 9.2.2.45A              |  | YES         | ignore               |
| >HS-DSCH Preconfiguration<br>Setup           | O        |  | 9.2.2.100              |  | YES         | Ignore               |
| Active Pattern Sequence<br>Information       | O        |  | 9.2.2A                 | Either all the<br>already<br>active<br>Transmissio<br>n Gap<br>Sequence(s)<br>are<br>addressed<br>(Transmissio<br>n Gap<br>Pattern<br>sequence<br>shall overlap<br>with the<br>existing one)<br>or none of<br>the<br>transmission<br>gap<br>sequences is<br>activated. | YES         | reject               |
| DPC Mode                                     | O        |  | 9.2.2.12A              |  | YES         | reject               |
| Permanent NAS UE Identity                    | O        |  | 9.2.1.73               |  | YES         | ignore               |
| Serving E-DCH RL                             | O        |  | 9.2.2.38C              |  | YES         | reject               |
| Initial DL DPCH Timing<br>Adjustment Allowed | O        |  | 9.2.2.21b              |  | YES         | ignore               |
| HS-DSCH Serving Cell<br>Change Information   | O        |  | 9.2.2.19f              |  | YES         | reject               |
| Serving Cell Change CFN                      | O        |  | CFN<br>9.2.1.9         |  | YES         | reject               |

|   |            |                                   |                   |   |      |        |
|---|------------|-----------------------------------|-------------------|---|------|--------|
| <b>E-DPCH Information</b>                         |            | <i>0..1</i>                       |                   |   | YES  | reject |
| >Maximum Set of E-DPDCHs                          | M          |                                   | 9.2.2.24e         |   | –    |        |
| >Puncture Limit                                   | M          |                                   | 9.2.1.46          |   | –    |        |
| >E-TFCS Information                               | M          |                                   | 9.2.2.4G          |   | –    |        |
| >E-TTI  | M          |                                   | 9.2.2.4J          |   | –    |        |
| >E-DPCCH Power Offset                             | M          |                                   | 9.2.2.4K          |   | –    |        |
| >E-RGCH 2-Index-Step Threshold                    | M          |                                   | 9.2.2.64          |   | –    |        |
| >E-RGCH 3-Index-Step Threshold                    | M          |                                   | 9.2.2.65          |   | –    |        |
| >HARQ Info for E-DCH                              | M          |                                   | 9.2.2.66          |   | –    |        |
| >HS-DSCH Configured Indicator                     | M          |                                   | 9.2.2.19C         |   | YES  | reject |
| > Minimum Reduced E-DPDCH Gain Factor             | O          |                                   | 9.2.2.102         |   | YES  | ignore |
| E-DCH FDD Information                             | C-EDCHInfo |                                   | 9.2.2.4B          |   | YES  | reject |
| <b>Additional HS Cell Information RL Addition</b> |            | <i>0..&lt;maxnoofHSDSCH-1&gt;</i> |                   | For secondary serving HS-DSCH cell. Max 1 in this 3GPP release. | EACH | reject |
| >HS-PDSCH RL ID                                   | M          |                                   | RL ID<br>9.2.1.49 |   | –    |        |
| >C-ID   | M          |                                   | 9.2.1.6           |   | –    |        |
| >HS-DSCH FDD Secondary Serving Information        | M          |                                   | 9.2.2.19aa        |   | –    |        |

| Condition | Explanation  |
|-----------|--|
| EDCHInfo  | This IE shall be present if <i>E-DPCH Information</i> IE is present. |

| Range bound            | Explanation   |
|------------------------|---|
| <i>maxnoofRLs</i>      | Maximum number of radio links for one UE.                     |
| <i>maxnoofHSDSCH-1</i> | Maximum number of Secondary Serving HS-DSCH cells for one UE. |

## 9.1.6.2 TDD Message

| IE/Group Name                                | Presence | Range                   | IE Type and Reference             | Semantics Description   | Criticality | Assigned Criticality |
|--|----------|-------------------------|-----------------------------------|---|-------------|----------------------|
| Message Type                                 | M        |                         | 9.2.1.40                          |   | YES         | reject               |
| Transaction ID                               | M        |                         | 9.2.1.59                          |   | –           |                      |
| <b>RL Information</b>                        |          | 1                       |                                   |   | YES         | reject               |
| >RL ID                                       | M        |                         | 9.2.1.49                          |   | –           |                      |
| >C-ID  | M        |                         | 9.2.1.6                           |   | –           |                      |
| >Frame Offset                                | M        |                         | 9.2.1.30                          |   | –           |                      |
| >Diversity Control Field                     | M        |                         | 9.2.1.20                          |   | –           |                      |
| >Primary CCPCH RSCP                          | O        |                         | 9.2.3.5                           |   | –           |                      |
| >DL Time Slot ISCP Info                      | O        |                         | 9.2.3.2D                          | Applicable to 3.84Mcps TDD and 7.68Mcps TDD only                            | –           |                      |
| >DL Time Slot ISCP Info LCR                  | O        |                         | 9.2.3.2F                          | Applicable to 1.28Mcps TDD only   | YES         | reject               |
| >RL Specific DCH Information                 | O        |                         | 9.2.1.49A                         |   | YES         | ignore               |
| >Delayed Activation                          | O        |                         | 9.2.1.19Aa                        |   | YES         | reject               |
| <b>&gt;UL Synchronisation Parameters LCR</b> |          | 0..1                    |                                   | Mandatory for 1.28Mcps TDD. Not Applicable to 3.84Mcps TDD or 7.68Mcps TDD. | YES         | reject               |
| >>Uplink Synchronisation Step Size           | M        |                         | 9.2.3.13J                         |   | –           |                      |
| >>Uplink Synchronisation Frequency           | M        |                         | 9.2.3.13I                         |   | –           |                      |
| > Primary CCPCH RSCP Delta                   | O        |                         | 9.2.3.5a                          |   | YES         | ignore               |
| > Idle Interval Configuration Indicator      | O        |                         | NULL                              | TDD only  | YES         | ignore               |
| Permanent NAS UE Identity                    | O        |                         | 9.2.1.73                          |   | YES         | ignore               |
| <b>UL CCTrCH Information</b>                 |          | 0..<maxno of CCTr CHs > |                                   |   | EACH        | notify               |
| >CCTrCH ID                                   | M        |                         | 9.2.3.2                           |   | –           |                      |
| >TDD TPC Uplink Step Size                    | O        |                         | 9.2.3.10a                         | Applicable to 1.28Mcps TDD only   | –           |                      |
| <b>DL CCTrCH Information</b>                 |          | 0..<maxno of CCTr CHs > |                                   |   | EACH        | notify               |
| >CCTrCH ID                                   | M        |                         | 9.2.3.2                           |   | –           |                      |
| >TDD TPC Downlink Step Size                  | O        |                         | 9.2.3.10                          |   | –           |                      |
| HS-DSCH Information                          | O        |                         | HS-DSCH TDD Information 9.2.3.3aa |   | YES         | reject               |
| HS-PDSCH RL ID                               | O        |                         | RL ID 9.2.1.49                    |   | YES         | reject               |
| <b>E-DCH Information</b>                     |          | 0..1                    |                                   | 3.84Mcps TDD only   | YES         | reject               |
| >E-PUCH Information                          | M        |                         | 9.2.3.36                          |   | –           |                      |

|  |   |      |           |                    |     |        |
|--|---|------|-----------|--------------------|-----|--------|
| >E-TFCS Information TDD                            | M |      | 9.2.3.37  |                    | –   |        |
| >E-DCH MAC-d Flows Information TDD                 | M |      | 9.2.3.38  |                    | –   |        |
| >E-DCH TDD Information                             | M |      | 9.2.3.40  |                    | –   |        |
| E-DCH Serving RL                                   | O |      | 9.2.1.49  | 3.84Mcps TDD only  | YES | reject |
| <b>E-DCH Information 7.68Mcps</b>                  |   | 0..1 |           | 7.68Mcps TDD only  | YES | reject |
| >E-PUCH Information                                | M |      | 9.2.3.36  |                    | –   |        |
| >E-TFCS Information TDD                            | M |      | 9.2.3.37  |                    | –   |        |
| >E-DCH MAC-d Flows Information TDD                 | M |      | 9.2.3.38  |                    | –   |        |
| >E-DCH TDD Information 7.68Mcps                    | M |      | 9.2.3.51  |                    | –   |        |
| <b>E-DCH Information 1.28Mcps</b>                  |   | 0..1 |           | 1.28Mcps TDD only  | YES | reject |
| >E-PUCH Information LCR                            | M |      | 9.2.3.36a |                    | –   |        |
| >E-TFCS Information TDD                            | M |      | 9.2.3.37  |                    | –   |        |
| >E-DCH MAC-d Flows Information TDD                 | M |      | 9.2.3.38  |                    | –   |        |
| >E-DCH TDD Information LCR                         | M |      | 9.2.3.40a |                    | –   |        |
| Continuous Packet Connectivity DRX Information LCR | O |      | 9.2.3.61  | 1.28 Mcps TDD only | YES | reject |
| HS-DSCH Semi-Persistent scheduling Information LCR | O |      | 9.2.3.64  | 1.28 Mcps TDD only | YES | reject |
| E-DCH Semi-Persistent scheduling Information LCR   | O |      | 9.2.3.66  | 1.28 Mcps TDD only | YES | reject |

| Range bound           | Explanation                          |
|-----------------------|--------------------------------------|
| <i>maxnoofCCTrCHs</i> | Maximum number of CCTrCH for one UE. |

## 9.1.7 RADIO LINK ADDITION RESPONSE

### 9.1.7.1 FDD Message

| IE/Group Name                            | Presence | Range              | IE Type and Reference                | Semantics Description | Criticality | Assigned Criticality |
|--|----------|--------------------|--------------------------------------|-----------------------|-------------|----------------------|
| Message Type                             | M        |                    | 9.2.1.40                             |                       | YES         | reject               |
| Transaction ID                           | M        |                    | 9.2.1.59                             |                       | –           |                      |
| <b>RL Information Response</b>           |          | 1..<maxnoof RLS-1> |                                      |                       | EACH        | ignore               |
| >RL ID                                   | M        |                    | 9.2.1.49                             |                       | –           |                      |
| >RL Set ID                               | M        |                    | 9.2.2.35                             |                       | –           |                      |
| >URA Information                         | O        |                    | 9.2.1.70B                            |                       | –           |                      |
| >SAI                                     | M        |                    | 9.2.1.52                             |                       | –           |                      |
| >Cell GAI                                | O        |                    | 9.2.1.5A                             |                       | –           |                      |
| >UTRAN Access Point Position             | O        |                    | 9.2.1.70A                            |                       | –           |                      |
| >Received Total Wide Band Power          | M        |                    | 9.2.2.35A                            |                       | –           |                      |
| >Not Used                                | O        |                    | NULL                                 |                       | –           |                      |
| >DL Code Information                     | M        |                    | FDD DL Code Information<br>9.2.2.14A |                       | YES         | ignore               |
| >CHOICE <i>Diversity Indication</i>      | M        |                    |                                      |                       | –           |                      |
| >> <i>Combining</i>                      |          |                    |                                      |                       | –           |                      |
| >>>RL ID                                 | M        |                    | 9.2.1.49                             | Reference RL ID       | –           |                      |
| >>>DCH Information Response              | O        |                    | 9.2.1.16A                            |                       | YES         | ignore               |
| >>>E-DCH FDD Information Response        | O        |                    | 9.2.2.4C                             |                       | YES         | ignore               |
| >> <i>Non Combining</i>                  |          |                    |                                      |                       | –           |                      |
| >>>DCH Information Response              | M        |                    | 9.2.1.16A                            |                       | –           |                      |
| >>>E-DCH FDD Information Response        | O        |                    | 9.2.2.4C                             |                       | YES         | ignore               |
| >SSDT Support Indicator                  | M        |                    | 9.2.2.43                             |                       | –           |                      |
| >Minimum Uplink SIR                      | M        |                    | Uplink SIR<br>9.2.1.69               |                       | –           |                      |
| >Maximum Uplink SIR                      | M        |                    | Uplink SIR<br>9.2.1.69               |                       | –           |                      |
| >Closed Loop Timing Adjustment Mode      | O        |                    | 9.2.2.3A                             |                       | –           |                      |
| >Maximum Allowed UL Tx Power             | M        |                    | 9.2.1.35                             |                       | –           |                      |
| >Maximum DL TX Power                     | M        |                    | DL Power<br>9.2.1.21A                |                       | –           |                      |
| >Minimum DL TX Power                     | M        |                    | DL Power<br>9.2.1.21A                |                       | –           |                      |
| >Neighbouring UMTS Cell Information      | O        |                    | 9.2.1.41A                            |                       | –           |                      |
| >Neighbouring GSM Cell Information       | O        |                    | 9.2.1.41C                            |                       | –           |                      |
| >PC Preamble                             | M        |                    | 9.2.2.27a                            |                       | –           |                      |
| >SRB Delay                               | M        |                    | 9.2.2.39A                            |                       | –           |                      |
| >Primary CPICH Power                     | M        |                    | 9.2.1.44                             |                       | –           |                      |
| >Cell GA Additional Shapes               | O        |                    | 9.2.1.5B                             |                       | YES         | ignore               |
| >DL Power Balancing Activation Indicator | O        |                    | 9.2.2.10B                            |                       | YES         | ignore               |
| >HCS Prio                                | O        |                    | 9.2.1.30N                            |                       | YES         | ignore               |
| <b>&gt;Active MBMS Bearer</b>            |          | 0..<maxnoof        |                                      |                       | GLOBAL      | ignore               |

| IE/Group Name   | Presence | Range                             | IE Type and Reference                  | Semantics Description   | Criticality | Assigned Criticality |
|---|----------|-----------------------------------|--|---|-------------|----------------------|
| <b>Service List</b>   |          | <i>ActiveMBMS</i>                 |  |   |             |                      |
| >>TMGI  | M        |                                   | 9.2.1.80                               |   | –           |                      |
| >>Transmission Mode   | O        |                                   | 9.2.1.81                               |   | –           |                      |
| >>Preferred Frequency Layer                                 | O        |                                   | UARFCN<br>9.2.1.66                     |   | –           |                      |
| >E-DCH RL Set ID  | O        |                                   | RL Set ID<br>9.2.2.35                  |   | YES         | ignore               |
| >E-DCH FDD DL Control Channel Information                   | O        |                                   | 9.2.2.4D                               |   | YES         | ignore               |
| >Initial DL DPCH Timing Adjustment                          | O        |                                   | DL DPCH Timing Adjustment<br>9.2.2.9.A |   | YES         | ignore               |
| >F-DPCH Slot Format   | O        |                                   | 9.2.2.85                               |   | YES         | ignore               |
| >Neighbouring E-UTRA Cell Information                       | O        |                                   | 9.2.1.41De                             |   | YES         | ignore               |
| >HS-DSCH Preconfiguration Info                              | O        |                                   | 9.2.2.99                               |   | YES         | ignore               |
| Criticality Diagnostics                                     | O        |                                   | 9.2.1.13                               |   | YES         | ignore               |
| HS-DSCH Serving Cell Change Information Response            | O        |                                   | 9.2.2.19g                              |   | YES         | ignore               |
| E-DCH Serving Cell Change Information Response              | O        |                                   | 9.2.2.19h                              |   | YES         | ignore               |
| MAC-hs Reset Indicator                                      | O        |                                   | 9.2.1.34B                              |   | YES         | ignore               |
| <b>Additional HS Cell Change Information Response</b>       |          | <i>0..&lt;maxnoofHSDSCH-1&gt;</i> |  | For secondary serving HS-DSCH cell. Max 1 in this 3GPP release. | EACH        | ignore               |
| >HS-PDSCH RL ID   | M        |                                   | RL ID<br>9.2.1.49                      |   | –           |                      |
| >HS-DSCH Secondary Serving Cell Change Information Response | M        |                                   | 9.2.2.19ga                             |   | –           |                      |

| Range bound              | Explanation   |
|--------------------------|---|
| <i>maxnoofRLs</i>        | Maximum number of radio links for one UE.                           |
| <i>maxnoofActiveMBMS</i> | Maximum number of MBMS bearer services that are active in parallel. |
| <i>maxnoofHSDSCH-1</i>   | Maximum number of Secondary Serving HS-DSCH cells for one UE.       |

## 9.1.7.2 TDD Message

| IE/Group Name                      | Presence | Range                | IE Type and Reference  | Semantics Description  | Criticality | Assigned Criticality |
|------------------------------------|----------|----------------------|------------------------|--|-------------|----------------------|
| Message Type                       | M        |                      | 9.2.1.40               |  | YES         | reject               |
| Transaction ID                     | M        |                      | 9.2.1.59               |  | –           |                      |
| <b>RL Information Response</b>     |          | 0..1                 |                        | Mandatory for 3.84Mcps TDD, not applicable to 1.28Mcps TDD or 7.68Mcps TDD | YES         | ignore               |
| >RL ID                             | M        |                      | 9.2.1.49               |  | –           |                      |
| >URA Information                   | O        |                      | 9.2.1.70B              |  | –           |                      |
| >SAI                               | M        |                      | 9.2.1.52               |  | –           |                      |
| >Cell GAI                          | O        |                      | 9.2.1.5A               |  | –           |                      |
| >UTRAN Access Point Position       | O        |                      | 9.2.1.70A              |  | –           |                      |
| >UL Time Slot ISCP Info            | M        |                      | 9.2.3.13D              |  | –           |                      |
| >Minimum Uplink SIR                | M        |                      | Uplink SIR<br>9.2.1.69 |  | –           |                      |
| >Maximum Uplink SIR                | M        |                      | Uplink SIR<br>9.2.1.69 |  | –           |                      |
| >Maximum Allowed UL Tx Power       | M        |                      | 9.2.1.35               |  | –           |                      |
| >Maximum DL TX Power               | M        |                      | DL Power<br>9.2.1.21A  |  | –           |                      |
| >Minimum DL TX Power               | M        |                      | DL Power<br>9.2.1.21A  |  | –           |                      |
| >PCCPCH Power                      | M        |                      | 9.2.1.43               |  | –           |                      |
| >Timing Advance Applied            | M        |                      | 9.2.3.12A              |  | –           |                      |
| >Alpha Value                       | M        |                      | 9.2.3.a                |  | –           |                      |
| >UL PhysCH SF Variation            | M        |                      | 9.2.3.13B              |  | –           |                      |
| >Synchronisation Configuration     | M        |                      | 9.2.3.7E               |  | –           |                      |
| >Secondary CCPCH Info TDD          | O        |                      | 9.2.3.7B               |  | –           |                      |
| <b>&gt;UL CCTrCH Information</b>   |          | 0..<maxnoof CCTrCHs> |                        | For DCH  | GLOBAL      | ignore               |
| >>CCTrCH ID                        | M        |                      | 9.2.3.2                |  | –           |                      |
| <b>&gt;&gt;UL DPCH Information</b> |          | 0..1                 |                        |  | YES         | ignore               |
| >>>Repetition Period               | M        |                      | 9.2.3.7                |  | –           |                      |
| >>>Repetition Length               | M        |                      | 9.2.3.6                |  | –           |                      |
| >>>TDD DPCH Offset                 | M        |                      | 9.2.3.8A               |  | –           |                      |
| >>>UL Timeslot Information         | M        |                      | 9.2.3.13C              |  | –           |                      |
| <b>&gt;DL CCTrCH Information</b>   |          | 0..<maxnoof CCTrCHs> |                        | For DCH  | GLOBAL      | ignore               |
| >>CCTrCH ID                        | M        |                      | 9.2.3.2                |  | –           |                      |
| <b>&gt;&gt;DL DPCH Information</b> |          | 0..1                 |                        |  | YES         | ignore               |
| >>>Repetition Period               | M        |                      | 9.2.3.7                |  | –           |                      |
| >>>Repetition Length               | M        |                      | 9.2.3.6                |  | –           |                      |
| >>>TDD DPCH Offset                 | M        |                      | 9.2.3.8A               |  | –           |                      |
| >>>DL Timeslot Information         | M        |                      | 9.2.3.2C               |  | –           |                      |
| >>CCTrCH Maximum DL TX Power       | O        |                      | DL Power<br>9.2.1.21A  | Maximum allowed power on DPCH  | YES         | ignore               |
| >>CCTrCH Minimum DL                | O        |                      | DL Power               | Minimum  | YES         | ignore               |

| IE/Group Name                         | Presence | Range                   | IE Type and Reference | Semantics Description  | Criticality | Assigned Criticality |
|---------------------------------------|----------|-------------------------|-----------------------|--|-------------|----------------------|
| TX Power                              |          |                         | 9.2.1.21A             | allowed power on DPCH  |             |                      |
| <b>&gt;DCH Information</b>            |          | 0..1                    |                       |  | –           |                      |
| >>CHOICE <i>Diversity Indication</i>  | M        |                         |                       |  | –           |                      |
| >>> <i>Combining</i>                  |          |                         |                       |  | –           |                      |
| >>>>RL ID                             | M        |                         | 9.2.1.49              | Reference RL   | –           |                      |
| >>>>DCH Information Response          | O        |                         | 9.2.1.16A             |  | YES         | ignore               |
| >>> <i>Non Combining</i>              |          |                         |                       |  | –           |                      |
| >>>>DCH Information Response          | M        |                         | 9.2.1.16A             |  | –           |                      |
| <b>&gt;DSCH Information Response</b>  |          | 0 ..<br><maxnoof DSCHs> |                       |  | GLOBAL      | ignore               |
| >>DSCH ID                             | M        |                         | 9.2.3.3ae             |  | –           |                      |
| >>Transport Format Management         | M        |                         | 9.2.3.13              |  | –           |                      |
| >>DSCH Flow Control Information       | M        |                         | 9.2.3.3ag             |  | –           |                      |
| >>CHOICE <i>Diversity Indication</i>  | O        |                         |                       |  | –           |                      |
| >>> <i>Non Combining</i>              |          |                         |                       |  | –           |                      |
| >>>>Binding ID                        | O        |                         | 9.2.1.3               |  | –           |                      |
| >>>>Transport Layer Address           | O        |                         | 9.2.1.62              |  | –           |                      |
| <b>&gt;USCH Information Response</b>  |          | 0 ..<br><maxnoof USCHs> |                       |  | GLOBAL      | ignore               |
| >>USCH ID                             | M        |                         | 9.2.3.14              |  | –           |                      |
| >>Transport Format Management         | M        |                         | 9.2.3.13              |  | –           |                      |
| >>CHOICE <i>Diversity Indication</i>  | O        |                         |                       |  | –           |                      |
| >>> <i>Non Combining</i>              |          |                         |                       |  | –           |                      |
| >>>>Binding ID                        | O        |                         | 9.2.1.3               |  | –           |                      |
| >>>>Transport Layer Address           | O        |                         | 9.2.1.62              |  | –           |                      |
| >Neighbouring UMTS Cell Information   | O        |                         | 9.2.1.41A             |  | –           |                      |
| >Neighbouring GSM Cell Information    | O        |                         | 9.2.1.41C             |  | –           |                      |
| >Cell GA Additional Shapes            | O        |                         | 9.2.1.5B              |  | YES         | ignore               |
| >HCS Prio                             | O        |                         | 9.2.1.30N             |  | YES         | ignore               |
| >Neighbouring E-UTRA Cell Information | O        |                         | 9.2.1.41De            |  | YES         | ignore               |
| Criticality Diagnostics               | O        |                         | 9.2.1.13              |  | YES         | ignore               |
| <b>RL Information Response LCR</b>    |          | 0..1                    |                       | Mandatory for 1.28Mcps TDD, not applicable to 3.84Mcps TDD or 7.68Mcps TDD | YES         | ignore               |
| >RL ID                                | M        |                         | 9.2.1.49              |  | –           |                      |
| >URA Information                      | M        |                         | 9.2.1.70B             |  | –           |                      |
| >SAI                                  | M        |                         | 9.2.1.52              |  | –           |                      |
| >Cell GAI                             | O        |                         | 9.2.1.5A              |  | –           |                      |



| IE/Group Name                            | Presence | Range                                | IE Type and Reference  | Semantics Description | Criticality | Assigned Criticality |
|--|----------|--------------------------------------|------------------------|-----------------------|-------------|----------------------|
| >UTRAN Access Point Position             | O        |                                      | 9.2.1.70A              |                       | –           |                      |
| >UL Time Slot ISCP Info LCR              | M        |                                      | 9.2.3.13H              |                       | –           |                      |
| >Maximum Uplink SIR                      | M        |                                      | Uplink SIR<br>9.2.1.69 |                       | –           |                      |
| >Minimum Uplink SIR                      | M        |                                      | Uplink SIR<br>9.2.1.69 |                       | –           |                      |
| >PCCPCH Power                            | M        |                                      | 9.2.1.43               |                       | –           |                      |
| >Maximum Allowed UL Tx Power             | M        |                                      | 9.2.1.35               |                       | –           |                      |
| >Maximum DL TX Power                     | M        |                                      | DL Power<br>9.2.1.21A  |                       | –           |                      |
| >Minimum DL TX Power                     | M        |                                      | DL Power<br>9.2.1.21A  |                       | –           |                      |
| >Alpha Value                             | M        |                                      | 9.2.3.a                |                       | –           |                      |
| >UL PhysCH SF Variation                  | M        |                                      | 9.2.3.13B              |                       | –           |                      |
| >Synchronisation Configuration           | M        |                                      | 9.2.3.7E               |                       | –           |                      |
| >Secondary CCPCH Info TDD LCR            | O        |                                      | 9.2.3.7F               |                       | –           |                      |
| <b>&gt;UL CCTrCH Information LCR</b>     |          | <i>0..&lt;maxnoof CCTrCHsLCR&gt;</i> |                        | For DCH               | GLOBAL      | ignore               |
| >>CCTrCH ID                              | M        |                                      | 9.2.3.2                |                       | –           |                      |
| <b>&gt;&gt;UL DPCH Information LCR</b>   |          | <i>0..1</i>                          |                        |                       | YES         | ignore               |
| >>>Repetition Period                     | M        |                                      | 9.2.3.7                |                       | –           |                      |
| >>>Repetition Length                     | M        |                                      | 9.2.3.6                |                       | –           |                      |
| >>>TDD DPCH Offset                       | M        |                                      | 9.2.3.8A               |                       | –           |                      |
| >>>UL Timeslot Information LCR           | M        |                                      | 9.2.3.13G              |                       | –           |                      |
| <b>&gt;DL CCTrCH Information LCR</b>     |          | <i>0..&lt;maxnoof CCTrCHsLCR&gt;</i> |                        | For DCH               | GLOBAL      | ignore               |
| >>CCTrCH ID                              | M        |                                      | 9.2.3.2                |                       | –           |                      |
| <b>&gt;&gt;DL DPCH Information LCR</b>   |          | <i>0..1</i>                          |                        |                       | YES         | ignore               |
| >>>Repetition Period                     | M        |                                      | 9.2.3.7                |                       | –           |                      |
| >>>Repetition Length                     | M        |                                      | 9.2.3.6                |                       | –           |                      |
| >>>TDD DPCH Offset                       | M        |                                      | 9.2.3.8A               |                       | –           |                      |
| >>>DL Timeslot Information LCR           | M        |                                      | 9.2.3.2E               |                       | –           |                      |
| >>>TSTD Indicator                        | M        |                                      | 9.2.3.13E              |                       | –           |                      |
| >DCH Information Response                | M        |                                      | 9.2.1.16A              |                       | –           |                      |
| <b>&gt;DSCH Information Response LCR</b> |          | <i>0..&lt;maxnoof DSCHsLCR&gt;</i>   |                        |                       | GLOBAL      | ignore               |
| >>DSCH ID                                | M        |                                      | 9.2.3.3ae              |                       | –           |                      |
| >>DSCH Flow Control Information          | M        |                                      | 9.2.3.3ag              |                       | –           |                      |
| >>Binding ID                             | O        |                                      | 9.2.1.3                |                       | –           |                      |
| >>Transport Layer Address                | O        |                                      | 9.2.1.62               |                       | –           |                      |
| >>Transport Format Management            | M        |                                      | 9.2.3.13               |                       | –           |                      |
| <b>&gt;USCH Information Response LCR</b> |          | <i>0..&lt;maxnoof USCHsLCR&gt;</i>   |                        |                       | GLOBAL      | ignore               |
| >>USCH ID                                | M        |                                      | 9.2.3.14               |                       | –           |                      |
| >>Transport Format                       | M        |                                      | 9.2.3.13               |                       | –           |                      |

| IE/Group Name                           | Presence | Range | IE Type and Reference | Semantics Description  | Criticality | Assigned Criticality |
|---|----------|-------|-----------------------|--|-------------|----------------------|
| Management                              |          |       |                       |  |             |                      |
| >>CHOICE Diversity Indication           | O        |       |                       |  | –           |                      |
| >>>Non Combining                        |          |       |                       |  | –           |                      |
| >>>>Binding ID                          | O        |       | 9.2.1.3               |  | –           |                      |
| >>>>Transport Layer Address             | O        |       | 9.2.1.62              |  | –           |                      |
| >Neighbouring UMTS Cell Information     | O        |       | 9.2.1.41A             |  | –           |                      |
| >Neighbouring GSM Cell Information      | O        |       | 9.2.1.41C             |  | –           |                      |
| >Cell GA Additional Shapes              | O        |       | 9.2.1.5B              |  | YES         | ignore               |
| >HCS Prio                               | O        |       | 9.2.1.30N             |  | YES         | ignore               |
| >Uplink Timing Advance Control LCR      | M        |       | 9.2.3.13K             |  | YES         | ignore               |
| >UARFCN                                 | O        |       | 9.2.1.66              | Applicable to 1.28Mcps TDD only. Mandatory for 1.28Mcps TDD when using multiple frequencies. Corresponds to Nt 3GPP TS 25.105. | YES         | ignore               |
| >PowerControl GAP                       | O        |       | INTEGER (1..255)      | Unit: umber of subframes Applicable to 1.28Mcps TDD only   | YES         | ignore               |
| >Neighbouring E-UTRA Cell Information   | O        |       | 9.2.1.41De            |  | YES         | ignore               |
| <b>RL Information Response 7.68Mcps</b> |          | 0..1  |                       | Mandatory for 7.68Mcps TDD, not applicable to 1.28Mcps TDD or 3.84Mcps TDD   | YES         | ignore               |
| >RL ID                                  | M        |       | 9.2.1.49              |  | –           |                      |
| >URA Information                        | O        |       | 9.2.1.70B             |  | –           |                      |
| >SAI                                    | M        |       | 9.2.1.52              |  | –           |                      |
| >Cell GAI                               | O        |       | 9.2.1.5A              |  | –           |                      |
| >UTRAN Access Point Position            | O        |       | 9.2.1.70A             |  | –           |                      |
| >UL Time Slot ISCP Info                 | M        |       | 9.2.3.13D             |  | –           |                      |
| >Minimum Uplink SIR                     | M        |       | Uplink SIR 9.2.1.69   |  | –           |                      |
| >Maximum Uplink SIR                     | M        |       | Uplink SIR 9.2.1.69   |  | –           |                      |
| >Maximum Allowed UL Tx Power            | M        |       | 9.2.1.35              |  | –           |                      |
| >Maximum DL TX Power                    | M        |       | DL Power 9.2.1.21A    |  | –           |                      |
| >Minimum DL TX Power                    | M        |       | DL Power 9.2.1.21A    |  | –           |                      |
| >PCCPCH Power                           | M        |       | 9.2.1.43              |  | –           |                      |
| >Timing Advance Applied                 | M        |       | 9.2.3.12A             |  | –           |                      |
| >Alpha Value                            | M        |       | 9.2.3.a               |  | –           |                      |

| IE/Group Name                                  | Presence | Range                | IE Type and Reference | Semantics Description         | Criticality | Assigned Criticality |
|--|----------|----------------------|-----------------------|-------------------------------|-------------|----------------------|
| >UL PhysCH SF Variation                        | M        |                      | 9.2.3.13B             |                               | –           |                      |
| >Synchronisation Configuration                 | M        |                      | 9.2.3.7E              |                               | –           |                      |
| >Secondary CCPCH Info 7.68Mcps TDD             | O        |                      | 9.2.3.22              |                               | –           |                      |
| <b>&gt;UL CCTrCH Information 7.68 Mcps</b>     |          | 0..<maxnoof CCTrCHs> |                       | For DCH                       | GLOBAL      | ignore               |
| >>CCTrCH ID                                    | M        |                      | 9.2.3.2               |                               | –           |                      |
| <b>&gt;&gt;UL DPCH Information 7.68 Mcps</b>   |          | 0..1                 |                       |                               | YES         | ignore               |
| >>>Repetition Period                           | M        |                      | 9.2.3.7               |                               | –           |                      |
| >>>Repetition Length                           | M        |                      | 9.2.3.6               |                               | –           |                      |
| >>>TDD DPCH Offset                             | M        |                      | 9.2.3.8A              |                               | –           |                      |
| >>>UL Timeslot Information 7.68Mcps            | M        |                      | 9.2.3.26              |                               | –           |                      |
| <b>&gt;DL CCTrCH Information 7.68 Mcps</b>     |          | 0..<maxnoof CCTrCHs> |                       | For DCH                       | GLOBAL      | ignore               |
| >>CCTrCH ID                                    | M        |                      | 9.2.3.2               |                               | –           |                      |
| <b>&gt;&gt;DL DPCH Information 7.68 Mcps</b>   |          | 0..1                 |                       |                               | YES         | ignore               |
| >>>Repetition Period                           | M        |                      | 9.2.3.7               |                               | –           |                      |
| >>>Repetition Length                           | M        |                      | 9.2.3.6               |                               | –           |                      |
| >>>TDD DPCH Offset                             | M        |                      | 9.2.3.8A              |                               | –           |                      |
| >>>DL Timeslot Information 7.68Mcps            | M        |                      | 9.2.3.28              |                               | –           |                      |
| >>CCTrCH Maximum DL TX Power                   | O        |                      | DL Power 9.2.1.21A    | Maximum allowed power on DPCH | –           |                      |
| >>CCTrCH Minimum DL TX Power                   | O        |                      | DL Power 9.2.1.21A    | Minimum allowed power on DPCH | –           |                      |
| <b>&gt;DCH Information</b>                     |          | 0..1                 |                       |                               | –           |                      |
| >>CHOICE Diversity Indication                  | M        |                      |                       |                               | –           |                      |
| >>>Combining                                   |          |                      |                       |                               | –           |                      |
| >>>>RL ID                                      | M        |                      | 9.2.1.49              | Reference RL                  | –           |                      |
| >>>>DCH Information Response                   | O        |                      | 9.2.1.16A             |                               | YES         | ignore               |
| >>>>Non Combining                              |          |                      |                       |                               | –           |                      |
| >>>>DCH Information Response                   | M        |                      | 9.2.1.16A             |                               | –           |                      |
| <b>&gt;DSCH Information Response 7.68 Mcps</b> |          | 0 .. <maxnoof DSCHs> |                       |                               | GLOBAL      | ignore               |
| >>DSCH ID                                      | M        |                      | 9.2.3.3ae             |                               | –           |                      |
| >>Transport Format Management                  | M        |                      | 9.2.3.13              |                               | –           |                      |
| >>DSCH Flow Control Information                | M        |                      | 9.2.3.3ag             |                               | –           |                      |
| >>CHOICE Diversity Indication                  | O        |                      |                       |                               | –           |                      |
| >>>>Non Combining                              |          |                      |                       |                               | –           |                      |
| >>>>Binding ID                                 | O        |                      | 9.2.1.3               |                               | –           |                      |
| >>>>Transport Layer Address                    | O        |                      | 9.2.1.62              |                               | –           |                      |
| <b>&gt;USCH Information Response 7.68 Mcps</b> |          | 0 .. <maxnoof USCHs> |                       |                               | GLOBAL      | ignore               |
| >>USCH ID                                      | M        |                      | 9.2.3.14              |                               | –           |                      |

| IE/Group Name   | Presence | Range                                | IE Type and Reference  | Semantics Description | Criticality | Assigned Criticality |
|---|----------|--------------------------------------|--|-----------------------|-------------|----------------------|
| >>Transport Format Management                               | M        |                                      | 9.2.3.13   |                       | –           |                      |
| >>CHOICE <i>Diversity Indication</i>                        | O        |                                      |  |                       | –           |                      |
| >>> <i>Non Combining</i>                                    |          |                                      |  |                       | –           |                      |
| >>>>Binding ID  | O        |                                      | 9.2.1.3  |                       | –           |                      |
| >>>>Transport Layer Address                                 | O        |                                      | 9.2.1.62   |                       | –           |                      |
| >Neighbouring UMTS Cell Information                         | O        |                                      | 9.2.1.41A  |                       | –           |                      |
| >Neighbouring GSM Cell Information                          | O        |                                      | 9.2.1.41C  |                       | –           |                      |
| >Cell GA Additional Shapes                                  | O        |                                      | 9.2.1.5B   |                       | –           |                      |
| >HCS Prio   | O        |                                      | 9.2.1.30N  |                       | –           |                      |
| >Neighbouring E-UTRA Cell Information                       | O        |                                      | 9.2.1.41De   |                       | YES         | ignore               |
| >Idle Interval Information                                  | O        |                                      | 9.2.3.60   | TDD only              | YES         | ignore               |
| <b>Active MBMS Bearer Service List</b>                      |          | <i>0..&lt;maxnoof ActiveMBMS&gt;</i> |  |                       | GLOBAL      | ignore               |
| >TMGI   | M        |                                      | 9.2.1.80   |                       | –           |                      |
| >Transmission Mode  | O        |                                      | 9.2.1.81   |                       | –           |                      |
| >Preferred Frequency Layer                                  | O        |                                      | UARFCN<br>9.2.1.66   |                       | –           |                      |
| HS-DSCH Information Response                                | O        |                                      | HS-DSCH<br>TDD<br>Information<br>Response<br>9.2.3.3ab           |                       | YES         | ignore               |
| HS-DSCH-RNTI  | O        |                                      | 9.2.1.30P  |                       | YES         | ignore               |
| E-DCH Information Response                                  | O        |                                      | E-DCH<br>TDD<br>Information<br>Response<br>9.2.3.41              | 3.84Mcps<br>TDD only  | YES         | ignore               |
| E-DCH Information Response 7.68Mcps                         | O        |                                      | E-DCH<br>TDD<br>Information<br>Response<br>7.68Mcps<br>9.2.3.52  | 7.68Mcps<br>TDD only  | YES         | ignore               |
| E-DCH Information Response 1.28Mcps                         | O        |                                      | E-DCH<br>TDD<br>Information<br>Response<br>1.28Mcps<br>9.2.3.41a | 1.28Mcps<br>TDD only  | YES         | ignore               |
| Continuous Packet Connectivity DRX Information Response LCR | O        |                                      | 9.2.3.63   | 1.28 Mcps<br>TDD only | YES         | ignore               |
| HS-DSCH Semi-Persistent scheduling Information Response LCR | O        |                                      | 9.2.3.68   | 1.28 Mcps<br>TDD only | YES         | ignore               |
| E-DCH Semi-Persistent scheduling Information Response LCR   | O        |                                      | 9.2.3.69   | 1.28 Mcps<br>TDD only | YES         | ignore               |

| <b>Range Bound</b>       | <b>Explanation</b>  |
|--------------------------|---|
| <i>maxnoofDSCHs</i>      | Maximum number of DSCHs for one UE for 3.84Mcps TDD.                |
| <i>maxnoofUSCHs</i>      | Maximum number of USCHs for one UE for 3.84Mcps TDD.                |
| <i>maxnoofCCTrCHs</i>    | Maximum number of CCTrCHs for one UE for 3.84Mcps TDD.              |
| <i>maxnoofDSCHsLCR</i>   | Maximum number of DSCHs for one UE for 1.28Mcps TDD.                |
| <i>maxnoofUSCHsLCR</i>   | Maximum number of USCHs for one UE for 1.28Mcps TDD.                |
| <i>maxnoofCCTrCHsLCR</i> | Maximum number of CCTrCH for one UE for 1.28Mcps TDD.               |
| <i>maxnoofActiveMBMS</i> | Maximum number of MBMS bearer services that are active in parallel. |

## 9.1.8 RADIO LINK ADDITION FAILURE

## 9.1.8.1 FDD Message

| IE/Group Name                                  | Presence | Range                 | IE Type and Reference                | Semantics Description | Criticality | Assigned Criticality |
|--|----------|-----------------------|--------------------------------------|-----------------------|-------------|----------------------|
| Message Type                                   | M        |                       | 9.2.1.40                             |                       | YES         | reject               |
| Transaction ID                                 | M        |                       | 9.2.1.59                             |                       | –           |                      |
| CHOICE <i>Cause Level</i>                      | M        |                       |                                      |                       | YES         | ignore               |
| > <i>General</i>                               |          |                       |                                      |                       | –           |                      |
| >> <i>Cause</i>                                | M        |                       | 9.2.1.5                              |                       | –           |                      |
| > <i>RL Specific</i>                           |          |                       |                                      |                       | –           |                      |
| >> <b>Unsuccessful RL Information Response</b> |          | 1..<maxnoof<br>RLs-1> |                                      |                       | EACH        | ignore               |
| >>>RL ID                                       | M        |                       | 9.2.1.49                             |                       | –           |                      |
| >>>Cause                                       | M        |                       | 9.2.1.5                              |                       | –           |                      |
| >> <b>Successful RL Information Response</b>   |          | 0..<maxnoof<br>RLs-2> |                                      |                       | EACH        | ignore               |
| >>>RL ID                                       | M        |                       | 9.2.1.49                             |                       | –           |                      |
| >>>RL Set ID                                   | M        |                       | 9.2.2.35                             |                       | –           |                      |
| >>>URA Information                             | O        |                       | 9.2.1.70B                            |                       | –           |                      |
| >>>SAI   | M        |                       | 9.2.1.52                             |                       | –           |                      |
| >>>Cell GAI                                    | O        |                       | 9.2.1.5A                             |                       | –           |                      |
| >>>UTRAN Access Point Position                 | O        |                       | 9.2.1.70A                            |                       | –           |                      |
| >>>Received Total Wide Band Power              | M        |                       | 9.2.2.35A                            |                       | –           |                      |
| >>>Not Used                                    | O        |                       | NULL                                 |                       | –           |                      |
| >>>DL Code Information                         | M        |                       | FDD DL Code Information<br>9.2.2.14A |                       | YES         | ignore               |
| >>>CHOICE <i>Diversity Indication</i>          | M        |                       |                                      |                       | –           |                      |
| >>>> <i>Combining</i>                          |          |                       |                                      |                       | –           |                      |
| >>>>>RL ID                                     | M        |                       | 9.2.1.49                             | Reference RL ID       | –           |                      |
| >>>>>DCH Information Response                  | O        |                       | 9.2.1.16A                            |                       | YES         | ignore               |
| >>>>>E-DCH FDD Information Response            | O        |                       | 9.2.2.4C                             |                       | YES         | ignore               |
| >>>>> <i>Non Combining</i>                     |          |                       |                                      |                       | –           |                      |
| >>>>>DCH Information Response                  | M        |                       | 9.2.1.16A                            |                       | –           |                      |
| >>>>>E-DCH FDD Information Response            | O        |                       | 9.2.2.4C                             |                       | YES         | ignore               |
| >>>SSDT Support Indicator                      | M        |                       | 9.2.2.43                             |                       | –           |                      |
| >>>Minimum Uplink SIR                          | M        |                       | Uplink SIR<br>9.2.1.69               |                       | –           |                      |
| >>>Maximum Uplink SIR                          | M        |                       | Uplink SIR<br>9.2.1.69               |                       | –           |                      |
| >>>Closed Loop Timing Adjustment Mode          | O        |                       | 9.2.2.3A                             |                       | –           |                      |
| >>>Maximum Allowed UL Tx Power                 | M        |                       | 9.2.1.35                             |                       | –           |                      |
| >>>Maximum DL TX Power                         | M        |                       | DL Power<br>9.2.1.21A                |                       | –           |                      |
| >>>Minimum DL TX Power                         | M        |                       | DL Power<br>9.2.1.21A                |                       | –           |                      |

| IE/Group Name   | Presence | Range                                | IE Type and Reference                  | Semantics Description   | Criticality | Assigned Criticality |
|---|----------|--------------------------------------|--|---|-------------|----------------------|
| >>>Neighbouring UMTS Cell Information                       | O        |                                      | 9.2.1.41A                              |   | –           |                      |
| >>>Neighbouring GSM Cell Information                        | O        |                                      | 9.2.1.41C                              |   | –           |                      |
| >>>Primary CPICH Power                                      | M        |                                      | 9.2.1.44                               |   | –           |                      |
| >>>PC Preamble  | M        |                                      | 9.2.2.27a                              |   | –           |                      |
| >>>SRB Delay  | M        |                                      | 9.2.2.39A                              |   | –           |                      |
| >>>Cell GA Additional Shapes                                | O        |                                      | 9.2.1.5B                               |   | YES         | ignore               |
| >>>DL Power Balancing Activation Indicator                  | O        |                                      | 9.2.2.10B                              |   | YES         | ignore               |
| >>>HCS Prio   | O        |                                      | 9.2.1.30N                              |   | YES         | ignore               |
| >>>Active MBMS Bearer Service List                          |          | <i>0..&lt;maxnoof ActiveMBMS&gt;</i> |  |   | GLOBAL      | ignore               |
| >>>>TMGI  | M        |                                      | 9.2.1.80                               |   | –           |                      |
| >>>>Transmission Mode                                       | O        |                                      | 9.2.1.81                               |   | –           |                      |
| >>>>Preferred Frequency Layer                               | O        |                                      | UARFCN<br>9.2.1.66                     |   | –           |                      |
| >>>E-DCH RL Set ID  | O        |                                      | RL Set ID<br>9.2.2.35                  |   | YES         | ignore               |
| >>>E-DCH FDD DL Control Channel Information                 | O        |                                      | 9.2.2.4D                               |   | YES         | ignore               |
| >>>Initial DL DPCH Timing Adjustment                        | O        |                                      | DL DPCH Timing Adjustment<br>9.2.2.9.A |   | YES         | ignore               |
| >>>Neighbouring E-UTRA Cell Information                     | O        |                                      | 9.2.1.41De                             |   | YES         | ignore               |
| >>>HS-DSCH Preconfiguration Info                            | O        |                                      | 9.2.2.99                               |   | YES         | ignore               |
| >>>F-DPCH Slot Format                                       | O        |                                      | 9.2.2.85                               |   | YES         | ignore               |
| Criticality Diagnostics                                     | O        |                                      | 9.2.1.13                               |   | YES         | ignore               |
| HS-DSCH Serving Cell Change Information Response            | O        |                                      | 9.2.2.19g                              |   | YES         | Ignore               |
| E-DCH Serving Cell Change Information Response              | O        |                                      | 9.2.2.19h                              |   | YES         | Ignore               |
| <b>Additional HS Cell Change Information Response</b>       |          | <i>0..&lt;maxnoof HSDSCH-1&gt;</i>   |  | For secondary serving HS-DSCH cell. Max 1 in this 3GPP release. | EACH        | Ignore               |
| >HS-PDSCH RL ID   | M        |                                      | RL ID<br>9.2.1.49                      |   | –           |                      |
| >HS-DSCH Secondary Serving Cell Change Information Response | M        |                                      | 9.2.2.19ga                             |   | –           |                      |
| MAC-hs Reset Indicator                                      | O        |                                      | 9.2.1.34B                              |   | YES         | ignore               |

| Range bound              | Explanation   |
|--------------------------|---|
| <i>maxnoofRLs</i>        | Maximum number of radio links for one UE.                           |
| <i>maxnoofActiveMBMS</i> | Maximum number of MBMS bearer services that are active in parallel. |
| <i>maxnoofHSDSCH-1</i>   | Maximum number of Secondary Serving HS-DSCH cells for one UE.       |

### 9.1.8.2 TDD Message

| IE/Group Name                          | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|--|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| Message Type                           | M        |       | 9.2.1.40              |                       | YES         | reject               |
| Transaction ID                         | M        |       | 9.2.1.59              |                       | –           |                      |
| CHOICE Cause Level                     | M        |       |                       |                       | YES         | ignore               |
| >General                               |          |       |                       |                       | –           |                      |
| >>Cause                                | M        |       | 9.2.1.5               |                       | –           |                      |
| >RL Specific                           |          |       |                       |                       | –           |                      |
| >>Unsuccessful RL Information Response |          | 1     |                       |                       | YES         | ignore               |
| >>>RL ID                               | M        |       | 9.2.1.49              |                       | –           |                      |
| >>>Cause                               | M        |       | 9.2.1.5               |                       | –           |                      |
| Criticality Diagnostics                | O        |       | 9.2.1.13              |                       | YES         | ignore               |

### 9.1.9 RADIO LINK DELETION REQUEST

| IE/Group Name  | Presence | Range            | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|----------------|----------|------------------|-----------------------|-----------------------|-------------|----------------------|
| Message Type   | M        |                  | 9.2.1.40              |                       | YES         | reject               |
| Transaction ID | M        |                  | 9.2.1.59              |                       | –           |                      |
| RL Information |          | 1..<maxno ofRLs> |                       |                       | EACH        | notify               |
| >RL ID         | M        |                  | 9.2.1.49              |                       | –           |                      |

| Range bound       | Explanation                              |
|-------------------|--|
| <i>maxnoofRLs</i> | Maximum number of radio links for one UE |

### 9.1.10 RADIO LINK DELETION RESPONSE

| IE/Group Name           | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|-------------------------|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| Message Type            | M        |       | 9.2.1.40              |                       | YES         | reject               |
| Transaction ID          | M        |       | 9.2.1.59              |                       | –           |                      |
| Criticality Diagnostics | O        |       | 9.2.1.13              |                       | YES         | ignore               |



## 9.1.11 RADIO LINK RECONFIGURATION PREPARE

## 9.1.11.1 FDD Message

| IE/Group Name                           | Presence      | Range             | IE Type and Reference           | Semantics Description           | Criticality | Assigned Criticality |
|---|---------------|-------------------|---------------------------------|---------------------------------|-------------|----------------------|
| Message Type                            | M             |                   | 9.2.1.40                        |                                 | YES         | reject               |
| Transaction ID                          | M             |                   | 9.2.1.59                        |                                 | –           |                      |
| Allowed Queuing Time                    | O             |                   | 9.2.1.2                         |                                 | YES         | reject               |
| <b>UL DPCH Information</b>              |               | 0..1              |                                 |                                 | YES         | reject               |
| >UL Scrambling Code                     | O             |                   | 9.2.2.53                        |                                 | –           |                      |
| >UL SIR Target                          | O             |                   | Uplink SIR<br>9.2.1.69          |                                 | –           |                      |
| >Min UL Channelisation Code Length      | O             |                   | 9.2.2.25                        |                                 | –           |                      |
| >Max Number of UL DPDCHs                | C – CodeLen   |                   | 9.2.2.24                        |                                 | –           |                      |
| >Puncture Limit                         | O             |                   | 9.2.1.46                        | For the UL.                     | –           |                      |
| >TFCS                                   | O             |                   | 9.2.1.63                        | TFCS for the UL.                | –           |                      |
| >UL DPCCH Slot Format                   | O             |                   | 9.2.2.52                        |                                 | –           |                      |
| >Diversity Mode                         | O             |                   | 9.2.2.8                         |                                 | –           |                      |
| >Not Used                               | O             |                   | NULL                            |                                 | –           |                      |
| >Not Used                               | O             |                   | NULL                            |                                 | –           |                      |
| >UL DPDCH Indicator For E-DCH Operation | O             |                   | 9.2.2.52A                       |                                 | YES         | reject               |
| <b>DL DPCH Information</b>              |               | 0..1              |                                 |                                 | YES         | reject               |
| >TFCS                                   | O             |                   | 9.2.1.63                        | TFCS for the DL.                | –           |                      |
| >DL DPCH Slot Format                    | O             |                   | 9.2.2.9                         |                                 | –           |                      |
| >Number of DL Channelisation Codes      | O             |                   | 9.2.2.26A                       |                                 | –           |                      |
| >TFCI Signalling Mode                   | O             |                   | 9.2.2.46                        |                                 | –           |                      |
| >TFCI Presence                          | C- SlotFormat |                   | 9.2.1.55                        |                                 | –           |                      |
| >Multiplexing Position                  | O             |                   | 9.2.2.26                        |                                 | –           |                      |
| >Limited Power Increase                 | O             |                   | 9.2.2.21A                       |                                 | –           |                      |
| <b>&gt;DL DPCH Power Information</b>    |               | 0..1              |                                 |                                 | YES         | reject               |
| <b>&gt;&gt;Power Offset Information</b> |               | 1                 |                                 |                                 | –           |                      |
| >>>PO1                                  | M             |                   | Power Offset<br>9.2.2.30        | Power offset for the TFCI bits  | –           |                      |
| >>>PO2                                  | M             |                   | Power Offset<br>9.2.2.30        | Power offset for the TPC bits   | –           |                      |
| >>>PO3                                  | M             |                   | Power Offset<br>9.2.2.30        | Power offset for the pilot bits | –           |                      |
| >>FDD TPC Downlink Step Size            | M             |                   | 9.2.2.16                        |                                 | –           |                      |
| >>Inner Loop DL PC Status               | M             |                   | 9.2.2.21a                       |                                 | –           |                      |
| DCHs To Modify                          | O             |                   | FDD DCHs To Modify<br>9.2.2.13C |                                 | YES         | reject               |
| DCHs To Add                             | O             |                   | DCH FDD Information<br>9.2.2.4A |                                 | YES         | reject               |
| <b>DCHs To Delete</b>                   |               | 0..<maxnoof DCHs> |                                 |                                 | GLOBAL      | reject               |

| IE/Group Name                                 | Presence           | Range            | IE Type and Reference                      | Semantics Description         | Criticality | Assigned Criticality |
|---|--------------------|------------------|--|-------------------------------|-------------|----------------------|
| >DCH ID                                       | M                  |                  | 9.2.1.16                                   |                               | –           |                      |
| <b>RL Information</b>                         |                    | 0..<maxnoof RLs> |  |                               | EACH        | reject               |
| >RL ID  | M                  |                  | 9.2.1.49                                   |                               | –           |                      |
| >Not Used                                     | O                  |                  | NULL                                       |                               | –           |                      |
| >Not Used                                     | O                  |                  | NULL                                       |                               | –           |                      |
| >Transmit Diversity Indicator                 | C – Diversity mode |                  | 9.2.2.48                                   |                               | –           |                      |
| >DL Reference Power                           | O                  |                  | DL Power 9.2.1.21A                         | Power on DPCH                 | YES         | ignore               |
| >RL Specific DCH Information                  | O                  |                  | 9.2.1.49A                                  |                               | YES         | ignore               |
| >DL DPCH Timing Adjustment                    | O                  |                  | 9.2.2.9A                                   | Required RL Timing Adjustment | YES         | reject               |
| >Phase Reference Update Indicator             | O                  |                  | 9.2.2.27B                                  |                               | YES         | ignore               |
| >RL specific E-DCH Information                | O                  |                  | 9.2.2.35a                                  |                               | YES         | reject               |
| >E-DCH RL Indication                          | O                  |                  | 9.2.2.4E                                   |                               | YES         | reject               |
| Transmission Gap Pattern Sequence Information | O                  |                  | 9.2.2.47A                                  |                               | YES         | reject               |
| HS-DSCH Information                           | O                  |                  | HS-DSCH FDD Information 9.2.2.19a          |                               | YES         | reject               |
| HS-DSCH Information To Modify                 | O                  |                  | 9.2.1.30Q                                  |                               | YES         | reject               |
| HS-DSCH MAC-d Flows To Add                    | O                  |                  | HS-DSCH MAC-d Flows Information 9.2.1.30OA |                               | YES         | reject               |
| HS-DSCH MAC-d Flows To Delete                 | O                  |                  | 9.2.1.30OB                                 |                               | YES         | reject               |
| HS-PDSCH RL ID                                | O                  |                  | RL ID 9.2.1.49                             |                               | YES         | reject               |
| <b>E-DPCH Information</b>                     |                    | 0..1             |  |                               | YES         | reject               |
| >Maximum Set of E-DPDCHs                      | O                  |                  | 9.2.2.24e                                  |                               | –           |                      |
| >Puncture Limit                               | O                  |                  | 9.2.1.46                                   |                               | –           |                      |
| >E-TFCS Information                           | O                  |                  | 9.2.2.4G                                   |                               | –           |                      |
| >E-TTI  | O                  |                  | 9.2.2.4J                                   |                               | –           |                      |
| >E-DPCCH Power Offset                         | O                  |                  | 9.2.2.4K                                   |                               | –           |                      |
| >E-RGCH 2-Index-Step Threshold                | O                  |                  | 9.2.2.64                                   |                               | –           |                      |
| >E-RGCH 3-Index-Step Threshold                | O                  |                  | 9.2.2.65                                   |                               | –           |                      |
| >HARQ Info for E-DCH                          | O                  |                  | 9.2.2.66                                   |                               | –           |                      |
| >HS-DSCH Configured Indicator                 | O                  |                  | 9.2.2.19C                                  |                               | –           |                      |
| > Minimum Reduced E-DPDCH Gain Factor         | O                  |                  | 9.2.2.102                                  |                               | YES         | ignore               |
| E-DCH FDD Information                         | O                  |                  | 9.2.2.4B                                   |                               | YES         | reject               |
| E-DCH FDD Information to Modify               | O                  |                  | 9.2.2.4F                                   |                               | YES         | reject               |
| E-DCH MAC-d Flows to Add                      | O                  |                  | E-DCH MAC-d flows Information 9.2.2.4MC    |                               | YES         | reject               |
| E-DCH MAC-d Flows to                          | O                  |                  | 9.2.1.90                                   |                               | YES         | reject               |

| IE/Group Name   | Presence | Range                 | IE Type and Reference    | Semantics Description   | Criticality | Assigned Criticality |
|---|----------|-----------------------|--------------------------|---|-------------|----------------------|
| Delete  |          |                       |                          |   |             |                      |
| Serving E-DCH RL  | O        |                       | 9.2.2.38C                |   | YES         | reject               |
| <b>F-DPCH Information</b>   |          | 0..1                  |                          |   | YES         | reject               |
| >Power Offset Information   |          | 1                     |                          |   | –           |                      |
| >>PO2   | M        |                       | Power Offset<br>9.2.2.30 | This IE shall be ignored by DRNS.                               | –           |                      |
| >FDD TPC Downlink Step Size                                       | M        |                       | 9.2.2.16                 |   | –           |                      |
| >Limited Power Increase   | M        |                       | 9.2.2.21A                |   | –           |                      |
| >Inner Loop DL PC Status  | M        |                       | 9.2.2.21a                |   | –           |                      |
| >F-DPCH Slot Format Support Request                               | O        |                       | 9.2.2.86                 |   | YES         | reject               |
| >F-DPCH Slot Format   | O        |                       | 9.2.2.85                 |   | YES         | Ignore               |
| Fast Reconfiguration Mode   | O        |                       | 9.2.2.70                 |   | YES         | ignore               |
| <b>CPC Information</b>  |          | 0..1                  |                          |   | YES         | reject               |
| >Continuous Packet Connectivity DTX-DRX Information               | O        |                       | 9.2.2.72                 |   | –           |                      |
| >Continuous Packet Connectivity DTX-DRX Information To Modify     | O        |                       | 9.2.2.73                 |   | –           |                      |
| >Continuous Packet Connectivity HS-SCCH less Information          | O        |                       | 9.2.2.74                 |   | –           |                      |
| >Continuous Packet Connectivity HS-SCCH less Deactivate Indicator | O        |                       | 9.2.2.75A                |   | YES         | reject               |
| <b>Additional HS Cell Information RL Reconf Prep</b>              |          | 0..<maxnoof HSDSCH-1> |                          | For secondary serving HS-DSCH cell. Max 1 in this 3GPP release. | EACH        | reject               |
| >HS-PDSCH RL ID   | M        |                       | RL ID<br>9.2.1.49        |   | –           |                      |
| >C-ID   | O        |                       | 9.2.1.6                  |   | –           |                      |
| >HS-DSCH FDD Secondary Serving Information                        | O        |                       | 9.2.2.19aa               |   | –           |                      |
| >HS-DSCH FDD Secondary Serving Information To Modify              | O        |                       | 9.2.2.19bb               |   | –           |                      |
| >HS-DSCH Secondary Serving Remove                                 | O        |                       | NULL                     |   | –           |                      |

| Condition      | Explanation   |
|----------------|---|
| CodeLen        | The IE shall be present only if the <i>Min UL Channelisation Code length</i> IE equals to 4.                                    |
| SlotFormat     | The IE shall only be present if the <i>DL DPCH Slot Format</i> IE is equal to any of the values from 12 to 16.                  |
| Diversity mode | The IE shall be present if <i>Diversity Mode</i> IE is present in the <i>UL DPCH Information</i> IE and is not equal to "none". |

| <b>Range bound</b>     | <b>Explanation</b>  |
|------------------------|---|
| <i>maxnoofDCHs</i>     | Maximum number of DCHs for a UE.                              |
| <i>maxnoofRLs</i>      | Maximum number of RLs for a UE.                               |
| <i>maxnoofHSDSCH-1</i> | Maximum number of Secondary Serving HS-DSCH cells for one UE. |

## 9.1.11.2 TDD Message

| IE/Group Name               | Presence | Range                              | IE Type and Reference  | Semantics Description  | Criticality | Assigned Criticality |
|-----------------------------|----------|------------------------------------|------------------------|--|-------------|----------------------|
| Message Type                | M        |                                    | 9.2.1.40               |  | YES         | reject               |
| Transaction ID              | M        |                                    | 9.2.1.59               |  | –           |                      |
| Allowed Queuing Time        | O        |                                    | 9.2.1.2                |  | YES         | reject               |
| <b>UL CCTrCH To Add</b>     |          | <i>0..&lt;maxno of CCTrCHs&gt;</i> |                        | For DCH and USCH   | EACH        | notify               |
| >CCTrCH ID                  | M        |                                    | 9.2.3.2                |  | –           |                      |
| >TFCS                       | M        |                                    | 9.2.1.63               | For the UL.  | –           |                      |
| >TFCI Coding                | M        |                                    | 9.2.3.11               |  | –           |                      |
| >Puncture Limit             | M        |                                    | 9.2.1.46               |  | –           |                      |
| >UL SIR Target              | O        |                                    | Uplink SIR<br>9.2.1.69 | Mandatory for 1.28Mcps TDD; not applicable to 3.84Mcps TDD or 7.68Mcps TDD | YES         | reject               |
| >TDD TPC Uplink Step Size   | O        |                                    | 9.2.3.10a              | Mandatory for 1.28Mcps TDD, not applicable to 3.84Mcps TDD or 7.68Mcps TDD | YES         | reject               |
| <b>UL CCTrCH To Modify</b>  |          | <i>0..&lt;maxno of CCTrCHs&gt;</i> |                        |  | EACH        | notify               |
| >CCTrCH ID                  | M        |                                    | 9.2.3.2                |  | –           |                      |
| >TFCS                       | O        |                                    | 9.2.1.63               | For the UL.  | –           |                      |
| >TFCI Coding                | O        |                                    | 9.2.3.11               |  | –           |                      |
| >Puncture Limit             | O        |                                    | 9.2.1.46               |  | –           |                      |
| >UL SIR Target              | O        |                                    | Uplink SIR<br>9.2.1.69 | Applicable to 1.28Mcps TDD only  | YES         | reject               |
| >TDD TPC Uplink Step Size   | O        |                                    | 9.2.3.10a              | Applicable to 1.28Mcps TDD only  | YES         | reject               |
| <b>UL CCTrCH to Delete</b>  |          | <i>0..&lt;maxno of CCTrCHs&gt;</i> |                        |  | EACH        | notify               |
| >CCTrCH ID                  | M        |                                    | 9.2.3.2                |  | –           |                      |
| <b>DL CCTrCH To Add</b>     |          | <i>0..&lt;maxno of CCTrCHs&gt;</i> |                        | For DCH and DSCH   | EACH        | notify               |
| >CCTrCH ID                  | M        |                                    | 9.2.3.2                |  | –           |                      |
| >TFCS                       | M        |                                    | 9.2.1.63               | For the DL.  | –           |                      |
| >TFCI Coding                | M        |                                    | 9.2.3.11               |  | –           |                      |
| >Puncture Limit             | M        |                                    | 9.2.1.46               |  | –           |                      |
| <b>&gt;TPC CCTrCH List</b>  |          | <i>0..&lt;maxno CCTrCHs&gt;</i>    |                        | List of uplink CCTrCH which provide TPC                                    | –           |                      |
| >>TPC CCTrCH ID             | M        |                                    | CCTrCH ID<br>9.2.3.2   |  | –           |                      |
| >TDD TPC Downlink Step Size | O        |                                    | 9.2.3.10               |  | YES         | reject               |

| IE/Group Name                       | Presence | Range                              | IE Type and Reference           | Semantics Description                                | Criticality | Assigned Criticality |
|-------------------------------------|----------|------------------------------------|---------------------------------|--|-------------|----------------------|
| <b>DL CCTrCH To Modify</b>          |          | <i>0..&lt;maxno of CCTrCHs&gt;</i> |                                 |  | EACH        | notify               |
| >CCTrCH ID                          | M        |                                    | 9.2.3.2                         |  | –           |                      |
| >TFCS                               | O        |                                    | 9.2.1.63                        | For the DL.  | –           |                      |
| >TFCI Coding                        | O        |                                    | 9.2.3.11                        |  | –           |                      |
| >Puncture Limit                     | O        |                                    | 9.2.1.46                        |  | –           |                      |
| <b>&gt;TPC CCTrCH List</b>          |          | <i>0..&lt;maxno CCTrCHs&gt;</i>    |                                 | List of uplink CCTrCH which provide TPC              | –           |                      |
| >>TPC CCTrCH ID                     | M        |                                    | CCTrCH ID<br>9.2.3.2            |  | –           |                      |
| >TDD TPC Downlink Step Size         | O        |                                    | 9.2.3.10                        |  | YES         | reject               |
| <b>DL CCTrCH to Delete</b>          |          | <i>0..&lt;maxno of CCTrCHs&gt;</i> |                                 |  | EACH        | notify               |
| >CCTrCH ID                          | M        |                                    | 9.2.3.2                         |  | –           |                      |
| DCHs To Modify                      | O        |                                    | TDD DCHs To Modify<br>9.2.3.8B  |  | YES         | reject               |
| DCHs To Add                         | O        |                                    | DCH TDD Information<br>9.2.3.2A |  | YES         | reject               |
| <b>DCHs to Delete</b>               |          | <i>0..&lt;maxno of DCHs&gt;</i>    |                                 |  | GLOBAL      | reject               |
| >DCH ID                             | M        |                                    | 9.2.1.16                        |  | –           |                      |
| <b>DSCHs To Modify</b>              |          | <i>0..&lt;maxno of DSCHs&gt;</i>   |                                 |  | GLOBAL      | reject               |
| >DSCH ID                            | M        |                                    | 9.2.3.3ae                       |  | –           |                      |
| >CCTrCH ID                          | O        |                                    | 9.2.3.2                         | DL CCTrCH in which the DSCH is mapped.               | –           |                      |
| >TrCH Source Statistics Descriptor  | O        |                                    | 9.2.1.65                        |  | –           |                      |
| >Transport Format Set               | O        |                                    | 9.2.1.64                        |  | –           |                      |
| >Allocation/Retention Priority      | O        |                                    | 9.2.1.1                         |  | –           |                      |
| >Scheduling Priority Indicator      | O        |                                    | 9.2.1.51A                       |  | –           |                      |
| >BLER                               | O        |                                    | 9.2.1.4                         |  | –           |                      |
| >Transport Bearer Request Indicator | M        |                                    | 9.2.1.61                        |  | –           |                      |
| >Traffic Class                      | O        |                                    | 9.2.1.58A                       |  | YES         | ignore               |
| >Binding ID                         | O        |                                    | 9.2.1.3                         | Shall be ignored if bearer establishment with ALCAP. | YES         | ignore               |
| >Transport Layer Address            | O        |                                    | 9.2.1.62                        | Shall be ignored if bearer establishment with ALCAP. | YES         | ignore               |

| IE/Group Name                       | Presence | Range                           | IE Type and Reference            | Semantics Description                                | Criticality | Assigned Criticality |
|-------------------------------------|----------|---------------------------------|----------------------------------|--|-------------|----------------------|
| >TNL QoS                            | O        |                                 | 9.2.1.56A                        | Shall be ignored if bearer establishment with ALCAP. | YES         | ignore               |
| DSCHs To Add                        | O        |                                 | DSCH TDD Information<br>9.2.3.3a |  | YES         | reject               |
| <b>DSCHs to Delete</b>              |          | <i>0..&lt;maxno ofDSCHs&gt;</i> |                                  |  | GLOBAL      | reject               |
| >DSCH ID                            | M        |                                 | 9.2.3.3ae                        |  | –           |                      |
| <b>USCHs To Modify</b>              |          | <i>0..&lt;maxno ofUSCHs&gt;</i> |                                  |  | GLOBAL      | reject               |
| >USCH ID                            | M        |                                 | 9.2.3.14                         |  | –           |                      |
| >CCTrCH ID                          | O        |                                 | 9.2.3.2                          | UL CCTrCH in which the USCH is mapped.               | –           |                      |
| >TrCH Source Statistics Descriptor  | O        |                                 | 9.2.1.65                         |  | –           |                      |
| >Transport Format Set               | O        |                                 | 9.2.1.64                         |  | –           |                      |
| >Allocation/Retention Priority      | O        |                                 | 9.2.1.1                          |  | –           |                      |
| >Scheduling Priority Indicator      | O        |                                 | 9.2.1.51A                        |  | –           |                      |
| >BLER                               | O        |                                 | 9.2.1.4                          |  | –           |                      |
| >Transport Bearer Request Indicator | M        |                                 | 9.2.1.61                         |  | –           |                      |
| <b>&gt;RB Info</b>                  |          | <i>0..&lt;maxno ofRB&gt;</i>    |                                  | All Radio Bearers using this USCH                    | –           |                      |
| >>RB Identity                       | M        |                                 | 9.2.3.5B                         |  | –           |                      |
| >Traffic class                      | O        |                                 | 9.2.1.58A                        |  | YES         | ignore               |
| >Binding ID                         | O        |                                 | 9.2.1.3                          | Shall be ignored if bearer establishment with ALCAP. | YES         | ignore               |
| >Transport Layer Address            | O        |                                 | 9.2.1.62                         | Shall be ignored if bearer establishment with ALCAP. | YES         | ignore               |
| >TNL QoS                            | O        |                                 | 9.2.1.56A                        |  | YES         | ignore               |

| IE/Group Name                            | Presence | Range                           | IE Type and Reference                      | Semantics Description   | Criticality | Assigned Criticality |
|--|----------|---------------------------------|--|---|-------------|----------------------|
| USCHs To Add                             | O        |                                 | USCH Information 9.2.3.15                  |   | YES         | reject               |
| <b>USCHs to Delete</b>                   |          | <i>0..&lt;maxno ofUSCHs&gt;</i> |  |   | GLOBAL      | reject               |
| >USCH ID                                 | M        |                                 | 9.2.3.14                                   |   | –           |                      |
| Primary CCPCH RSCP                       | O        |                                 | 9.2.3.5                                    |   | YES         | ignore               |
| DL Time Slot ISCP Info                   | O        |                                 | 9.2.3.2D                                   | Applicable to 3.84Mcps TDD and 7.68Mcps TDD only                            | YES         | ignore               |
| DL Time Slot ISCP Info LCR               | O        |                                 | 9.2.3.2F                                   | Applicable to 1.28Mcps TDD only   | YES         | ignore               |
| HS-DSCH Information                      | O        |                                 | HS-DSCH TDD Information 9.2.3.3aa          |   | YES         | reject               |
| HS-DSCH Information To Modify            | O        |                                 | 9.2.1.30Q                                  |   | YES         | reject               |
| HS-DSCH MAC-d Flows To Add               | O        |                                 | HS-DSCH MAC-d Flows Information 9.2.1.30OA |   | YES         | reject               |
| HS-DSCH MAC-d Flows To Delete            | O        |                                 | 9.2.1.30OB                                 |   | YES         | reject               |
| HS-PDSCH RL ID                           | O        |                                 | RL ID 9.2.1.49                             |   | YES         | reject               |
| PDSCH-RL-ID                              | O        |                                 | RL ID 9.2.1.49                             |   | YES         | ignore               |
| <b>UL Synchronisation Parameters LCR</b> |          | <i>0..1</i>                     |  | Mandatory for 1.28Mcps TDD. Not Applicable to 3.84Mcps TDD or 7.68Mcps TDD. | YES         | ignore               |
| >Uplink Synchronisation Step Size        | M        |                                 | 9.2.3.13J                                  |   | –           |                      |
| >Uplink Synchronisation Frequency        | M        |                                 | 9.2.3.13I                                  |   | –           |                      |
| <b>RL Information</b>                    |          | <i>0..&lt;maxno ofRLs.&gt;</i>  |  |   | YES         | ignore               |
| >RL ID                                   | M        |                                 | 9.2.1.49                                   |   | –           |                      |
| >RL Specific DCH Information             | O        |                                 | 9.2.1.49A                                  |   | –           |                      |
| Primary CCPCH RSCP Delta                 | O        |                                 | 9.2.3.5a                                   |   | YES         | ignore               |
| <b>E-DCH Information</b>                 |          | <i>0..1</i>                     |  | 3.84Mcps TDD only   | YES         | reject               |
| >E-PUCH Information                      | O        |                                 | 9.2.3.36                                   |   | –           |                      |
| >E-TFCS Information TDD                  | O        |                                 | 9.2.3.37                                   |   | –           |                      |
| >E-DCH MAC-d Flows to Add                | O        |                                 | 9.2.3.38                                   |   | –           |                      |
| >E-DCH MAC-d Flows to Delete             | O        |                                 | 9.2.1.90                                   |   | –           |                      |
| >E-DCH TDD Information                   | O        |                                 | 9.2.3.40                                   |   | –           |                      |
| >E-DCH TDD Information to Modify         | O        |                                 | 9.2.3.42                                   |   | –           |                      |



| IE/Group Name   | Presence | Range | IE Type and Reference    | Semantics Description | Criticality | Assigned Criticality |
|---|----------|-------|--------------------------|-----------------------|-------------|----------------------|
| E-DCH Serving RL  | O        |       | 9.2.1.49                 | 3.84Mcps<br>TDD only  | YES         | reject               |
| <b>E-DCH Information<br/>7.68Mcps</b>                         |          | 0..1  |                          | 7.68Mcps<br>TDD only  | YES         | reject               |
| >E-PUCH Information   | O        |       | 9.2.3.36                 |                       | –           |                      |
| >E-TFCS Information TDD                                       | O        |       | 9.2.3.37                 |                       | –           |                      |
| >E-DCH MAC-d Flows to Add                                     | O        |       | 9.2.3.38                 |                       | –           |                      |
| >E-DCH MAC-d Flows to Delete                                  | O        |       | 9.2.1.90                 |                       | –           |                      |
| >E-DCH TDD Information<br>7.68Mcps                            | O        |       | 9.2.3.51                 |                       | –           |                      |
| >E-DCH TDD Information to Modify                              | O        |       | 9.2.3.42                 |                       | –           |                      |
| <b>E-DCH Information<br/>1.28Mcps</b>                         |          | 0..1  |                          | 1.28Mcps<br>TDD only  | YES         | reject               |
| >E-PUCH Information LCR                                       | O        |       | 9.2.3.36a                |                       | –           |                      |
| >E-TFCS Information TDD                                       | O        |       | 9.2.3.37                 |                       | –           |                      |
| >E-DCH MAC-d Flows to Add                                     | O        |       | 9.2.3.38                 |                       | –           |                      |
| >E-DCH MAC-d Flows to Delete                                  | O        |       | 9.2.1.90                 |                       | –           |                      |
| >E-DCH TDD Information LCR                                    | O        |       | 9.2.3.40a                |                       | –           |                      |
| >E-DCH TDD Information to Modify                              | O        |       | 9.2.3.42                 |                       | –           |                      |
| Need for Idle Interval  | O        |       | ENUMERATED (True, False) | TDD only              | YES         | ignore               |
| <b>CPC Information</b>  |          | 0..1  |                          | 1.28Mcps<br>TDD only  | YES         | reject               |
| >Continuous Packet Connectivity DRX Information LCR           | O        |       | 9.2.3.61                 |                       | –           |                      |
| >Continuous Packet Connectivity DRX Information To Modify LCR | O        |       | 9.2.3.62                 |                       | –           |                      |
| >HS-DSCH Semi-Persistent scheduling Information LCR           | O        |       | 9.2.3.64                 |                       | –           |                      |
| >HS-DSCH Semi-Persistent scheduling Information to modify LCR | O        |       | 9.2.3.65                 |                       | –           |                      |
| >HS-DSCH Semi-Persistent scheduling Deactivate Indicator LCR  | O        |       | 9.2.3.70                 |                       | –           |                      |
| >E-DCH Semi-Persistent scheduling Information LCR             | O        |       | 9.2.3.66                 |                       | –           |                      |
| >E-DCH Semi-Persistent scheduling Information to modify LCR   | O        |       | 9.2.3.67                 |                       | –           |                      |
| >E-DCH Semi-Persistent scheduling Deactivate Indicator LCR    | O        |       | 9.2.3.71                 |                       | –           |                      |
| RNTI Allocation Indicator                                     | O        |       | ENUMERATED (True)        | 1.28 Mcps<br>TDD only | YES         | ignore               |

| <b>Range bound</b>    | <b>Explanation</b>                  |
|-----------------------|-------------------------------------|
| <i>maxnoofDCHs</i>    | Maximum number of DCHs for a UE.    |
| <i>maxnoofCCTrCHs</i> | Maximum number of CCTrCHs for a UE. |
| <i>maxnoofDSCHs</i>   | Maximum number of DSCHs for one UE. |
| <i>maxnoofUSCHs</i>   | Maximum number of USCHs for one UE. |
| <i>maxnoofRLs</i>     | Maximum number of RLs for one UE    |

## 9.1.12 RADIO LINK RECONFIGURATION READY

## 9.1.12.1 FDD Message

| IE/Group Name  | Presence | Range                               | IE Type and Reference                                  | Semantics Description   | Criticality | Assigned Criticality |
|--|----------|-------------------------------------|--|---|-------------|----------------------|
| Message Type   | M        |                                     | 9.2.1.40   |   | YES         | reject               |
| Transaction ID   | M        |                                     | 9.2.1.59   |   | –           |                      |
| <b>RL Information Response</b>                                   |          | <i>0..&lt;maxno ofRLs&gt;</i>       |  |   | EACH        | ignore               |
| >RL ID   | M        |                                     | 9.2.1.49   |   | –           |                      |
| >Maximum Uplink SIR  | O        |                                     | Uplink SIR<br>9.2.1.69                                 |   | –           |                      |
| >Minimum Uplink SIR  | O        |                                     | Uplink SIR<br>9.2.1.69                                 |   | –           |                      |
| >Maximum DL TX Power   | O        |                                     | DL Power<br>9.2.1.21A                                  |   | –           |                      |
| >Minimum DL TX Power   | O        |                                     | DL Power<br>9.2.1.21A                                  |   | –           |                      |
| >Not Used  | O        |                                     | NULL   |   | –           |                      |
| >DL Code Information   | O        |                                     | FDD DL<br>Code<br>Information<br>9.2.2.14A             |   | YES         | ignore               |
| >DCH Information Response  | O        |                                     | 9.2.1.16A  |   | YES         | ignore               |
| >Not Used  | O        |                                     | NULL   |   | –           |                      |
| >DL Power Balancing Updated Indicator                            | O        |                                     | 9.2.2.10D  |   | YES         | ignore               |
| >Primary CPICH Usage For Channel Estimation                      | O        |                                     | 9.2.2.32A  |   | YES         | ignore               |
| >Secondary CPICH Information Change                              | O        |                                     | 9.2.2.38B  |   | YES         | ignore               |
| >E-DCH FDD Information Response                                  | O        |                                     | 9.2.2.4C   |   | YES         | ignore               |
| >E-DCH RL Set ID   | O        |                                     | RL Set ID<br>9.2.2.35                                  |   | YES         | ignore               |
| >E-DCH FDD DL Control Channel Information                        | O        |                                     | 9.2.2.4D   |   | YES         | ignore               |
| >F-DPCH Slot Format  | O        |                                     | 9.2.2.85   |   | YES         | ignore               |
| Criticality Diagnostics  | O        |                                     | 9.2.1.13   |   | YES         | ignore               |
| HS-DSCH-RNTI   | O        |                                     | 9.2.1.30P  |   | YES         | ignore               |
| HS-DSCH Information Response                                     | O        |                                     | HS-DSCH<br>FDD<br>Information<br>Response<br>9.2.2.19b |   | YES         | ignore               |
| MAC-hs Reset Indicator   | O        |                                     | 9.2.1.34B  |   | YES         | ignore               |
| Fast Reconfiguration Permission                                  | O        |                                     | 9.2.2.71   | FDD only  | YES         | ignore               |
| Continuous Packet Connectivity HS-SCCH less Information Response | O        |                                     | 9.2.2.75   |   | YES         | ignore               |
| <b>Additional HS Cell Information Response</b>                   |          | <i>0..&lt;maxno ofHSDSC H-1&gt;</i> |  | For secondary serving HS-DSCH cell. Max 1 in this 3GPP release. | EACH        | ignore               |
| >HS-PDSCH RL ID  | M        |                                     | RL ID<br>9.2.1.49                                      |   | –           |                      |
| >HS-DSCH-RNTI  | M        |                                     | 9.2.1.30P  |   | –           |                      |
| >HS-DSCH FDD   | M        |                                     | 9.2.2.19ba   |   | –           |                      |

| IE/Group Name                          | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|--|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| Secondary Serving Information Response |          |       |                       |                       |             |                      |

| Range bound            | Explanation   |
|------------------------|---|
| <i>maxnoofRLs</i>      | Maximum number of RLs for a UE.                               |
| <i>maxnoofHSDSCH-1</i> | Maximum number of Secondary Serving HS-DSCH cells for one UE. |

## 9.1.12.2 TDD Message

| IE/Group Name                                      | Presence | Range                             | IE Type and Reference  | Semantics Description           | Criticality | Assigned Criticality |
|--|----------|-----------------------------------|------------------------|---------------------------------|-------------|----------------------|
| Message Type                                       | M        |                                   | 9.2.1.40               |                                 | YES         | reject               |
| Transaction ID                                     | M        |                                   | 9.2.1.59               |                                 | –           |                      |
| <b>RL Information Response</b>                     |          | <i>0..&lt;maxnoof RLS&gt;</i>     |                        | See Note 1 below                | YES         | ignore               |
| >RL ID   | M        |                                   | 9.2.1.49               |                                 | –           |                      |
| >Maximum Uplink SIR                                | O        |                                   | Uplink SIR<br>9.2.1.69 |                                 | –           |                      |
| >Minimum Uplink SIR                                | O        |                                   | Uplink SIR<br>9.2.1.69 |                                 | –           |                      |
| >Maximum DL TX Power                               | O        |                                   | DL Power<br>9.2.1.21A  |                                 | –           |                      |
| >Minimum DL TX Power                               | O        |                                   | DL Power<br>9.2.1.21A  |                                 | –           |                      |
| >Secondary CCPCH Info TDD                          | O        |                                   | 9.2.3.7B               | Applicable to 3.84Mcps TDD only | –           |                      |
| <b>&gt;UL CCTrCH Information</b>                   |          | <i>0..&lt;maxnoof CCTrCHs&gt;</i> |                        | For DCH                         | GLOBAL      | ignore               |
| >>CCTrCH ID  | M        |                                   | 9.2.3.2                |                                 | –           |                      |
| <b>&gt;&gt;UL DPCH to be Added</b>                 |          | <i>0..1</i>                       |                        | Applicable to 3.84Mcps TDD only | YES         | ignore               |
| >>>Repetition Period                               | M        |                                   | 9.2.3.7                |                                 | –           |                      |
| >>>Repetition Length                               | M        |                                   | 9.2.3.6                |                                 | –           |                      |
| >>>TDD DPCH Offset                                 | M        |                                   | 9.2.3.8A               |                                 | –           |                      |
| >>> Rx Timing Deviation                            | O        |                                   | 9.2.3.7A               |                                 | –           |                      |
| >>>UL Timeslot Information                         | M        |                                   | 9.2.3.13C              |                                 | –           |                      |
| >>> Rx Timing Deviation 3.84 Mcps Extended         | O        |                                   | 9.2.3.35               |                                 | YES         | ignore               |
| <b>&gt;&gt;UL DPCH to be Modified</b>              |          | <i>0..1</i>                       |                        |                                 | YES         | ignore               |
| >>>Repetition Period                               | O        |                                   | 9.2.3.7                |                                 | –           |                      |
| >>>Repetition Length                               | O        |                                   | 9.2.3.6                |                                 | –           |                      |
| >>>TDD DPCH Offset                                 | O        |                                   | 9.2.3.8A               |                                 | –           |                      |
| <b>&gt;&gt;&gt;UL Timeslot Information</b>         |          | <i>0..&lt;maxnoO fTS&gt;</i>      |                        | Applicable to 3.84Mcps TDD only | –           |                      |
| >>>>Time Slot                                      | M        |                                   | 9.2.1.56               |                                 | –           |                      |
| >>>>Midamble Shift And Burst Type                  | O        |                                   | 9.2.3.4                |                                 | –           |                      |
| >>>>TFCI Presence                                  | O        |                                   | 9.2.1.55               |                                 | –           |                      |
| <b>&gt;&gt;&gt;&gt;UL Code Information</b>         |          | <i>0..&lt;maxnoO fDPCHs&gt;</i>   |                        |                                 | –           |                      |
| >>>>>DPCH ID                                       | M        |                                   | 9.2.3.3                |                                 | –           |                      |
| >>>>>TDD Channelisation Code                       | O        |                                   | 9.2.3.8                |                                 | –           |                      |
| <b>&gt;&gt;&gt;&gt;UL Timeslot Information LCR</b> |          | <i>0..&lt;maxnoO fTSLCR&gt;</i>   |                        | Applicable to 1.28Mcps TDD only | GLOBAL      | ignore               |
| >>>>>Time Slot LCR                                 | M        |                                   | 9.2.3.12a              |                                 | –           |                      |
| >>>>>Midamble                                      | O        |                                   | 9.2.3.4C               |                                 | –           |                      |

| IE/Group Name                              | Presence | Range                | IE Type and Reference | Semantics Description           | Criticality | Assigned Criticality |
|--|----------|----------------------|-----------------------|---------------------------------|-------------|----------------------|
| Shift LCR                                  |          |                      |                       |                                 |             |                      |
| >>>>TFCI Presence                          | O        |                      | 9.2.1.55              |                                 | –           |                      |
| >>>>UL Code Information LCR                |          | 0..<maxnoOfDPCHLCR>  |                       |                                 | GLOBAL      | ignore               |
| >>>>>DPCH ID                               | M        |                      | 9.2.3.3               |                                 | –           |                      |
| >>>>>TDD Channelisation Code LCR           | O        |                      | 9.2.3.8a              |                                 | –           |                      |
| >>>>>TDD UL DPCH Time Slot Format LCR      | O        |                      | 9.2.3.10C             |                                 | YES         | reject               |
| >>>>UL Timeslot Information 7.68Mcps       |          | 0..<maxnoOfTS>       |                       | Applicable to 7.68Mcps TDD only | GLOBAL      | ignore               |
| >>>>Time Slot                              | M        |                      | 9.2.1.56              |                                 | –           |                      |
| >>>>Midamble Shift And Burst Type 7.68Mcps | O        |                      | 9.2.3.23              |                                 | –           |                      |
| >>>>TFCI Presence                          | O        |                      | 9.2.1.55              |                                 | –           |                      |
| >>>>>UL Code Information 7.68Mcps          |          | 0..<maxnoOfDPCHs768> |                       |                                 | GLOBAL      | ignore               |
| >>>>>DPCH ID                               | M        |                      | 9.2.3.3               |                                 | –           |                      |
| >>>>>>TDD Channelisation Code 7.68Mcps     | O        |                      | 9.2.3.25              |                                 | –           |                      |
| >>UL DPCH to be Deleted                    |          | 0..<maxnoofDPCHs>    |                       |                                 | GLOBAL      | ignore               |
| >>>DPCH ID                                 | M        |                      | 9.2.3.3               |                                 | –           |                      |
| >>UL DPCH to be Added LCR                  |          | 0..1                 |                       | Applicable to 1.28Mcps TDD only | YES         | ignore               |
| >>>Repetition Period                       | M        |                      | 9.2.3.7               |                                 | –           |                      |
| >>>Repetition Length                       | M        |                      | 9.2.3.6               |                                 | –           |                      |
| >>>TDD DPCH Offset                         | M        |                      | 9.2.3.8A              |                                 | –           |                      |
| >>>UL Timeslot Information LCR             | M        |                      | 9.2.3.13G             |                                 | –           |                      |
| >>UL DPCH to be Added 7.68Mcps             |          | 0..1                 |                       | Applicable to 7.68Mcps TDD only | YES         | ignore               |
| >>>Repetition Period                       | M        |                      | 9.2.3.7               |                                 | –           |                      |
| >>>Repetition Length                       | M        |                      | 9.2.3.6               |                                 | –           |                      |
| >>>TDD DPCH Offset                         | M        |                      | 9.2.3.8A              |                                 | –           |                      |
| >>> Rx Timing Deviation 7.68Mcps           | O        |                      | 9.2.3.30              |                                 | –           |                      |
| >>>UL Timeslot Information 7.68Mcps        | M        |                      | 9.2.3.26              |                                 | –           |                      |
| >DL CCTrCH Information                     |          | 0..<maxnoofCCTrCHs>  |                       | For DCH                         | GLOBAL      | ignore               |
| >>CCTrCH ID                                | M        |                      | 9.2.3.2               |                                 | –           |                      |
| >>DL DPCH to be Added                      |          | 0..1                 |                       | Applicable to 3.84Mcps TDD only | YES         | ignore               |
| >>>Repetition Period                       | M        |                      | 9.2.3.7               |                                 | –           |                      |
| >>>Repetition Length                       | M        |                      | 9.2.3.6               |                                 | –           |                      |
| >>>TDD DPCH Offset                         | M        |                      | 9.2.3.8A              |                                 | –           |                      |

| IE/Group Name                               | Presence | Range                | IE Type and Reference | Semantics Description           | Criticality | Assigned Criticality |
|---|----------|----------------------|-----------------------|---------------------------------|-------------|----------------------|
| >>>DL Timeslot Information                  | M        |                      | 9.2.3.2C              |                                 | –           |                      |
| >>DL DPCH to be Modified                    |          | 0..1                 |                       |                                 | YES         | ignore               |
| >>>Repetition Period                        | O        |                      | 9.2.3.7               |                                 | –           |                      |
| >>>Repetition Length                        | O        |                      | 9.2.3.6               |                                 | –           |                      |
| >>>TDD DPCH Offset                          | O        |                      | 9.2.3.8A              |                                 | –           |                      |
| >>>DL Timeslot Information                  |          | 0..<maxnoOfTS>       |                       | Applicable to 3.84Mcps TDD only | –           |                      |
| >>>>Time Slot                               | M        |                      | 9.2.1.56              |                                 | –           |                      |
| >>>>Midamble Shift And Burst Type           | O        |                      | 9.2.3.4               |                                 | –           |                      |
| >>>>TFCI Presence                           | O        |                      | 9.2.1.55              |                                 | –           |                      |
| >>>>DL Code Information                     |          | 0..<maxnoOfDPCHs>    |                       |                                 | –           |                      |
| >>>>>DPCH ID                                | M        |                      | 9.2.3.3               |                                 | –           |                      |
| >>>>>TDD Channelisation Code                | O        |                      | 9.2.3.8               |                                 | –           |                      |
| >>>>DL Timeslot Information LCR             |          | 0..<maxnoOfTSLCR>    |                       | Applicable to 1.28Mcps TDD only | GLOBAL      | ignore               |
| >>>>>Time Slot LCR                          | M        |                      | 9.2.3.12a             |                                 | –           |                      |
| >>>>>Midamble Shift LCR                     | O        |                      | 9.2.3.4C              |                                 | –           |                      |
| >>>>>TFCI Presence                          | O        |                      | 9.2.1.55              |                                 | –           |                      |
| >>>>>DL Code Information LCR                |          | 0..<maxnoOfDPCHLCR>  |                       |                                 | GLOBAL      | ignore               |
| >>>>>>DPCH ID                               | M        |                      | 9.2.3.3               |                                 | –           |                      |
| >>>>>>TDD Channelisation Code LCR           | O        |                      | 9.2.3.8a              |                                 | –           |                      |
| >>>>>> TDD DL DPCH Time Slot Format LCR     | O        |                      | 9.2.3.8E              |                                 | YES         | reject               |
| >>>>>Maximum DL TX Power                    | O        |                      | DL Power 9.2.1.21A    | Maximum allowed power on DPCH   | YES         | ignore               |
| >>>>>Minimum DL TX Power                    | O        |                      | DL Power 9.2.1.21A    | Minimum allowed power on DPCH   | YES         | ignore               |
| >>>>DL Timeslot Information 7.68Mcps        |          | 0..<maxnoOfTS>       |                       | Applicable to 7.68Mcps TDD only | GLOBAL      | ignore               |
| >>>>>Time Slot                              | M        |                      | 9.2.1.56              |                                 | –           |                      |
| >>>>>Midamble Shift And Burst Type 7.68Mcps | O        |                      | 9.2.3.23              |                                 | –           |                      |
| >>>>>TFCI Presence                          | O        |                      | 9.2.1.55              |                                 | –           |                      |
| >>>>>>DL Code Information                   |          | 0..<maxnoOfDPCHs768> |                       |                                 | –           |                      |
| >>>>>>>DPCH ID 7.68Mcps                     | M        |                      | 9.2.3.34              |                                 | –           |                      |
| >>>>>>>TDD Channelisation Code 7.68Mcps     | O        |                      | 9.2.3.25              |                                 | –           |                      |
| >>DL DPCH to be Deleted                     |          | 0..<maxnoofDPCHs>    |                       |                                 | GLOBAL      | ignore               |
| >>>DPCH ID                                  | M        |                      | 9.2.3.3               |                                 | –           |                      |

| IE/Group Name                                     | Presence | Range                              | IE Type and Reference | Semantics Description   | Criticality | Assigned Criticality |
|---|----------|------------------------------------|-----------------------|---|-------------|----------------------|
| <b>&gt;&gt;DL DPCH to be Deleted 7.68Mcps TDD</b> |          | <i>0..&lt;maxnoof DPCHs768&gt;</i> |                       |   | GLOBAL      | ignore               |
| >>>DPCH ID 7.68Mcps                               | M        |                                    | 9.2.3.34              |   | –           |                      |
| <b>&gt;&gt;DL DPCH to be Added LCR</b>            |          | <i>0..1</i>                        |                       | Applicable to 1.28Mcps TDD only   | YES         | ignore               |
| >>>Repetition Period                              | M        |                                    | 9.2.3.7               |   | –           |                      |
| >>>Repetition Length                              | M        |                                    | 9.2.3.6               |   | –           |                      |
| >>>TDD DPCH Offset                                | M        |                                    | 9.2.3.8A              |   | –           |                      |
| >>>DL Timeslot Information LCR                    | M        |                                    | 9.2.3.2E              |   | –           |                      |
| <b>&gt;&gt;DL DPCH to be Added 7.68Mcps</b>       |          | <i>0..1</i>                        |                       | Applicable to 7.68Mcps TDD only   | YES         | ignore               |
| >>>Repetition Period                              | M        |                                    | 9.2.3.7               |   | –           |                      |
| >>>Repetition Length                              | M        |                                    | 9.2.3.6               |   | –           |                      |
| >>>TDD DPCH Offset                                | M        |                                    | 9.2.3.8A              |   | –           |                      |
| >>>DL Timeslot Information 7.68Mcps               | M        |                                    | 9.2.3.28              |   | –           |                      |
| <b>&gt;&gt;CCTrCH Maximum DL TX Power</b>         | O        |                                    | DL Power 9.2.1.21A    | Maximum allowed power on DPCH<br>Applicable to 3.84Mcps TDD and 7.68Mcps TDD only | YES         | ignore               |
| <b>&gt;&gt;CCTrCH Minimum DL TX Power</b>         | O        |                                    | DL Power 9.2.1.21A    | Minimum allowed power on DPCH<br>Applicable to 3.84Mcps TDD and 7.68Mcps TDD only | YES         | ignore               |
| <b>&gt;DCH Information Response</b>               | O        |                                    | 9.2.1.16A             |   | YES         | ignore               |
| <b>&gt;DSCH to be Added or Modified</b>           |          | <i>0 .. &lt;maxnoof DSCHs&gt;</i>  |                       |   | GLOBAL      | ignore               |
| >>DSCH ID   | M        |                                    | 9.2.3.3ae             |   | –           |                      |
| >>Transport Format Management                     | M        |                                    | 9.2.3.13              |   | –           |                      |
| >>DSCH Flow Control Information                   | M        |                                    | 9.2.3.3ag             |   | –           |                      |
| >>Binding ID                                      | O        |                                    | 9.2.1.3               |   | –           |                      |
| >>Transport Layer Address                         | O        |                                    | 9.2.1.62              |   | –           |                      |
| <b>&gt;USCH to be Added or Modified</b>           |          | <i>0 .. &lt;maxnoof USCHs&gt;</i>  |                       |   | GLOBAL      | ignore               |
| >>USCH ID   | M        |                                    | 9.2.3.14              |   | –           |                      |
| >>Transport Format Management                     | M        |                                    | 9.2.3.13              |   | –           |                      |
| >>Binding ID                                      | O        |                                    | 9.2.1.3               |   | –           |                      |
| >>Transport Layer Address                         | O        |                                    | 9.2.1.62              |   | –           |                      |
| <b>&gt;Uplink Timing Advance Control LCR</b>      | O        |                                    | 9.2.3.13K             | Applicable to 1.28Mcps TDD only   | YES         | ignore               |
| <b>&gt;Secondary CCPCH Info</b>                   | O        |                                    | 9.2.3.7F              | Applicable to   | YES         | ignore               |



| IE/Group Name   | Presence | Range | IE Type and Reference                             | Semantics Description   | Criticality | Assigned Criticality |
|---|----------|-------|---|---|-------------|----------------------|
| TDD LCR   |          |       |   | 1.28Mcps TDD only   |             |                      |
| >Secondary CCPCH Info 7.68Mcps TDD  | O        |       | 9.2.3.22  | Applicable to 7.68Mcps TDD only   | YES         | ignore               |
| >UARFCN   | O        |       | 9.2.1.66  | Applicable to 1.28Mcps TDD only. Mandatory for 1.28Mcps TDD when using multiple frequencies. Corresponds to Nt (3GPP TS 25.105) | YES         | ignore               |
| Criticality Diagnostics   | O        |       | 9.2.1.13  |   | YES         | ignore               |
| HS-DSCH-RNTI  | O        |       | 9.2.1.30P   |   | YES         | ignore               |
| HS-DSCH Information Response  | O        |       | HS-DSCH TDD Information Response 9.2.3.3ab        |   | YES         | ignore               |
| DSCH-RNTI   | O        |       | 9.2.3.3ah   |   | YES         | ignore               |
| MAC-hs Reset Indicator  | O        |       | 9.2.1.34B   |   | YES         | ignore               |
| E-DCH Information Response  | O        |       | E-DCH TDD Information Response 9.2.3.41           | 3.84Mcps TDD only   | YES         | ignore               |
| E-DCH Information Response 7.68Mcps   | O        |       | E-DCH TDD Information Response 7.68Mcps 9.2.3.52  | 7.68Mcps TDD only   | YES         | ignore               |
| E-DCH Information Response 1.28Mcps   | O        |       | E-DCH TDD Information Response 1.28Mcps 9.2.3.41a | 1.28Mcps TDD only   | YES         | ignore               |
| PowerControl GAP  | O        |       | INTEGER (1..255)                                  | 1.28Mcps TDD only   | YES         | ignore               |
| Idle Interval Information   | O        |       | 9.2.3.60  | TDD only  | YES         | ignore               |
| Continuous Packet Connectivity DRX Information Response LCR   | O        |       | 9.2.3.63  | 1.28 Mcps TDD only  | YES         | ignore               |
| HS-DSCH Semi-Persistent scheduling Information Response LCR   | O        |       | 9.2.3.68  | 1.28 Mcps TDD only  | YES         | ignore               |
| E-DCH Semi-Persistent scheduling Information Response LCR   | O        |       | 9.2.3.69  | 1.28 Mcps TDD only  | YES         | ignore               |
| E-RNTI for FACH   | O        |       | E-RNTI 9.2.1.94                                   | 1.28 Mcps TDD only  | YES         | ignore               |
| H-RNTI for FACH   | O        |       | HS-DSCH-RNTI 9.2.1.30P                            | 1.28 Mcps TDD only  | YES         | ignore               |
| Note 1: This information element is a simplified representation of the ASN.1. Repetition 1 and repetition 2 through maxnoofRLs are represented by separate ASN.1 structures with different criticalities. |          |       |   |   |             |                      |

| Range bound            | Explanation  |
|------------------------|--|
| <i>maxnoofDSCHs</i>    | Maximum number of DSCHs for one UE.                                    |
| <i>maxnoofUSCHs</i>    | Maximum number of USCHs for one UE.                                    |
| <i>maxnoofCCTrCHs</i>  | Maximum number of CCTrCHs for a UE.                                    |
| <i>maxnoofTS</i>       | Maximum number of Timeslots for a UE for 3.84Mcps TDD or 7.68Mcps TDD. |
| <i>maxnoofDPCHs</i>    | Maximum number of DPCH for a UE for 3.84Mcps TDD.                      |
| <i>maxnoofTSLCRs</i>   | Maximum number of Timeslots for a UE for 1.28Mcps TDD.                 |
| <i>maxnoofDPCHLCRs</i> | Maximum number of DPCH for a UE for 1.28Mcps TDD.                      |
| <i>maxnoofRLs</i>      | Maximum number of RLs for one UE                                       |
| <i>maxnoofDPCHs768</i> | Maximum number of DPCH for a UE for 7.68Mcps TDD.                      |

### 9.1.13 RADIO LINK RECONFIGURATION COMMIT

| IE/Group Name                       | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|-------------------------------------|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| Message Type                        | M        |       | 9.2.1.40              |                       | YES         | ignore               |
| Transaction ID                      | M        |       | 9.2.1.59              |                       | –           |                      |
| CFN                                 | M        |       | 9.2.1.9               |                       | YES         | ignore               |
| Active Pattern Sequence Information | O        |       | 9.2.2.A               | FDD only              | YES         | ignore               |
| Fast Reconfiguration Mode           | O        |       | 9.2.2.70              | FDD only              | YES         | reject               |

### 9.1.14 RADIO LINK RECONFIGURATION FAILURE

| IE/Group Name                         | Presence                  | Range            | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|---------------------------------------|---------------------------|------------------|-----------------------|-----------------------|-------------|----------------------|
| Message Type                          | M                         |                  | 9.2.1.40              |                       | YES         | reject               |
| Transaction ID                        | M                         |                  | 9.2.1.59              |                       | –           |                      |
| CHOICE Cause Level                    | M                         |                  |                       |                       | YES         | ignore               |
| >General                              |                           |                  |                       |                       | –           |                      |
| >>Cause                               | M                         |                  | 9.2.1.5               |                       | –           |                      |
| >RL Specific                          |                           |                  |                       |                       | –           |                      |
| >>RLs Causing Reconfiguration Failure |                           | 0..<maxnoof RLs> |                       |                       | EACH        | ignore               |
| >>>RL ID                              | M                         |                  | 9.2.1.49              |                       | –           |                      |
| >>>Cause                              | M                         |                  | 9.2.1.5               |                       | –           |                      |
| >>>Max UE DTX Cycle                   | C-DTX-CycleNotA available |                  | 9.2.2.87              |                       | YES         | ignore               |
| Criticality Diagnostics               | O                         |                  | 9.2.1.13              |                       | YES         | ignore               |

| Condition             | Explanation   |
|-----------------------|---|
| DTX-CycleNotAvailable | The IE shall be present if the Cause IE is set to "Continuous Packet Connectivity UE DTX Cycle not Available ". |

| Range bound       | Explanation                     |
|-------------------|---------------------------------|
| <i>maxnoofRLs</i> | Maximum number of RLs for a UE. |

## 9.1.15 RADIO LINK RECONFIGURATION CANCEL

| IE/Group Name  | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|----------------|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| Message Type   | M        |       | 9.2.1.40              |                       | YES         | ignore               |
| Transaction ID | M        |       | 9.2.1.59              |                       | -           |                      |

## 9.1.16 RADIO LINK RECONFIGURATION REQUEST

## 9.1.16.1 FDD Message

| IE/Group Name                                 | Presence | Range             | IE Type and Reference                      | Semantics Description | Criticality | Assigned Criticality |
|---|----------|-------------------|--|-----------------------|-------------|----------------------|
| Message Type                                  | M        |                   | 9.2.1.40                                   |                       | YES         | reject               |
| Transaction ID                                | M        |                   | 9.2.1.59                                   |                       | –           |                      |
| Allowed Queuing Time                          | O        |                   | 9.2.1.2                                    |                       | YES         | reject               |
| <b>UL DPCH Information</b>                    |          | 0..1              |  |                       | YES         | reject               |
| >TFCS   | O        |                   | 9.2.1.63                                   | TFCS for the UL.      | –           |                      |
| >UL DPDCH Indicator For E-DCH Operation       | O        |                   | 9.2.2.52A                                  |                       | YES         | reject               |
| <b>DL DPCH Information</b>                    |          | 0..1              |  |                       | YES         | reject               |
| >TFCS   | O        |                   | 9.2.1.63                                   | TFCS for the DL.      | –           |                      |
| >TFCI Signalling Mode                         | O        |                   | 9.2.2.46                                   |                       | –           |                      |
| >Limited Power Increase                       | O        |                   | 9.2.2.21A                                  |                       | –           |                      |
| DCHs To Modify                                | O        |                   | FDD DCHs To Modify 9.2.2.13C               |                       | YES         | reject               |
| DCHs To Add                                   | O        |                   | DCH FDD Information 9.2.2.4A               |                       | YES         | reject               |
| <b>DCHs To Delete</b>                         |          | 0..<maxno ofDCHs> |  |                       | GLOBAL      | reject               |
| >DCH ID                                       | M        |                   | 9.2.1.16                                   |                       | –           |                      |
| Transmission Gap Pattern Sequence Information | O        |                   | 9.2.2.47A                                  |                       | YES         | reject               |
| <b>RL Information</b>                         |          | 0..<maxno ofRLs>  |  |                       | EACH        | ignore               |
| >RL ID  | M        |                   | 9.2.1.49                                   |                       | –           |                      |
| >RL Specific DCH Information                  | O        |                   | 9.2.1.49A                                  |                       | –           |                      |
| >RL specific E-DCH Information                | O        |                   | 9.2.2.35a                                  |                       | YES         | reject               |
| >E-DCH RL Indication                          | O        |                   | 9.2.2.4E                                   |                       | YES         | reject               |
| DL Reference Power Information                | O        |                   | 9.2.2.10C                                  |                       | YES         | ignore               |
| HS-DSCH Information                           | O        |                   | HS-DSCH FDD Information 9.2.2.19a          |                       | YES         | reject               |
| HS-DSCH Information To Modify Unsynchronised  | O        |                   | 9.2.1.30NA                                 |                       | YES         | reject               |
| HS-DSCH MAC-d Flows To Add                    | O        |                   | HS-DSCH MAC-d Flows Information 9.2.1.30OA |                       | YES         | reject               |
| HS-DSCH MAC-d Flows To Delete                 | O        |                   | 9.2.1.30OB                                 |                       | YES         | reject               |
| HS-PDSCH RL ID                                | O        |                   | RL ID 9.2.1.49                             |                       | YES         | reject               |
| <b>E-DPCH Information</b>                     |          | 0..1              |  |                       | YES         | reject               |
| >Maximum Set of E-DPDCHs                      | O        |                   | 9.2.2.24e                                  |                       | –           |                      |
| >Puncture Limit                               | O        |                   | 9.2.1.46                                   |                       | –           |                      |
| >E-TFCS Information                           | O        |                   | 9.2.2.4G                                   |                       | –           |                      |

|   |   |                        |   |   |      |        |
|---|---|------------------------|---|---|------|--------|
| >E-TTI  | O |                        | 9.2.2.4J                                |   | –    |        |
| >E-DPCCH Power Offset   | O |                        | 9.2.2.4K                                |   | –    |        |
| >E-RGCH 2-Index-Step Threshold                                      | O |                        | 9.2.2.64                                |   | –    |        |
| >E-RGCH 3-Index-Step Threshold                                      | O |                        | 9.2.2.65                                |   | –    |        |
| >HARQ Info for E-DCH  | O |                        | 9.2.2.66                                |   | –    |        |
| > Minimum Reduced E-DPDCH Gain Factor                               | O |                        | 9.2.2.102                               |   | YES  | ignore |
| >HS-DSCH Configured Indicator                                       | O |                        | 9.2.2.19C                               |   | –    |        |
| E-DCH FDD Information   | O |                        | 9.2.2.4B                                |   | YES  | reject |
| E-DCH FDD Information to Modify                                     | O |                        | 9.2.2.4F                                |   | YES  | reject |
| E-DCH MAC-d Flows to Add  | O |                        | E-DCH MAC-d flows Information 9.2.2.4MC |   | YES  | reject |
| E-DCH MAC-d Flows to Delete   | O |                        | 9.2.1.90                                |   | YES  | reject |
| Serving E-DCH RL  | O |                        | 9.2.2.38C                               |   | YES  | reject |
| <b>CPC Information</b>  |   | 0..1                   |   |   | YES  | reject |
| >Continuous Packet Connectivity DTX-DRX Information                 | O |                        | 9.2.2.72                                |   | –    |        |
| >Continuous Packet Connectivity DTX-DRX Information To Modify       | O |                        | 9.2.2.73                                |   | –    |        |
| >Continuous Packet Connectivity HS-SCCH less Information            | O |                        | 9.2.2.74                                |   | –    |        |
| >Continuous Packet Connectivity HS-SCCH less Deactivate Indicator   | O |                        | 9.2.2.75A                               |   | YES  | reject |
| No of Target Cell HS-SCCH Order                                     | O |                        | INTEGER (1..30)                         |   | YES  | ignore |
| <b>Additional HS Cell Information RL Reconf Req</b>                 |   | 0..<maxno ofHSDSC H-1> |   | For secondary serving HS-DSCH cell. Max 1 in this 3GPP release. | EACH | reject |
| >HS-PDSCH RL ID   | M |                        | RL ID 9.2.1.49                          |   | –    |        |
| >C-ID   | O |                        | 9.2.1.6                                 |   | –    |        |
| >HS-DSCH FDD Secondary Serving Information                          | O |                        | 9.2.2.19aa                              |   | –    |        |
| >HS-DSCH FDD Secondary Serving Information To Modify Unsynchronised | O |                        | 9.2.2.19bc                              |   | –    |        |
| >HS-DSCH Secondary Serving Remove                                   | O |                        | NULL                                    |   | –    |        |

| Range Bound            | Explanation   |
|------------------------|---|
| <i>maxnoofDCHs</i>     | Maximum number of DCHs for one UE.                            |
| <i>maxnoofRLs</i>      | Maximum number of RLs for a UE.                               |
| <i>maxnoofHSDSCH-1</i> | Maximum number of Secondary Serving HS-DSCH cells for one UE. |

## 9.1.16.2 TDD Message

| IE/Group Name                                | Presence | Range                | IE Type and Reference                                  | Semantics Description  | Criticality | Assigned Criticality |
|--|----------|----------------------|--|--|-------------|----------------------|
| Message Type                                 | M        |                      | 9.2.1.40   |  | YES         | reject               |
| Transaction ID                               | M        |                      | 9.2.1.59   |  | –           |                      |
| Allowed Queuing Time                         | O        |                      | 9.2.1.2  |  | YES         | reject               |
| <b>UL CCTrCH Information To Modify</b>       |          | 0..<maxnoof CCTrCHs> |  |  | EACH        | notify               |
| >CCTrCH ID                                   | M        |                      | 9.2.3.2  |  | –           |                      |
| >TFCS  | O        |                      | 9.2.1.63   |  | –           |                      |
| >UL SIR Target                               | O        |                      | Uplink SIR<br>9.2.1.69                                 | Applicable to<br>1.28Mcps<br>TDD only                                      | YES         | reject               |
| <b>UL CCTrCH Information to Delete</b>       |          | 0..<maxnoof CCTrCHs> |  |  | EACH        | notify               |
| >CCTrCH ID                                   | M        |                      | 9.2.3.2  |  | –           |                      |
| <b>DL CCTrCH Information To Modify</b>       |          | 0..<maxnoof CCTrCHs> |  |  | EACH        | notify               |
| >CCTrCH ID                                   | M        |                      | 9.2.3.2  |  | –           |                      |
| >TFCS  | O        |                      | 9.2.1.63   |  | –           |                      |
| <b>DL CCTrCH Information to Delete</b>       |          | 0..<maxnoof CCTrCHs> |  |  | EACH        | notify               |
| >CCTrCH ID                                   | M        |                      | 9.2.3.2  |  | –           |                      |
| DCHs To Modify                               | O        |                      | TDD DCHs<br>To Modify<br>9.2.3.8B                      |  | YES         | reject               |
| DCHs To Add                                  | O        |                      | DCH TDD<br>Information<br>9.2.3.2A                     |  | YES         | reject               |
| <b>DCHs to Delete</b>                        |          | 0..<maxnoof DCHs>    |  |  | GLOBAL      | reject               |
| >DCH ID                                      | M        |                      | 9.2.1.16   |  | –           |                      |
| <b>RL Information</b>                        |          | 0..<maxnoof RLs>     |  |  | YES         | ignore               |
| >RL ID                                       | M        |                      | 9.2.1.49   |  | –           |                      |
| >RL Specific DCH Information                 | O        |                      | 9.2.1.49A  |  | –           |                      |
| <b>UL Synchronisation Parameters LCR</b>     |          | 0..1                 |  | Mandatory<br>for 1.28Mcps<br>TDD. Not<br>Applicable to<br>3.84Mcps<br>TDD. | YES         | ignore               |
| >Uplink Synchronisation Step Size            | M        |                      | 9.2.3.13J  |  | –           |                      |
| >Uplink Synchronisation Frequency            | M        |                      | 9.2.3.13I  |  | –           |                      |
| HS-DSCH Information                          | O        |                      | HS-DSCH<br>TDD<br>Information<br>9.2.3.3aa             |  | YES         | reject               |
| HS-DSCH Information To Modify Unsynchronised | O        |                      | 9.2.1.30NA   |  | YES         | reject               |
| HS-DSCH MAC-d Flows To Add                   | O        |                      | HS-DSCH<br>MAC-d<br>Flows<br>Information<br>9.2.1.30OA |  | YES         | reject               |
| HS-DSCH MAC-d Flows To Delete                | O        |                      | 9.2.1.30OB   |  | YES         | reject               |
| HS-PDSCH RL ID                               | O        |                      | RL ID<br>9.2.1.49                                      |  | YES         | reject               |
| <b>E-DCH Information</b>                     |          | 0..1                 |  | 3.84Mcps<br>TDD only   | YES         | reject               |

| IE/Group Name   | Presence | Range | IE Type and Reference    | Semantics Description | Criticality | Assigned Criticality |
|---|----------|-------|--------------------------|-----------------------|-------------|----------------------|
| >E-PUCH Information   | O        |       | 9.2.3.36                 |                       | –           |                      |
| >E-TFCS Information TDD                                       | O        |       | 9.2.3.37                 |                       | –           |                      |
| >E-DCH MAC-d Flows to Add                                     | O        |       | 9.2.3.38                 |                       | –           |                      |
| >E-DCH MAC-d Flows to Delete                                  | O        |       | 9.2.1.90                 |                       | –           |                      |
| >E-DCH TDD Information  | O        |       | 9.2.3.40                 |                       | –           |                      |
| >E-DCH TDD Information to Modify                              | O        |       | 9.2.3.42                 |                       | –           |                      |
| E-DCH Serving RL  | O        |       | 9.2.1.49                 | 3.84Mcps TDD only     | YES         | reject               |
| <b>E-DCH Information 7.68Mcps</b>                             |          | 0..1  |                          | 7.68Mcps TDD only     | YES         | reject               |
| >E-PUCH Information   | O        |       | 9.2.3.36                 |                       | –           |                      |
| >E-TFCS Information TDD                                       | O        |       | 9.2.3.37                 |                       | –           |                      |
| >E-DCH MAC-d Flows to Add                                     | O        |       | 9.2.3.38                 |                       | –           |                      |
| >E-DCH MAC-d Flows to Delete                                  | O        |       | 9.2.1.90                 |                       | –           |                      |
| >E-DCH TDD Information 7.68Mcps                               | O        |       | 9.2.3.51                 |                       | –           |                      |
| >E-DCH TDD Information to Modify                              | O        |       | 9.2.3.42                 |                       | –           |                      |
| <b>E-DCH Information 1.28Mcps</b>                             |          | 0..1  |                          | 1.28Mcps TDD only     | YES         | reject               |
| >E-PUCH Information LCR                                       | O        |       | 9.2.3.36a                |                       | –           |                      |
| >E-TFCS Information TDD                                       | O        |       | 9.2.3.37                 |                       | –           |                      |
| >E-DCH MAC-d Flows to Add                                     | O        |       | 9.2.3.38                 |                       | –           |                      |
| >E-DCH MAC-d Flows to Delete                                  | O        |       | 9.2.1.90                 |                       | –           |                      |
| >E-DCH TDD Information LCR                                    | O        |       | 9.2.3.40a                |                       | –           |                      |
| >E-DCH TDD Information to Modify                              | O        |       | 9.2.3.42                 |                       | –           |                      |
| Need for Idle Interval  | O        |       | ENUMERATED (True, False) | TDD only              | YES         | ignore               |
| <b>CPC Information</b>  |          | 0..1  |                          |                       | YES         | reject               |
| >Continuous Packet Connectivity DRX Information LCR           | O        |       | 9.2.3.61                 |                       | –           |                      |
| >Continuous Packet Connectivity DRX Information To Modify LCR | O        |       | 9.2.3.62                 |                       | –           |                      |
| >HS-DSCH Semi-Persistent scheduling Information LCR           | O        |       | 9.2.3.64                 |                       | –           |                      |
| >HS-DSCH Semi-Persistent scheduling Information to modify LCR | O        |       | 9.2.3.65                 |                       | –           |                      |
| >HS-DSCH Semi-Persistent scheduling Deactivate Indicator LCR  | O        |       | 9.2.3.70                 |                       | –           |                      |
| >E-DCH Semi-Persistent scheduling Information LCR             | O        |       | 9.2.3.66                 |                       | –           |                      |
| >E-DCH Semi-Persistent scheduling Information to modify LCR   | O        |       | 9.2.3.67                 |                       | –           |                      |
| >E-DCH Semi-Persistent scheduling Deactivate                  | O        |       | 9.2.3.71                 |                       | –           |                      |

| IE/Group Name             | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|---------------------------|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| Indicator LCR             |          |       |                       |                       |             |                      |
| RNTI Allocation Indicator | O        |       | ENUMERATED (True)     | 1.28 Mcps TDD only    | YES         | ignore               |

| Range Bound           | Explanation                         |
|-----------------------|-------------------------------------|
| <i>maxnoofCCTrCHs</i> | Maximum number of CCTrCHs for a UE. |
| <i>maxnoofDCHs</i>    | Maximum number of DCHs for one UE.  |
| <i>maxnoofRLs</i>     | Maximum number of RLs for one UE    |



## 9.1.17 RADIO LINK RECONFIGURATION RESPONSE

## 9.1.17.1 FDD Message

| IE/Group Name  | Presence | Range                               | IE Type and Reference                         | Semantics Description   | Criticality | Assigned Criticality |
|--|----------|-------------------------------------|---|---|-------------|----------------------|
| Message Type   | M        |                                     | 9.2.1.40                                      |   | YES         | reject               |
| Transaction ID   | M        |                                     | 9.2.1.59                                      |   | –           |                      |
| <b>RL Information Response</b>                                   |          | <i>0..&lt;maxno ofRLs&gt;</i>       |   |   | EACH        | ignore               |
| >RL ID   | M        |                                     | 9.2.1.49                                      |   | –           |                      |
| >Maximum Uplink SIR  | O        |                                     | Uplink SIR<br>9.2.1.69                        |   | –           |                      |
| >Minimum Uplink SIR  | O        |                                     | Uplink SIR<br>9.2.1.69                        |   | –           |                      |
| >Maximum DL TX Power   | O        |                                     | DL Power<br>9.2.1.21A                         |   | –           |                      |
| >Minimum DL TX Power   | O        |                                     | DL Power<br>9.2.1.21A                         |   | –           |                      |
| >Not Used  | O        |                                     | NULL  |   | –           |                      |
| >DCH Information Response  | O        |                                     | 9.2.1.16A                                     |   | YES         | ignore               |
| >DL Code Information   | O        |                                     | FDD DL Code Information<br>9.2.2.14A          |   | YES         | ignore               |
| >DL Power Balancing Updated Indicator                            | O        |                                     | 9.2.2.10D                                     |   | YES         | ignore               |
| >E-DCH FDD Information Response                                  | O        |                                     | 9.2.2.4C                                      |   | YES         | ignore               |
| >E-DCH RL Set ID   | O        |                                     | RL Set ID<br>9.2.2.35                         |   | YES         | ignore               |
| >E-DCH FDD DL Control Channel Information                        | O        |                                     | 9.2.2.4D                                      |   | YES         | ignore               |
| >F-DPCH Slot Format  | O        |                                     | 9.2.2.85                                      |   | YES         | ignore               |
| Criticality Diagnostics  | O        |                                     | 9.2.1.13                                      |   | YES         | ignore               |
| HS-DSCH-RNTI   | O        |                                     | 9.2.1.30P                                     |   | YES         | ignore               |
| HS-DSCH Information Response                                     | O        |                                     | HS-DSCH FDD Information Response<br>9.2.2.19b |   | YES         | ignore               |
| MAC-hs Reset Indicator   | O        |                                     | 9.2.1.34B                                     |   | YES         | ignore               |
| Continuous Packet Connectivity HS-SCCH less Information Response | O        |                                     | 9.2.2.75                                      |   | YES         | ignore               |
| <b>Additional HS Cell Information Response</b>                   |          | <i>0..&lt;maxno ofHSDSC H-1&gt;</i> |   | For secondary serving HS-DSCH cell. Max 1 in this 3GPP release. | EACH        | ignore               |
| >HS-PDSCH RL ID  | M        |                                     | RL ID<br>9.2.1.49                             |   | –           |                      |
| >HS-DSCH-RNTI  | M        |                                     | 9.2.1.30P                                     |   | –           |                      |
| >HS-DSCH FDD Secondary Serving Information Response              | M        |                                     | 9.2.2.19ba                                    |   | –           |                      |

| <b>Range Bound</b>     | <b>Explanation</b>  |
|------------------------|---|
| <i>maxnoofRLs</i>      | Maximum number of RLs for a UE.                               |
| <i>maxnoofHSDSCH-1</i> | Maximum number of Secondary Serving HS-DSCH cells for one UE. |

## 9.1.17.2 TDD Message

| IE/Group Name                                  | Presence | Range                              | IE Type and Reference                         | Semantics Description   | Criticality | Assigned Criticality |
|--|----------|------------------------------------|---|---|-------------|----------------------|
| Message Type                                   | M        |                                    | 9.2.1.40                                      |   | YES         | reject               |
| Transaction ID                                 | M        |                                    | 9.2.1.59                                      |   | –           |                      |
| <b>RL Information Response</b>                 |          | <i>0..&lt;maxno ofRLs&gt;</i>      |   | See note 1 below  | YES         | ignore               |
| >RL ID   | M        |                                    | 9.2.1.49                                      |   | –           |                      |
| >Maximum Uplink SIR                            | O        |                                    | Uplink SIR<br>9.2.1.69                        |   | –           |                      |
| >Minimum Uplink SIR                            | O        |                                    | Uplink SIR<br>9.2.1.69                        |   | –           |                      |
| >Maximum DL TX Power                           | O        |                                    | DL Power<br>9.2.1.21A                         |   | –           |                      |
| >Minimum DL TX Power                           | O        |                                    | DL Power<br>9.2.1.21A                         |   | –           |                      |
| >DCH Information Response                      | O        |                                    | 9.2.1.16A                                     |   | YES         | ignore               |
| <b>&gt;DL CCTrCH Information</b>               |          | <i>0..&lt;maxno ofCCTrCH s&gt;</i> |   | For DCH   | GLOBAL      | ignore               |
| >>CCTrCH ID                                    | M        |                                    | 9.2.3.2                                       |   | –           |                      |
| <b>&gt;&gt;DL DPCH To Modify LCR</b>           |          | <i>0..1</i>                        |   | Applicable to 1.28Mcps TDD only   | YES         | ignore               |
| <b>&gt;&gt;&gt;DL Timeslot Information LCR</b> |          | <i>0..&lt;maxno ofTSLCR &gt;</i>   |   |   | –           |                      |
| >>>>Time Slot LCR                              | M        |                                    | 9.2.3.12a                                     |   | –           |                      |
| >>>>Maximum DL TX Power                        | O        |                                    | DL Power<br>9.2.1.21A                         | Maximum allowed power on DPCH   | –           |                      |
| >>>>Minimum DL TX Power                        | O        |                                    | DL Power<br>9.2.1.21A                         | Minimum allowed power on DPCH   | –           |                      |
| >>CCTrCH Maximum DL TX Power                   | O        |                                    | DL Power<br>9.2.1.21A                         | Maximum allowed power on DPCH<br>Applicable to 3.84Mcps TDD and 7.68Mcps TDD only | YES         | ignore               |
| >>CCTrCH Minimum DL TX Power                   | O        |                                    | DL Power<br>9.2.1.21A                         | Minimum allowed power on DPCH<br>Applicable to 3.84Mcps TDD and 7.68Mcps TDD only | YES         | ignore               |
| >Uplink Timing Advance Control LCR             | O        |                                    | 9.2.3.13K                                     | Applicable to 1.28Mcps TDD only   | YES         | ignore               |
| Criticality Diagnostics                        | O        |                                    | 9.2.1.13                                      |   | YES         | ignore               |
| HS-DSCH-RNTI                                   | O        |                                    | 9.2.1.30P                                     |   | YES         | ignore               |
| HS-DSCH Information Response                   | O        |                                    | HS-DSCH TDD Information Response<br>9.2.3.3ab |   | YES         | ignore               |

| IE/Group Name  | Presence | Range | IE Type and Reference                             | Semantics Description | Criticality | Assigned Criticality |
|--|----------|-------|---|-----------------------|-------------|----------------------|
| MAC-hs Reset Indicator   | O        |       | 9.2.1.34B   |                       | YES         | ignore               |
| E-DCH Information Response   | O        |       | E-DCH TDD Information Response 9.2.3.41           | 3.84Mcps TDD only     | YES         | ignore               |
| E-DCH Information Response 7.68Mcps  | O        |       | E-DCH TDD Information Response 7.68Mcps 9.2.3.52  | 7.68Mcps TDD only     | YES         | ignore               |
| E-DCH Information Response 1.28Mcps  | O        |       | E-DCH TDD Information Response 1.28Mcps 9.2.3.41a | 1.28Mcps TDD only     | YES         | ignore               |
| PowerControl GAP   | O        |       | INTEGER (1..255)                                  | 1.28Mcps TDD only     | YES         | ignore               |
| Idle Interval Information  | O        |       | 9.2.3.60  | TDD only              | YES         | ignore               |
| Continuous Packet Connectivity DRX Information Response LCR  | O        |       | 9.2.3.63  | 1.28 Mcps TDD only    | YES         | ignore               |
| HS-DSCH Semi-Persistent scheduling Information Response LCR  | O        |       | 9.2.3.68  | 1.28 Mcps TDD only    | YES         | ignore               |
| E-DCH Semi-Persistent scheduling Information Response LCR  | O        |       | 9.2.3.69  | 1.28 Mcps TDD only    | YES         | ignore               |
| E-RNTI for FACH  | O        |       | E-RNTI 9.2.1.94                                   | 1.28 Mcps TDD only    | YES         | ignore               |
| H-RNTI for FACH  | O        |       | HS-DSCH-RNTI 9.2.1.30P                            | 1.28 Mcps TDD only    | YES         | ignore               |
| Note 1: This information element is a simplified representation of the ASN.1. Repetition 1 and repetition 2 through <i>maxnoofRLs</i> are represented by separate ASN.1 structures with different criticalities. |          |       |   |                       |             |                      |

| Range bound           | Explanation  |
|-----------------------|--|
| <i>maxnoofCCTrCHs</i> | Maximum number of CCTrCHs for a UE.                    |
| <i>maxnoofTSLCRs</i>  | Maximum number of Timeslots for a UE for 1.28Mcps TDD. |
| <i>maxnoofRLs</i>     | Maximum number of RLs for one UE                       |

## 9.1.18 RADIO LINK FAILURE INDICATION

| IE/Group Name                  | Presence | Range                   | IE Type and Reference | Semantics Description                           | Criticality | Assigned Criticality |
|--------------------------------|----------|-------------------------|-----------------------|---|-------------|----------------------|
| Message Type                   | M        |                         | 9.2.1.40              |   | YES         | ignore               |
| Transaction ID                 | M        |                         | 9.2.1.59              |   | –           |                      |
| CHOICE <i>Reporting Object</i> | M        |                         |                       | Object for which the Failure shall be reported. | YES         | ignore               |
| >RL                            |          |                         |                       |   | –           |                      |
| >>RL Information               |          | 1 ..<br><maxnoofRLs>    |                       |   | EACH        | ignore               |
| >>>RL ID                       | M        |                         | 9.2.1.49              |   | –           |                      |
| >>>Cause                       | M        |                         | 9.2.1.5               |   | –           |                      |
| >RLS                           |          |                         |                       | FDD only  | –           |                      |
| >>RL Set Information           |          | 1 ..<br><maxnoofRLSets> |                       |   | EACH        | ignore               |
| >>>RL Set ID                   | M        |                         | 9.2.2.35              |   | –           |                      |
| >>>Cause                       | M        |                         | 9.2.1.5               |   | –           |                      |
| >CCTrCH                        |          |                         |                       | TDD only  | –           |                      |
| >>RL ID                        | M        |                         | 9.2.1.49              |   | –           |                      |
| >>CCTrCH List                  |          | 1..<maxnoCCTrCHs>       |                       |   | EACH        | ignore               |
| >>>CCTrCH ID                   | M        |                         | 9.2.3.2               |   | –           |                      |
| >>>Cause                       | M        |                         | 9.2.1.5               |   | –           |                      |

| Range bound           | Explanation                           |
|-----------------------|---------------------------------------|
| <i>maxnoofRLs</i>     | Maximum number of RLs for one UE.     |
| <i>maxnoofRLSets</i>  | Maximum number of RL Sets for one UE. |
| <i>maxnoofCCTrCHs</i> | Maximum number of CCTrCHs for a UE.   |

## 9.1.19 RADIO LINK RESTORE INDICATION

| IE/Group Name           | Presence | Range                    | IE Type and Reference | Semantics Description                               | Criticality | Assigned Criticality |
|-------------------------|----------|--------------------------|-----------------------|---|-------------|----------------------|
| Message Type            | M        |                          | 9.2.1.40              |   | YES         | ignore               |
| Transaction ID          | M        |                          | 9.2.1.59              |   | –           |                      |
| CHOICE Reporting Object | M        |                          |                       | Object for which the Restoration shall be reported. | YES         | ignore               |
| >RL                     |          |                          |                       | TDD only  | –           |                      |
| >>RL Information        |          | 1 ..<br><maxno ofRLs>    |                       |   | EACH        | ignore               |
| >>>RL ID                | M        |                          | 9.2.1.49              |   | –           |                      |
| >RLS                    |          |                          |                       | FDD only  | –           |                      |
| >>RL Set Information    |          | 1 ..<br><maxno ofRLSets> |                       |   | EACH        | ignore               |
| >>>RL Set ID            | M        |                          | 9.2.2.35              |   | –           |                      |
| >CCTrCH                 |          |                          |                       | TDD only  | –           |                      |
| >>RL ID                 | M        |                          | 9.2.1.49              |   | –           |                      |
| >>>CCTrCH List          |          | 1..<maxnoCCTrCHs>        |                       |   | EACH        | ignore               |
| >>>CCTrCH ID            | M        |                          | 9.2.3.2               |   | –           |                      |

| Range bound           | Explanation                           |
|-----------------------|---------------------------------------|
| <i>maxnoofRLs</i>     | Maximum number of RLs for one UE.     |
| <i>maxnoofRLSets</i>  | Maximum number of RL Sets for one UE. |
| <i>maxnoofCCTrCHs</i> | Maximum number of CCTrCHs for a UE.   |

## 9.1.20 DL POWER CONTROL REQUEST [FDD]

| IE/Group Name                  | Presence                 | Range          | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|--------------------------------|--------------------------|----------------|-----------------------|-----------------------|-------------|----------------------|
| Message Type                   | M                        |                | 9.2.1.40              |                       | YES         | ignore               |
| Transaction ID                 | M                        |                | 9.2.1.59              |                       | –           |                      |
| Power Adjustment Type          | M                        |                | 9.2.2.28              |                       | YES         | ignore               |
| DL Reference Power             | C-Common                 |                | DL Power 9.2.1.21A    |                       | YES         | ignore               |
| Inner Loop DL PC Status        | O                        |                | 9.2.2.21a             |                       | YES         | ignore               |
| DL Reference Power Information | C-Individual             | 1..<maxnofRLs> |                       |                       | EACH        | ignore               |
| >RL ID                         | M                        |                | 9.2.1.49              |                       | –           |                      |
| >DL Reference Power            | M                        |                | DL Power 9.2.1.21A    |                       | –           |                      |
| Max Adjustment Step            | C-Common<br>O Individual |                | 9.2.2.23              |                       | YES         | ignore               |
| Adjustment Period              | C-Common<br>O Individual |                | 9.2.2.B               |                       | YES         | ignore               |
| Adjustment Ratio               | C-Common<br>O Individual |                | 9.2.2.C               |                       | YES         | ignore               |

| Condition          | Explanation  |
|--------------------|--|
| Common             | The IE shall be present if the <i>Power Adjustment Type</i> IE is set to "Common".                 |
| Individual         | The IE shall be present if the <i>Power Adjustment Type</i> IE is set to "Individual".             |
| CommonOrIndividual | The IE shall be present if the <i>Power Adjustment Type</i> IE is set to "Common" or "Individual". |

| Range Bound       | Explanation                       |
|-------------------|-----------------------------------|
| <i>maxnoofRLs</i> | Maximum number of RLs for one UE. |

## 9.1.21 PHYSICAL CHANNEL RECONFIGURATION REQUEST

### 9.1.21.1 FDD Message

| IE/Group Name         | Presence | Range | IE Type and Reference                | Semantics Description | Criticality | Assigned Criticality |
|-----------------------|----------|-------|--------------------------------------|-----------------------|-------------|----------------------|
| Message Type          | M        |       | 9.2.1.40                             |                       | YES         | reject               |
| Transaction ID        | M        |       | 9.2.1.59                             |                       | –           |                      |
| <b>RL Information</b> |          | 1     |                                      |                       | YES         | reject               |
| >RL ID                | M        |       | 9.2.1.49                             |                       | –           |                      |
| >DL Code Information  | M        |       | FDD DL Code Information<br>9.2.2.14A |                       | YES         | notify               |
| >F-DPCH Slot Format   | O        |       | 9.2.2.85                             |                       | YES         | Ignore               |

## 9.1.21.2 TDD Message

| IE/Group Name   | Presence | Range                       | IE Type and Reference                             | Semantics Description                 | Criticality | Assigned Criticality |
|---|----------|-----------------------------|---|---------------------------------------|-------------|----------------------|
| Message Type  | M        |                             | 9.2.1.40  |                                       | YES         | reject               |
| Transaction ID  | M        |                             | 9.2.1.59  |                                       | –           |                      |
| <b>RL Information</b>                                   |          | 1                           |   |                                       | YES         | reject               |
| >RL ID  | M        |                             | 9.2.1.49  |                                       | –           |                      |
| <b>&gt;UL CCTrCH Information</b>                        |          | 0..<br><maxnoof<br>CCTrCHs> |   |                                       | GLOBAL      | reject               |
| >>CCTrCH ID   | M        |                             | 9.2.3.2   |                                       | –           |                      |
| <b>&gt;&gt;UL DPCH Information</b>                      |          | 1                           |   |                                       | YES         | notify               |
| >>>Repetition Period                                    | O        |                             | 9.2.3.7   |                                       | –           |                      |
| >>>Repetition Length                                    | O        |                             | 9.2.3.6   |                                       | –           |                      |
| >>>TDD DPCH Offset                                      | O        |                             | 9.2.3.8A  |                                       | –           |                      |
| <b>&gt;&gt;&gt;UL Timeslot Information</b>              |          | 0..<maxno<br>OFTS>          |   | Applicable to<br>3.84Mcps<br>TDD only | –           |                      |
| >>>>Time Slot   | M        |                             | 9.2.1.56  |                                       | –           |                      |
| >>>>Midamble Shift<br>And Burst Type                    | O        |                             | 9.2.3.4   |                                       | –           |                      |
| >>>>TFCI Presence                                       | O        |                             | 9.2.1.55  |                                       | –           |                      |
| >>>>UL Code<br>Information                              | O        |                             | TDD UL<br>Code<br>Information<br>9.2.3.10A        |                                       | –           |                      |
| <b>&gt;&gt;&gt;UL Timeslot<br/>Information LCR</b>      |          | 0..<maxno<br>OFTSLCR<br>>   |   | Applicable to<br>1.28Mcps<br>TDD only | GLOBAL      | reject               |
| >>>>Time Slot LCR                                       | M        |                             | 9.2.3.12a   |                                       | –           |                      |
| >>>>Midamble Shift<br>LCR                               | O        |                             | 9.2.3.4C  |                                       | –           |                      |
| >>>>TFCI Presence                                       | O        |                             | 9.2.1.55  |                                       | –           |                      |
| >>>>UL Code<br>Information LCR                          | O        |                             | TDD UL<br>Code<br>Information<br>LCR<br>9.2.3.10B |                                       | –           |                      |
| >>>>PLCCH<br>Information                                | O        |                             | 9.2.3.17  |                                       | YES         | Reject               |
| <b>&gt;&gt;&gt;UL Timeslot<br/>Information 7.68Mcps</b> |          | 0..<maxno<br>OFTS>          |   | Applicable to<br>7.68Mcps<br>TDD only | GLOBAL      | reject               |
| >>>>Time Slot   | M        |                             | 9.2.1.56  |                                       | –           |                      |
| >>>>Midamble Shift<br>And Burst Type<br>7.68Mcps        | O        |                             | 9.2.3.23  |                                       | –           |                      |
| >>>>TFCI Presence                                       | O        |                             | 9.2.1.55  |                                       | –           |                      |
| >>>>UL Code<br>Information 7.68Mcps                     | O        |                             | TDD UL<br>Code<br>Information<br>9.2.3.27         |                                       | –           |                      |
| <b>&gt;DL CCTrCH Information</b>                        |          | 0..<maxno<br>ofCCTrCH<br>s> |   |                                       | GLOBAL      | reject               |
| >>CCTrCH ID   | M        |                             | 9.2.3.2   |                                       | –           |                      |
| <b>&gt;&gt;DL DPCH Information</b>                      |          | 1                           |   |                                       | YES         | notify               |
| >>>Repetition Period                                    | O        |                             | 9.2.3.7   |                                       | –           |                      |
| >>>Repetition Length                                    | O        |                             | 9.2.3.6   |                                       | –           |                      |
| >>>TDD DPCH Offset                                      | O        |                             | 9.2.3.8A  |                                       | –           |                      |
| <b>&gt;&gt;&gt;DL Timeslot<br/>Information</b>          |          | 0..<maxno<br>OFTS>          |   | Applicable to<br>3.84Mcps<br>TDD only | –           |                      |
| >>>>Time Slot   | M        |                             | 9.2.1.56  |                                       | –           |                      |
| >>>>Midamble Shift                                      | O        |                             | 9.2.3.4   |                                       | –           |                      |



|  |   |                         |  |                                  |        |        |
|--|---|-------------------------|--|----------------------------------|--------|--------|
| And Burst Type                                   |   |                         |  |                                  |        |        |
| >>>>TFCI Presence                                | O |                         | 9.2.1.55                                     |                                  | –      |        |
| >>>>DL Code Information                          | O |                         | TDD DL Code Information<br>9.2.3.8C          |                                  | –      |        |
| >>>>DL Timeslot Information LCR                  |   | $0..<maxno\ ofTSLCR>$   |  | Applicable to 1.28Mcps TDD only  | GLOBAL | reject |
| >>>>Time Slot LCR                                | M |                         | 9.2.3.12a                                    |                                  | –      |        |
| >>>>Midamble Shift LCR                           | O |                         | 9.2.3.4C                                     |                                  | –      |        |
| >>>>TFCI Presence                                | O |                         | 9.2.1.55                                     |                                  | –      |        |
| >>>>DL Code Information LCR                      | O |                         | TDD DL Code Information LCR<br>9.2.3.8D      |                                  | –      |        |
| >>>>DL Timeslot Information 7.68Mcps             |   | $0..<maxno\ ofTS>$      |  | Applicable to 7.68Mcps TDD only  | GLOBAL | reject |
| >>>>Time Slot                                    | M |                         | 9.2.1.56                                     |                                  | –      |        |
| >>>>Midamble Shift And Burst Type 7.68Mcps       | O |                         | 9.2.3.23                                     |                                  | –      |        |
| >>>>TFCI Presence                                | O |                         | 9.2.1.55                                     |                                  | –      |        |
| >>>>DL Code Information 7.68Mcps                 | O |                         | TDD DL Code Information 7.68Mcps<br>9.2.3.29 |                                  | –      |        |
| >HS-PDSCH Timeslot Specific Information          |   | $0..<maxno\ ofDLts>$    |  | Applicable to 3.84Mcps TDD only. | GLOBAL | reject |
| >>Time Slot                                      | M |                         | 9.2.1.56                                     |                                  | –      |        |
| >>Midamble Shift And Burst Type                  | M |                         | 9.2.3.4                                      |                                  | –      |        |
| >HS-PDSCH Timeslot Specific Information LCR      |   | $0..<maxno\ ofDLtsLCR>$ |  | Applicable to 1.28Mcps TDD only  | GLOBAL | reject |
| >>Time Slot LCR                                  | M |                         | 9.2.3.12a                                    |                                  | –      |        |
| >>Midamble Shift LCR                             | M |                         | 9.2.3.4C                                     |                                  | –      |        |
| >HS-PDSCH Timeslot Specific Information 7.68Mcps |   | $0..<maxno\ ofDLts>$    |  | Applicable to 7.68Mcps TDD only. | GLOBAL | reject |
| >>Time Slot                                      | M |                         | 9.2.1.56                                     |                                  | –      |        |
| >>Midamble Shift And Burst Type 7.68Mcps         | M |                         | 9.2.3.23                                     |                                  | –      |        |
| >UARFCN  | O |                         | 9.2.1.66                                     | Applicable to 1.28Mcps TDD only. | YES    | ignore |

| Range bound      | Explanation  |
|------------------|--|
| $maxnoofCCTrCHs$ | Maximum number of CCTrCHs for a UE.  |
| $maxnoofTS$      | Maximum number of Timeslots for a UE for 3.84Mcps TDD or 7.68Mcps TDD.                 |
| $maxnoofTSLCR$   | Maximum number of Timeslots for a UE for 1.28Mcps TDD.                                 |
| $maxnoofDLts$    | Maximum number of downlink time slots per Radio Link for 3.84Mcps TDD or 7.68Mcps TDD. |
| $maxnoofDLtsLCR$ | Maximum number of Downlink time slots per Radio Link for 1.28Mcps TDD.                 |

## 9.1.22 PHYSICAL CHANNEL RECONFIGURATION COMMAND

| IE/Group Name           | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|-------------------------|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| Message Type            | M        |       | 9.2.1.40              |                       | YES         | reject               |
| Transaction ID          | M        |       | 9.2.1.59              |                       | –           |                      |
| CFN                     | M        |       | 9.2.1.9               |                       | YES         | ignore               |
| Criticality Diagnostics | O        |       | 9.2.1.13              |                       | YES         | ignore               |

## 9.1.23 PHYSICAL CHANNEL RECONFIGURATION FAILURE

| IE/Group Name           | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|-------------------------|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| Message Type            | M        |       | 9.2.1.40              |                       | YES         | reject               |
| Transaction ID          | M        |       | 9.2.1.59              |                       | –           |                      |
| Cause                   | M        |       | 9.2.1.5               |                       | YES         | ignore               |
| Criticality Diagnostics | O        |       | 9.2.1.13              |                       | YES         | ignore               |

## 9.1.24 UPLINK SIGNALLING TRANSFER INDICATION

### 9.1.24.1 FDD Message

| IE/Group Name  | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|--|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| Message Type   | M        |       | 9.2.1.40              |                       | YES         | ignore               |
| Transaction ID   | M        |       | 9.2.1.59              |                       | –           |                      |
| UC-ID  | M        |       | 9.2.1.71              |                       | YES         | ignore               |
| SAI  | M        |       | 9.2.1.52              |                       | YES         | ignore               |
| Cell GAI   | O        |       | 9.2.1.5A              |                       | YES         | ignore               |
| C-RNTI   | M        |       | 9.2.1.14              |                       | YES         | ignore               |
| S-RNTI   | M        |       | 9.2.1.53              |                       | YES         | ignore               |
| D-RNTI   | O        |       | 9.2.1.24              |                       | YES         | ignore               |
| Propagation Delay  | M        |       | 9.2.2.33              |                       | YES         | ignore               |
| STTD Support Indicator   | M        |       | 9.2.2.45              |                       | YES         | ignore               |
| Closed Loop Mode1 Support Indicator                            | M        |       | 9.2.2.2               |                       | YES         | ignore               |
| L3 Information   | M        |       | 9.2.1.32              |                       | YES         | ignore               |
| CN PS Domain Identifier  | O        |       | 9.2.1.12              |                       | YES         | ignore               |
| CN CS Domain Identifier  | O        |       | 9.2.1.11              |                       | YES         | ignore               |
| URA Information  | O        |       | 9.2.1.70B             |                       | YES         | ignore               |
| Cell GA Additional Shapes                                      | O        |       | 9.2.1.5B              |                       | YES         | ignore               |
| DPC Mode Change Support Indicator                              | O        |       | 9.2.2.56              |                       | YES         | ignore               |
| Common Transport Channel Resources Initialisation Not Required | O        |       | 9.2.1.12F             |                       | YES         | Ignore               |

|   |                     |                          |                    |  |        |        |
|---|---------------------|--------------------------|--------------------|--|--------|--------|
| Cell Capability Container FDD           | O                   |                          | 9.2.2.D            |  | YES    | ignore |
| SNA Information                         | O                   |                          | 9.2.1.52Ca         |  | YES    | ignore |
| Cell Portion ID                         | O                   |                          | 9.2.2.E            |  | YES    | ignore |
| <b>Active MBMS Bearer Service List</b>  |                     | $0..<maxnoofActiveMBMS>$ |                    |  | GLOBAL | ignore |
| >TMGI                                   | M                   |                          | 9.2.1.80           |  | –      |        |
| >Transmission Mode                      | M                   |                          | 9.2.1.81           |  | –      |        |
| Inter-frequency Cell List               |                     | $0..<maxCellsMeas>$      |                    |  | GLOBAL | ignore |
| >DL UARFCN                              | M                   |                          | UARFCN<br>9.2.1.66 |  | –      |        |
| >UL UARFCN                              | O                   |                          | UARFCN<br>9.2.1.66 |  | –      |        |
| >Primary Scrambling Code                | M                   |                          | 9.2.1.45           |  | –      |        |
| Extended Propagation Delay              | O                   |                          | 9.2.2.33a          |  | YES    | ignore |
| HS-DSCH-RNTI                            | O                   |                          | 9.2.1.30P          |  | YES    | ignore |
| Multiple PLMN List                      | O                   |                          | 9.2.1.117          |  | YES    | ignore |
| E-RNTI                                  | O                   |                          | 9.2.1.94           |  | YES    | ignore |
| Max UE DTX Cycle                        | C-DTX-DRXCapability |                          | 9.2.2.87           |  | YES    | ignore |
| Cell Capability Container FDD Extension | O                   |                          | 9.2.2.123          |  | YES    | ignore |
| Secondary Serving Cell List             | O                   |                          | 9.2.2.101          |  | YES    | ignore |

| Condition         | Explanation   |
|-------------------|---|
| DTX-DRXCapability | The IE shall be present if the <i>Continuous Packet Connectivity DTX-DRX Support Indicator</i> IE in <i>Cell Capability Container FDD</i> IE is set to 1. |

| Range bound              | Explanation   |
|--------------------------|---|
| <i>maxnoofActiveMBMS</i> | Maximum number of MBMS bearer services that are active in parallel. |
| <i>maxCellsMeas</i>      | Maximum number of inter-frequency cells measured by a UE.           |

## 9.1.24.2 TDD Message

| IE/Group Name  | Presence | Range                                 | IE Type and Reference | Semantics Description           | Criticality | Assigned Criticality |
|--|----------|---------------------------------------|-----------------------|---------------------------------|-------------|----------------------|
| Message Type   | M        |                                       | 9.2.1.40              |                                 | YES         | ignore               |
| Transaction ID   | M        |                                       | 9.2.1.59              |                                 | –           |                      |
| UC-ID  | M        |                                       | 9.2.1.71              |                                 | YES         | ignore               |
| SAI  | M        |                                       | 9.2.1.52              |                                 | YES         | ignore               |
| Cell GAI   | O        |                                       | 9.2.1.5A              |                                 | YES         | ignore               |
| C-RNTI   | M        |                                       | 9.2.1.14              |                                 | YES         | ignore               |
| S-RNTI   | M        |                                       | 9.2.1.53              |                                 | YES         | ignore               |
| D-RNTI   | O        |                                       | 9.2.1.24              |                                 | YES         | ignore               |
| Rx Timing Deviation  | M        |                                       | 9.2.3.7A              |                                 | YES         | ignore               |
| L3 Information   | M        |                                       | 9.2.1.32              |                                 | YES         | ignore               |
| CN PS Domain Identifier  | O        |                                       | 9.2.1.12              |                                 | YES         | ignore               |
| CN CS Domain Identifier  | O        |                                       | 9.2.1.11              |                                 | YES         | ignore               |
| URA Information  | O        |                                       | 9.2.1.70B             |                                 | YES         | ignore               |
| Cell GA Additional Shapes                                      | O        |                                       | 9.2.1.5B              |                                 | YES         | ignore               |
| Common Transport Channel Resources Initialisation Not Required | O        |                                       | 9.2.1.12F             |                                 | YES         | ignore               |
| Cell Capability Container TDD                                  | O        |                                       | 9.2.3.1a              | Applicable to 3.84Mcps TDD only | YES         | ignore               |
| Cell Capability Container TDD LCR                              | O        |                                       | 9.2.3.1b              | Applicable to 1.28Mcps TDD only | YES         | ignore               |
| SNA Information  | O        |                                       | 9.2.1.52Ca            |                                 | YES         | ignore               |
| <b>Active MBMS Bearer Service List</b>                         |          | <i>0..&lt;max noofActiveMBMS &gt;</i> |                       |                                 | GLOBAL      | ignore               |
| >TMGI  | M        |                                       | 9.2.1.80              |                                 | –           |                      |
| >Transmission Mode   | M        |                                       | 9.2.1.81              |                                 | –           |                      |
| Cell Capability Container 7.68Mcps TDD                         | O        |                                       | 9.2.3.31              | Applicable to 7.68Mcps TDD only | YES         | ignore               |
| Rx Timing Deviation 7.68Mcps                                   | O        |                                       | 9.2.3.30              | Applicable to 7.68Mcps TDD only | YES         | ignore               |
| Rx Timing Deviation 3.84Mcps Extended                          | O        |                                       | 9.2.3.35              | Applicable to 3.84Mcps TDD only | YES         | ignore               |
| Multiple PLMN List   | O        |                                       | 9.2.1.117             |                                 | YES         | ignore               |
| HS-DSCH-RNTI   | O        |                                       | 9.2.1.30P             |                                 | YES         | ignore               |
| E-RNTI   | O        |                                       | 9.2.1.94              |                                 | YES         | ignore               |

| Range bound              | Explanation   |
|--------------------------|---|
| <i>maxnoofActiveMBMS</i> | Maximum number of MBMS bearer services that are active in parallel. |

## 9.1.24A GERAN UPLINK SIGNALLING TRANSFER INDICATION

| IE/Group Name           | Presence | Range | IE type and reference | Semantics description                  | Criticality | Assigned Criticality |
|-------------------------|----------|-------|-----------------------|--|-------------|----------------------|
| Message Type            | M        |       | 9.2.1.40              |  | YES         | ignore               |
| Transaction ID          | M        |       | 9.2.1.59              |  | –           |                      |
| UC-ID                   | M        |       | 9.2.1.71              | UC-ID may be a GERAN cell identifier.  | YES         | ignore               |
| SAI                     | M        |       | 9.2.1.52              |  | YES         | ignore               |
| S-RNTI                  | M        |       | 9.2.1.53              |  | YES         | ignore               |
| D-RNTI                  | O        |       | 9.2.1.24              |  | YES         | ignore               |
| L3 Information          | M        |       | 9.2.1.32              |  | YES         | ignore               |
| CN PS Domain Identifier | O        |       | 9.2.1.12              |  | YES         | ignore               |
| CN CS Domain Identifier | O        |       | 9.2.1.11              |  | YES         | ignore               |
| URA Information         | O        |       | 9.2.1.70B             | URA information may be GRA information | YES         | ignore               |

## 9.1.25 DOWNLINK SIGNALLING TRANSFER REQUEST

| IE/Group Name                   | Presence | Range                           | IE Type and Reference        | Semantics Description   | Criticality | Assigned Criticality |
|---------------------------------|----------|---------------------------------|------------------------------|---|-------------|----------------------|
| Message Type                    | M        |                                 | 9.2.1.40                     |   | YES         | ignore               |
| Transaction ID                  | M        |                                 | 9.2.1.59                     |   | –           |                      |
| C-ID                            | M        |                                 | 9.2.1.6                      | May be a GERAN cell identifier  | YES         | ignore               |
| D-RNTI                          | M        |                                 | 9.2.1.24                     |   | YES         | ignore               |
| L3 Information                  | M        |                                 | 9.2.1.32                     |   | YES         | ignore               |
| D-RNTI Release Indication       | M        |                                 | 9.2.1.25                     |   | YES         | ignore               |
| URA-ID                          | O        |                                 | 9.2.1.70                     |   | YES         | ignore               |
| <b>MBMS Bearer Service List</b> |          | <i>0..&lt;maxno of MBMS&gt;</i> |                              |   | GLOBAL      | ignore               |
| >TMGI                           | M        |                                 | 9.2.1.80                     |   | –           |                      |
| Old URA-ID                      | O        |                                 | URA-ID<br>9.2.1.70           |   | YES         | ignore               |
| SRNC-ID                         | C-URA    |                                 | RNC-ID<br>9.2.1.50           | If the <i>Extended SRNC-ID</i> IE is included in the message, the <i>SRNC-ID</i> IE shall be ignored. | YES         | ignore               |
| Extended SRNC-ID                | O        |                                 | Extended RNC-ID<br>9.2.1.50a | The <i>Extended SRNC-ID</i> IE shall be used if the RNC identity has a value larger than 4095.        | YES         | reject               |
| Enhanced PCH Capability         | O        |                                 | 9.2.1.132                    | FDD and 1.28Mcps TDD only   | YES         | Ignore               |

| Condition | Explanation   |
|-----------|---|
| URA       | The IE shall be present if the <i>URA-ID</i> IE or <i>Old URA-ID</i> IE is present. |

| Range bound        | Explanation  |
|--------------------|--|
| <i>maxnoofMBMS</i> | Maximum number of MBMS bearer services that a UE can join. |

## 9.1.26 RELOCATION COMMIT

| IE/Group Name                | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|------------------------------|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| Message Type                 | M        |       | 9.2.1.40              |                       | YES         | ignore               |
| Transaction ID               | M        |       | 9.2.1.59              |                       | –           |                      |
| D-RNTI                       | O        |       | 9.2.1.24              |                       | YES         | ignore               |
| RANAP Relocation Information | O        |       | 9.2.1.47              |                       | YES         | ignore               |

## 9.1.27 PAGING REQUEST

| IE/Group Name                                  | Presence | Range       | IE Type and Reference        | Semantics Description   | Criticality | Assigned Criticality |
|--|----------|-------------|------------------------------|---|-------------|----------------------|
| Message Type                                   | M        |             | 9.2.1.40                     |   | YES         | ignore               |
| Transaction ID                                 | M        |             | 9.2.1.59                     |   | –           |                      |
| CHOICE <i>Paging Area</i>                      | M        |             |                              |   | YES         | ignore               |
| > <i>URA</i>                                   |          |             |                              |   | –           |                      |
| >> <i>URA-ID</i>                               | M        |             | 9.2.1.70                     | May be a <i>GRA-ID</i> .  | –           |                      |
| > <i>Cell</i>                                  |          |             |                              | UTRAN only  | –           |                      |
| >> <i>C-ID</i>                                 | M        |             | 9.2.1.6                      |   | –           |                      |
| SRNC-ID  | M        |             | RNC-ID<br>9.2.1.50           | May be a <i>BSC-ID</i> .<br>If the <i>Extended SRNC-ID</i> IE is included in the message, the <i>SRNC-ID</i> IE shall be ignored. | YES         | ignore               |
| S-RNTI   | M        |             | 9.2.1.53                     |   | YES         | ignore               |
| IMSI   | M        |             | 9.2.1.31                     |   | YES         | ignore               |
| DRX Cycle Length Coefficient                   | M        |             | 9.2.1.26                     |   | YES         | ignore               |
| <b>CN Originated Page to Connected Mode UE</b> |          | <i>0..1</i> |                              |   | YES         | ignore               |
| > <i>Paging Cause</i>                          | M        |             | 9.2.1.41E                    |   | –           |                      |
| > <i>CN Domain Type</i>                        | M        |             | 9.2.1.11A                    |   | –           |                      |
| > <i>Paging Record Type</i>                    | M        |             | 9.2.1.41F                    |   | –           |                      |
| Extended SRNC-ID                               | O        |             | Extended RNC-ID<br>9.2.1.50a | The <i>Extended SRNC-ID</i> IE shall be used if the RNC identity has a value larger than 4095.                                    | YES         | reject               |
| Enhanced PCH Capability                        | O        |             | 9.2.1.132                    | FDD and 1.28Mcps TDD only   | YES         | ignore               |

## 9.1.28 DEDICATED MEASUREMENT INITIATION REQUEST

| IE/Group Name                                   | Presence | Range                 | IE Type and Reference               | Semantics Description | Criticality | Assigned Criticality |
|---|----------|-----------------------|-------------------------------------|-----------------------|-------------|----------------------|
| Message Type                                    | M        |                       | 9.2.1.40                            |                       | YES         | reject               |
| Transaction ID                                  | M        |                       | 9.2.1.59                            |                       | –           |                      |
| Measurement ID                                  | M        |                       | 9.2.1.37                            |                       | YES         | reject               |
| CHOICE <i>Dedicated Measurement Object Type</i> | M        |                       |                                     |                       | YES         | reject               |
| >RL   |          |                       |                                     |                       | –           |                      |
| >>RL Information                                |          | 1..<maxn oofRLs>      |                                     |                       | EACH        | reject               |
| >>>RL-ID  | M        |                       | 9.2.1.49                            |                       | –           |                      |
| >>>DPCH ID                                      | O        |                       | 9.2.3.3                             | TDD only              | –           |                      |
| >>>DPCH ID 7.68Mcps                             | O        |                       | 9.2.3.34                            | 7.68Mcps<br>TDD only  | –           |                      |
| >>>HS-SICH Information                          |          | 0..<maxn oofHSSI CHs> |                                     | TDD only              | GLOBAL      | reject               |
| >>>>HS-SICH ID                                  | M        |                       | 9.2.3.3ad                           |                       | –           |                      |
| >RLS  |          |                       |                                     | FDD only              | –           |                      |
| >>RL Set Information                            |          | 1..<maxn oofRLSets>   |                                     |                       | EACH        | reject               |
| >>>RL-Set-ID                                    | M        |                       | 9.2.2.35                            |                       | –           |                      |
| >ALL RL   |          |                       | NULL                                |                       | –           |                      |
| >ALL RLS  |          |                       | NULL                                | FDD only              | –           |                      |
| Dedicated Measurement Type                      | M        |                       | 9.2.1.18                            |                       | YES         | reject               |
| Measurement Filter Coefficient                  | O        |                       | 9.2.1.36                            |                       | YES         | reject               |
| Report Characteristics                          | M        |                       | 9.2.1.48                            |                       | YES         | reject               |
| CFN reporting indicator                         | M        |                       | FN reporting indicator<br>9.2.1.28A |                       | YES         | reject               |
| CFN   | O        |                       | 9.2.1.9                             |                       | YES         | reject               |
| Partial Reporting Indicator                     | O        |                       | 9.2.1.41Fa                          |                       | YES         | ignore               |
| Measurement Recovery Behavior                   | O        |                       | 9.2.1.38A                           |                       | YES         | ignore               |
| Alternative Format Reporting Indicator          | O        |                       | 9.2.1.2D                            |                       | YES         | ignore               |

| Range bound          | Explanation   |
|----------------------|---|
| <i>maxnoofRLs</i>    | Maximum number of individual RLs a measurement can be started on.     |
| <i>maxnoofRLSets</i> | Maximum number of individual RL Sets a measurement can be started on. |

## 9.1.29 DEDICATED MEASUREMENT INITIATION RESPONSE

| IE/Group Name   | Presence | Range                        | IE Type and Reference | Semantics Description  | Criticality | Assigned Criticality |
|---|----------|------------------------------|-----------------------|--|-------------|----------------------|
| Message Type  | M        |                              | 9.2.1.40              |  | YES         | reject               |
| Transaction ID  | M        |                              | 9.2.1.59              |  | –           |                      |
| Measurement ID  | M        |                              | 9.2.1.37              |  | YES         | ignore               |
| CHOICE <i>Dedicated Measurement Object Type</i>               | O        |                              |                       | Dedicated Measurement Object Type the measurement was initiated with | YES         | ignore               |
| >RL or ALL RL   |          |                              |                       | See Note 1   | –           |                      |
| >>RL Information  |          | 1..<maxno ofRLs>             |                       |  | EACH        | ignore               |
| >>>RL ID  | M        |                              | 9.2.1.49              |  | –           |                      |
| >>>DPCH ID  | O        |                              | 9.2.3.3               | TDD only   | –           |                      |
| >>>DPCH ID 7.68Mcps   | O        |                              | 9.2.3.34              | 7.68Mcps TDD only  | –           |                      |
| >>>Dedicated Measurement Value                                | M        |                              | 9.2.1.19              |  | –           |                      |
| >>>CFN  | O        |                              | 9.2.1.9               | Dedicated Measurement Time Reference                                 | –           |                      |
| >>>HS-SICH ID   | O        |                              | 9.2.3.3ad             | TDD only   | YES         | reject               |
| >>>Multiple Dedicated Measurement Value Information           |          | 0..<maxno ofDPCHsPerRL-1>    |                       | Applicable to 3.84Mcps TDD only                                      | GLOBAL      | ignore               |
| >>>>DPCH ID   | M        |                              | 9.2.3.3               |  | –           |                      |
| >>>>Dedicated Measurement Value                               | M        |                              | 9.2.1.19              |  | –           |                      |
| >>>>Multiple Dedicated Measurement Value Information LCR      |          | 0..<maxno ofDPCHsLCRPerRL-1> |                       | Applicable to 1.28McpsTDD only                                       | GLOBAL      | ignore               |
| >>>>DPCH ID   | M        |                              | 9.2.3.3               |  | –           |                      |
| >>>>Dedicated Measurement Value                               | M        |                              | 9.2.1.19              |  | –           |                      |
| >>>>Multiple HS-SICH Measurement Value Information            |          | 0..<maxno ofHSSICHs-1>       |                       | TDD only   | GLOBAL      | ignore               |
| >>>>HS-SICH ID  | M        |                              | 9.2.3.3ad             |  | –           |                      |
| >>>>Dedicated Measurement Value                               | M        |                              | 9.2.1.19              |  | –           |                      |
| >>>>Multiple Dedicated Measurement Value Information 7.68Mcps |          | 0..<maxno ofDPCHs768PerRL-1> |                       | Applicable to 7.68Mcps TDD only                                      | GLOBAL      | ignore               |
| >>>>DPCH ID 7.68Mcps  | M        |                              | 9.2.3.34              |  | –           |                      |
| >>>>Dedicated Measurement Value                               | M        |                              | 9.2.1.19              |  | –           |                      |
| >RLS or ALL RLS   |          |                              |                       | FDD only See Note 2  | –           |                      |
| >>RL Set Information  |          | 1..<maxno ofRLSets>          |                       |  | EACH        | ignore               |
| >>>RL Set ID  | M        |                              | 9.2.2.35              |  | –           |                      |
| >>>Dedicated  | M        |                              | 9.2.1.19              |  | –           |                      |



|   |   |  |           |                                      |     |        |
|---|---|--|-----------|--------------------------------------|-----|--------|
| Measurement Value   |   |  |           |                                      |     |        |
| >>>CFN  | O |  | 9.2.1.9   | Dedicated Measurement Time Reference | –   |        |
| Criticality Diagnostics   | O |  | 9.2.1.13  |                                      | YES | Ignore |
| Measurement Recovery Support Indicator  | O |  | 9.2.1.38C |                                      | YES | ignore |
| Note 1: This is a simplified representation of the ASN.1: there are two different choice tags "RL" and "ALL RL" in the ASN.1, each having exactly the same structure.   |   |  |           |                                      |     |        |
| Note 2: This is a simplified representation of the ASN.1: there are two different choice tags "RLS" and "ALL RLS" in the ASN.1, each having exactly the same structure. |   |  |           |                                      |     |        |

| Range bound                 | Explanation   |
|-----------------------------|---|
| <i>maxnoofRLs</i>           | Maximum number of individual RLs the measurement can be started on.             |
| <i>maxnoofRLSets</i>        | Maximum number of individual RL Sets the measurement can be started on.         |
| <i>maxnoofDPCHsPerRL</i>    | Maximum number of DPCHs per RL a measurement can be started on for 3.84Mcps TDD |
| <i>maxnoofDPCHsLCRPerRL</i> | Maximum number of DPCHs per RL a measurement can be started on for 1.28Mcps TDD |
| <i>maxnoofHSSICHs</i>       | Maximum number of HSSICHs per RL a measurement can be started on                |
| <i>maxnoofDPCHs768PerRL</i> | Maximum number of DPCHs per RL a measurement can be started on for 7.68Mcps TDD |

## 9.1.30 DEDICATED MEASUREMENT INITIATION FAILURE

| IE/Group Name                                   | Presence | Range                 | IE Type and Reference | Semantics Description  | Criticality | Assigned Criticality |
|---|----------|-----------------------|-----------------------|--|-------------|----------------------|
| Message Type                                    | M        |                       | 9.2.1.40              |  | YES         | reject               |
| Transaction ID                                  | M        |                       | 9.2.1.59              |  | –           |                      |
| Measurement ID                                  | M        |                       | 9.2.1.37              |  | YES         | ignore               |
| Cause   | M        |                       | 9.2.1.5               |  | YES         | ignore               |
| Criticality Diagnostics                         | O        |                       | 9.2.1.13              |  | YES         | ignore               |
| CHOICE <i>Dedicated Measurement Object Type</i> | O        |                       |                       | Dedicated Measurement Object Type the measurement was initiated with | YES         | ignore               |
| >RL or ALL RL                                   |          |                       |                       |  | –           |                      |
| <b>&gt;&gt;Unsuccessful RL Information</b>      |          | 1..<maxno ofRLs>      |                       |  | EACH        | ignore               |
| >>>RL ID  | M        |                       | 9.2.1.49              |  | –           |                      |
| >>>Individual Cause                             | O        |                       | Cause 9.2.1.5         |  | –           |                      |
| <b>&gt;&gt;Successful RL Information</b>        |          | 0..<maxno ofRLs-1>    |                       |  | EACH        | ignore               |
| >>>RL ID  | M        |                       | 9.2.1.49              |  | –           |                      |
| >>>DPCH ID                                      | O        |                       | 9.2.3.3               | TDD only   | –           |                      |
| >>>Dedicated Measurement Value                  | M        |                       | 9.2.1.19              |  | –           |                      |
| >>>CFN  | O        |                       | 9.2.1.9               | Dedicated Measurement Time Reference                                 | –           |                      |
| >>>HS-SICH ID                                   | O        |                       | 9.2.3.3ad             | TDD only   | YES         | reject               |
| >RLS or ALL RLS                                 |          |                       |                       | FDD only   | –           |                      |
| <b>&gt;&gt;Unsuccessful RL Set Information</b>  |          | 1..<maxno ofRLSets>   |                       |  | EACH        | ignore               |
| >>>RL Set ID                                    | M        |                       | 9.2.2.35              |  | –           |                      |
| >>>Individual Cause                             | O        |                       | Cause 9.2.1.5         |  | –           |                      |
| <b>&gt;&gt;Successful RL Set Information</b>    |          | 0..<maxno ofRLSets-1> |                       |  | EACH        | ignore               |
| >>>RL Set ID                                    | M        |                       | 9.2.2.35              |  | –           |                      |
| >>>Dedicated Measurement Value                  | M        |                       | 9.2.1.19              |  | –           |                      |
| >>>CFN  | O        |                       | 9.2.1.9               | Dedicated Measurement Time Reference                                 | –           |                      |

| Range bound          | Explanation   |
|----------------------|---|
| <i>maxnoofRLs</i>    | Maximum number of individual RLs the measurement can be started on.     |
| <i>maxnoofRLSets</i> | Maximum number of individual RL Sets the measurement can be started on. |

## 9.1.31 DEDICATED MEASUREMENT REPORT

| IE/Group Name   | Presence | Range              | IE Type and Reference | Semantics Description  | Criticality | Assigned Criticality |
|---|----------|--------------------|-----------------------|--|-------------|----------------------|
| Message Type  | M        |                    | 9.2.1.40              |  | YES         | ignore               |
| Transaction ID  | M        |                    | 9.2.1.59              |  | –           |                      |
| Measurement ID  | M        |                    | 9.2.1.37              |  | YES         | ignore               |
| CHOICE <i>Dedicated Measurement Object Type</i>   | M        |                    |                       | Dedicated Measurement Object Type the measurement was initiated with | YES         | ignore               |
| >RL or ALL RL   |          |                    |                       | See Note 1   | –           |                      |
| >>RL Information  |          | 1..<maxnoofRLs>    |                       |  | EACH        | ignore               |
| >>>RL-ID  | M        |                    | 9.2.1.49              |  | –           |                      |
| >>>DPCH ID  | O        |                    | 9.2.3.3               | TDD only   | –           |                      |
| >>>DPCH ID 7.68Mcps   | O        |                    | 9.2.3.34              | 7.68Mcps TDD only  | –           |                      |
| >>>Dedicated Measurement Value Information  | M        |                    | 9.2.1.19A             |  | –           |                      |
| >>>HS-SICH ID   | O        |                    | 9.2.3.3ad             | TDD only   | YES         | ignore               |
| >RLS or ALL RLS   |          |                    |                       | FDD only<br>See Note 2   | –           |                      |
| >>RL Set Information  |          | 1..<maxnoofRLSets> |                       |  | EACH        | ignore               |
| >>>RL Set ID  | M        |                    | 9.2.2.35              |  | –           |                      |
| >>>Dedicated Measurement Value Information  | M        |                    | 9.2.1.19A             |  | –           |                      |
| Measurement Recovery Reporting Indicator  | O        |                    | 9.2.1.38B             |  | YES         | ignore               |
| Note 1: This is a simplified representation of the ASN.1: there are two different choice tags "RL" and "ALL RL" in the ASN.1, each having exactly the same structure.   |          |                    |                       |  |             |                      |
| Note 2: This is a simplified representation of the ASN.1: there are two different choice tags "RLS" and "ALL RLS" in the ASN.1, each having exactly the same structure. |          |                    |                       |  |             |                      |

| Range bound          | Explanation   |
|----------------------|---|
| <i>maxnoofRLs</i>    | Maximum number of individual RLs the measurement can be started on.     |
| <i>maxnoofRLSets</i> | Maximum number of individual RL Sets the measurement can be started on. |

## 9.1.32 DEDICATED MEASUREMENT TERMINATION REQUEST

| IE/Group Name  | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|----------------|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| Message Type   | M        |       | 9.2.1.40              |                       | YES         | ignore               |
| Transaction ID | M        |       | 9.2.1.59              |                       | –           |                      |
| Measurement ID | M        |       | 9.2.1.37              |                       | YES         | ignore               |

## 9.1.33 DEDICATED MEASUREMENT FAILURE INDICATION

| IE/Group Name                                   | Presence | Range               | IE Type and Reference | Semantics Description  | Criticality | Assigned Criticality |
|---|----------|---------------------|-----------------------|--|-------------|----------------------|
| Message Type                                    | M        |                     | 9.2.1.40              |  | YES         | ignore               |
| Transaction ID                                  | M        |                     | 9.2.1.59              |  | –           |                      |
| Measurement ID                                  | M        |                     | 9.2.1.37              |  | YES         | ignore               |
| Cause   | M        |                     | 9.2.1.5               |  | YES         | ignore               |
| CHOICE <i>Dedicated Measurement Object Type</i> | O        |                     |                       | Dedicated Measurement Object Type the measurement was initiated with | YES         | ignore               |
| >RL or ALL RL                                   |          |                     |                       |  | –           |                      |
| >>Unsuccessful RL Information                   |          | 1..<maxnoof RLs>    |                       |  | EACH        | ignore               |
| >>>RL ID  | M        |                     | 9.2.1.49              |  | –           |                      |
| >>>Individual Cause                             | O        |                     | Cause 9.2.1.5         |  | –           |                      |
| >RLS or ALL RLS                                 |          |                     |                       | FDD only   | –           |                      |
| >>Unsuccessful RL Set Information               |          | 1..<maxnoof RLSets> |                       |  | EACH        | ignore               |
| >>>RL Set ID                                    | M        |                     | 9.2.2.35              |  | –           |                      |
| >>>Individual Cause                             | O        |                     | Cause 9.2.1.5         |  | –           |                      |

| Range bound          | Explanation   |
|----------------------|---|
| <i>maxnoofRLs</i>    | Maximum number of individual RLs the measurement can be started on.     |
| <i>maxnoofRLSets</i> | Maximum number of individual RL Sets the measurement can be started on. |

## 9.1.34 COMMON TRANSPORT CHANNEL RESOURCES RELEASE REQUEST

| IE/Group Name  | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|----------------|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| Message Type   | M        |       | 9.2.1.40              |                       | YES         | ignore               |
| Transaction ID | M        |       | 9.2.1.59              |                       | –           |                      |
| D-RNTI         | M        |       | 9.2.1.24              |                       | YES         | ignore               |

## 9.1.35 COMMON TRANSPORT CHANNEL RESOURCES REQUEST

| IE/Group Name                        | Presence | Range                          | IE Type and Reference | Semantics Description   | Criticality | Assigned Criticality |
|--------------------------------------|----------|--------------------------------|-----------------------|---|-------------|----------------------|
| Message Type                         | M        |                                | 9.2.1.40              |   | YES         | reject               |
| Transaction ID                       | M        |                                | 9.2.1.59              |   | –           |                      |
| D-RNTI                               | M        |                                | 9.2.1.24              |   | YES         | reject               |
| C-ID                                 | O        |                                | 9.2.1.6               |   | YES         | reject               |
| Transport Bearer Request Indicator   | M        |                                | 9.2.1.61              | Request a new transport bearer or to use an existing bearer for the user plane. | YES         | reject               |
| Transport Bearer ID                  | M        |                                | 9.2.1.60              | Indicates the lur transport bearer to be used for the user plane.               | YES         | reject               |
| Permanent NAS UE Identity Binding ID | O        |                                | 9.2.1.73              |   | YES         | ignore               |
|                                      | O        |                                | 9.2.1.3               | Shall be ignored if bearer establishment with ALCAP.                            | YES         | ignore               |
| Transport Layer Address              | O        |                                | 9.2.1.62              | Shall be ignored if bearer establishment with ALCAP.                            | YES         | ignore               |
| <b>MBMS Bearer Service List</b>      |          | <i>0..&lt;max noofMBMS&gt;</i> |                       |   | GLOBAL      | notify               |
| >TMGI                                | M        |                                | 9.2.1.80              |   | –           |                      |
| TNL QoS                              | O        |                                | 9.2.1.56A             | Shall be ignored if bearer establishment with ALCAP.                            | YES         | ignore               |
| Enhanced FACH Support Indicator      | O        |                                | 9.2.1.131             | FDD and 1.28Mcps TDD only   | YES         | Ignore               |
| Common E-DCH Support Indicator       | O        |                                | 9.2.2.92              | FDD only  | YES         | Ignore               |
| HS-DSCH Physical Layer Category      | O        |                                | 9.2.1.300a            |   | Yes         | Ignore               |

| Range bound        | Explanation  |
|--------------------|--|
| <i>maxnoofMBMS</i> | Maximum number of MBMS bearer services that a UE can join. |

## 9.1.36 COMMON TRANSPORT CHANNEL RESOURCES RESPONSE

## 9.1.36.1 FDD Message

| IE/Group Name  | Presence | Range                    | IE Type and Reference   | Semantics Description   | Criticality | Assigned Criticality |
|--|----------|--------------------------|---|---|-------------|----------------------|
| Message Type   | M        |                          | 9.2.1.40  |   | YES         | reject               |
| Transaction ID   | M        |                          | 9.2.1.59  |   | –           |                      |
| S-RNTI   | M        |                          | 9.2.1.53  |   | YES         | ignore               |
| C-RNTI   | O        |                          | 9.2.1.14  |   | YES         | ignore               |
| <b>FACH Info for UE Selected S-CCPCH</b>                             |          | 1                        |   |   | YES         | ignore               |
| >FACH Flow Control Information                                       | M        |                          | 9.2.1.26C   | If the <i>Enhanced FACH Information Response</i> IE is included in the message, the <i>FACH Flow Control Information</i> IE shall be ignored. | YES         | ignore               |
| Transport Layer Address  | O        |                          | 9.2.1.62  |   | YES         | ignore               |
| Binding Identity   | O        |                          | 9.2.1.3   |   | YES         | ignore               |
| Criticality Diagnostics  | O        |                          | 9.2.1.13  |   | YES         | ignore               |
| C-ID   | M        |                          | 9.2.1.6   |   | YES         | ignore               |
| <b>Active MBMS Bearer Service List</b>                               |          | 0..<maxnoo fActiveMB MS> |   |   | GLOBAL      | ignore               |
| >TMGI  | M        |                          | 9.2.1.80  |   | –           |                      |
| >Transmission Mode   | M        |                          | 9.2.1.81  |   | –           |                      |
| <b>Enhanced FACH Information Response</b>                            |          | 0.. 1                    |   |   | YES         | ignore               |
| >Common HS-DSCH-RNTI Priority Queue Information for Enhanced FACH    | M        |                          | Priority Queue Information for Enhanced FACH/PC H<br>9.2.2.82 |   | –           |                      |
| >Dedicated HS-DSCH-RNTI Priority Queue Information for Enhanced FACH | M        |                          | Priority Queue Information for Enhanced FACH/PC H<br>9.2.2.82 |   | –           |                      |
| >Priority Queue Information for Enhanced PCH                         | O        |                          | Priority Queue Information for Enhanced FACH/PC H<br>9.2.2.82 |   | –           |                      |
| >HS-DSCH Initial Capacity Allocation                                 | M        |                          | 9.2.1.30Na  |   | –           |                      |
| >HS-DSCH-RNTI  | O        |                          | 9.2.1.30P   |   | –           |                      |
| Common E-DCH MAC-d Flow Specific Information                         | O        |                          | 9.2.2.93  |   | –           |                      |

|        |   |  |          |  |     |        |
|--------|---|--|----------|--|-----|--------|
| E-RNTI | O |  | 9.2.1.94 |  | YES | ignore |
|--------|---|--|----------|--|-----|--------|

| <b>Range bound</b>       | <b>Explanation</b>  |
|--------------------------|---|
| <i>maxnoofActiveMBMS</i> | Maximum number of MBMS bearer services that are active in parallel. |

## 9.1.36.2 TDD Message

| IE/Group Name  | Presence | Range                   | IE Type and Reference  | Semantics Description   | Criticality | Assigned Criticality |
|--|----------|-------------------------|--|---|-------------|----------------------|
| Message Type   | M        |                         | 9.2.1.40   |   | YES         | reject               |
| Transaction ID   | M        |                         | 9.2.1.59   |   | –           |                      |
| S-RNTI   | M        |                         | 9.2.1.53   |   | YES         | ignore               |
| C-RNTI   | O        |                         | 9.2.1.14   |   | YES         | ignore               |
| <b>FACH Info for UE Selected S-CCPCHs</b>                            |          | 1                       |  |   | YES         | ignore               |
| >FACH Flow Control Information                                       | M        |                         | 9.2.1.26C  | If the <i>Enhanced FACH Information Response</i> IE is included in the message, the <i>FACH Flow Control Information</i> IE shall be ignored. | YES         | ignore               |
| Transport Layer Address  | O        |                         | 9.2.1.62   |   | YES         | ignore               |
| Binding Identity   | O        |                         | 9.2.1.3  |   | YES         | ignore               |
| Criticality Diagnostics  | O        |                         | 9.2.1.13   |   | YES         | ignore               |
| C-ID   | M        |                         | 9.2.1.6  |   | YES         | ignore               |
| <b>Active MBMS Bearer Service List</b>                               |          | 0..<maxno ofActiveMBMS> |  |   | GLOBAL      | ignore               |
| >TMGI  | M        |                         | 9.2.1.80   |   | –           |                      |
| >Transmission Mode   | M        |                         | 9.2.1.81   |   | –           |                      |
| <b>Enhanced FACH Information Response</b>                            |          | 0.. 1                   |  |   | YES         | ignore               |
| >Common HS-DSCH-RNTI Priority Queue Information for Enhanced FACH    | M        |                         | Priority Queue Information for Enhanced FACH/PC H<br>9.2.1.133 |   | –           |                      |
| >Dedicated HS-DSCH-RNTI Priority Queue Information for Enhanced FACH | M        |                         | Priority Queue Information for Enhanced FACH/PC H<br>9.2.1.133 |   | –           |                      |
| >Priority Queue Information for Enhanced PCH                         | O        |                         | Priority Queue Information for Enhanced FACH/PC H<br>9.2.1.133 |   | –           |                      |
| >HS-DSCH Initial Capacity Allocation                                 | M        |                         | 9.2.1.30Na   |   | –           |                      |
| >HS-DSCH-RNTI  | O        |                         | 9.2.1.30P  |   | –           |                      |
| Common E-DCH MAC-d Flow Specific Information LCR                     | O        |                         | 9.2.3.58   |   | YES         | ignore               |



| Range bound              | Explanation   |
|--------------------------|---|
| <i>maxnoofActiveMBMS</i> | Maximum number of MBMS bearer services that are active in parallel. |

### 9.1.37 COMMON TRANSPORT CHANNEL RESOURCES FAILURE

| IE/Group Name           | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|-------------------------|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| Message Type            | M        |       | 9.2.1.40              |                       | YES         | reject               |
| Transaction ID          | M        |       | 9.2.1.59              |                       | –           |                      |
| S-RNTI                  | M        |       | 9.2.1.53              |                       | YES         | ignore               |
| Cause                   | M        |       | 9.2.1.5               |                       | YES         | ignore               |
| Criticality Diagnostics | O        |       | 9.2.1.13              |                       | YES         | ignore               |

### 9.1.38 COMPRESSED MODE COMMAND [FDD]

| IE/Group Name                       | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|-------------------------------------|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| Message Type                        | M        |       | 9.2.1.40              |                       | YES         | ignore               |
| Transaction ID                      | M        |       | 9.2.1.59              |                       | –           |                      |
| Active Pattern Sequence Information | M        |       | 9.2.2.A               |                       | YES         | ignore               |

### 9.1.39 ERROR INDICATION

| IE/Group Name           | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|-------------------------|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| Message Type            | M        |       | 9.2.1.40              |                       | YES         | ignore               |
| Transaction ID          | M        |       | 9.2.1.59              |                       | –           |                      |
| Cause                   | O        |       | 9.2.1.5               |                       | YES         | ignore               |
| Criticality Diagnostics | O        |       | 9.2.1.13              |                       | YES         | ignore               |
| S-RNTI                  | O        |       | 9.2.1.53              |                       | YES         | ignore               |
| D-RNTI                  | O        |       | 9.2.1.24              |                       | YES         | ignore               |

## 9.1.40 DL POWER TIMESLOT CONTROL REQUEST [TDD]

| IE/Group Name              | Presence | Range | IE Type and Reference | Semantics Description   | Criticality | Assigned Criticality |
|----------------------------|----------|-------|-----------------------|---|-------------|----------------------|
| Message Type               | M        |       | 9.2.1.40              |   | YES         | ignore               |
| Transaction ID             | M        |       | 9.2.1.59              |   | –           |                      |
| DL Time Slot ISCP Info     | O        |       | 9.2.3.2D              | Mandatory for 3.84Mcps TDD and 7.68Mcps TDD, not applicable to 1.28Mcps TDD | YES         | ignore               |
| DL Time Slot ISCP Info LCR | O        |       | 9.2.3.2F              | Mandatory for 1.28Mcps TDD, not applicable to 3.84Mcps TDD or 7.68Mcps TDD  | YES         | ignore               |
| Primary CCPCH RSCP         | O        |       | 9.2.3.5               |   | YES         | ignore               |
| Primary CCPCH RSCP Delta   | O        |       | 9.2.3.5a              |   | YES         | ignore               |

## 9.1.41 RADIO LINK PREEMPTION REQUIRED INDICATION

| IE/Group Name                                  | Presence | Range                                   | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|--|----------|---|-----------------------|-----------------------|-------------|----------------------|
| Message Type                                   | M        |   | 9.2.1.40              |                       | YES         | ignore               |
| Transaction ID                                 | M        |   | 9.2.1.59              |                       | –           |                      |
| <b>RL Information</b>                          |          | <i>0..&lt;maxno ofRLs&gt;</i>           |                       |                       | EACH        | ignore               |
| >RL ID   | M        |   | 9.2.1.49              |                       | –           |                      |
| >E-DCH MAC-d Flow Specific Information         |          | <i>0..&lt;maxno ofEDCHMACdFlows&gt;</i> |                       |                       | EACH        | ignore               |
| >>E-DCH MAC-d Flow ID                          | M        |   | 9.2.1.91              |                       | –           |                      |
| <b>HS-DSCH MAC-d Flow Specific Information</b> |          | <i>0..&lt;maxno ofMACdFlows&gt;</i>     |                       |                       | EACH        | ignore               |
| >HS-DSCH MAC-d Flow ID                         | M        |   | 9.2.1.300             |                       | –           |                      |

| Range bound                 | Explanation                              |
|-----------------------------|--|
| <i>maxnoofRLs</i>           | Maximum number of radio links for one UE |
| <i>maxnoofMACdFlows</i>     | Maximum number of HS-DSCH MAC-d flows    |
| <i>maxnoofEDCHMACdFlows</i> | Maximum number of E-DCH MAC-d flows      |

## 9.1.42 RADIO LINK CONGESTION INDICATION

| IE/Group Name                                    | Presence | Range                       | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|--|----------|-----------------------------|-----------------------|-----------------------|-------------|----------------------|
| Message Type                                     | M        |                             | 9.2.1.40              |                       | YES         | ignore               |
| Transaction ID                                   | M        |                             | 9.2.1.59              |                       | –           |                      |
| Congestion Cause                                 | O        |                             | 9.2.1.79              |                       | YES         | ignore               |
| <b>RL Information</b>                            |          | 1..<maxno ofRLs>            |                       |                       | EACH        | ignore               |
| >RL ID   | M        |                             | 9.2.1.49              |                       | –           |                      |
| <b>&gt;DCH Rate Information</b>                  |          | 1..<maxno ofDCHs>           |                       |                       | EACH        | ignore               |
| >>DCH ID   | M        |                             | 9.2.1.16              |                       | –           |                      |
| >>Allowed Rate Information                       | O        |                             | 9.2.1.2A              |                       | –           |                      |
| <b>&gt;E-DCH MAC-d Flow Specific Information</b> |          | 0..<maxno ofEDCHMACdFlows > |                       |                       | EACH        | ignore               |
| >>E-DCH MAC-d Flow ID                            | M        |                             | 9.2.1.91              |                       | –           |                      |
| >DCH Indicator For E-DCH-HSDPA Operation         | O        |                             | 9.2.2.67              |                       | YES         | ignore               |

| Range bound                 | Explanation                              |
|-----------------------------|--|
| <i>maxnoofRLs</i>           | Maximum number of Radio Links for one UE |
| <i>maxnoofDCHs</i>          | Maximum number of DCHs for one UE.       |
| <i>maxnoofEDCHMACdFlows</i> | Maximum number of E-DCH MAC-d flows      |

## 9.1.43 COMMON MEASUREMENT INITIATION REQUEST

| IE/Group Name  | Presence | Range                    | IE Type and Reference          | Semantics Description               | Criticality | Assigned Criticality |
|--|----------|--------------------------|--------------------------------|-------------------------------------|-------------|----------------------|
| Message Type   | M        |                          | 9.2.1.40                       |                                     | YES         | reject               |
| Transaction ID   | M        |                          | 9.2.1.59                       |                                     | –           |                      |
| Measurement ID   | M        |                          | 9.2.1.37                       |                                     | YES         | reject               |
| CHOICE <i>Common Measurement Object Type</i>                       | M        |                          |                                |                                     | YES         | reject               |
| >Cell  |          |                          |                                |                                     | –           |                      |
| >>Reference Cell Identifier  | M        |                          | UTRAN Cell Identifier 9.2.1.71 | May be a GERAN Cell Identifier      | –           |                      |
| >>Time Slot  | O        |                          | 9.2.1.56                       | 3.84Mcps TDD and 7.68 Mcps TDD only | –           |                      |
| >>Time Slot LCR  | O        |                          | 9.2.3.12a                      | 1.28Mcps TDD only                   | –           |                      |
| >>Neighbouring Cell Measurement Information                        |          | 0..<maxnoof MeasNCells > |                                | UTRAN only                          | –           |                      |
| >>>CHOICE <i>Neighbouring Cell Measurement Information</i>         |          |                          |                                |                                     | –           |                      |
| >>>>Neighbouring FDD Cell Measurement Information                  |          |                          |                                | FDD only                            | –           |                      |
| >>>>Neighbouring FDD Cell Measurement Information                  | M        |                          | 9.2.1.41G                      |                                     | –           |                      |
| >>>>Neighbouring TDD Cell Measurement Information                  |          |                          |                                | 3.84Mcps TDD only                   | –           |                      |
| >>>>Neighbouring TDD Cell Measurement Information                  | M        |                          | 9.2.1.41H                      |                                     | –           |                      |
| >>>>Additional Neighbouring Cell Measurement Information           |          |                          |                                |                                     | –           |                      |
| >>>>Neighbouring TDD Cell Measurement InformationLCR               |          |                          |                                | 1.28Mcps TDD only                   | –           |                      |
| >>>>>Neighbouring TDD Cell Measurement InformationLCR              | M        |                          | 9.2.1.41Dd                     |                                     | YES         | reject               |
| >>>>>Additional Neighbouring Cell Measurement Information 7.68Mcps |          |                          |                                |                                     | –           |                      |
| >>>>>Neighbouring TDD Cell   |          |                          |                                | 7.68Mcps TDD only                   | –           |                      |

|  |   |  |                                  |  |     |        |
|--|---|--|----------------------------------|--|-----|--------|
| <i>Measurement Information 7.68 Mcps</i>                     |   |  |                                  |  |     |        |
| >>>>>Neighbouring TDD Cell Measurement Information 7.68 Mcps | M |  | 9.2.3.32                         |  | YES | reject |
| >>UARFCN   | O |  | 9.2.1.66                         | Applicable to 1.28Mcps TDD only.   | YES | ignore |
| >>UpPCH Position LCR   | O |  | 9.2.3.56                         | Applicable to 1.28Mcps TDD only.   | YES | ignore |
| Common Measurement Type                                      | M |  | 9.2.1.12C                        |  | YES | reject |
| Measurement Filter Coefficient                               | O |  | 9.2.1.41                         | UTRAN only   | YES | reject |
| Report Characteristics                                       | M |  | 9.2.1.48                         |  | YES | reject |
| SFN reporting indicator                                      | M |  | FN reporting indicator 9.2.1.28A |  | YES | reject |
| SFN  | O |  | 9.2.1.52A                        | UTRAN only   | YES | reject |
| Common Measurement Accuracy                                  | O |  | 9.2.1.12A                        | UTRAN only   | YES | reject |
| Measurement Recovery Behavior                                | O |  | 9.2.1.38A                        | UTRAN only   | YES | ignore |
| GANSS Time ID  | O |  | 9.2.1.119a                       | This IE may only be present if the <i>Common Measurement Type</i> IE is set to "UTRAN GANSS Timing of Cell Frames for UE Positioning". If the <i>Common Measurement Type</i> IE is set to "UTRAN GANSS Timing of Cell Frames for UE Positioning" and this IE is absent, the GANSS time is Galileo system time. | YES | ignore |

| Range bound             | Explanation  |
|-------------------------|--|
| <i>maxnoofMeasNCell</i> | Maximum number of neighbouring cells on which measurements can be performed. |

## 9.1.44 COMMON MEASUREMENT INITIATION RESPONSE

| IE/Group Name                                | Presence | Range | IE Type and Reference                    | Semantics Description   | Criticality | Assigned Criticality |
|--|----------|-------|--|---|-------------|----------------------|
| Message Type                                 | M        |       | 9.2.1.40                                 |   | YES         | reject               |
| Transaction ID                               | M        |       | 9.2.1.59                                 |   | –           |                      |
| Measurement ID                               | M        |       | 9.2.1.37                                 |   | YES         | ignore               |
| CHOICE <i>Common Measurement Object Type</i> | O        |       |  | Common Measurement Object Type that the measurement was initiated with. | YES         | ignore               |
| >Cell  |          |       |  |   | –           |                      |
| >>Common Measurement value                   | M        |       | 9.2.1.12D                                |   | –           |                      |
| SFN  | O        |       | 9.2.1.52A                                | Common Measurement Time Reference, UTRAN only.                          | YES         | ignore               |
| Criticality Diagnostics                      | O        |       | 9.2.1.13                                 |   | YES         | ignore               |
| Common Measurement Achieved Accuracy         | O        |       | Common Measurement Accuracy<br>9.2.1.12A | UTRAN only  | YES         | ignore               |
| Measurement Recovery Support Indicator       | O        |       | 9.2.1.38C                                | UTRAN only  | YES         | ignore               |

## 9.1.45 COMMON MEASUREMENT INITIATION FAILURE

| IE/Group Name           | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|-------------------------|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| Message Type            | M        |       | 9.2.1.40              |                       | YES         | reject               |
| Transaction ID          | M        |       | 9.2.1.59              |                       | –           |                      |
| Measurement ID          | M        |       | 9.2.1.37              |                       | YES         | ignore               |
| Cause                   | M        |       | 9.2.1.5               |                       | YES         | ignore               |
| Criticality Diagnostics | O        |       | 9.2.1.13              |                       | YES         | ignore               |

## 9.1.46 COMMON MEASUREMENT REPORT

| IE/Group Name                                   | Presence | Range | IE Type and Reference | Semantics Description   | Criticality | Assigned Criticality |
|---|----------|-------|-----------------------|---|-------------|----------------------|
| Message Type                                    | M        |       | 9.2.1.40              |   | YES         | ignore               |
| Transaction ID                                  | M        |       | 9.2.1.59              |   | –           |                      |
| Measurement ID                                  | M        |       | 9.2.1.37              |   | YES         | ignore               |
| CHOICE <i>Common Measurement Object Type</i>    | M        |       |                       | Common Measurement Object Type that the measurement was initiated with. | YES         | ignore               |
| > <i>Cell</i>                                   |          |       |                       |   | –           |                      |
| >>Common Measurement Value Information          | M        |       | 9.2.1.12E             |   | –           |                      |
| SFN   | O        |       | 9.2.1.52A             | Common Measurement Time Reference, UTRAN only.                          | YES         | ignore               |
| <i>Measurement Recovery Reporting Indicator</i> | O        |       | 9.2.1.38B             | UTRAN only  | YES         | ignore               |

## 9.1.47 COMMON MEASUREMENT TERMINATION REQUEST

| IE/Group Name  | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|----------------|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| Message Type   | M        |       | 9.2.1.40              |                       | YES         | ignore               |
| Transaction ID | M        |       | 9.2.1.59              |                       | –           |                      |
| Measurement ID | M        |       | 9.2.1.37              |                       | YES         | ignore               |

## 9.1.48 COMMON MEASUREMENT FAILURE INDICATION

| IE/Group Name  | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|----------------|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| Message Type   | M        |       | 9.2.1.40              |                       | YES         | ignore               |
| Transaction ID | M        |       | 9.2.1.59              |                       | –           |                      |
| Measurement ID | M        |       | 9.2.1.37              |                       | YES         | ignore               |
| Cause          | M        |       | 9.2.1.5               |                       | YES         | ignore               |

## 9.1.49 INFORMATION EXCHANGE INITIATION REQUEST

| IE/Group Name                                  | Presence | Range             | IE Type and Reference | Semantics Description   | Criticality | Assigned Criticality |
|--|----------|-------------------|-----------------------|---|-------------|----------------------|
| Message Type                                   | M        |                   | 9.2.1.40              |   | YES         | reject               |
| Transaction ID                                 | M        |                   | 9.2.1.59              |   | –           |                      |
| Information Exchange ID                        | M        |                   | 9.2.1.31A             |   | YES         | reject               |
| CHOICE <i>Information Exchange Object Type</i> | M        |                   |                       |   | YES         | reject               |
| >Cell  |          |                   |                       |   | –           |                      |
| >>C-ID   | M        |                   | 9.2.1.6               | May be a GERAN cell identifier  | –           |                      |
| >Additional Information Exchange Object Types  |          |                   |                       |   | –           |                      |
| >>GSM Cell                                     |          |                   |                       |   | –           |                      |
| >>>CGI   | M        |                   | 9.2.1.5D              |   | –           |                      |
| >>MBMS Bearer Service                          |          |                   |                       |   | –           |                      |
| >>>MBMS Bearer Service List                    |          | 1..<maxno ofMBMS> |                       |   | GLOBAL      | reject               |
| >>>>TMGI                                       | M        |                   | 9.2.1.80              |   | –           |                      |
| >>MBMS Bearer Service in MBMS Cell             |          |                   |                       | FDD only  | GLOBAL      | reject               |
| >>>MBMS Cell List                              |          | 1..<maxno ofcell> |                       |   | –           |                      |
| >>>>C-ID                                       | M        |                   | 9.2.1.6               | Cell identifier of cell in RNC initiating Information Exchange Initiation procedure               | –           |                      |
| >>>>MBMS Bearer Service List                   |          | 1..<maxno ofMBMS> |                       |   | –           |                      |
| >>>>>TMGI                                      | M        |                   | 9.2.1.80              |   | –           |                      |
| >>MBMS Cell                                    |          |                   |                       | FDD only  | GLOBAL      | reject               |
| >>>MBMS Cell List                              |          | 1..<maxno ofcell> |                       |   | –           |                      |
| >>>>>C-ID                                      | M        |                   | 9.2.1.6               | Cell identifier of cell in receiving RNC not initiating Information Exchange Initiation procedure | –           |                      |
| Information Type                               | M        |                   | 9.2.1.31E             |   | YES         | reject               |
| Information Report Characteristics             | M        |                   | 9.2.1.31C             |   | YES         | reject               |

| Range bound        | Explanation  |
|--------------------|--|
| <i>maxnoofMBMS</i> | Maximum number of MBMS bearer services that a UE can join.             |
| <i>Maxnoofcell</i> | Maximum number of cells that can be indicated in the corresponding IE. |



## 9.1.50 INFORMATION EXCHANGE INITIATION RESPONSE

| IE/Group Name                                  | Presence | Range             | IE Type and Reference | Semantics Description   | Criticality | Assigned Criticality |
|--|----------|-------------------|-----------------------|---|-------------|----------------------|
| Message Type                                   | M        |                   | 9.2.1.40              |   | YES         | reject               |
| Transaction ID                                 | M        |                   | 9.2.1.59              |   | –           |                      |
| Information Exchange ID                        | M        |                   | 9.2.1.31A             |   | YES         | ignore               |
| CHOICE <i>Information Exchange Object Type</i> | O        |                   |                       |   | YES         | ignore               |
| >Cell  |          |                   |                       |   | –           |                      |
| >>Requested Data Value                         | M        |                   | 9.2.1.48A             |   | –           |                      |
| >Additional Information Exchange Object Types  |          |                   |                       |   | –           |                      |
| >>MBMS Bearer Service                          |          |                   |                       |   | –           |                      |
| >>>MBMS Bearer Service List                    |          | 1..<maxno ofMBMS> |                       |   | GLOBAL      | ignore               |
| >>>>TMGI                                       | M        |                   | 9.2.1.80              |   | –           |                      |
| >>>>Requested Data Value                       | M        |                   | 9.2.1.48A             |   | –           |                      |
| >>MBMS Bearer Service in MBMS Cell             |          |                   |                       | FDD only  | GLOBAL      | ignore               |
| >>>MBMS Cell List                              |          | 1..<maxno ofcell> |                       |   | –           |                      |
| >>>>C-ID                                       | M        |                   | 9.2.1.6               | Cell identifier of cell in RNC initiating Information Exchange Initiation procedure             | –           |                      |
| >>>>MBMS Bearer Service List                   |          | 1..<maxno ofMBMS> |                       |   | –           |                      |
| >>>>>TMGI                                      | M        |                   | 9.2.1.80              |   | –           |                      |
| >>>>>Requested Data Value                      | M        |                   | 9.2.1.48A             |   | –           |                      |
| >>MBMS Cell                                    |          |                   |                       | FDD only  | GLOBAL      | ignore               |
| >>>MBMS Cell List                              |          | 1..<maxno ofcell> |                       |   | –           |                      |
| >>>>C-ID                                       | M        |                   | 9.2.1.6               | Cell identifier of cell in sending RNC not initiating Information Exchange Initiation procedure | –           |                      |
| >>>>>Requested Data Value                      | M        |                   | 9.2.1.48A             |   | –           |                      |
| Criticality Diagnostics                        | O        |                   | 9.2.1.13              |   | YES         | ignore               |

| Range bound        | Explanation  |
|--------------------|--|
| <i>maxnoofMBMS</i> | Maximum number of MBMS bearer services that a UE can join.             |
| <i>maxnoofcell</i> | Maximum number of cells that can be indicated in the corresponding IE. |

### 9.1.51 INFORMATION EXCHANGE INITIATION FAILURE

| IE/Group Name           | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|-------------------------|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| Message Type            | M        |       | 9.2.1.40              |                       | YES         | reject               |
| Transaction ID          | M        |       | 9.2.1.59              |                       | –           |                      |
| Information Exchange ID | M        |       | 9.2.1.31A             |                       | YES         | ignore               |
| Cause                   | M        |       | 9.2.1.5               |                       | YES         | ignore               |
| Criticality Diagnostics | O        |       | 9.2.1.13              |                       | YES         | ignore               |

## 9.1.52 INFORMATION REPORT

| IE/Group Name                                  | Presence | Range             | IE Type and Reference | Semantics Description   | Criticality | Assigned Criticality |
|--|----------|-------------------|-----------------------|---|-------------|----------------------|
| Message Type                                   | M        |                   | 9.2.1.40              |   | YES         | ignore               |
| Transaction ID                                 | M        |                   | 9.2.1.59              |   | –           |                      |
| Information Exchange ID                        | M        |                   | 9.2.1.31A             |   | YES         | ignore               |
| CHOICE <i>Information Exchange Object Type</i> | M        |                   |                       |   | YES         | ignore               |
| >Cell  |          |                   |                       |   | –           |                      |
| >>Requested Data Value Information             | M        |                   | 9.2.1.48B             |   | –           |                      |
| >Additional Information Exchange Object Types  |          |                   |                       |   | –           |                      |
| >>MBMS Bearer Service in MBMS Cell             |          |                   |                       | FDD only  | GLOBAL      | ignore               |
| >>>MBMS Cell List                              |          | 1..<maxno ofcell> |                       |   | –           |                      |
| >>>>C-ID                                       | M        |                   | 9.2.1.6               | Cell identifier of cell in receiving RNC initiating Information Exchange Initiation procedure   | –           |                      |
| >>>>MBMS Bearer Service List                   |          | 1..<maxno ofMBMS> |                       |   | –           |                      |
| >>>>>TMGI                                      | M        |                   | 9.2.1.80              |   | –           |                      |
| >>>>>Requested Data Value Information          | M        |                   | 9.2.1.48B             |   | –           |                      |
| >>MBMS Cell                                    |          |                   |                       | FDD only  | GLOBAL      | ignore               |
| >>>MBMS Cell List                              |          | 1..<maxno ofcell> |                       |   | –           |                      |
| >>>>C-ID                                       | M        |                   | 9.2.1.6               | Cell identifier of cell in sending RNC not initiating Information Exchange Initiation procedure | –           |                      |
| >>>>>Requested Data Value Information          | M        |                   | 9.2.1.48B             |   | –           |                      |

| Range bound        | Explanation  |
|--------------------|--|
| <i>maxnoofMBMS</i> | Maximum number of MBMS bearer services that a UE can join.             |
| <i>maxnoofcell</i> | Maximum number of cells that can be indicated in the corresponding IE. |

## 9.1.53 INFORMATION EXCHANGE TERMINATION REQUEST

| IE/Group Name           | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|-------------------------|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| Message Type            | M        |       | 9.2.1.40              |                       | YES         | ignore               |
| Transaction ID          | M        |       | 9.2.1.59              |                       | –           |                      |
| Information Exchange ID | M        |       | 9.2.1.31A             |                       | YES         | ignore               |

### 9.1.54 INFORMATION EXCHANGE FAILURE INDICATION

| IE/Group Name           | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|-------------------------|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| Message Type            | M        |       | 9.2.1.40              |                       | YES         | ignore               |
| Transaction ID          | M        |       | 9.2.1.59              |                       | –           |                      |
| Information Exchange ID | M        |       | 9.2.1.31A             |                       | YES         | ignore               |
| Cause                   | M        |       | 9.2.1.5               |                       | YES         | ignore               |

### 9.1.55 RESET REQUEST

| IE/Group Name  | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|----------------|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| Message Type   | M        |       | 9.2.1.40              |                       | YES         | reject               |
| Transaction ID | M        |       | 9.2.1.59              |                       | –           |                      |

|                                     |   |                                      |           |  |      |        |
|-------------------------------------|---|--------------------------------------|-----------|--|------|--------|
| RNC-ID                              | M |                                      | 9.2.1.50  | Identity of the sending RNC. If the <i>Extended RNC-ID</i> IE is included in the message, the <i>RNC-ID</i> IE shall be ignored. | YES  | reject |
| CHOICE <i>Reset Indicator</i>       | M |                                      |           |  | YES  | reject |
| > <i>Context</i>                    |   |                                      |           |  | –    |        |
| >> <b>Context Information</b>       |   | 1..< <i>maxResetContext</i> >        |           |  | EACH | reject |
| >>>CHOICE <i>Context Type</i>       | M |                                      |           |  | –    |        |
| >>>> <i>SRNTI</i>                   |   |                                      |           |  | –    |        |
| >>>>>S-RNTI                         | M |                                      | 9.2.1.53  |  | –    |        |
| >>>>>DRNTI                          |   |                                      |           |  | –    |        |
| >>>>>D-RNTI                         | M |                                      | 9.2.1.24  |  | –    |        |
| > <i>All Contexts</i>               |   |                                      | NULL      |  | –    |        |
| > <i>Context Group</i>              |   |                                      |           |  | –    |        |
| >> <b>Context Group Information</b> |   | 1..< <i>maxResetContext Groups</i> > |           |  | EACH | reject |
| >>>S-RNTI Group                     | M |                                      | 9.2.1.53a |  | –    |        |
| Extended RNC-ID                     | O |                                      | 9.2.1.50a | Identity of the sending RNC. The <i>Extended RNC-ID</i> IE shall be used if the RNC identity has a value larger than 4095.       | YES  | reject |

| Range bound                  | Explanation  |
|------------------------------|--|
| <i>maxResetContext</i>       | Maximum number of contexts that can be reset by one RESET message.       |
| <i>maxResetContextGroups</i> | Maximum number of context groups that can be reset by one RESET message. |

## 9.1.56 RESET RESPONSE

| IE/Group Name           | Presence | Range | IE Type and Reference | Semantics Description   | Criticality | Assigned Criticality |
|-------------------------|----------|-------|-----------------------|---|-------------|----------------------|
| Message Type            | M        |       | 9.2.1.40              |   | YES         | reject               |
| Transaction ID          | M        |       | 9.2.1.59              |   | –           |                      |
| RNC-ID                  | M        |       | 9.2.1.50              | Identity of the sending RNC.<br>If the <i>Extended RNC-ID</i> IE is included in the message, the <i>RNC-ID</i> IE shall be ignored. | YES         | ignore               |
| Criticality Diagnostics | O        |       | 9.2.1.13              |   | YES         | ignore               |
| Extended RNC-ID         | O        |       | 9.2.1.50a             | Identity of the sending RNC.<br>The <i>Extended RNC-ID</i> IE shall be used if the RNC identity has a value larger than 4095.       | YES         | reject               |

## 9.1.57 RADIO LINK ACTIVATION COMMAND

### 9.1.57.1 FDD Message

| IE/Group Name                         | Presence | Range                        | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|---------------------------------------|----------|------------------------------|-----------------------|-----------------------|-------------|----------------------|
| Message Type                          | M        |                              | 9.2.1.46              |                       | YES         | ignore               |
| Transaction ID                        | M        |                              | 9.2.1.62              |                       | –           |                      |
| <b>Delayed activation Information</b> |          | <i>1..&lt;maxnoofRLs&gt;</i> |                       |                       | EACH        | ignore               |
| >RL ID                                | M        |                              | 9.2.1.49              |                       | –           |                      |
| >Delayed Activation Update            | M        |                              | 9.2.1.19Ab            |                       | –           |                      |

### 9.1.57.2 TDD Message

| IE/Group Name                         | Presence | Range                        | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|---------------------------------------|----------|------------------------------|-----------------------|-----------------------|-------------|----------------------|
| Message Type                          | M        |                              | 9.2.1.46              |                       | YES         | ignore               |
| Transaction ID                        | M        |                              | 9.2.1.62              |                       | –           |                      |
| <b>Delayed activation Information</b> |          | <i>1..&lt;maxnoofRLs&gt;</i> |                       |                       | EACH        | ignore               |
| >RL ID                                | M        |                              | 9.2.1.49              |                       | –           |                      |
| >Delayed Activation Update            | M        |                              | 9.2.1.19Ab            |                       | –           |                      |

## 9.1.58 RADIO LINK PARAMETER UPDATE INDICATION

### 9.1.58.1 FDD Message

| IE/Group name                                      | Presence | Range                               | IE Type and Reference | Semantic Description  | Criticality | Assigned Criticality |
|--|----------|-------------------------------------|-----------------------|---|-------------|----------------------|
| Message type                                       | M        |                                     | 9.2.1.40              |   | YES         | ignore               |
| Transaction ID                                     | M        |                                     | 9.2.1.59              |   | –           |                      |
| HS-DSCH FDD Update Information                     | O        |                                     | 9.2.2.19c             |   | YES         | ignore               |
| <b>RL Information</b>                              |          | <i>0..&lt;max noofRLs &gt;</i>      |                       |   | EACH        | ignore               |
| >RL Id   | M        |                                     | 9.2.1.49              |   | –           |                      |
| >Phase Reference Update Indicator                  | O        |                                     | 9.2.2.27B             |   | –           |                      |
| E-DCH FDD Update Information                       | O        |                                     | 9.2.2.19e             |   | YES         | ignore               |
| <b>Additional HS Cell Information RL Param Upd</b> |          | <i>0..&lt;max noofHS DSCH-1&gt;</i> |                       | For secondary serving HS-DSCH cell. Max 1 in this 3GPP release. | EACH        | ignore               |
| >HS-PDSCH RL ID                                    | M        |                                     | RL ID<br>9.2.1.49     |   | –           |                      |
| >HS-DSCH FDD Secondary Serving Update Information  | O        |                                     | 9.2.2.19ca            |   | –           |                      |

| Range bound            | Explanation   |
|------------------------|---|
| <i>maxnoofHSDSCH-1</i> | Maximum number of Secondary Serving HS-DSCH cells for one UE. |

### 9.1.58.2 TDD Message

| IE/Group name                  | Presence | Range | IE Type and Reference | Semantic Description | Criticality | Assigned Criticality |
|--------------------------------|----------|-------|-----------------------|----------------------|-------------|----------------------|
| Message type                   | M        |       | 9.2.1.40              |                      | YES         | ignore               |
| Transaction ID                 | M        |       | 9.2.1.59              |                      | –           |                      |
| HS-DSCH TDD Update Information | O        |       | 9.2.3.3ac             |                      | YES         | ignore               |

## 9.1.59 UE MEASUREMENT INITIATION REQUEST [TDD]

| IE/Group Name                                 | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|---|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| Message Type                                  | M        |       | 9.2.1.40              |                       | YES         | reject               |
| Transaction ID                                | M        |       | 9.2.1.59              |                       | –           |                      |
| Allowed Queuing Time                          | O        |       | 9.2.1.2               |                       | YES         | reject               |
| Measurement ID                                | M        |       | 9.2.1.37              |                       | YES         | reject               |
| UE Measurement Type                           | M        |       | 9.2.3.13Fh            |                       | YES         | reject               |
| UE Measurement Timeslot information HCR       | O        |       | 9.2.3.13Fe            | 3.84 Mcps TDD only    | YES         | reject               |
| UE Measurement Timeslot information LCR       | O        |       | 9.2.3.13Ff            | 1.28 Mcps TDD only    | YES         | reject               |
| UE Measurement Timeslot information 7.68Mcps  | O        |       | 9.2.3.33              | 7.68 Mcps TDD only    | YES         | reject               |
| Measurement Filter Coefficient                | O        |       | 9.2.1.36              |                       | YES         | reject               |
| UE Measurement Report Characteristics         | M        |       | 9.2.3.13Fc            |                       | YES         | reject               |
| UE Measurement Parameter Modification Allowed | O        |       | 9.2.3.13Fb            |                       | YES         | reject               |

## 9.1.60 UE MEASUREMENT INITIATION RESPONSE [TDD]

| IE/Group Name                         | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|---------------------------------------|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| Message Type                          | M        |       | 9.2.1.40              |                       | YES         | reject               |
| Transaction ID                        | M        |       | 9.2.1.59              |                       | –           |                      |
| Measurement ID                        | M        |       | 9.2.1.37              |                       | YES         | ignore               |
| Measurement Filter Coefficient        | O        |       | 9.2.1.36              |                       | YES         | reject               |
| UE Measurement Report Characteristics | O        |       | 9.2.3.13Fc            |                       | YES         | reject               |
| Criticality Diagnostics               | O        |       | 9.2.1.13              |                       | YES         | ignore               |

## 9.1.61 UE MEASUREMENT INITIATION FAILURE [TDD]

| IE/Group Name           | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|-------------------------|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| Message Type            | M        |       | 9.2.1.40              |                       | YES         | reject               |
| Transaction ID          | M        |       | 9.2.1.59              |                       | –           |                      |
| Measurement ID          | M        |       | 9.2.1.37              |                       | YES         | ignore               |
| Cause                   | M        |       | 9.2.1.5               |                       | YES         | ignore               |
| Criticality Diagnostics | O        |       | 9.2.1.13              |                       | YES         | ignore               |

## 9.1.62 UE MEASUREMENT REPORT [TDD]

| IE/Group Name                    | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|----------------------------------|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| Message Type                     | M        |       | 9.2.1.40              |                       | YES         | ignore               |
| Transaction ID                   | M        |       | 9.2.1.59              |                       | –           |                      |
| Measurement ID                   | M        |       | 9.2.1.37              |                       | YES         | ignore               |
| UE Measurement Value Information | M        |       | 9.2.3.13Fj            |                       | YES         | ignore               |



## 9.1.63 UE MEASUREMENT TERMINATION REQUEST [TDD]

| IE/Group Name  | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|----------------|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| Message Type   | M        |       | 9.2.1.40              |                       | YES         | ignore               |
| Transaction ID | M        |       | 9.2.1.59              |                       | –           |                      |
| Measurement ID | M        |       | 9.2.1.37              |                       | YES         | ignore               |

## 9.1.64 UE MEASUREMENT FAILURE INDICATION [TDD]

| IE/Group Name  | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|----------------|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| Message Type   | M        |       | 9.2.1.40              |                       | YES         | ignore               |
| Transaction ID | M        |       | 9.2.1.59              |                       | –           |                      |
| Measurement ID | M        |       | 9.2.1.37              |                       | YES         | ignore               |
| Cause          | M        |       | 9.2.1.5               |                       | YES         | ignore               |

## 9.1.65 IUR INVOKE TRACE

| IE/Group Name                      | Presence | Range                       | IE Type and Reference     | Semantics Description | Criticality | Assigned Criticality |
|------------------------------------|----------|-----------------------------|---------------------------|-----------------------|-------------|----------------------|
| Message Type                       | M        |                             | 9.2.1.40                  |                       | YES         | ignore               |
| Transaction ID                     | M        |                             | 9.2.1.59                  |                       | –           |                      |
| D-RNTI                             | O        |                             | 9.2.1.24                  |                       | YES         | ignore               |
| Trace Reference                    | M        |                             | 9.2.1.58c                 |                       | YES         | ignore               |
| UE Identity                        | M        |                             | 9.2.1.66A                 |                       | YES         | ignore               |
| Trace Recording Session Reference  | M        |                             | 9.2.1.58b                 |                       | YES         | ignore               |
| <b>List Of Interfaces To Trace</b> |          | <i>0..maxnoofInterfaces</i> |                           |                       | EACH        | ignore               |
| >Interface                         | M        |                             | ENUMERATED (Iub, Iur,...) |                       | –           |                      |
| Trace Depth                        | M        |                             | 9.2.1.58a                 |                       | YES         | ignore               |

| Range bound              | Explanation                         |
|--------------------------|-------------------------------------|
| <i>maxnoofInterfaces</i> | Maximum of Interfaces to be traced. |

## 9.1.66 IUR DEACTIVATE TRACE

| IE/Group Name   | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|-----------------|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| Message Type    | M        |       | 9.2.1.40              |                       | YES         | ignore               |
| Transaction ID  | M        |       | 9.2.1.59              |                       | –           |                      |
| D-RNTI          | O        |       | 9.2.1.24              |                       | YES         | ignore               |
| Trace Reference | M        |       | 9.2.1.58c             |                       | YES         | ignore               |

## 9.1.67 MBMS ATTACH COMMAND

| IE/Group Name                   | Presence | Range             | IE Type and Reference        | Semantics Description   | Criticality | Assigned Criticality |
|---------------------------------|----------|-------------------|------------------------------|---|-------------|----------------------|
| Message Type                    | M        |                   | 9.2.1.40                     |   | YES         | ignore               |
| Transaction ID                  | M        |                   | 9.2.1.59                     |   | –           |                      |
| <b>MBMS Bearer Service List</b> |          | 1..<maxno ofMBMS> |                              |   | GLOBAL      | ignore               |
| >TMGI                           | M        |                   | 9.2.1.80                     |   | –           |                      |
| CHOICE UE State                 | O        |                   |                              |   | YES         | ignore               |
| >CELL_FACH/CELL_PCH             |          |                   |                              |   | –           |                      |
| >>D-RNTI                        | M        |                   | 9.2.1.24                     |   | –           |                      |
| >URA_PCH                        |          |                   |                              |   | –           |                      |
| >>SRNC-ID                       | M        |                   | RNC-ID<br>9.2.1.50           | If the <i>Extended SRNC-ID</i> IE is included in the message, the <i>SRNC-ID</i> IE shall be ignored. | –           |                      |
| >>URA-ID                        | M        |                   | 9.2.1.70                     |   | –           |                      |
| >>Extended SRNC-ID              | O        |                   | Extended RNC-ID<br>9.2.1.50a | The <i>Extended SRNC-ID</i> IE shall be used if the RNC identity has a value larger than 4095.        | YES         | reject               |

| Range bound        | Explanation  |
|--------------------|--|
| <i>maxnoofMBMS</i> | Maximum number of MBMS bearer services that a UE can join. |

## 9.1.68 MBMS DETACH COMMAND

| IE/Group Name                   | Presence | Range             | IE Type and Reference        | Semantics Description   | Criticality | Assigned Criticality |
|---------------------------------|----------|-------------------|------------------------------|---|-------------|----------------------|
| Message Type                    | M        |                   | 9.2.1.40                     |   | YES         | ignore               |
| Transaction ID                  | M        |                   | 9.2.1.59                     |   | –           |                      |
| <b>MBMS Bearer Service List</b> |          | 1..<maxno ofMBMS> |                              |   | GLOBAL      | ignore               |
| >TMGI                           | M        |                   | 9.2.1.80                     |   | –           |                      |
| CHOICE UE State                 | O        |                   |                              |   | YES         | ignore               |
| >CELL_FACH/CELL_PCH             |          |                   |                              |   | –           |                      |
| >>D-RNTI                        | M        |                   | 9.2.1.24                     |   | –           |                      |
| >URA_PCH                        |          |                   |                              |   | –           |                      |
| >>SRNC-ID                       | M        |                   | RNC-ID<br>9.2.1.50           | If the <i>Extended SRNC-ID</i> IE is included in the message, the <i>SRNC-ID</i> IE shall be ignored. | –           |                      |
| >>URA-ID                        | M        |                   | 9.2.1.70                     |   | –           |                      |
| >>Extended SRNC-ID              | O        |                   | Extended RNC-ID<br>9.2.1.50a | The <i>Extended SRNC-ID</i> IE shall be used if the RNC identity has a value larger than 4095.        | YES         | reject               |

| Range bound        | Explanation  |
|--------------------|--|
| <i>maxnoofMBMS</i> | Maximum number of MBMS bearer services that a UE can join. |

## 9.1.69 DIRECT INFORMATION TRANSFER

| IE/Group Name        | Presence | Range | IE Type and Reference | Semantics Description   | Criticality | Assigned Criticality |
|----------------------|----------|-------|-----------------------|---|-------------|----------------------|
| Message Type         | M        |       | 9.2.1.40              |   | YES         | ignore               |
| Transaction ID       | M        |       | 9.2.1.59              |   | –           |                      |
| RNC-ID               | M        |       | 9.2.1.50              | ID of an RNC which initiates the procedure. If the <i>Extended RNC-ID</i> IE is included in the message, the <i>RNC-ID</i> IE shall be ignored. | YES         | ignore               |
| Provided Information | M        |       | 9.2.1.85              |   | YES         | ignore               |
| Extended RNC-ID      | O        |       | 9.2.1.50a             | The <i>Extended RNC-ID</i> IE shall be used if the RNC identity has a value larger than 4095.   | YES         | reject               |

## 9.1.70 ENHANCED RELOCATION REQUEST

| IE/Group Name                                 | Presence | Range | IE Type and Reference        | Semantics Description   | Criticality | Assigned Criticality |
|---|----------|-------|------------------------------|---|-------------|----------------------|
| Message Type                                  | M        |       | 9.2.1.40                     |   | YES         | reject               |
| Transaction ID                                | M        |       | 9.2.1.59                     |   | –           |                      |
| Cause   | M        |       | 9.2.1.5                      |   | YES         | reject               |
| Permanent NAS UE Identity                     | M        |       | 9.2.1.73                     |   | YES         | reject               |
| SRNC-ID                                       | O        |       | RNC-ID<br>9.2.1.50           | If the <i>Extended SRNC-ID</i> IE is included in the message, the <i>SRNC-ID</i> IE shall be ignored. | YES         | reject               |
| Extended SRNC-ID                              | O        |       | Extended RNC-ID<br>9.2.1.50a | The <i>Extended SRNC-ID</i> IE shall be used if the RNC identity has a value larger than 4095.        | YES         | reject               |
| S-RNTI  | M        |       | 9.2.1.53                     |   | YES         | reject               |
| RANAP Enhanced Relocation Information Request | M        |       | 9.2.1.124                    |   | YES         | reject               |

## 9.1.71 ENHANCED RELOCATION RESPONSE

| IE/Group Name                                  | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|--|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| Message Type                                   | M        |       | 9.2.1.40              |                       | YES         | reject               |
| Transaction ID                                 | M        |       | 9.2.1.59              |                       | –           |                      |
| RANAP Enhanced Relocation Information Response | M        |       | 9.2.1.125             |                       | YES         | ignore               |

## 9.1.72 ENHANCED RELOCATION FAILURE

| IE/Group Name           | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|-------------------------|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| Message Type            | M        |       | 9.2.1.40              |                       | YES         | reject               |
| Transaction ID          | M        |       | 9.2.1.59              |                       | –           |                      |
| Cause                   | M        |       | 9.2.1.5               |                       | YES         | ignore               |
| Criticality Diagnostics | O        |       | 9.2.1.13              |                       | YES         | ignore               |

## 9.1.73 ENHANCED RELOCATION CANCEL

| IE/Group Name  | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|----------------|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| Message Type   | M        |       | 9.2.1.40              |                       | YES         | ignore               |
| Transaction ID | M        |       | 9.2.1.59              |                       | –           |                      |
| Cause          | M        |       | 9.2.1.5               |                       | YES         | ignore               |

## 9.1.74 ENHANCED RELOCATION SIGNALLING TRANSFER

| IE/Group Name  | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|----------------|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| Message Type   | M        |       | 9.2.1.40              |                       | YES         | ignore               |
| Transaction ID | M        |       | 9.2.1.59              |                       | –           |                      |
| L3 Information | M        |       | 9.2.1.32              |                       | YES         | ignore               |

## 9.1.75 ENHANCED RELOCATION RELEASE

| IE/Group Name      | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|--------------------|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| Message Type       | M        |       | 9.2.1.40              |                       | YES         | ignore               |
| Transaction ID     | M        |       | 9.2.1.59              |                       | –           |                      |
| Released CN Domain | M        |       | 9.2.1.126             |                       | YES         | ignore               |

## 9.1.76 MBSFN MCCH INFORMATION (FDD)

| IE/Group Name   | Presence | Range                                    | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|---|----------|--|-----------------------|-----------------------|-------------|----------------------|
| Message Type  | M        |  | 9.2.1.40              |                       | YES         | reject               |
| Transaction ID  | M        |  | 9.2.1.59              |                       | –           |                      |
| MBSFN Cluster Identity  | M        |  | 9.2.1.128             |                       | YES         | ignore               |
| <b>MCCH Message List</b>  |          | <i>1..&lt;maxno of MCCH messages&gt;</i> |                       |                       | YES         | reject               |
| >L3 Information   | M        |  | 9.2.1.32              | See Note 1 below.     | –           |                      |
| CFN   | M        |  | 9.2.1.9               |                       | YES         | reject               |
| <b>MCCH Configuration Info</b>  |          | 0..1                                     |                       |                       | YES         | ignore               |
| >Secondary CCPCH system information MBMS  | M        |  | 9.2.1.127             |                       | –           |                      |
| <b>MBSFN Scheduling Transmission Time Interval info List</b>  |          | <i>0..&lt;maxNrOf MBMSL3&gt;</i>         |                       |                       | YES         | ignore               |
| >TMGI   | M        |  | 9.2.1.80              |                       | –           |                      |
| >MBSFN Scheduling Transmission Time Interval  | M        |  | 9.2.1.129             |                       | –           |                      |
| Note 1: The IE Contains one of the following messages defined in ref. [16]: MBMS MODIFIED SERVICES INFORMATION, MBMS UNMODIFIED SERVICES INFORMATION, MBMS GENERAL INFORMATION, MBMS COMMON P-T-M RB INFORMATION, MBMS CURRENT Cell PTM RB INFORMATION. |          |  |                       |                       |             |                      |

| Range bound                | Explanation   |
|----------------------------|---|
| <i>maxnoofMCCHMessages</i> | Maximum number of MCCH Messages simultaneous sent on MCCH |
| <i>maxNrOfMBMSL3</i>       | Maximum number of MBMS service in L3 information          |

## 9.2 Information Element Functional Definition and Contents

### 9.2.0 General

Subclause 9.2 presents the RNSAP IE definitions in tabular format. The corresponding ASN.1 definition is presented in subclause 9.3. In case there is a contradiction between the tabular format in subclause 9.2 and the ASN.1 definition, the ASN.1 shall take precedence, except for the definition of conditions for the presence of conditional elements, in which the tabular format shall take precedence.

When specifying information elements which are to be represented by bitstrings, if not otherwise specifically stated in the semantics description of the concerned IE or elsewhere, the following principle applies with regards to the ordering of bits:

- The first bit (leftmost bit) contains the most significant bit (MSB);
- The last bit (rightmost bit) contains the least significant bit (LSB);
- When importing bitstrings from other specifications, the first bit of the bitstring contains the first bit of the concerned information;

## 9.2.1 Common Parameters

This subclause contains parameters that are common to FDD and TDD.

### 9.2.1.1 Allocation/Retention Priority

This parameter indicates the priority level in the allocation and retention of transport channel resources in DRNS. DRNS may use the Allocation/Retention priority information of the transport channels composing the RL to prioritise requests for RL Setup/addition and reconfiguration. In similar way, DRNS may use the allocation/Retention priority information of the transport channels composing the RL to prioritise which RL shall be set to failure, in case prioritisation is possible. See Annex A.

| IE/Group Name             | Presence | Range | IE Type and Reference   | Semantics Description   |
|---------------------------|----------|-------|---|---|
| Priority Level            | M        |       | INTEGER(0..15)  | This IE indicates the priority of the request.<br><b>Usage:</b><br>Value "0" means "Spare"; It shall be treated as a logical error if received.<br>Values between 1 and 14 are ordered in decreasing order of priority, "1" being the highest and "14" the lowest.<br>Value "15" means "No Priority". |
| Pre-emption Capability    | M        |       | ENUMERATED (shall not trigger pre-emption, may trigger pre-emption) |   |
| Pre-emption Vulnerability | M        |       | ENUMERATED (not pre-emptable, pre-emptable)                         |   |

### 9.2.1.2 Allowed Queuing Time

This parameter specifies the maximum queuing time that is allowed in the DRNS until the DRNS must start to execute the request.

| IE/Group Name        | Presence | Range | IE Type and Reference | Semantics Description |
|----------------------|----------|-------|-----------------------|-----------------------|
| Allowed Queuing Time |          |       | INTEGER(1..60)        | Unit: Seconds         |

### 9.2.1.2A Allowed Rate Information

The *Allowed Rate Information* IE indicates the TFI corresponding to the highest allowed bit rate for the uplink and/or the downlink of a DCH. The SRNC is allowed to use any rate being lower than or equal to the rate corresponding to the indicated TFI.

| IE/Group Name   | Presence | Range | IE Type and Reference  | Semantics Description                            |
|-----------------|----------|-------|------------------------|--|
| Allowed UL Rate | O        |       | INTEGER(1..maxTFcount) | "1": TFI 0,<br>"2": TFI 1,<br>"3": TFI 2,<br>... |
| Allowed DL Rate | O        |       | INTEGER(1..maxTFcount) | "1": TFI 0,<br>"2": TFI 1,<br>"3": TFI 2,<br>... |

### 9.2.1.2B Altitude and Direction

This IE contains a description of Altitude and Direction.

| IE/Group Name         | Presence | Range | IE Type and Reference          | Semantics Description  |
|-----------------------|----------|-------|--------------------------------|--|
| Direction of Altitude | M        |       | ENUMERATED(Height, Depth)      |  |
| Altitude              | M        |       | INTEGER(0..2 <sup>15</sup> -1) | The relation between the value (N) and the altitude (a) in meters it describes is $N \leq a < N+1$ , except for $N=2^{15}-1$ for which the range is extended to include all greater values of (a). |

### 9.2.1.2C Antenna Co-location Indicator

The Antenna Co-location Indicator indicates whether the antenna of the serving and neighbouring cells are approximately co-located.

| IE/Group Name                 | Presence | Range | IE Type and Reference      | Semantics Description |
|-------------------------------|----------|-------|----------------------------|-----------------------|
| Antenna Co-location Indicator |          |       | ENUMERATED(co-located,...) |                       |

### 9.2.1.2D Alternative Format Reporting Indicator

This IE indicates if DRNS may report a measurement using an alternative format.

| IE/Group Name                          | Presence | Range | IE Type and Reference                          | Semantics Description |
|--|----------|-------|--|-----------------------|
| Alternative Format Reporting Indicator |          |       | ENUMERATED(Alternative format is allowed, ...) |                       |

### 9.2.1.3 Binding ID

The Binding ID is the identifier of a user data stream.

In case of transport bearer establishment with ALCAP [3][35], this IE contains the identifier that is allocated at the DRNS and that is unique for each transport bearer under establishment to/from the DRNS.

If the Transport Layer Address contains an IP address [33], this IE contains the UDP port [34] intended to be used for the user plane transport.

| IE/Group Name | Presence | Range | IE Type and Reference   | Semantics Description  |
|---------------|----------|-------|-------------------------|--|
| Binding ID    |          |       | OCTET STRING (1..4,...) | If the Binding ID includes an UDP port, the UDP port is included in octet 1 and 2. The first octet of the UDP port field shall be included in the first octet of the Binding ID. |

### 9.2.1.4 BLER

This Block Error Rate defines the target radio interface Transport Block Error Rate of the transport channel . BLER is used by the DRNS to determine the needed SIR targets, for admission control and power management reasons.

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description                                   |
|---------------|----------|-------|-----------------------|---|
| BLER          |          |       | INTEGER(-63..0)       | Step 0.1. (Range -6.3...0). It is the Log10 of the BLER |

#### 9.2.1.4A Block STTD Indicator

Void.

#### 9.2.1.4B Burst Mode Parameters

The *Burst Mode Parameters* IE provides all the relevant information in order to able IPDL in the Burst mode.

| IE/Group name | Presence | Range | IE Type and Reference | Semantics Description |
|---------------|----------|-------|-----------------------|-----------------------|
| Burst Start   | M        |       | INTEGER(0..15)        | See [10] and [22]     |
| Burst Length  | M        |       | INTEGER(10..25)       | See [10] and [22]     |
| Burst freq    | M        |       | INTEGER(1..16)        | See [10] and [22]     |

### 9.2.1.5 Cause

The purpose of the cause information element is to indicate the reason for a particular event for the whole protocol.



| IE/Group Name               | Presence | Range | IE Type and Reference   | Semantics Description |
|-----------------------------|----------|-------|---|-----------------------|
| CHOICE Cause Group          | M        |       |   |                       |
| >Radio Network Layer        |          |       |   |                       |
| >>Radio Network Layer Cause | M        |       | <p>ENUMERATED<br/>           (Unknown C-ID,<br/>           Cell not Available,<br/>           Power Level not Supported,<br/>           UL Scrambling Code Already in Use,<br/>           DL Radio Resources not Available,<br/>           UL Radio Resources not Available,<br/>           Measurement not Supported For The Object,<br/>           Combining Resources Not Available,<br/>           Combining not Supported,<br/>           Reconfiguration not Allowed,<br/>           Requested Configuration not Supported,<br/>           Synchronisation Failure,<br/>           Requested Tx Diversity Mode not Supported,<br/>           Measurement Temporarily not Available,<br/>           Unspecified,<br/>           Invalid CM Settings,<br/>           Reconfiguration CFN not Elapsed,<br/>           Number of DL Codes Not Supported,<br/>           Dedicated Transport Channel Type not Supported,<br/>           DL Shared Channel Type not Supported,<br/>           UL Shared Channel Type not Supported,<br/>           Common Transport Channel Type not Supported,<br/>           UL Spreading Factor not Supported,<br/>           DL Spreading Factor not Supported,<br/>           CM not Supported,<br/>           Transaction not Supported by Destination Node B,<br/>           RL Already Activated/Allocated,<br/>           ...,<br/>           Number of UL Codes Not Supported,<br/>           Cell reserved for operator use,<br/>           DPC Mode Change not Supported,<br/>           Information temporarily not available,<br/>           Information Provision not supported for the object,<br/>           Power Balancing status not compatible,<br/>           Delayed Activation not Supported,<br/>           RL Timing Adjustment Not Supported,<br/>           Unknown RNTI,<br/>           Measurement Repetition Rate not Compatible with Current Measurements,<br/>           UE not Capable to Implement Measurement,<br/>           F-DPCH not supported,<br/>           E-DCH not supported,<br/>           Continuous Packet Connectivity DTX-DRX operation not supported,<br/>           Continuous Packet Connectivity HS-SCCH less operation not supported,<br/>           MIMO not supported,<br/>           E-DCH TTI2ms not supported,<br/>           Continuous Packet Connectivity DTX-DRX operation not available,<br/>           Continuous Packet Connectivity UE DTX Cycle not available,<br/>           MIMO not available,<br/>           SixteenQAM UL not supported,<br/>           HS-DSCH MAC-d PDU Size Format not supported,<br/>           F-DPCH Slot Format operation not supported,</p> |                       |

|                            |   |  |   |  |
|----------------------------|---|--|---|--|
|                            |   |  | <p>E-DCH MAC-d PDU Size Format not available,<br/>                 E-DPCCH Power Boosting not supported,<br/>                 Trelocprep Expiry,<br/>                 Relocation Cancelled,<br/>                 Traffic Load In The Target Cell Higher Than In The Source Cell,<br/>                 Time critical Relocation,<br/>                 Resource optimisation relocation,<br/>                 Relocation desirable for radio reasons</p> <p>,<br/>                 Directed Retry,<br/>                 Reduce Load in Serving Cell,<br/>                 No lu CS UP relocation,<br/>                 SixtyfourQAM DL and MIMO Combined not available,<br/>                 Multi Cell operation not available,<br/>                 Multi Cell operation not supported,<br/>                 Semi-Persistent scheduling not supported,<br/>                 Continuous Packet Connectivity DRX not supported,<br/>                 Continuous Packet Connectivity DRX not available,<br/>                 Enhanced Relocation not Supported,<br/>                 Relocation Not Supported Due To PUESBINE Feature,<br/>                 Relocation Failure In Target RNC,<br/>                 Relocation Target not allowed,<br/>                 Requested Ciphering and/or Integrity Protection Algorithms not Supported,<br/>                 SixtyfourQAM DL and MIMO Combined not supported,<br/>                 TX diversity for MIMO UE on DL Control Channels not available,<br/>                 Cell Specific Tx Diversity Handling For Multi Cell Operation Not Available,<br/>                 Cell Specific Tx Diversity Handling For Multi Cell Operation Not Supported)</p> |  |
| <i>&gt;Transport Layer</i> |   |  |   |  |
| >>Transport Layer Cause    | M |  | <p>ENUMERATED<br/>                 (Transport Resource Unavailable,<br/>                 Unspecified,<br/>                 ...)</p>   |  |
| <i>&gt;Protocol</i>        |   |  |   |  |
| >>Protocol Cause           | M |  | <p>ENUMERATED<br/>                 (Transfer Syntax Error,<br/>                 Abstract Syntax Error (Reject),<br/>                 Abstract Syntax Error (Ignore and Notify),<br/>                 Message not Compatible with Receiver State,<br/>                 Semantic Error,<br/>                 Unspecified,<br/>                 Abstract Syntax Error (Falsely Constructed Message),...)</p>   |  |
| <i>&gt;Misc</i>            |   |  |   |  |
| >>Miscellaneous Cause      | M |  | <p>ENUMERATED<br/>                 (Control Processing Overload,<br/>                 Hardware Failure,<br/>                 O&amp;M Intervention,<br/>                 Not enough User Plane Processing Resources,<br/>                 Unspecified,...)</p>   |  |

The meaning of the different cause values is described in the following table. In general, "not supported" cause values indicate that the concerned capability is missing. On the other hand, "not available" cause values indicate that the concerned capability is present, but insufficient resources were available to perform the requested action.

| Radio Network Layer cause | Meaning |
|---------------------------|---------|
|---------------------------|---------|

|  |  |
|--|--|
| Cell not Available   | The concerned cell is not available  |
| Cell reserved for operator use   | The concerned cell is reserved for operator use  |
| Cell Specific Tx Diversity Handling For Multi Cell Operation Not Available | Cell specific tx diversity handling for multi cell operation not available in the concerned cell(s)                                |
| Cell Specific Tx Diversity Handling For Multi Cell Operation Not Supported | The concerned cell(s) do not support the cell specific tx diversity handling for multi cell operation                              |
| CM not Supported   | The concerned cell(s) do not support Compressed Mode   |
| Combining not Supported  | The DRNS does not support the RL combining for the concerned cells   |
| Combining Resources Not Available  | The value of the received <i>Diversity Control Field</i> IE was set to "Must", but the DRNS cannot perform the requested combining |
| Common Transport Channel Type not Supported                                | The concerned cell(s) do not support the RACH and/or FACH Common Transport Channel Type  |
| Continuous Packet Connectivity DTX-DRX operation not available             | CPC resources for DTX-DRX operation not available in the concerned cell(s).  |
| Continuous Packet Connectivity DRX not available                           | HSPA resources for DRX operation not available in the concerned cell(s). (for 1.28Mcps TDD only)                                   |
| Continuous Packet Connectivity DRX not supported                           | The concerned cell(s) do not support the Continuous Packet Connectivity DRX operation (for 1.28Mcps TDD only)                      |
| Continuous Packet Connectivity DTX-DRX operation not Supported             | The concerned cell(s) do not support the Continuous Packet Connectivity DTX-DRX operation  |
| Continuous Packet Connectivity HS-SCCH less operation not Supported        | The concerned cell(s) do not support the Continuous Packet Connectivity HS-SCCH less operation                                     |
| Continuous Packet Connectivity UE DTX Cycle not available                  | CPC resources for the UE DTX Cycle not available in the concerned cell(s).   |
| Dedicated Transport Channel Type not Supported                             | The concerned cell(s) do not support the Dedicated Transport Channel Type  |
| Delayed Activation not Supported   | The concerned cell(s) do not support delayed activation of RLs   |
| Directed Retry   | The reason for action is Directed Retry  |
| DL Radio Resources not Available   | The DRNS does not have sufficient DL radio resources available   |
| DL SF not Supported  | The concerned cell(s) do not support the requested DL SF   |
| DL Shared Channel Type not Supported                                       | The concerned cell(s) do not support the Downlink Shared Channel Type  |
| DPC Mode Change not Supported  | The concerned cells do not support the DPC mode changes  |
| E-DCH MAC-d PDU Size Format not available                                  | The selected E-DCH MAC-d PDU Size Format is not available in the concerned cell(s).  |
| E-DCH not supported  | The concerned cell(s) do not support E-DCH   |
| E-DCH TTI2ms not supported   | The concerned cell(s) do not support the E-DCH 2ms TTI operation   |
| E-DPCCH Power Boosting not supported                                       | The concerned cell(s) do not support the E-DPCCH Power Boosting.   |
| Enhanced Relocation not Supported  | The DRNS does not support the Enhanced Relocation.   |
| F-DPCH not supported   | The concerned cell(s) do not support the Fractional DPCH   |
| F-DPCH Slot Format operation not supported                                 | The concerned cell(s) do not support the F-DPCH Slot Format operation  |
| HS-DSCH MAC-d PDU Size Format not supported                                | The concerned cell(s) do not support the selected HS-DSCH MAC-d PDU Size Format  |
| Information Provision not supported for the object                         | The RNS doesn't support provision of the requested information for the concerned object types                                      |
| Information temporarily not available                                      | The RNS can temporarily not provide the requested information  |
| Invalid CM Settings  | The concerned cell(s) consider the requested Compressed Mode settings invalid  |

|  |   |
|--|---|
| Measurement not Supported For The Object                                 | At least one of the concerned cell(s) does not support the requested measurement on the concerned object type   |
| Measurement Repetition Rate not Compatible with Current Measurements     | The requested parameters for a forwarded UE measurement are not compatible with the current measurement schedule in the SRNC.   |
| Measurement Temporarily not Available                                    | The DRNS can temporarily not provide the requested measurement value  |
| MIMO not available   | MIMO resources not available in the concerned cell(s).  |
| MIMO not supported   | The concerned cell(s) do not support the MIMO operation   |
| Multi Cell operation not available                                       | Multi Cell operation resources not available in the concerned cell(s).  |
| Multi Cell operation not supported                                       | The concerned cell(s) do not support Multi Cell operation   |
| No Iu CS UP relocation   | The relocation is triggered by CS call and the source RNC has no Iu CS user plane.  |
| Number of DL Codes not Supported   | The concerned cell(s) do not support the requested number of DL codes   |
| Number of UL Codes not Supported   | The concerned cell(s) do not support the requested number of UL codes   |
| Power Balancing status not compatible                                    | The power balancing status in the SRNC is not compatible with that of the DRNC.   |
| Power Level not Supported  | A DL power level was requested which the concerned cell(s) do not support   |
| Reconfiguration CFN not Elapsed  | The requested action cannot be performed due to that a COMMIT message was received previously, but the concerned CFN has not yet elapsed  |
| Reconfiguration not Allowed  | The SRNC does currently not allow the requested reconfiguration   |
| Reduce Load in Serving Cell  | Load on serving cell needs to be reduced.   |
| Relocation Cancelled   | The reason for the action is relocation cancellation.   |
| Relocation Desirable For Radio Reasons                                   | The reason for requesting relocation is radio related.  |
| Relocation Failure In Target RNC   | Relocation failed due to a failure in target RNC.   |
| Relocation Not Supported Due To PUESBINE Feature                         | The DRNS can not support the relocation due to the PUESBINE Feature.  |
| Relocation Target not allowed  | Relocation to the indicated target cell is not allowed for the UE in question.  |
| Requested Ciphering And/Or Integrity Protection Algorithms Not Supported | The DRNS does not support the requested ciphering and/or integrity protection algorithms.   |
| Requested Configuration not Supported                                    | The concerned cell(s) do not support the requested configuration i.e. power levels, Transport Formats, physical channel parameters,.....  |
| Requested Tx Diversity mode not Supported                                | The concerned cell(s) do not support the requested transmit diversity mode  |
| Resource Optimisation Relocation   | The reason for requesting relocation is resource optimisation.  |
| RL Already Activated/ Allocated  | The DRNS has already allocated an RL with the requested RL ID for this UE Context   |
| RL Timing Adjustment not Supported                                       | The concerned cell(s) do not support adjustments of the RL timing   |
| Semi-Persistent scheduling not supported                                 | The concerned cell(s) do not support the Semi-Persistent scheduling operation (for 1.28Mcps TDD only)   |
| SixteenQAM UL not Supported  | The concerned cell(s) do not support the 16 QAM UL  |
| SixtyfourQAM DL and MIMO Combined not available                          | SixtyfourQAM DL and MIMO Combined not available in the concerned cell(s)  |
| SixtyfourQAM DL and MIMO Combined not supported                          | The DRNS does not support SixtyfourQAM DL and MIMO Combined for the concerned cells.  |
| Synchronisation Failure  | Loss of UL Uu synchronisation   |
| Time Critical Relocation   | Relocation is requested for time critical reason i.e. this cause value is reserved to represent all critical cases where the connection is likely to be dropped if relocation is not performed. |
| Traffic Load In The Target Cell Higher Than In The Source Cell           | Relocation to reduce load in the source cell is rejected, as the target cell's traffic load is higher than that in the source cell.   |

|   |  |
|---|--|
| Transaction not Supported by Destination Node B               | The requested action cannot be performed due to lack of support of the corresponding action in the destination Node B  |
| T <sub>RELOCprep</sub> Expiry                                 | Relocation Preparation procedure is cancelled when timer T <sub>RELOCprep</sub> expires.   |
| TX diversity for MIMO UE on DL Control Channels not available | The DRNS does not have sufficient radio resources available to support transmit diversity on downlink control channels when the UE is configured in MIMO mode with P-CPICH & S-CPICH as phase references [8] |
| UE not Capable to Implement Measurement                       | The UE is not capable to initiate/report a requested measurement due to its current state or capabilities.   |
| UL Radio Resources not Available                              | The DRNS does not have sufficient UL radio resources available   |
| UL Scrambling Code Already in Use                             | The concerned UL scrambling code is already in use for another UE  |
| UL SF not Supported   | The concerned cell(s) do not support the requested minimum UL SF   |
| UL Shared Channel Type not Supported                          | The concerned cell(s) do not support the Uplink Shared Channel Type  |
| Unknown C-ID  | The DRNS is not aware of a cell with the provided C-ID   |
| Unknown RNTI  | The SRNC or DRNC is not aware of a UE indicated with the provided RNTI   |
| Unspecified   | Sent when none of the above cause values applies but still the cause is Radio Network Layer related  |

| <b>Transport Network Layer cause</b> | <b>Meaning</b>  |
|--------------------------------------|---|
| Transport resource unavailable       | <b>The required transport resources are not available</b>   |
| Unspecified                          | Sent when none of the above cause values applies but still the cause is Transport Network Layer related |

| <b>Protocol cause</b>                               | <b>Meaning</b>  |
|---|---|
| Abstract Syntax Error (Reject)                      | The received message included an abstract syntax error and the concerned criticality indicated "reject" (see subclause 10.3)            |
| Abstract Syntax Error (Ignore and Notify)           | The received message included an abstract syntax error and the concerned criticality indicated "ignore and notify" (see subclause 10.3) |
| Abstract syntax error (falsely constructed message) | The received message contained IEs or IE groups in wrong order or with too many occurrences (see subclause 10.3)                        |
| Message not Compatible with Receiver State          | The received message was not compatible with the receiver state (see subclause 10.4)  |
| Semantic Error                                      | The received message included a semantic error (see subclause 10.4)   |
| Transfer Syntax Error                               | The received message included a transfer syntax error (see subclause 10.2)  |
| Unspecified   | Sent when none of the above cause values applies but still the cause is Protocol related  |

| <b>Miscellaneous cause</b>                 | <b>Meaning</b>   |
|--|--|
| Control Processing Overload                | DRNS control processing overload   |
| Hardware Failure                           | DRNS hardware failure  |
| Not enough User Plane Processing Resources | DRNS has insufficient user plane processing resources available  |
| O&M Intervention                           | Operation and Maintenance intervention related to DRNS equipment   |
| Unspecified                                | Sent when none of the above cause values applies and the cause is not related to any of the categories Radio Network Layer, Transport Network Layer or Protocol. |

### 9.2.1.5A Cell Geographical Area Identity (Cell GAI)

The Cell Geographical Area is used to identify the geographical area of a cell. The area is represented as a polygon. See ref. [25].

| IE/Group Name                             | Presence | Range                   | IE Type and Reference                          | Semantics Description   |
|---|----------|-------------------------|--|---|
| <b>Cell GAI Geographical Co-ordinates</b> |          | 1 ..<br><maxnoofPoints> |  |   |
| >Latitude Sign                            | M        |                         | ENUMERATED(North, South)                       |   |
| >Degrees of Latitude                      | M        |                         | INTEGER(0..2 <sup>23</sup> -1)                 | The IE value (N) is derived by this formula:<br>$N \leq 2^{23} X / 90 < N+1$<br>X being the latitude in degree (0°.. 90°)       |
| >Degrees of Longitude                     | M        |                         | INTEGER(-2 <sup>23</sup> ..2 <sup>23</sup> -1) | The IE value (N) is derived by this formula:<br>$N \leq 2^{24} X / 360 < N+1$<br>X being the longitude in degree (-180°..+180°) |

| Range bound   | Explanation                       |
|---------------|-----------------------------------|
| maxnoofPoints | Maximum no. of points in polygon. |

### 9.2.1.5B Cell Geographical Area Additional Shapes (Cell GAI Additional Shapes)

This IE is used to provide several descriptions of the geographical area of a cell.

| IE/Group Name  | Presence | Range | IE Type and Reference | Semantics Description                                   |
|--|----------|-------|-----------------------|---|
| <b>CHOICE Cell GAI Additional Shapes</b>                     |          |       |                       |   |
| >GA Point With Uncertainty                                   |          |       |                       |   |
| >>GA Point With Uncertainty                                  | M        |       | 9.2.1.30A             | Ellipsoid point with uncertainty circle                 |
| >GA Ellipsoid point with uncertainty Ellipse                 |          |       |                       |   |
| >>GA Ellipsoid point with uncertainty Ellipse                | M        |       | 9.2.1.30B             | Ellipsoid point with uncertainty Ellipse                |
| >GA Ellipsoid point with altitude                            |          |       |                       |   |
| >>GA Ellipsoid point with altitude                           | M        |       | 9.2.1.30C             | Ellipsoid point with altitude                           |
| >GA Ellipsoid point with altitude and uncertainty Ellipsoid  |          |       |                       |   |
| >>GA Ellipsoid point with altitude and uncertainty Ellipsoid | M        |       | 9.2.1.30D             | Ellipsoid point with altitude and uncertainty Ellipsoid |
| >GA Ellipsoid Arc  |          |       |                       |   |
| >>GA Ellipsoid Arc   | M        |       | 9.2.1.30E             | Ellipsoid Arc   |

### 9.2.1.5C Cell Capacity Class Value

The *Cell Capacity Class Value* IE contains the capacity class for both the uplink and downlink. *Cell Capacity Class Value* IE is the value that classifies the cell capacity with regards to the other cells. *Cell Capacity Class Value* IE only indicates resources that are configured for traffic purposes.

| IE/Group Name                      | Presence | Range | IE Type and Reference | Semantics Description  |
|------------------------------------|----------|-------|-----------------------|--|
| Uplink Cell Capacity Class Value   | M        |       | INTEGER(1..100,...)   | Value 1 shall indicate the minimum uplink cell capacity, and 100 shall indicate the maximum uplink cell capacity. There should be linear relation between uplink cell capacity and Uplink Cell Capacity Class Value.         |
| Downlink Cell Capacity Class Value | M        |       | INTEGER(1..100,...)   | Value 1 shall indicate the minimum downlink cell capacity, and 100 shall indicate the maximum downlink cell capacity. There should be linear relation between downlink cell capacity and Downlink Cell Capacity Class Value. |

### 9.2.1.5D Cell Global Identifier (CGI)

The *Cell Global Identifier* IE contains the Cell Global Identity as defined in ref. [1].

| IE/Group Name  | Presence | Range | IE Type and Reference | Semantics Description  |
|----------------|----------|-------|-----------------------|--|
| <b>LAI</b>     |          | 1     |                       |  |
| >PLMN Identity | M        |       | OCTET STRING (3)      | <ul style="list-style-type: none"> <li>- digits 0 to 9, two digits per octet,</li> <li>- each digit encoded 0000 to 1001,</li> <li>- 1111 used as filler</li> <li>- bit 4 to 1 of octet n encoding digit 2n-1</li> <li>- bit 8 to 5 of octet n encoding digit 2n</li> <li>-The PLMN Identity consists of 3 digits from MCC followed by either</li> <li>-a filler plus 2 digits from MNC (in case of 2 digit MNC) or</li> <li>-3 digits from MNC (in case of a 3 digit MNC).</li> </ul> |
| >LAC           | M        |       | OCTET STRING (2)      | 0000 and FFFE not allowed  |
| CI             | M        |       | OCTET STRING (2)      |  |

### 9.2.1.6 Cell Identifier (C-ID)

The C-ID (Cell Identifier) is the identifier of a cell in one RNS.

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description |
|---------------|----------|-------|-----------------------|-----------------------|
| C-ID          |          |       | INTEGER (0..65535)    |                       |

### 9.2.1.7 Cell Individual Offset

Cell individual offset is an offset that will be applied by UE to the measurement results for a Primary-CPICH[FDD]/Primary-CCPCH[TDD] or for GSM Carrier RSSI according to [16].

| IE/Group Name          | Presence | Range | IE Type and Reference | Semantics Description                                |
|------------------------|----------|-------|-----------------------|--|
| Cell Individual Offset |          |       | INTEGER(-20..+20)     | -20 -> -10dB<br>-19 -> -9.5dB<br>...<br>+20 -> +10dB |

### 9.2.1.8 Cell Parameter ID

The Cell Parameter ID identifies unambiguously the [3.84 Mcps TDD and 7.68Mcps TDD - Code Groups, Scrambling Codes, Midambles and Toffset] [1.28 Mcps TDD - SYNC-DL and SYNC-UL sequences, the scrambling codes and the midamble codes] (see ref. [20]).

| IE/Group Name     | Presence | Range | IE Type and Reference | Semantics Description |
|-------------------|----------|-------|-----------------------|-----------------------|
| Cell Parameter ID |          |       | INTEGER(0..127,...)   |                       |

### 9.2.1.9 CFN

Connection Frame Number for the radio connection, see ref. [17].

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description |
|---------------|----------|-------|-----------------------|-----------------------|
| CFN           |          |       | INTEGER(0..255)       |                       |

### 9.2.1.10 CFN Offset

Void

### 9.2.1.11 CN CS Domain Identifier

Identification of the CN node in the CS Domain.

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description  |
|---------------|----------|-------|-----------------------|--|
| PLMN Identity | M        |       | OCTET STRING (3)      | - digits 0 to 9, two digits per octet,<br>- each digit encoded 0000 to 1001,<br>- 1111 used as filler<br>- bit 4 to 1 of octet n encoding digit 2n-1<br>- bit 8 to 5 of octet n encoding digit 2n<br>-The PLMN Identity consists of 3 digits from MCC followed by either<br>-a filler plus 2 digits from MNC (in case of 2 digit MNC) or<br>-3 digits from MNC (in case of a 3 digit MNC). |
| LAC           | M        |       | OCTET STRING (2)      | 0000 and FFFE not allowed  |



## 9.2.1.11A CN Domain Type

Identifies the type of core network domain.

| IE/Group Name  | Presence | Range | IE Type and Reference                            | Semantics Description |
|----------------|----------|-------|--|-----------------------|
| CN Domain Type |          |       | ENUMERATED(CS domain, PS domain, Don't care,...) | See in [16]           |

## 9.2.1.12 CN PS Domain Identifier

Identification of the CN Node in the PS Domain.

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description  |
|---------------|----------|-------|-----------------------|--|
| PLMN Identity | M        |       | OCTET STRING (3)      | - digits 0 to 9, two digits per octet,<br>- each digit encoded 0000 to 1001,<br>- 1111 used as filler<br>- bit 4 to 1 of octet n encoding digit 2n-1<br>- bit 8 to 5 of octet n encoding digit 2n<br>-The PLMN Identity consists of 3 digits from MCC followed by either<br>-a filler plus 2 digits from MNC (in case of 2 digit MNC) or<br>-3 digits from MNC (in case of a 3 digit MNC). |
| LAC           | M        |       | OCTET STRING (2)      | 0000 and FFFE not allowed  |
| RAC           | M        |       | OCTET STRING (1)      |  |

## 9.2.1.12A Common Measurement Accuracy

The Common Measurement Accuracy IE indicates the accuracy of the common measurement.

| IE/Group Name  | Presence | Range | IE Type and Reference                         | Semantics Description |
|--|----------|-------|---|-----------------------|
| CHOICE <i>Common Measurement Accuracy</i>              | M        |       |   |                       |
| > $T_{UTRAN-GPS}$ <i>Measurement Accuracy Class</i>    |          |       |   |                       |
| >> $T_{UTRAN-GPS}$ <i>Measurement Accuracy Class</i>   | M        |       | $T_{UTRAN-GPS}$ Accuracy Class<br>9.2.1.59B   |                       |
| > $T_{UTRAN-GANSS}$ <i>Measurement Accuracy Class</i>  |          |       |   |                       |
| >> $T_{UTRAN-GANSS}$ <i>Measurement Accuracy Class</i> | M        |       | $T_{UTRAN-GANSS}$ Accuracy Class<br>9.2.1.112 |                       |

### 9.2.1.12B Common Measurement Object Type

Void.

### 9.2.1.12C Common Measurement Type

The Common Measurement Type identifies which measurement that shall be performed.

| IE/Group Name           | Presence | Range | IE Type and Reference   | Semantics Description   |
|-------------------------|----------|-------|---|---|
| Common Measurement Type |          |       | ENUMERATED (UTRAN GPS Timing of Cell Frames for UE Positioning , SFN-SFN Observed Time Difference, load, transmitted carrier power, received total wide band power, UL timeslot ISCP, ..., RT Load, NRT Load Information, UpPTS interference, UTRAN GANSS Timing of Cell Frames for UE Positioning) | UL timeslot ISCP shall only be used by TDD.<br>For measurements, which are requested on the Iur-g interface, only load, RT Load and NRT Load information are used.<br>"UpPTS interference" is used by 1.28Mcps TDD only<br>"UpPTS interference" means "UpPCH interference" in the whole 25.423, refer to [14] and [22]. |

### 9.2.1.12D Common Measurement Value

The Common Measurement Value shall be the most recent value for this measurement, for which the reporting criteria were met.

| IE/Group Name  | Presence | Range | IE Type and Reference                       | Semantics Description        | Criticality | Assigned Criticality |
|--|----------|-------|---|------------------------------|-------------|----------------------|
| CHOICE <i>Common Measurement Value</i>                     | M        |       |   |                              | –           |                      |
| > $T_{UTRAN-GPS}$ <i>Measurement Value Information</i>     |          |       |   | UTRAN only                   | –           |                      |
| >> $T_{UTRAN-GPS}$ <i>Measurement Value Information</i>    | M        |       | 9.2.1.59D                                   |                              | –           |                      |
| > <i>SFN-SFN Measurement Value Information</i>             |          |       |   | UTRAN only                   | –           |                      |
| >> <i>SFN-SFN Measurement Value Information</i>            | M        |       | 9.2.1.52C                                   |                              | –           |                      |
| > <i>Load Value</i>  |          |       |   |                              | –           |                      |
| >> <i>Load Value</i>                                       | M        |       | 9.2.1.33A                                   |                              | –           |                      |
| > <i>Transmitted Carrier Power Value</i>                   |          |       |   | UTRAN only                   | –           |                      |
| >> <i>Transmitted Carrier Power Value</i>                  | M        |       | Transmitted Carrier Power<br>9.2.1.59A      |                              | –           |                      |
| > <i>Received Total Wide Band Power Value</i>              |          |       |   | UTRAN only                   | –           |                      |
| >> <i>Received Total Wide Band Power Value</i>             | M        |       | Received Total Wide Band Power<br>9.2.2.35A |                              | –           |                      |
| > <i>UL Timeslot ISCP Value</i>                            |          |       |   | TDD Only                     | –           |                      |
| >> <i>UL Timeslot ISCP Value</i>                           | M        |       | UL Timeslot ISCP<br>9.2.3.13A               |                              | –           |                      |
| > <i>Additional Common Measurement Values</i>              |          |       |   |                              | –           |                      |
| >> <i>RT Load Value</i>                                    |          |       |   |                              | –           |                      |
| >>> <i>RT Load Value</i>                                   | M        |       | 9.2.1.50B                                   |                              | YES         | ignore               |
| >> <i>NRT Load Information Value</i>                       |          |       |   |                              | –           |                      |
| >>> <i>NRT Load Information Value</i>                      | M        |       | 9.2.1.41I                                   |                              | YES         | ignore               |
| >> <i>UpPTS interference</i>                               |          |       |   | 1.28Mcps TDD Only            | –           |                      |
| >>> <i>UpPTS interference Value</i>                        | M        |       | INTEGER (0..127,...)                        | According to mapping in [24] | YES         | reject               |
| >> $T_{UTRAN-GANSS}$ <i>Measurement Value Information</i>  |          |       |   | UTRAN only                   | –           |                      |
| >>> $T_{UTRAN-GANSS}$ <i>Measurement Value Information</i> | M        |       | 9.2.1.114                                   |                              | YES         | reject               |

### 9.2.1.12E Common Measurement Value Information

The *Common Measurement Value Information* IE provides information both on whether the Common Measurement Value is provided in the message or not and if provided also the Common Measurement Value itself.

| IE/Group Name                          | Presence | Range | IE Type and Reference | Semantics Description |
|--|----------|-------|-----------------------|-----------------------|
| CHOICE <i>Measurement Availability</i> | M        |       |                       |                       |
| > <i>Measurement Available</i>         |          |       |                       |                       |
| >>Common Measurement Value             | M        |       | 9.2.1.12D             |                       |
| > <i>Measurement not Available</i>     |          |       | NULL                  |                       |

### 9.2.1.12F Common Transport Channel Resources Initialisation Not Required

If present, this IE indicates that as far as the DRNC is concerned, there is no need to initiate a Common Transport Channel Resources Initialisation procedure if the SRNC wants to allocate common transport channel resources in the new cell.

| IE/Group Name  | Presence | Range | IE Type and Reference    | Semantics Description |
|--|----------|-------|--------------------------|-----------------------|
| Common Transport Channel Resources Initialisation Not Required |          |       | ENUMERATED(Not Required) |                       |

### 9.2.1.12G Coverage Indicator

The Coverage Indicator indicates whether the serving and the neighbouring cell are overlapped, i.e. the cells have approximately same coverage area or whether the neighbouring cell covers or contained in the serving cell.

| IE/Group Name      | Presence | Range | IE Type and Reference                         | Semantics Description |
|--------------------|----------|-------|---|-----------------------|
| Coverage Indicator |          |       | ENUMERATED(Overlap, Covers, Contained in,...) |                       |

### 9.2.1.13 Criticality Diagnostics

The *Criticality Diagnostics* IE is sent by an RNC when parts of a received message have not been comprehended or were missing, or if the message contained logical errors. When applicable, it contains information about which IEs that were not comprehended or were missing.

For further details on how to use the *Criticality Diagnostics* IE, see Annex C.

| IE/Group Name                                      | Presence | Range                                      | IE Type and Reference   | Semantics Description  | Criticality | Assigned Criticality |
|--|----------|--|---|--|-------------|----------------------|
| Procedure ID                                       |          | 0..1                                       |   | Procedure ID is to be used if Criticality Diagnostics is part of Error Indication procedure, and not within the response message of the same procedure that caused the error   | –           |                      |
| >Procedure Code                                    | M        |  | INTEGER(0..255)   |  | –           |                      |
| >Ddmode  | M        |  | ENUMERATED(FDD, TDD, Common)  | Common = common to FDD and TDD. Common Ddmode is also applicable for luring procedures listed in section 7.  | –           |                      |
| Triggering Message                                 | O        |  | ENUMERATED(initiating message, successful outcome, unsuccessful outcome, outcome) | The Triggering Message is used only if the Criticality Diagnostics is part of Error Indication.  | –           |                      |
| Procedure Criticality                              | O        |  | ENUMERATED(reject, ignore, notify)  | This Procedure Criticality is used for reporting the Criticality of the Triggering message (Procedure).  | –           |                      |
| Transaction ID                                     | O        |  | Transaction ID  |  | –           |                      |
| <b>Information Element Criticality Diagnostics</b> |          | <i>0..&lt;maximum number of errors&gt;</i> |   |  | –           |                      |
| >IE Criticality                                    | M        |  | ENUMERATED(reject, ignore, notify)  | The IE Criticality is used for reporting the criticality of the triggering IE. The value "Ignore" shall never be used.   | –           |                      |
| >IE ID   | M        |  | INTEGER(0..65535)   | The IE ID of the not understood or missing IE as defined in the ASN.1 part of the specification.   | –           |                      |
| >Repetition Number                                 | O        |  | INTEGER(0..255)   | The <i>Repetition Number</i> IE gives <ul style="list-style-type: none"> <li>in case of a not understood IE: The number of occurrences of the reported IE up to and including the not understood occurrence</li> <li>in case of a missing IE: The number of occurrences up to but not including the missing occurrence.</li> </ul> Note: All the counted | –           |                      |

|                    |   |  |  |   |     |        |
|--------------------|---|--|--|---|-----|--------|
|                    |   |  |  | occurrences of the reported IE must have the same topdown hierarchical message structure of IEs with assigned criticality above them.   |     |        |
| >Message Structure | O |  | 9.2.1.39A                                | The <i>Message Structure</i> IE describes the structure in which the not understood or missing IE was detected. This IE is included if the not understood IE is not the top level of the message. | YES | ignore |
| >Type of Error     | M |  | ENUMERATED(not understood, missing, ...) |   | YES | ignore |

| Range bound          | Explanation   |
|----------------------|---|
| <i>maxnooferrors</i> | Maximum number of IE errors allowed to be reported with a single message. |

#### 9.2.1.14 C-RNTI

C-RNTI (Cell RNTI) is the UE identifier allocated by the DRNS to be used over the radio interface. It is unique in the cell. One UE Context has one unique C-RNTI value allocated in the DRNS.

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description |
|---------------|----------|-------|-----------------------|-----------------------|
| C-RNTI        |          |       | INTEGER(0..65535)     |                       |

#### 9.2.1.14A CTFC

The CTFC is an integer number calculated in accordance with [16], subclause 14.10. Regarding the channel ordering, for all transport channels, 'TrCH1' corresponds to the transport channel having the lowest transport channel identity among all configured transport channels on this CCTrCH. 'TrCH2' corresponds to the transport channel having the next lowest transport channel identity, and so on.

| IE/Group Name             | Presence | Range | IE Type and Reference | Semantics Description |
|---------------------------|----------|-------|-----------------------|-----------------------|
| CHOICE <i>CTFC Format</i> |          |       |                       |                       |
| >2 bits long              |          |       |                       |                       |
| >>CTFC value              | M        |       | INTEGER (0..3)        |                       |
| >4 bits long              |          |       |                       |                       |
| >>CTFC value              | M        |       | INTEGER (0..15)       |                       |
| >6 bits long              |          |       |                       |                       |
| >>CTFC value              | M        |       | INTEGER (0..63)       |                       |
| >8 bits long              |          |       |                       |                       |
| >>CTFC value              | M        |       | INTEGER (0..255)      |                       |
| >12 bits long             |          |       |                       |                       |
| >>CTFC value              | M        |       | INTEGER (0..4095)     |                       |
| >16 bits long             |          |       |                       |                       |
| >>CTFC value              | M        |       | INTEGER (0..65535)    |                       |
| >max nb bits long         |          |       |                       |                       |
| >>CTFC value              | M        |       | INTEGER (0..maxCTFC)  |                       |

| Range Bound | Explanation  |
|-------------|--|
| MaxCTFC     | Maximum number of the CTFC value is calculated according to the following:<br>$\sum_{i=1}^I (L_i - 1)P_i$ with the notation according to ref. [16] |

### 9.2.1.15 DCH Combination Indicator

Void

### 9.2.1.16 DCH ID

The DCH ID is the identifier of an active dedicated transport channel. It is unique for each active DCH among the active DCHs simultaneously allocated for the same UE.

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description |
|---------------|----------|-------|-----------------------|-----------------------|
| DCH ID        |          |       | INTEGER<br>(0..255)   |                       |

### 9.2.1.16A DCH Information Response

The *DCH Information* IE provides information for DCHs that have been established or modified.

| IE/Group Name                         | Presence | Range             | IE Type and Reference | Semantics Description   | Criticality | Assigned Criticality |
|---------------------------------------|----------|-------------------|-----------------------|---|-------------|----------------------|
| <b>DCH Information Response</b>       |          | 1..<maxno ofDCHs> |                       | Several DCHs belonging to the same set of coordinated DCHs may be included. | –           |                      |
| >DCH ID                               | M        |                   | 9.2.1.16              |   | –           |                      |
| >Binding ID                           | O        |                   | 9.2.1.3               |   | –           |                      |
| >Transport Layer Address              | O        |                   | 9.2.1.62              |   | –           |                      |
| >Allowed Rate Information             | O        |                   | 9.2.1.2A              |   | YES         | ignore               |
| >Transport Bearer Not Setup Indicator | O        |                   | 9.2.2.4T              | FDD Only  | YES         | Ignore               |

| Range bound        | Explanation                        |
|--------------------|------------------------------------|
| <i>maxnoofDCHs</i> | Maximum number of DCHs for one UE. |

### 9.2.1.17 Dedicated Measurement Object Type

Void.

### 9.2.1.18 Dedicated Measurement Type

The Dedicated Measurement Type identifies the type of measurement that shall be performed.

| IE/Group Name              | Presence | Range | IE Type and Reference  | Semantics Description  |
|----------------------------|----------|-------|--|--|
| Dedicated Measurement Type |          |       | ENUMERATED(SIR, SIR Error, Transmitted Code Power, RSCP, Rx Timing Deviation, Round Trip Time, ..., Rx Timing Deviation LCR, Angle Of Arrival LCR, HS-SICH Reception Quality, Rx Timing Deviation 768, Rx Timing Deviation 384 Extended) | RSCP and HS-SICH Receptions Quality are used by TDD only, Rx Timing Deviation and Rx Timing Deviation 384 Extended are used by 3.84 Mcps TDD only, Rx Timing Deviation LCR is used by 1.28 TDD only, Round Trip Time, SIR Error are used by FDD only. Angle Of Arrival LCR is used by 1.28Mcps TDD only. Rx Timing Deviation 768 is used by 7.68Mcps TDD only. |

NOTE: For definitions of the measurement types refer to ref. [11] and [14].

#### 9.2.1.19 Dedicated Measurement Value

The Dedicated Measurement Value shall be the most recent value for this measurement, for which the reporting criteria were met.



| IE/Group Name                                    | Presence | Range | IE Type and Reference                  | Semantics Description   | Criticality | Assigned Criticality |
|--|----------|-------|--|---|-------------|----------------------|
| CHOICE <i>Dedicated Measurement Value</i>        | M        |       |  |   | –           |                      |
| > <i>SIR Value</i>                               |          |       |  |   | –           |                      |
| >> <i>SIR Value</i>                              | M        |       | INTEGER(0..63)                         | According to mapping in ref. [23] and [24]  | –           |                      |
| > <i>SIR Error Value</i>                         |          |       |  | FDD Only  | –           |                      |
| >> <i>SIR Error Value</i>                        | M        |       | INTEGER(0..125)                        | According to mapping in [23]  | –           |                      |
| > <i>Transmitted Code Power Value</i>            |          |       |  |   | –           |                      |
| >> <i>Transmitted Code Power Value</i>           | M        |       | INTEGER(0..127)                        | According to mapping in ref. [23] and [24]<br>Values 0 to 9 and 123 to 127 shall not be used. | –           |                      |
| > <i>RSCP</i>                                    |          |       |  | TDD Only  | –           |                      |
| >> <i>RSCP</i>                                   | M        |       | INTEGER(0..127)                        | According to mapping in ref. [24]   | –           |                      |
| > <i>Rx Timing Deviation Value</i>               |          |       |  | 3.84Mcps<br>TDD Only  | –           |                      |
| >> <i>Rx Timing Deviation</i>                    | M        |       | INTEGER(0..8191)                       | According to mapping in [24]  | –           |                      |
| > <i>Round Trip Time</i>                         |          |       |  | FDD Only  | –           |                      |
| >> <i>Round Trip Time</i>                        | M        |       | INTEGER(0..32767)                      | According to mapping in [23]  | –           |                      |
| > <i>Additional Dedicated Measurement Values</i> |          |       |  |   | –           |                      |
| >> <i>Rx Timing Deviation Value LCR</i>          |          |       |  | 1.28Mcps<br>TDD Only  | YES         | reject               |
| >>> <i>Rx Timing Deviation LCR</i>               | M        |       | INTEGER(0..511)                        | According to mapping in [24]  | –           |                      |
| >> <i>Angle of Arrival Value LCR</i>             |          |       |  | 1.28Mcps<br>TDD only  | YES         | reject               |
| >>> <i>AOA LCR</i>                               | M        |       | INTEGER(0..719)                        | According to mapping in [24]  | –           |                      |
| >>> <i>AOA LCR Accuracy Class</i>                | M        |       | ENUMERATED(A, B, C, D, E, F, G, H,...) | According to mapping in [24]  | –           |                      |
| >> <i>HS-SICH reception quality</i>              |          |       |  | Applicable to TDD only  | –           |                      |
| >>> <i>HS-SICH reception quality Value</i>       |          | 1     |  |   | YES         | reject               |
| >>>> <i>Failed HS-SICH</i>                       | M        |       | INTEGER(0..20)                         | According to mapping in [24]  | –           |                      |
| >>>> <i>Missed HS-SICH</i>                       | M        |       | INTEGER(0..20)                         | According to mapping in [24]  | –           |                      |
| >>>> <i>Total HS-SICH</i>                        | M        |       | INTEGER(0..20)                         | According to mapping in [24]  | –           |                      |
| >> <i>Rx Timing Deviation</i>                    |          |       |  | 7.68Mcps  | YES         | reject               |

|   |   |  |                                |  |     |        |
|---|---|--|--------------------------------|--|-----|--------|
| <i>Value 7.68Mcps</i>                                   |   |  |                                | TDD Only   |     |        |
| >>>Rx Timing Deviation<br>7.68Mcps                      | M |  | INTEGER(<br>0..65535)          | According to<br>mapping in<br>[24]                                       | –   |        |
| >>Rx Timing Deviation<br><i>Value 3.84Mcps Extended</i> |   |  |                                | 3.84 Mcps<br>TDD Only  | YES | reject |
| >>>Rx Timing Deviation<br>3.84Mcps Extended             | M |  | INTEGER(<br>0..32767)          | According to<br>mapping in<br>[24]                                       | –   |        |
| >>Extended Round Trip<br>Time                           |   |  |                                | FDD Only   | YES | ignore |
| >>>Extended Round<br>Trip Time Value                    | M |  | INTEGER<br>(32767..10<br>3041) | Continuation<br>of intervals<br>with step size<br>as defined in<br>[23]. | –   |        |

### 9.2.1.19A Dedicated Measurement Value Information

The *Dedicated Measurement Value Information* IE provides information both on whether or not the Dedicated Measurement Value is provided in the message and if provided also the Dedicated Measurement Value itself.

| IE/Group Name                                    | Presence | Range | IE Type and Reference | Semantics Description                         | Criticality | Assigned Criticality |
|--|----------|-------|-----------------------|---|-------------|----------------------|
| CHOICE <i>Measurement Availability Indicator</i> | M        |       |                       |   | –           |                      |
| > <i>Measurement Available</i>                   |          |       |                       |   | –           |                      |
| >>Dedicated<br>Measurement Value                 | M        |       | 9.2.1.19              |   | –           |                      |
| >>CFN  | O        |       | 9.2.1.9               | Dedicated<br>Measurement<br>Time<br>Reference | –           |                      |
| > <i>Measurement not Available</i>               |          |       | NULL                  |   | –           |                      |

### 9.2.1.19Aa Delayed Activation

The *Delayed Activation* IE indicates that the activation of the DL power shall be delayed until an indicated CFN or until a separate activation indication is received.

| IE/Group Name                    | Presence | Range | IE Type and Reference | Semantics Description |
|----------------------------------|----------|-------|-----------------------|-----------------------|
| CHOICE <i>Delayed Activation</i> | M        |       |                       |                       |
| > <i>CFN</i>                     |          |       |                       |                       |
| >> Activation CFN                | M        |       | CFN 9.2.1.7           |                       |
| > <i>Separate Indication</i>     |          |       | NULL                  |                       |

### 9.2.1.19Ab Delayed Activation Update

The *Delayed Activation Update* IE indicates a change of the activation of the DL power for a specific RL.

| IE/Group Name                           | Presence | Range | IE Type and Reference | Semantics Description |
|---|----------|-------|-----------------------|-----------------------|
| CHOICE <i>Delayed Activation Update</i> | M        |       |                       |                       |
| > <i>Activate</i>                       |          |       |                       |                       |
| >> CHOICE <i>Activation Type</i>        | M        |       |                       |                       |
| >>> <i>Synchronised</i>                 |          |       |                       |                       |
| >>>> <i>Activation CFN</i>              | M        |       | CFN 9.2.1.7           |                       |
| >>>> <i>Unsynchronised</i>              |          |       | NULL                  |                       |
| >> <i>Initial DL TX Power</i>           | M        |       | DL Power 9.2.1.21     |                       |
| >> <i>First RLS Indicator</i>           | O        |       | 9.2.2.16A             | FDD Only              |
| >> <i>Propagation Delay</i>             | O        |       | 9.2.2.35              | FDD Only              |
| >> <i>Extended Propagation Delay</i>    | O        |       | 9.2.2.33a             | FDD Only              |
| > <i>Deactivate</i>                     |          |       |                       |                       |
| >> CHOICE <i>Deactivation type</i>      | M        |       |                       |                       |
| >>> <i>Synchronised</i>                 |          |       |                       |                       |
| >>>> <i>Deactivation</i>                | M        |       | CFN 9.2.1.7           |                       |
| CFN                                     |          |       |                       |                       |
| >>>> <i>Unsynchronised</i>              |          |       | NULL                  |                       |

### 9.2.1.19B DGPS Corrections

The DGPS Corrections IE contains DGPS information used by the UE Positioning A-GPS method. For further details on the meaning of parameters, see [31].

| IE/Group Name                                 | Presence | Range         | IE Type and Reference   | Semantics Description  |
|---|----------|---------------|---|--|
| GPS TOW                                       | M        |               | INTEGER(0..604799)  | Time in seconds. This field indicates the baseline time for which the corrections are valid  |
| Status/Health                                 | M        |               | ENUMERATED (UDRE scale 1.0, UDRE scale 0.75, UDRE scale 0.5, UDRE scale 0.3, UDRE scale 0.1, no data, invalid data) | This field indicates the status of the differential corrections  |
| <b>Satellite DGPS Corrections Information</b> |          | 1..<maxNoSat> |   |  |
| >SatID  | M        |               | SAT ID 9.2.1.50A  |  |
| >IODE   | M        |               | BIT STRING(8)   | This IE is the sequence number for the ephemeris for the particular satellite. It can be used to determine if new ephemeris is used for calculating the corrections that are provided. This eight-bit IE is incremented for each new set of ephemeris for the satellite and may occupy the numerical range of [0, 239] during normal operations. |
| >UDRE   | M        |               | ENUMERATED (UDRE $\leq 1.0m$ , $1.0m < UDRE \leq 4.0m$ , $4.0m < UDRE \leq 8.0m$ , $8.0m < UDRE, \dots$ )           | User Differential Range Error. This field provides an estimate of the uncertainty ( $1-\sigma$ ) in the corrections for the particular satellite. The value in this field shall be multiplied by the UDRE Scale Factor in the common Corrections Status/Health field to determine the final UDRE estimate for the particular satellite           |
| >PRC  | M        |               | INTEGER(-2047..2047)  | Scaling factor 0.32 meters   |
| >Range Correction Rate                        | M        |               | INTEGER(-127.. 127)   | Scaling factor 0.032 m/s   |

| Range Bound     | Explanation  |
|-----------------|--|
| <i>maxNoSat</i> | Maximum number of satellites for which information can be provided |

### 9.2.1.19C Discard Timer

The *Discard Timer* IE defines the time to live for a MAC-hs SDU starting from the instant of its arrival into an HSDPA Priority Queue. The DRNS shall use this information to discard out-of-date MAC-hs SDUs from the HSDPA Priority Queues.

| IE/Group Name | Presence | Range | IE type and reference   | Semantics description |
|---------------|----------|-------|---|-----------------------|
| Discard Timer |          |       | ENUMERATED (20, 40, 60, 80, 100, 120, 140, 160, 180, 200, 250, 300, 400, 500, 750, 1000, 1250, 1500, 1750, 2000, 2500, 3000, 3500, 4000, 4500, 5000, 7500, ...) | Unit: ms              |

### 9.2.1.20 Diversity Control Field

The Diversity Control Field indicates if the current RL may, must or must not be combined with the already existing RLs.

| IE/Group Name           | Presence | Range | IE Type and Reference                 | Semantics Description |
|-------------------------|----------|-------|---------------------------------------|-----------------------|
| Diversity Control Field |          |       | ENUMERATED (May, Must, Must not, ...) |                       |

### 9.2.1.21 Diversity Indication

Void.

#### 9.2.1.21A DL Power

The *DL Power* IE indicates a power level relative to the [FDD - primary CPICH power] [TDD - PCCPCH power] configured in a cell. [FDD - If referred to a DPCH, it indicates the power of the transmitted DPDCH symbols. If referred to an F-DPCH, it indicates the Reference F-DPCH TX Power.] If Transmit Diversity is applied to a downlink physical channel, the *DL Power* IE indicates the power offset between the linear sum of the power for this downlink physical channel on all branches and the [FDD - primary CPICH power] [TDD - PCCPCH power] configured in a cell.

[TDD - If referred to a DPCH, it indicates the power of a spreading factor 16 code, the power for a spreading factor 1 code would be 12 dB higher.]

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description   |
|---------------|----------|-------|-----------------------|---|
| DL Power      |          |       | INTEGER (-350..150)   | Value = DL Power /10<br>Unit dB<br>Range -35.0 .. +15.0<br>Step 0.1dB |

### 9.2.1.22 Downlink SIR Target

Void

### 9.2.1.23 DPCH Constant Value

DPCH Constant Value is the power margin used by a UE to set the proper uplink power.

| IE/Group Name       | Presence | Range | IE Type and Reference | Semantics Description        |
|---------------------|----------|-------|-----------------------|------------------------------|
| DPCH Constant Value |          |       | INTEGER (-10..10)     | Unit dB<br>Granularity 1 dB. |

### 9.2.1.24 D-RNTI

The D-RNTI identifies the UE Context in the DRNC.

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description |
|---------------|----------|-------|-----------------------|-----------------------|
| D-RNTI        |          |       | INTEGER(0..20-1)      |                       |

### 9.2.1.25 D-RNTI Release Indication

The D-RNTI Release Indication indicates whether or not a DRNC shall release the D-RNTI allocated for a particular UE.

| IE/Group Name             | Presence | Range | IE Type and Reference                          | Semantics Description |
|---------------------------|----------|-------|--|-----------------------|
| D-RNTI Release Indication |          |       | ENUMERATED(Release D-RNTI, not Release D-RNTI) |                       |

### 9.2.1.26 DRX Cycle Length Coefficient

The DRX Cycle Length Coefficient is used as input for the formula to establish the paging occasions to be used in DRX.

| IE/Group Name                | Presence | Range | IE Type and Reference | Semantics Description  |
|------------------------------|----------|-------|-----------------------|--|
| DRX Cycle Length Coefficient |          |       | INTEGER (3..9)        | Refers to 'k' in the formula as specified in ref. [15], Discontinuous Reception. |

#### 9.2.1.26A DSCH ID

Void.

#### 9.2.1.26Aa DSCH Initial Window Size

Void.

#### 9.2.1.26B DSCH Flow Control Information

Void.

#### 9.2.1.26Ba DSCH-RNTI

Void.

### 9.2.1.26Bb Extended GSM Cell Individual Offset

Extended GSM Cell individual offset is an offset that will be applied by UE to the measurement results for GSM carrier RSSI according to [16]. It shall be used when the offset exceeds the range of values that can be indicated using the *Cell Individual Offset* IE (Subclause 9.2.1.7).

| IE/Group Name                       | Presence | Range | IE Type and Reference       | Semantics Description          |
|-------------------------------------|----------|-------|-----------------------------|--------------------------------|
| Extended GSM Cell Individual Offset |          |       | INTEGER (-50..-11   11..50) | Unit in dB. Step size is 1 dB. |

### 9.2.1.26C FACH Flow Control Information

The *FACH Flow Control Information* IE provides flow control information for each scheduling priority class for the FACH FP over Iur.

| IE/Group Name                        | Presence | Range                        | IE Type and Reference                   | Semantics Description | Criticality | Assigned Criticality |
|--------------------------------------|----------|------------------------------|---|-----------------------|-------------|----------------------|
| <b>FACH Flow Control Information</b> |          | 1..16                        |   |                       | –           |                      |
| >FACH Scheduling Priority            | M        |                              | Scheduling Priority Indicator 9.2.1.51A |                       | –           |                      |
| >MAC-c/sh SDU Length                 |          | 1..<maxNb MAC-c/shSDULength> |   |                       | –           |                      |
| >>MAC-c/sh SDU Length                | M        |                              | 9.2.1.34                                |                       | –           |                      |
| >FACH Initial Window Size            | M        |                              | 9.2.1.27                                |                       | –           |                      |

| Range bound            | Explanation                                       |
|------------------------|---|
| maxNbMAC-c/shSDULength | Maximum number of different MAC-c/sh SDU lengths. |

### 9.2.1.27 FACH Initial Window Size

Indicates the initial number of MAC-c/sh SDUs that may be transmitted before an acknowledgement is received from the DRNC.

| IE/Group Name            | Presence | Range | IE Type and Reference | Semantics Description  |
|--------------------------|----------|-------|-----------------------|--|
| FACH Initial Window Size |          |       | INTEGER(0..255)       | Number of frames (MAC-c/sh SDUs.)<br>255 = Unlimited number of FACH data frames. |

### 9.2.1.28 FACH Priority Indicator

Void

### 9.2.1.28A FN Reporting Indicator

Frame Number reporting indicator.

Indicates if the SFN or CFN shall be included together with the reported measurement value.

| IE/Group Name          | Presence | Range | IE Type and Reference  | Semantics Description |
|------------------------|----------|-------|--|-----------------------|
| FN reporting indicator |          |       | ENUMERATED(FN reporting required, FN reporting not required) |                       |

### 9.2.1.29 Frame Handling Priority

This parameter indicates the priority level to be used during the lifetime of the DCH, [TDD - DSCH] for temporary restriction of the allocated resources due overload reason.

| IE/Group Name           | Presence | Range | IE Type and Reference | Semantics Description                      |
|-------------------------|----------|-------|-----------------------|--|
| Frame Handling Priority |          |       | INTEGER (0..15)       | 0=Lowest Priority, ... 15=Highest Priority |

### 9.2.1.30 Frame Offset

Frame Offset is the required offset between the dedicated channel downlink transmission frames (CFN, Connection Frame Number) and the broadcast channel frame offset (Cell Frame Number). The Frame Offset is used in the translation between Connection Frame Number (CFN) on Iub/Iur and least significant 8 bits of SFN (System Frame Number) on Uu. The Frame Offset is UE and cell specific.

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description |
|---------------|----------|-------|-----------------------|-----------------------|
| Frame Offset  |          |       | INTEGER (0..255)      | Frames                |

### 9.2.1.30A GA Point with Uncertainty

This IE contains one of the possible descriptions of a Cell Geographical Area.

| IE/Group Name            | Presence | Range | IE Type and Reference | Semantics Description   |
|--------------------------|----------|-------|-----------------------|---|
| Geographical Coordinates | M        |       | 9.2.1.30F             |   |
| Uncertainty Code         | M        |       | INTEGER(0..127)       | The uncertainty "r" is derived from the "uncertainty code" k by $r = 10 \times (1.1^k - 1)$ |

### 9.2.1.30B GA Ellipsoid Point with Uncertainty Ellipse

This IE contains one of the possible descriptions of a Cell Geographical Area.

| IE/Group Name            | Presence | Range | IE Type and Reference | Semantics Description |
|--------------------------|----------|-------|-----------------------|-----------------------|
| Geographical Coordinates | M        |       | 9.2.1.30F             |                       |
| Uncertainty Ellipse      | M        |       | 9.2.1.68A             |                       |
| Confidence               | M        |       | INTEGER(0..127)       |                       |

### 9.2.1.30C GA Ellipsoid Point with Altitude

This IE contains one of the possible descriptions of a Cell Geographical Area.



| IE/Group Name            | Presence | Range | IE Type and Reference | Semantics Description |
|--------------------------|----------|-------|-----------------------|-----------------------|
| Geographical Coordinates | M        |       | 9.2.1.30F             |                       |
| Altitude and direction   | M        |       | 9.2.1.2B              |                       |

### 9.2.1.30D GA Ellipsoid Point with Altitude and Uncertainty Ellipsoid

This IE contains one of the possible descriptions of a Cell Geographical Area.

| IE/Group Name            | Presence | Range | IE Type and Reference | Semantics Description |
|--------------------------|----------|-------|-----------------------|-----------------------|
| Geographical Coordinates | M        |       | 9.2.1.30F             |                       |
| Altitude and direction   | M        |       | 9.2.1.2B              |                       |
| Uncertainty Ellipse      | M        |       | 9.2.1.68A             |                       |
| Uncertainty Altitude     | M        |       | INTEGER(0..127)       |                       |
| Confidence               | M        |       | INTEGER(0..127)       |                       |

### 9.2.1.30E GA Ellipsoid Arc

This IE contains one of the possible descriptions of a Cell Geographical Area.

| IE/Group Name            | Presence | Range | IE Type and Reference          | Semantics Description  |
|--------------------------|----------|-------|--------------------------------|--|
| Geographical Coordinates | M        |       | 9.2.1.30F                      |  |
| Inner radius             | M        |       | INTEGER(0..2 <sup>16</sup> -1) | The relation between the value (N) and the radius (r) in meters it describes is $5N \leq r < 5(N+1)$ , except for $N=2^{16}-1$ for which the range is extended to include all greater values of (r). |
| Uncertainty radius       | M        |       | INTEGER(0..127)                | The uncertainty "r" is derived from the "uncertainty code" k by $r = 10 \times (1.1^k - 1)$  |
| Offset angle             | M        |       | INTEGER(0..179)                | The relation between the value (N) and the angle (a) in degrees it describes is $2N \leq a < 2(N+1)$   |
| Included angle           | M        |       | INTEGER(0..179)                | The relation between the value (N) and the angle (a) in degrees it describes is $2N < a \leq 2(N+1)$   |
| Confidence               | M        |       | INTEGER(0..127)                |  |

### 9.2.1.30F Geographical Coordinates

This IE contains the description of geographical coordinates.

| IE/Group Name        | Presence | Range | IE Type and Reference                          | Semantics Description  |
|----------------------|----------|-------|--|--|
| Latitude Sign        | M        |       | ENUMERATED(North, South)                       |  |
| Degrees Of Latitude  | M        |       | INTEGER(0..2 <sup>23</sup> -1)                 | The IE value (N) is derived by this formula:<br>$N \leq 2^{23} \times X / 90 < N+1$<br>X being the latitude in degree (0°.. 90°)       |
| Degrees Of Longitude | M        |       | INTEGER(-2 <sup>23</sup> ..2 <sup>23</sup> -1) | The IE value (N) is derived by this formula:<br>$N \leq 2^{24} \times X / 360 < N+1$<br>X being the longitude in degree (-180°..+180°) |

### 9.2.1.30Fa GERAN Cell Capability

The *GERAN Cell Capability* IE is used to transfer the capabilities of a certain GERAN cell via the Iur interface.

| IE/Group Name         | Presence | Range | IE type and reference | Semantics description  |
|-----------------------|----------|-------|-----------------------|--|
| GERAN Cell Capability | M        |       | BIT STRING (16)       | Each bit indicates whether a cell supports a particular functionality or not. The value 1 of a bit indicates that the corresponding functionality is supported in a cell and value 0 indicates that the corresponding functionality is not supported in a cell. Each bit is defined as follows.<br>The first bit: A/Gb mode.<br>The second bit: Iu mode.<br>Note that undefined bits are considered as a spare bit and spare bits shall be set to 0 by the transmitter and shall be ignored by the receiver. |

### 9.2.1.30Fb GERAN Classmark

The *GERAN Classmark* IE is used to transfer the capabilities of a certain GERAN Iu-mode capable cell via the Iur interface.

| IE/Group Name   | Presence | Range | IE type and reference | Semantics description    |
|-----------------|----------|-------|-----------------------|--------------------------|
| GERAN Classmark | M        |       | OCTET STRING          | Contents defined in [38] |

### 9.2.1.30Fc GERAN System Information

The *GERAN System Information* IE provides GERAN specific information.

| IE/Group Name            | Presence | Range                            | IE Type and Reference | Semantics Description  |
|--------------------------|----------|----------------------------------|-----------------------|--|
| <b>GERAN System Info</b> |          | <i>1..&lt;maxNrOfGERANSI&gt;</i> |                       |  |
| >GERAN System Info Block | M        |                                  | OCTET STRING (1..23)  | The first octet contains octet 1 of the GERAN system information block, the second octet contains octet 2 of the GERAN system information block and so on. |

| Range bound           | Explanation  |
|-----------------------|--|
| <i>maxNrOfGERANSI</i> | Maximum number of GERAN SI blocks that can be provided as part of NACC information |

### 9.2.1.30G GPS Almanac

This IE provides the information regarding the GPS Almanac. For further details on the meaning of parameters, see [30].

| IE/Group name  | Presence | Range                               | IE Type and Reference | Semantics Description |
|--|----------|-------------------------------------|-----------------------|-----------------------|
| WN <sub>a</sub>  | M        |                                     | BIT STRING(8)         |                       |
| <b>Satellite Almanac Information</b>   | M        | <i>1..&lt;maxNoOfSatAlmanac&gt;</i> |                       | See Note 1.           |
| >DataID  | M        |                                     | INTEGER (0..3)        |                       |
| >SatID   | M        |                                     | SAT ID 9.2.1.50A      |                       |
| >e   | M        |                                     | BIT STRING(16)        |                       |
| >t <sub>oa</sub>   | M        |                                     | BIT STRING(8)         |                       |
| >δi  | M        |                                     | BIT STRING(16)        |                       |
| >OMEGADOT  | M        |                                     | BIT STRING(16)        |                       |
| >SV Health   | M        |                                     | BIT STRING(8)         |                       |
| >A <sup>1/2</sup>  | M        |                                     | BIT STRING(24)        |                       |
| >OMEGA <sub>0</sub>  | M        |                                     | BIT STRING(24)        |                       |
| >M <sub>0</sub>  | M        |                                     | BIT STRING(24)        |                       |
| >ω   | M        |                                     | BIT STRING(24)        |                       |
| >af <sub>0</sub>   | M        |                                     | BIT STRING(11)        |                       |
| >af <sub>1</sub>   | M        |                                     | BIT STRING(11)        |                       |
| SV Global Health   | O        |                                     | BIT STRING(364)       |                       |
| Note 1: This information element is a simplified representation of the ASN.1 description. Repetitions 1 through maxNoSat and repetitions maxNoSat+1 through maxNoOfSatAlmanac are represented by separate ASN.1 structures with different criticality. |          |                                     |                       |                       |

| Range Bound              | Explanation  |
|--------------------------|--|
| <i>maxNoOfSatAlmanac</i> | Maximum number of satellite almanacs for which information can be provided |

### 9.2.1.30H GPS Ionospheric Model

This IE provides the information regarding the GPS Ionospheric Model. For further details on the meaning of parameters, see [30].

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description |
|---------------|----------|-------|-----------------------|-----------------------|
| $\alpha_0$    | M        |       | BIT<br>STRING(8)      |                       |
| $\alpha_1$    | M        |       | BIT<br>STRING(8)      |                       |
| $\alpha_2$    | M        |       | BIT<br>STRING(8)      |                       |
| $\alpha_3$    | M        |       | BIT<br>STRING(8)      |                       |
| $\beta_0$     | M        |       | BIT<br>STRING(8)      |                       |
| $\beta_1$     | M        |       | BIT<br>STRING(8)      |                       |
| $\beta_2$     | M        |       | BIT<br>STRING(8)      |                       |
| $\beta_3$     | M        |       | BIT<br>STRING(8)      |                       |

### 9.2.1.30I GPS Navigation Model and Time Recovery

This IE contains subframes 1 to 3 of the GPS navigation message. For further details on the meaning of parameters, see [30].

| IE/Group Name                  | Presence | Range                      | IE Type and Reference | Semantics Description                           |
|--------------------------------|----------|----------------------------|-----------------------|---|
| <b>Navigation Message 1to3</b> |          | <i>1..&lt;maxNoSat&gt;</i> |                       |   |
| >Transmission TOW              | M        |                            | INTEGER0..1048575)    | Time of the Week when the message is broadcast. |
| >SatID                         | M        |                            | SAT ID<br>9.2.1.50A   |   |
| >TLM Message                   | M        |                            | BIT STRING(14)        |   |
| >TIm Revd (C)                  | M        |                            | BIT STRING(2)         |   |
| >HO-Word                       | M        |                            | BIT STRING(22)        |   |
| >WN                            | M        |                            | BIT STRING(10)        |   |
| >C/A or P on L2                | M        |                            | BIT STRING(2)         |   |
| >User Range Accuracy Index     | M        |                            | BIT STRING(4)         |   |
| >SV Health                     | M        |                            | BIT STRING(6)         |   |
| >IODC                          | M        |                            | BIT STRING(10)        |   |
| >L2 P Data Flag                | M        |                            | BIT STRING(1)         |   |
| >SF 1 Reserved                 | M        |                            | BIT STRING(87)        |   |
| >T <sub>GD</sub>               | M        |                            | BIT STRING(8)         |   |
| >t <sub>oc</sub>               | M        |                            | BIT STRING(16)        |   |
| >af <sub>2</sub>               | M        |                            | BIT STRING(8)         |   |
| >af <sub>1</sub>               | M        |                            | BIT STRING(16)        |   |
| >af <sub>0</sub>               | M        |                            | BIT STRING(22)        |   |
| >C <sub>rs</sub>               | M        |                            | BIT STRING(16)        |   |
| >Δn                            | M        |                            | BIT STRING(16)        |   |
| >M <sub>0</sub>                | M        |                            | BIT STRING(32)        |   |
| >C <sub>uc</sub>               | M        |                            | BIT STRING(16)        |   |
| >e                             | M        |                            | BIT STRING(32)        |   |
| >C <sub>us</sub>               | M        |                            | BIT STRING(16)        |   |
| >(A) <sup>1/2</sup>            | M        |                            | BIT STRING(32)        |   |
| >t <sub>oe</sub>               | M        |                            | BIT STRING(16)        |   |
| >Fit Interval Flag             | M        |                            | BIT STRING(1)         |   |
| >AODO                          | M        |                            | BIT STRING(5)         |   |
| >C <sub>ic</sub>               | M        |                            | BIT STRING(16)        |   |
| >OMEGA <sub>0</sub>            | M        |                            | BIT STRING(32)        |   |
| >C <sub>is</sub>               | M        |                            | BIT STRING(16)        |   |
| >i <sub>0</sub>                | M        |                            | BIT STRING(32)        |   |
| >C <sub>rc</sub>               | M        |                            | BIT STRING(16)        |   |
| >ω                             | M        |                            | BIT STRING(32)        |   |
| >OMEGA <sub>dot</sub>          | M        |                            | BIT STRING(24)        |   |
| >Idot                          | M        |                            | BIT STRING(14)        |   |
| >Spare/zero fill               | M        |                            | BIT STRING(20)        |   |

| Range Bound     | Explanation  |
|-----------------|--|
| <i>maxNoSat</i> | Maximum number of satellites for which information can be provided |

### 9.2.1.30J GPS Real-Time Integrity

This IE provides the information regarding the status of the GPS constellation. For further details on the meaning of parameters, see [30].

| IE/Group name                         | Presence | Range                      | IE Type and Reference | Semantics Description |
|---------------------------------------|----------|----------------------------|-----------------------|-----------------------|
| <i>CHOICE Bad Satellites Presence</i> | M        |                            |                       |                       |
| > <i>Bad Satellites</i>               |          |                            |                       |                       |
| >> <b>Satellite Information</b>       |          | <i>1..&lt;maxNoSat&gt;</i> |                       |                       |
| >>>BadSatID                           | M        |                            | SAT ID<br>9.2.1.50A   |                       |
| > <i>No Bad Satellites</i>            |          |                            | NULL                  |                       |

| Range Bound     | Explanation  |
|-----------------|--|
| <i>MaxNoSat</i> | Maximum number of satellites for which information can be provided |

### 9.2.1.30K GPS Receiver Geographical Position (GPS RX Pos)

The GPS Receiver Geographical Position is used to identify the geographical coordinates of a GPS receiver relevant for a certain Information Exchange Object.

| IE/Group Name            | Presence | Range | IE Type and Reference | Semantics Description |
|--------------------------|----------|-------|-----------------------|-----------------------|
| Geographical Coordinates | M        |       | 9.2.1.30F             |                       |
| Altitude and direction   | M        |       | 9.2.1.2B              |                       |

### 9.2.1.30L GPS UTC Model

This IE provides the information regarding the GPS UTC Model. For further details on the meaning of parameters, see [30].

| IE/Group name    | Presence | Range | IE Type and Reference | Semantics Description |
|------------------|----------|-------|-----------------------|-----------------------|
| $A_1$            | M        |       | BIT<br>STRING(24)     |                       |
| $A_0$            | M        |       | BIT<br>STRING(32)     |                       |
| $t_{tot}$        | M        |       | BIT<br>STRING(8)      |                       |
| $\Delta t_{LS}$  | M        |       | BIT<br>STRING(8)      |                       |
| $WN_t$           | M        |       | BIT<br>STRING(8)      |                       |
| $WN_{LSF}$       | M        |       | BIT<br>STRING(8)      |                       |
| DN               | M        |       | BIT<br>STRING(8)      |                       |
| $\Delta t_{LSF}$ | M        |       | BIT<br>STRING(8)      |                       |

### 9.2.1.30M Guaranteed Rate Information

The *Guaranteed Rate Information* IE indicates the TFI corresponding to the guaranteed bit rate for the uplink and/or the downlink of a DCH.

| IE/Group Name      | Presence | Range | IE Type and Reference          | Semantics Description                            |
|--------------------|----------|-------|--------------------------------|--|
| Guaranteed UL Rate | O        |       | INTEGER(1.<br>.maxTFcount<br>) | "1": TFI 0,<br>"2": TFI 1,<br>"3": TFI 2,<br>... |
| Guaranteed DL Rate | O        |       | INTEGER(1.<br>.maxTFcount<br>) | "1": TFI 0,<br>"2": TFI 1,<br>"3": TFI 2,<br>... |

### 9.2.1.30N HCS Prio

The HCS Prio is the characteristics of the cell as defined in [15].

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description                           |
|---------------|----------|-------|-----------------------|---|
| HCS Prio      |          |       | INTEGER<br>(0..7)     | 0=Lowest Priority,<br>...<br>7=Highest Priority |

### 9.2.1.30NA HS-DSCH Information To Modify Unsynchronised

The *HS-DSCH Information To Modify Unsynchronised* IE is used for modification of HS-DSCH information in a UE Context with the Unsynchronised Radio Link Reconfiguration procedure.

| IE/Group Name                                       | Presence | Range                         | IE Type and Reference                          | Semantics Description                                | Criticality | Assigned Criticality |
|---|----------|-------------------------------|--|--|-------------|----------------------|
| HS-DSCH MAC-d Flow Specific Information             |          | $0..<max\ nof\ MACd\ Flows>$  |  |  | –           |                      |
| >HS-DSCH MAC-d Flow ID                              | M        |                               | 9.2.1.300                                      |  | –           |                      |
| >Allocation/Retention Priority                      | O        |                               | 9.2.1.1  |  | –           |                      |
| >Transport Bearer Request Indicator                 | M        |                               | 9.2.1.61                                       |  | –           |                      |
| >Traffic Class                                      | O        |                               | 9.2.1.58A                                      |  | –           |                      |
| >Binding ID   | O        |                               | 9.2.1.3  | Shall be ignored if bearer establishment with ALCAP. | –           |                      |
| >Transport Layer Address                            | O        |                               | 9.2.1.62                                       | Shall be ignored if bearer establishment with ALCAP. | –           |                      |
| >TNL QoS  | O        |                               | 9.2.1.56A                                      | Shall be ignored if bearer establishment with ALCAP. | YES         | ignore               |
| <b>Priority Queue Information</b>                   |          | $0..<max\ nof\ PrioQ\ ueues>$ |  |  | –           |                      |
| >Priority Queue ID                                  | M        |                               | 9.2.1.45A                                      |  | –           |                      |
| >Scheduling Priority Indicator                      | O        |                               | 9.2.1.51A                                      |  | –           |                      |
| >Discard Timer                                      | O        |                               | 9.2.1.19C                                      |  | –           |                      |
| >MAC-hs Guaranteed Bit Rate                         | O        |                               | 9.2.1.34Aa                                     |  | –           |                      |
| CQI Power Offset                                    | O        |                               | 9.2.2.24b                                      | For FDD only   | –           |                      |
| ACK Power Offset                                    | O        |                               | 9.2.2.b  | For FDD only   | –           |                      |
| NACK Power Offset                                   | O        |                               | 9.2.2.26a                                      | For FDD only   | –           |                      |
| HS-SCCH Power Offset                                | O        |                               | 9.2.2.19d                                      | For FDD only   | –           |                      |
| TDD ACK NACK Power Offset                           | O        |                               | 9.2.3.7l                                       | For TDD only   | –           |                      |
| HARQ Preamble Mode                                  | O        |                               | 9.2.2.57                                       | For FDD only   | YES         | ignore               |
| MIMO Mode Indicator                                 | O        |                               | 9.2.1.135                                      | For FDD and 1.28Mcps TDD only                        | YES         | reject               |
| Sixtyfour QAM Usage Allowed Indicator               | O        |                               | 9.2.2.79A                                      | For FDD only   | YES         | ignore               |
| Enhanced HS Serving CC Abort                        | O        |                               | ENUMERATED (Abort Enhanced HS Serving CC, ...) | For FDD only   | YES         | reject               |
| UE Support Indicator Extension                      | O        |                               | 9.2.2.103                                      |  | YES         | ignore               |
| Power Offset For S-CPICH for MIMO Request Indicator | O        |                               | 9.2.2.105                                      | For FDD only   | YES         | ignore               |

### 9.2.1.30Na HS-DSCH Initial Capacity Allocation

The *HS-DSCH Initial Capacity Allocation* IE provides flow control information for each scheduling priority class for the HS-DSCH FP over Iur.



| IE/Group Name                       | Presence | Range                              | IE Type and Reference              | Semantics Description   | Criticality | Assigned Criticality |
|-------------------------------------|----------|------------------------------------|------------------------------------|---|-------------|----------------------|
| HS-DSCH Initial Capacity Allocation |          | 1..<<br><i>maxnoofPrioQueues</i> > |                                    |   | –           |                      |
| >Scheduling Priority Indicator      | M        |                                    | 9.2.1.51A                          |   | –           |                      |
| >Maximum MAC-d PDU Size             | M        |                                    | MAC-d PDU Size<br>9.2.1.34A        | Shall be ignored if <i>Maximum MAC-d PDU Size Extended</i> IE is present. | –           |                      |
| >HS-DSCH Initial Window Size        | M        |                                    | 9.2.1.30Nb                         |   | –           |                      |
| >Maximum MAC-d PDU Size Extended    | O        |                                    | MAC PDU Size Extended<br>9.2.1.34D |   | YES         | ignore               |

| Range Bound              | Explanation                       |
|--------------------------|-----------------------------------|
| <i>maxnoofPrioQueues</i> | Maximum number of Priority Queues |

### 9.2.1.30Nb HS-DSCH Initial Window Size

Indicates the initial number of MAC-d PDUs (or octets in case *HS-DSCH MAC-d PDU Size Format* = "Flexible MAC-d PDU Size") that may be transmitted before new credits are received from the DRNC.

| IE/Group Name               | Presence | Range | IE type and reference | Semantics description   |
|-----------------------------|----------|-------|-----------------------|---|
| HS-DSCH Initial Window Size |          |       | INTEGER (1..255)      | Number of MAC-d PDUs<br>If <i>HS-DSCH MAC-d PDU Size Format</i> = "Flexible MAC-d PDU Size" the credit shall be determined in octets:<br>credit (in octets) = <i>Maximum MAC-d PDU Size extended</i> * <i>HS-DSCH Initial Window Size</i> |

### 9.2.1.30O HS-DSCH MAC-d Flow ID

HS-DSCH MAC-d Flow ID is the unique identifier for one MAC-d flow.

| IE/Group Name         | Presence | Range | IE Type and Reference | Semantics Description |
|-----------------------|----------|-------|-----------------------|-----------------------|
| HS-DSCH MAC-d Flow ID |          |       | INTEGER (0..7)        |                       |

### 9.2.1.30OA HS-DSCH MAC-d Flows Information

The *HS-DSCH MAC-d Flows Information* IE is used for the establishment of HS-DSCH MAC-d flows for a UE Context.

| IE/Group Name                           | Presence | Range                        | IE Type and Reference              | Semantics Description   | Criticality | Assigned Criticality |
|---|----------|------------------------------|------------------------------------|---|-------------|----------------------|
| HS-DSCH MAC-d Flow Specific Information |          | 1..<maxn oofMACd Flows>      |                                    |   | –           |                      |
| >HS-DSCH MAC-d Flow ID                  | M        |                              | 9.2.1.300                          |   | –           |                      |
| >Allocation/Retention Priority          | M        |                              | 9.2.1.1                            |   | –           |                      |
| >Traffic Class                          | M        |                              | 9.2.1.58A                          |   | –           |                      |
| >Binding ID                             | O        |                              | 9.2.1.3                            | Shall be ignored if bearer establishment with ALCAP.  | –           |                      |
| >Transport Layer Address                | O        |                              | 9.2.1.62                           | Shall be ignored if bearer establishment with ALCAP.  | –           |                      |
| >TNL QoS                                | O        |                              | 9.2.1.56A                          | Shall be ignored if bearer establishment with ALCAP.  | YES         | ignore               |
| >TrCH Source Statistics Descriptor      | O        |                              | 9.2.1.65                           |   | YES         | ignore               |
| <b>Priority Queue Information</b>       |          | 1..<maxn oofPrioQueues>      |                                    |   | –           |                      |
| >Priority Queue ID                      | M        |                              | 9.2.1.45A                          |   | –           |                      |
| >Associated HS-DSCH MAC-d Flow          | M        |                              | HS-DSCH MAC-d Flow ID<br>9.2.1.300 | The HS-DSCH MAC-d Flow ID shall be one of the flow IDs defined in the HS-DSCH MAC-d Flow Specific Information of this IE. Multiple Priority Queues can be associated with the same HS-DSCH MAC-d Flow ID. | –           |                      |
| >Scheduling Priority Indicator          | M        |                              | 9.2.1.51A                          |   | –           |                      |
| >T1                                     | M        |                              | 9.2.1.54A                          |   | –           |                      |
| >Discard Timer                          | O        |                              | 9.2.1.19C                          |   | –           |                      |
| >MAC-hs Window Size                     | M        |                              | 9.2.1.34C                          |   | –           |                      |
| >MAC-hs Guaranteed Bit Rate             | O        |                              | 9.2.1.34Aa                         |   | –           |                      |
| <b>&gt;MAC-d PDU Size Index</b>         |          | 1..<maxn oofMACd PDUindexes> |                                    |   | –           |                      |
| >>SID                                   | M        |                              | 9.2.1.52D                          | Shall be ignored if <i>Maximum MAC-d PDU Size extended</i> IE is present.   | –           |                      |
| >>MAC-d PDU Size                        | M        |                              | 9.2.1.34A                          | Shall be ignored if <i>Maximum MAC-d PDU</i>  | –           |                      |

|                                     |   |  |  | Size extended<br>IE is present. |     |        |
|-------------------------------------|---|--|--|---------------------------------|-----|--------|
| >RLC Mode                           | M |  | 9.2.1.48D                                |                                 | –   |        |
| >Maximum MAC-d PDU<br>Size extended | O |  | MAC PDU<br>Size<br>Extended<br>9.2.1.34D |                                 | YES | reject |
| >DL RLC PDU Size<br>Format          | O |  | 9.2.1.136                                |                                 | YES | ignore |

| Range Bound                  | Explanation                                |
|------------------------------|--|
| <i>maxnoofMACdFlows</i>      | Maximum number of HS-DSCH MAC-d flows      |
| <i>maxnoofPrioQueues</i>     | Maximum number of Priority Queues          |
| <i>maxnoofMACdPDUindexes</i> | Maximum number of different MAC-d PDU SIDs |

### 9.2.1.300B HS-DSCH MAC-d Flows To Delete

The *HS-DSCH MAC-d Flows To Delete* IE is used for the removal of HS-DSCH MAC-d flows from a UE Context.

| IE/Group Name                    | Presence | Range                         | IE Type and<br>Reference | Semantics Description |
|----------------------------------|----------|-------------------------------|--------------------------|-----------------------|
| HS-DSCH MAC-d Flows To<br>Delete |          | 1..<maxno<br>ofMACdFl<br>ows> |                          |                       |
| >HS-DSCH MAC-d Flow ID           | M        |                               | 9.2.1.300                |                       |

| Range Bound             | Explanation                           |
|-------------------------|---------------------------------------|
| <i>maxnoofMACdFlows</i> | Maximum number of HS-DSCH MAC-d flows |

### 9.2.1.300C HS-DSCH MAC-d PDU Size Format

The *HS-DSCH MAC-d PDU Size Format* IE provides information about the type of MAC-d PDU Size Format used for HS-DSCH. "Indexed MAC-d PDU Size" uses MAC-d PDU sizes based on *SID* IE and *MAC-d PDU Size* IE of *MAC-d PDU Size Index* IE. "Flexible MAC-d PDU Size" uses a flexible MAC-d PDU size with a maximum PDU size as defined by *Maximum MAC-d PDU Size extended* IE of *Priority Queue Information* IE. The actual MAC-d PDU size is determined as specified in [32] and [41].

| IE/Group Name                    | Presence | Range | IE Type and<br>Reference  | Semantics Description |
|----------------------------------|----------|-------|---|-----------------------|
| HS-DSCH MAC-d PDU Size<br>Format |          |       | ENUMERATED<br>(Indexed MAC-d<br>PDU Size, Flexible<br>MAC-d PDU Size) |                       |

### 9.2.1.300a HS-DSCH Physical Layer Category

The *HS-DSCH Physical Layer Category* IE defines a set of UE radio access capabilities related to HSDPA, as defined in [42].

| IE/Group Name                      | Presence | Range | IE Type and<br>Reference | Semantics Description |
|------------------------------------|----------|-------|--------------------------|-----------------------|
| HS-DSCH Physical Layer<br>Category |          |       | INTEGER (1..64,...)      |                       |

### 9.2.1.30P HS-DSCH-RNTI

The HS-DSCH-RNTI is needed for the UE-specific CRC in HS-SCCH and HS-DSCH.

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description |
|---------------|----------|-------|-----------------------|-----------------------|
| HS-DSCH-RNTI  |          |       | INTEGER<br>(0..65535) |                       |

### 9.2.1.30Q HS-DSCH Information To Modify

The *HS-DSCH Information To Modify* IE is used for modification of HS-DSCH information in a UE Context.

| IE/Group Name                                  | Presence | Range  | IE Type and Reference           | Semantics Description   | Criticality | Assigned Criticality |
|--|----------|--|---------------------------------|---|-------------|----------------------|
| <b>HS-DSCH MAC-d Flow Specific Information</b> |          | $0..<max\ number\ of\ MAC\ d\ Flows>$        |                                 |   | –           |                      |
| >HS-DSCH MAC-d Flow ID                         | M        |  | 9.2.1.300                       |   | –           |                      |
| >Allocation/Retention Priority                 | O        |  | 9.2.1.1                         |   | –           |                      |
| >Transport Bearer Request Indicator            | M        |  | 9.2.1.61                        |   | –           |                      |
| >Traffic Class                                 | O        |  | 9.2.1.58A                       |   | –           |                      |
| >Binding ID                                    | O        |  | 9.2.1.3                         | Shall be ignored if bearer establishment with ALCAP.  | –           |                      |
| >Transport Layer Address                       | O        |  | 9.2.1.62                        | Shall be ignored if bearer establishment with ALCAP.  | –           |                      |
| >TNL QoS                                       | O        |  | 9.2.1.56A                       | Shall be ignored if bearer establishment with ALCAP.  | YES         | ignore               |
| <b>Priority Queue Information</b>              |          | $0..<max\ number\ of\ Priority\ Queues>$     |                                 |   | –           |                      |
| >CHOICE <i>Priority Queue</i>                  | M        |  |                                 |   | –           |                      |
| >>Add <i>Priority Queue</i>                    |          |  |                                 |   | –           |                      |
| >>>Priority Queue ID                           | M        |  | 9.2.1.45A                       |   | –           |                      |
| >>>Associated HS-DSCH MAC-d Flow               | M        |  | HS-DSCH MAC-d Flow ID 9.2.1.300 | Shall only refer to a HS-DSCH MAC-d flow already existing in the old configuration. Multiple Priority Queues can be associated with the same HS-DSCH MAC-d Flow ID. | –           |                      |
| >>>Scheduling Priority Indicator               | M        |  | 9.2.1.51A                       |   | –           |                      |
| >>>T1  | M        |  | 9.2.1.54A                       |   | –           |                      |
| >>>Discard Timer                               | O        |  | 9.2.1.19C                       |   | –           |                      |
| >>>MAC-hs Window Size                          | M        |  | 9.2.1.34C                       |   | –           |                      |
| >>>MAC-hs Guaranteed Bit Rate                  | O        |  | 9.2.1.34Aa                      |   | –           |                      |
| >>>MAC-d PDU Size Index                        |          | $1..<max\ number\ of\ MAC\ d\ PDU\ Indices>$ |                                 |   | –           |                      |
| >>>>SID  | M        |  | 9.2.1.52D                       | Shall be ignored if <i>Maximum MAC-d PDU Size extended</i> IE is present.   | –           |                      |
| >>>>MAC-d PDU Size                             | M        |  | 9.2.1.34A                       | Shall be ignored if   | –           |                      |

| IE/Group Name                            | Presence | Range                                       | IE Type and Reference              | Semantics Description   | Criticality | Assigned Criticality |
|--|----------|---|------------------------------------|---|-------------|----------------------|
|  |          |   |                                    | <i>Maximum MAC-d PDU Size extended</i> IE is present.                           |             |                      |
| >>>RLC Mode                              | M        |   | 9.2.1.48D                          |   | –           |                      |
| >>>Maximum MAC-d PDU Size extended       | O        |   | MAC PDU Size Extended<br>9.2.1.34D |   | YES         | reject               |
| >>>DL RLC PDU Size Format                | O        |   | 9.2.1.136                          |   | Yes         | ignore               |
| >>Modify Priority Queue                  |          |   |                                    |   | –           |                      |
| >>>Priority Queue ID                     | M        |   | 9.2.1.45A                          | Shall only refer to a Priority Queue already existing in the old configuration. | –           |                      |
| >>>Scheduling Priority Indicator         | O        |   | 9.2.1.51A                          |   | –           |                      |
| >>>T1                                    | O        |   | 9.2.1.54A                          |   | –           |                      |
| >>>Discard Timer                         | O        |   | 9.2.1.19C                          |   | –           |                      |
| >>>MAC-hs Window Size                    | O        |   | 9.2.1.34C                          |   | –           |                      |
| >>>MAC-hs Guaranteed Bit Rate            | O        |   | 9.2.1.34Aa                         |   | –           |                      |
| >>>MAC-d PDU Size Index                  |          | <i>0..&lt;maximum MAC-d PDU indexes&gt;</i> |                                    |   | –           |                      |
| >>>>SID                                  | M        |   | 9.2.1.52D                          | Shall be ignored if <i>Maximum MAC-d PDU Size extended</i> IE is present.       | –           |                      |
| >>>>MAC-d PDU Size                       | M        |   | 9.2.1.34A                          | Shall be ignored if <i>Maximum MAC-d PDU Size extended</i> IE is present.       | –           |                      |
| >>>Maximum MAC-d PDU Size extended       | O        |   | MAC PDU Size Extended<br>9.2.1.34D |   | YES         | reject               |
| >>>DL RLC PDU Size Format                | O        |   | 9.2.1.136                          |   | Yes         | ignore               |
| >>Delete Priority Queue                  |          |   |                                    |   | –           |                      |
| >>>Priority Queue ID                     | M        |   | 9.2.1.45A                          | Shall only refer to a Priority Queue already existing in the old configuration. | –           |                      |
| MAC-hs Reordering Buffer Size for RLC-UM | O        |   | 9.2.1.34Ab                         |   | –           |                      |
| CQI Feedback Cycle k                     | O        |   | 9.2.2.24a                          | For FDD only  | –           |                      |
| CQI Repetition Factor                    | O        |   | 9.2.2.24c                          | For FDD only  | –           |                      |
| ACK-NACK Repetition Factor               | O        |   | 9.2.2.a                            | For FDD only  | –           |                      |
| CQI Power Offset                         | O        |   | 9.2.2.24b                          | For FDD only  | –           |                      |
| ACK Power Offset                         | O        |   | 9.2.2.b                            | For FDD only  | –           |                      |
| NACK Power Offset                        | O        |   | 9.2.2.26a                          | For FDD only  | –           |                      |



| IE/Group Name                                       | Presence | Range | IE Type and Reference  | Semantics Description  | Criticality | Assigned Criticality |
|---|----------|-------|--|--|-------------|----------------------|
| HS-SCCH Power Offset                                | O        |       | 9.2.2.19d  | For FDD only   | –           |                      |
| HS-SCCH Code Change Grant                           | O        |       | 9.2.1.30S  |  | –           |                      |
| TDD ACK NACK Power Offset                           | O        |       | 9.2.3.7I   | For TDD only   | –           |                      |
| HARQ Preamble Mode                                  | O        |       | 9.2.2.57   | For FDD only   | YES         | ignore               |
| HS-PDSCH Code Change Grant                          | O        |       | 9.2.1.30W  | For FDD only   | YES         | ignore               |
| MIMO Mode Indicator                                 | O        |       | 9.2.1.135  | For FDD and 1.28Mcps TDD only  | YES         | reject               |
| HS-DSCH MAC-d PDU Size Format                       | O        |       | 9.2.1.30O C  |  | YES         | reject               |
| Sixtyfour QAM Usage Allowed Indicator               | O        |       | 9.2.2.79A  | For FDD only   | YES         | ignore               |
| <b>UE Capabilities Information</b>                  | O        |       |  |  | YES         | ignore               |
| >HS-DSCH Physical Layer Category                    | M        |       | 9.2.1.30O a  |  | –           |                      |
| >1.28 Mcps TDD uplink physical channel capability   | O        |       | 9.2.3.10D  | Applicable to 1.28Mcps TDD only  | YES         | ignore               |
| >Number of Supported Carriers                       | O        |       | ENUMERATED ( One-one carrier, One-three carrier, Three-three carrier, One-six carrier, Tree-six carrier, Six-six carrier, ...) | Applicable to 1.28Mcps TDD only<br>This IE indicates the number of carrier that UE can support at the same time,where " One-three carrier" means the number of supported carrier is one for the uplink,and three for the downlink. | YES         | reject               |
| >Multi-carrier HS-DSCH Physical Layer Category      | O        |       | 9.2.1.30O a  | Applicable to 1.28Mcps TDD only  | YES         | ignore               |
| >MIMO SF Mode Supported For HS-PDSCH dual stream    | O        |       | ENUMERATED (SF1, SF1/SF16)   | Applicable to 1.28Mcps TDD only  | YES         | ignore               |
| Enhanced HS Serving CC Abort                        | O        |       | ENUMERATED (Abort Enhanced HS Serving CC, ...)   | For FDD only   | YES         | reject               |
| UE Support Indicator Extension                      | O        |       | 9.2.2.103  |  | YES         | ignore               |
| Power Offset For S-CPICH for MIMO Request Indicator | O        |       | 9.2.2.105  | For FDD only   | YES         | ignore               |

| Range bound                  | Explanation                                      |
|------------------------------|--|
| <i>maxnoofMACdFlows</i>      | Maximum number of MAC-d flows.                   |
| <i>maxnoofPrioQueues</i>     | Maximum number of Priority Queues.               |
| <i>maxnoofMACdPDUindexes</i> | Maximum number of MAC-d PDU Size Indexes (SIDs). |

### 9.2.1.30R HS-SCCH Code Change Indicator

The HS-SCCH Code Change Indicator indicates whether the HS-SCCH Code change is needed or not.

| IE/Group Name                 | Presence | Range | IE type and reference                   | Semantics description |
|-------------------------------|----------|-------|---|-----------------------|
| HS-SCCH Code Change Indicator |          |       | ENUMERATED (HS-SCCH Code Change needed) |                       |

### 9.2.1.30S HS-SCCH Code Change Grant

The *HS-SCCH Code Change Grant* IE indicates that modification of HS-SCCH Codes is granted.

| IE/Group Name             | Presence | Range | IE Type and Reference       | Semantics Description |
|---------------------------|----------|-------|-----------------------------|-----------------------|
| HS-SCCH Code Change Grant |          |       | ENUMERATED (Change Granted) |                       |

### 9.2.1.30T IMEI

The IMEI is a permanent UE Equipment Identity, see ref. [1].

| IE/Group Name | Presence | Range | IE Type and Reference   | Semantics Description  |
|---------------|----------|-------|-------------------------|--|
| IMEI          |          |       | OCTET STRING (SIZE (8)) | <ul style="list-style-type: none"> <li>- hexadecimal digits 0 to F, two hexadecimal digits per octet,</li> <li>- each hexadecimal digit encoded 0000 to 1111,</li> <li>- 1111 used as filler for bits 8 to 5 of last octet</li> <li>- bit 4 to 1 of octet n encoding digit 2n-1</li> <li>- bit 8 to 5 of octet n encoding digit 2n</li> </ul> <p>Number of hexadecimal digits shall be 15.</p> |

### 9.2.1.30U IMEISV

The IMEISV is a permanent UE Equipment Identity, see ref. [1].

| IE/Group Name | Presence | Range | IE Type and Reference   | Semantics Description  |
|---------------|----------|-------|-------------------------|--|
| IMEISV        |          |       | OCTET STRING (SIZE (8)) | <ul style="list-style-type: none"> <li>- hexadecimal digits 0 to F, two hexadecimal digits per octet,</li> <li>- each hexadecimal digit encoded 0000 to 1111,</li> <li>- 1111 used as filler for bits 8 to 5 of last octet</li> <li>- bit 4 to 1 of octet n encoding digit 2n-1</li> <li>- bit 8 to 5 of octet n encoding digit 2n</li> </ul> <p>Number of hexadecimal digits shall be 16.</p> |

### 9.2.1.30V HS-PDSCH Code Change Indicator [FDD]

The HS-PDSCH Code Change Indicator indicates whether the HS-PDSCH Code change is needed or not.

| IE/Group Name                  | Presence | Range | IE Type and Reference                    | Semantics Description |
|--------------------------------|----------|-------|--|-----------------------|
| HS-PDSCH Code Change Indicator |          |       | ENUMERATED (HS-PDSCH Code Change needed) |                       |

### 9.2.1.30W HS-PDSCH Code Change Grant [FDD]

The *HS-PDSCH Code Change Grant* IE indicates that modification of HS-PDSCH Codes is granted.

| IE/Group Name              | Presence | Range | IE Type and Reference      | Semantics Description |
|----------------------------|----------|-------|----------------------------|-----------------------|
| HS-PDSCH Code Change Grant |          |       | ENUMERATED(Change Granted) |                       |

### 9.2.1.31 IMSI

The IMSI is the permanent UE user Identity, see ref. [1].

| IE/Group Name | Presence | Range | IE Type and Reference     | Semantics Description  |
|---------------|----------|-------|---------------------------|--|
| IMSI          |          |       | OCTET STRING (SIZE(3..8)) | -Decimal digits coded in BCD<br>-"1111" used as filler<br>-bit 4 to 1 of octet n is encoding digit 2n-1<br>-bit 8 to 5 of octet n is encoding digit 2n |

### 9.2.1.31A Information Exchange ID

The Information Exchange ID uniquely identifies any requested information per RNS.

| IE/Group Name           | Presence | Range | IE Type and Reference            | Semantics Description |
|-------------------------|----------|-------|----------------------------------|-----------------------|
| Information Exchange ID | M        |       | INTEGER(0 .. 2 <sup>20</sup> -1) |                       |

### 9.2.1.31B Information Exchange Object Type

Void.

### 9.2.1.31C Information Report Characteristics

The information report characteristics define how the reporting shall be performed.

| IE/Group Name   | Presence | Range | IE Type and Reference | Semantics Description   |
|---|----------|-------|-----------------------|---|
| CHOICE <i>Information Report Characteristics Type</i> | M        |       |                       |   |
| > <i>On Demand</i>                                    |          |       | NULL                  |   |
| > <i>Periodic</i>                                     |          |       |                       |   |
| >>CHOICE <i>Information Report Periodicity Scale</i>  | M        |       |                       | The frequency with which the Node B shall send information reports. |
| >>> <i>minute</i>                                     |          |       |                       |   |
| >>>>Report Periodicity Value                          | M        |       | INTEGER (1..60,...)   |   |
| >>> <i>hour</i>                                       |          |       |                       |   |
| >>>>Report Periodicity Value                          | M        |       | INTEGER (1..24,...)   |   |
| > <i>On Modification</i>                              |          |       |                       |   |
| >>Information Threshold                               | O        |       | 9.2.1.31D             |   |

### 9.2.1.31D Information Threshold

The Information Threshold indicates which kind of information shall trigger the Information Reporting procedure.

| IE/Group Name                       | Presence | Range | IE Type and Reference        | Semantics Description  | Criticality | Assigned Criticality |
|-------------------------------------|----------|-------|------------------------------|--|-------------|----------------------|
| CHOICE <i>Information Type Item</i> | M        |       |                              |  | –           |                      |
| > <i>DGPS Corrections</i>           |          |       |                              |  |             |                      |
| >>PRC Deviation                     | M        |       | ENUMERATED(1, 2, 5, 10, ...) | PRC deviation in meters from the previously reported value, which shall trigger a report | –           |                      |
| > <i>DGANSS</i>                     |          |       |                              |  |             |                      |
| >>PRC Deviation                     | M        |       | ENUMERATED(1, 2, 5, 10, ...) | PRC deviation in meters from the previously reported value, which shall trigger a report | –           |                      |

### 9.2.1.31E Information Type

The Information Type indicates which kind of information the RNS shall provide.

| IE/Group Name                  | Presence | Range                    | IE Type and Reference   | Semantics Description   | Criticality | Assigned Criticality |
|--------------------------------|----------|--------------------------|---|---|-------------|----------------------|
| Information Type Item          | M        |                          | ENUMERATED (UTRAN Access Point Position with Altitude, UTRAN Access Point Position, IPDL Parameters, GPS Information, DGPS Corrections, GPS RX Pos, SFN-SFN Measurement Reference Point Position,..., Cell Capacity Class, NACC Related Data, MBMS Bearer Service Full Address, Inter-frequency Cell Information, GANSS Information, DGANSS Corrections, GANSS RX Pos, MBMS Counting Information, MBMS Transmission Mode, MBMS Neighbouring Cell Information, MBMS RLC Sequence Number) | For information exchange on the Iur-g interface, only the Cell Capacity Class is used.<br><br>MBMS Counting Information, MBMS Transmission Mode, MBMS Neighbouring Cell Information and MBMS RLC Sequence Number shall only be used by FDD. | –           |                      |
| <b>GPS Information</b>         | C-GPS    | 1..<maximum of GPSTypes> |   |   | –           |                      |
| >GPS Information Item          |          |                          | ENUMERATED (GPS Navigation Model and Time Recovery, GPS Ionospheric Model, GPS UTC Model, GPS Almanac, GPS Real-Time Integrity, ...)  |   | –           |                      |
| <b>GANSS Information</b>       | C-GANSS  |                          |   |   | YES         | Ignore               |
| >GANSS Common Data             |          | 0..1                     |   |   | –           |                      |
| >>Ionospheric Model            | O        |                          | BOOLEAN   | True means requested  | –           |                      |
| >>Additional Ionospheric Model | O        |                          | Additional Ionospheric Model Request 9.2.1.122d   | Presence means requested.   | YES         | Ignore               |
| >>Earth Orientation Parameters | O        |                          | Earth Orientation Parameters Request 9.2.1.122e   |   | YES         | Ignore               |

|  |                      |  |  |   |     |        |
|--|----------------------|--|--|---|-----|--------|
| >GANSS Generic Data                                    |                      | <i>0..&lt;maxn<br/>oofGANS<br/>S&gt;</i> |  |   | –   |        |
| >>GANSS ID   | O                    |  | 9.2.1.119  |   | –   |        |
| >>GANSS Navigation Model And Time Recovery             | O                    |  | BOOLEAN  | True means requested  | –   |        |
| >>GANSS Time Model GNSS-GNSS                           | O                    |  | BIT STRING(9)  | Defines the time model required.<br><br>Bit 1 is the MSB and bit 9 is the LSB (see section 9.2.0).<br><br>Bit 1:GPS,<br>Bit 2:Galileo,<br>Bit 3:QZSS,<br>Bit 4:GLONASS.<br><br>Other bits are reserved. | –   |        |
| >>GANSS UTC Model                                      | O                    |  | BOOLEAN  | True means requested  | –   |        |
| >>GANSS Almanac  | O                    |  | BOOLEAN  | True means requested  | –   |        |
| >>GANSS Real Time Integrity                            | O                    |  | BOOLEAN  | True means requested  | –   |        |
| >>GANSS Data Bit Assistance                            |                      | <i>0..1</i>                              |  |   | –   |        |
| >>>GANSS TOD   | M                    |  | INTEGER (0..86399)   | The GANSS Time Of Day for which the data bits are requested   | –   |        |
| >>>Data Bit Assistance                                 |                      | <i>1</i>                                 |  |   | –   |        |
| >>>>DGANSS Signal ID                                   | M                    |  | BIT STRING(8)  | Defined in [16]   | –   |        |
| >>>>GANSS Data Bit Interval                            | M                    |  | INTEGER (0..15)  | Defined in [16]   | –   |        |
| >>>>Satellite Information                              |                      | <i>0..&lt;max<br/>GANSS<br/>Sat&gt;</i>  |  |   | –   |        |
| >>>>Sat ID   | M                    |  | INTEGER(0..63)   | Identifies the satellite and is equal to (SV ID No - 1)   | –   |        |
| >>GANSS Additional Navigation Models And Time Recovery | O                    |  | GANSS Additional Navigation Models And Time Recovery Request<br>9.2.1.122f |   | YES | Ignore |
| >>GANSS Additional UTC Models                          | O                    |  | GANSS Additional UTC Models Request<br>9.2.1.122g                          |   | YES | Ignore |
| >>GANSS Auxiliary Information                          | O                    |  | GANSS Auxiliary Information Request<br>9.2.1.122h                          |   | YES | Ignore |
| >>SBAS ID  | C-GANSS-ID           |  | 9.2.1.122b   |   | YES | Ignore |
| DGANSS Corrections Req                                 | C-DGANSS Corrections | <i>1</i>                                 |  |   | YES | ignore |

|   |                         |                  |               |                 |     |        |
|---|-------------------------|------------------|---------------|-----------------|-----|--------|
| >DGNSS Signal ID                            | M                       |                  | BIT STRING(8) | Defined in [16] | -   |        |
| >GANSS ID                                   | O                       |                  | 9.2.1.119     |                 | YES | Ignore |
| <b>MBMS RLC Sequence Number Information</b> | C-MBMSRLCSequenceNumber |                  |               | FDD only        | YES | Ignore |
| >MBMS Cell List                             |                         | 1..<maxnoofcell> |               |                 | -   |        |
| >>C-ID                                      | M                       |                  | 9.2.1.6       |                 | -   |        |
| >>MBMS Bearer Service List                  |                         | 1..<maxnoofMBMS> |               |                 | -   |        |
| >>>TMGI                                     | M                       |                  | 9.2.1.80      |                 | -   |        |
| >>>Time Stamp                               | M                       |                  | 9.2.2.98      |                 | -   |        |

| Condition                    | Explanation   |
|------------------------------|---|
| <i>DGNSSCorrections</i>      | The IE shall be present if the Information Type Item IE indicates "DGNSS Corrections".                |
| <i>GPS</i>                   | This IE shall be present if the <i>Information Type Item</i> IE indicates "GPS Information".          |
| <i>GANSS</i>                 | This IE shall be present if the <i>Information Type Item</i> IE indicates "GANSS Information".        |
| <i>GANSS-ID</i>              | This IE shall be present if the <i>GANSS ID</i> IE indicates "SBAS".                                  |
| <i>MBMSRLCSequenceNumber</i> | This IE shall be present if the <i>Information Type Item</i> IE indicates "MBMS RLC Sequence Number". |

| Range Bound            | Explanation  |
|------------------------|--|
| <i>maxGANSSSat</i>     | Maximum number of satellites for which data is included in the IE              |
| <i>maxnoofGPSTypes</i> | Maximum number of GPS Information Types supported in one Information Exchange. |
| <i>maxnoofGANSS</i>    | Maximum number of GANSS Systems.   |
| <i>maxnoofMBMS</i>     | Maximum number of MBMS bearer services that a UE can join.                     |
| <i>Maxnoofcell</i>     | Maximum number of cells that can be indicated in the corresponding IE.         |

### 9.2.1.31F IPDL Parameters

| IE/Group Name                       | Presence | Range | IE Type and Reference | Semantics Description                            | Criticality | Assigned Criticality |
|-------------------------------------|----------|-------|-----------------------|--|-------------|----------------------|
| CHOICE <i>IPDL Parameters</i>       |          |       |                       |  | -           |                      |
| > <i>IPDL FDD Parameters</i>        |          |       |                       |  |             |                      |
| >>IPDL FDD parameters               | M        |       | 9.2.2.21B             |  | -           |                      |
| > <i>IPDL TDD Parameters</i>        |          |       |                       | Applicable to 3.84Mcps TDD and 7.68Mcps TDD only |             |                      |
| >>IPDL TDD parameters               | M        |       | 9.2.3.4B              |  | -           |                      |
| > <i>Additional IPDL Parameters</i> |          |       |                       |  |             |                      |
| >>IPDL TDD Parameters LCR           |          |       |                       | Applicable to 1.28Mcps TDD only                  | -           |                      |
| >>>IPDL TDD parameters LCR          | M        |       | 9.2.3.4Bb             |  | YES         | reject               |

### 9.2.1.31G Inter-frequency Cell Information

This IE contains the inter-frequency cell information of a cell in the DRNS broadcasted in SIB11 or SIB12.

| IE/Group Name                           | Presence | Range                      | IE Type and Reference | Semantics Description  |
|---|----------|----------------------------|-----------------------|--|
| <b>SIB11</b>                            |          | 0..2                       |                       |  |
| >Inter-frequency Cell Indication- SIB11 | M        |                            | Integer(0..1)         | Value tag in 10.3.7.45 in [16] with the same IE name.  |
| >Inter-frequency Cell List in SIB11     |          | 0..<maxCell/SIB11 OrSIB12> |                       |  |
| >>Inter-frequency Cell Id               | M        |                            | Integer(0..31)        | The order of the inter-frequency cell in SIB11.  |
| >>DL UARFCN                             | M        |                            | UARFCN 9.2.1.66       |  |
| >>UL UARFCN                             | O        |                            | UARFCN 9.2.1.66       | If this IE is not present, the default duplex distance defined for the operating frequency band shall be used [43] |
| >>Primary Scrambling Code               | M        |                            | 9.2.1.45              |  |
| <b>SIB12</b>                            |          | 0..2                       |                       |  |
| >Inter-frequency Cell Indication- SIB12 | M        |                            |                       | Value tag in 10.3.7.45 in [16] with the same IE name.  |
| >Inter-frequency Cell List in SIB12     |          | 0..<maxCell/SIB11 OrSIB12> |                       |  |
| >>Inter-frequency Cell Id               |          |                            | Integer(0..31)        | The order of the inter-frequency cell in SIB12.  |
| >>DL UARFCN                             | M        |                            | UARFCN 9.2.1.66       |  |
| >>UL UARFCN                             | O        |                            | UARFCN 9.2.1.66       | If this IE is not present, the default duplex distance defined for the operating frequency band shall be used [43] |
| >>Primary Scrambling Code               | M        |                            | 9.2.1.45              |  |

| Range bound                 | Explanation  |
|-----------------------------|--|
| <i>maxCell/SIB11OrSIB12</i> | Maximum number of inter-frequency cells broadcasted in SIB11 or SIB12. |

### 9.2.1.32 L3 Information

This parameter contains the Layer 3 Information from a Uu message as received from the UE over the Uu interface or the Layer 3 Information for a Uu message to be sent to a UE by the DRNC, as defined in ref. [16].

| IE/Group Name  | Presence | Range | IE Type and Reference | Semantics Description               |
|----------------|----------|-------|-----------------------|-------------------------------------|
| L3 Information |          |       | BIT STRING            | The content is defined in ref. [16] |

### 9.2.1.33 Limited Power Increase

Void.

### 9.2.1.33A Load Value

The *Load Value* IE contains the total load on the measured object relative to the maximum planned load for both the uplink and downlink. It is defined as the load percentage of the Cell Capacity Class.



| IE/Group Name       | Presence | Range | IE Type and Reference | Semantics Description  |
|---------------------|----------|-------|-----------------------|--|
| Uplink Load Value   | M        |       | INTEGER(0..100)       | Value 0 shall indicate the minimum load, and 100 shall indicate the maximum load. Load should be measured on a linear scale. |
| Downlink Load Value | M        |       | INTEGER(0..100)       | Value 0 shall indicate the minimum load, and 100 shall indicate the maximum load. Load should be measured on a linear scale. |

### 9.2.1.34 MAC-c/sh SDU Length

Indicates the MAC-c/sh SDU Length. Which is used for FACH, [TDD - DSCH and USCH]. There may be multiple MAC-c/sh SDU Lengths per priority class.

| IE/Group Name       | Presence | Range | IE Type and Reference | Semantics Description                       |
|---------------------|----------|-------|-----------------------|---|
| MAC-c/sh SDU Length |          |       | INTEGER(1..5000)      | Size of the MAC-c/sh SDU in number of bits. |

### 9.2.1.34A MAC-d PDU Size

The *MAC-d PDU Size* IE provides the size in bits of the MAC-d PDU.

| IE/Group Name  | Presence | Range | IE Type and Reference | Semantics Description   |
|----------------|----------|-------|-----------------------|---|
| MAC-d PDU Size |          |       | INTEGER (1..5000,...) | In case of E-DCH, value 8 and values not multiple of 8 shall not be used. |

### 9.2.1.34Aa MAC-hs Guaranteed Bit Rate

The *MAC-hs Guaranteed Bit Rate* IE indicates the guaranteed number of bits per second that Node B should deliver over the air interface under normal operating conditions (provided there is data to deliver). If the *MAC-hs Guaranteed Bit Rate* IE is received with the value set to 0 during RL set up or modification, no guarantee is applied.

| IE/Group Name              | Presence | Range | IE type and reference   | Semantics description |
|----------------------------|----------|-------|---|-----------------------|
| MAC-hs Guaranteed Bit Rate |          |       | INTEGER (0..2 <sup>24</sup> -1, ..., 2 <sup>24</sup> ..256,000,000) | Unit: bit/s           |

### 9.2.1.34Ab MAC-hs Reordering Buffer Size for RLC-UM

The *MAC-hs Reordering Buffer Size for RLC-UM* IE indicates the portion of the buffer in the UE that can be used for RLC-UM traffic (i.e. for Priority Queues whose *RLC Mode* IE is set to "RLC-UM").

| IE/Group Name                            | Presence | Range | IE Type and Reference | Semantics Description  |
|--|----------|-------|-----------------------|--|
| MAC-hs Reordering Buffer Size for RLC-UM |          |       | INTEGER (0..300,...)  | Unit: kBytes<br>And N kBytes = N*1024 Bytes.<br>The D R N S shall use this value to avoid the overflow of the UE buffer. |

### 9.2.1.34B MAC-hs Reset Indicator

The *MAC-hs Reset Indicator* IE indicates that a reset of the MAC-hs is not required.

| IE/Group Name          | Presence | Range | IE Type and Reference         | Semantics Description |
|------------------------|----------|-------|-------------------------------|-----------------------|
| MAC-hs Reset Indicator |          |       | ENUMERATED (MAC-hs Not Reset) |                       |

### 9.2.1.34C MAC-hs Window Size

The *MAC-hs Window Size* IE is used for MAC-hs PDU retransmission as defined in [41].

| IE/Group Name      | Presence | Range | IE type and reference                    | Semantics description |
|--------------------|----------|-------|--|-----------------------|
| MAC-hs Window Size |          |       | ENUMERATED (4, 6, 8, 12, 16, 24, 32,...) |                       |

### 9.2.1.34D MAC PDU Size Extended

The *MAC PDU Size Extended* IE provides the size in octets of the MAC level PDU when an extended MAC level PDU size is required.

| IE/Group Name         | Presence | Range | IE Type and Reference      | Semantics Description                       |
|-----------------------|----------|-------|----------------------------|---|
| MAC PDU Size Extended |          |       | INTEGER (1..1504,...,1505) | In case of E-DCH, value 1 shall not be used |

### 9.2.1.35 Maximum Allowed UL Tx Power

Maximum Allowed UL Tx Power is the maximum power that a UE in a particular cell is allowed to transmit.

| IE/Group Name               | Presence | Range | IE Type and Reference | Semantics Description |
|-----------------------------|----------|-------|-----------------------|-----------------------|
| Maximum Allowed UL Tx Power |          |       | INTEGER(-50..+33)     | dBm                   |

### 9.2.1.35A Measurement Availability Indicator

Void

### 9.2.1.35B Measurement Change Time

| IE/Group Name           | Presence | Range | IE Type and Reference | Semantics Description                          |
|-------------------------|----------|-------|-----------------------|--|
| Measurement Change Time | M        |       | INTEGER (1..6000,...) | Unit: ms<br>Range: 10..60000 ms<br>Step: 10 ms |

### 9.2.1.36 Measurement Filter Coefficient

The Measurement Filter Coefficient determines the amount of filtering to be applied for measurements.

| IE/Group Name                  | Presence | Range | IE Type and Reference  | Semantics Description |
|--------------------------------|----------|-------|--|-----------------------|
| Measurement Filter Coefficient |          |       | ENUMERATED(0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 13, 15, 17, 19,...) |                       |

### 9.2.1.36A Measurement Hysteresis Time

The Measurement Hysteresis Time provides the duration during which a reporting criterion has to be fulfilled for the Measurement Reporting procedure to be triggered.

| IE/Group Name               | Presence | Range | IE Type and Reference | Semantics Description                          |
|-----------------------------|----------|-------|-----------------------|--|
| Measurement Hysteresis Time |          |       | INTEGER(1..6000,...)  | Unit: ms<br>Range: 10..60000 ms<br>Step: 10 ms |

### 9.2.1.37 Measurement ID

The Measurement ID uniquely identifies a dedicated measurement within a UE Context or a common measurement within a Distant RNC Context [TDD – or a UE measurement within a UE Context].

| IE/Group Name  | Presence | Range | IE Type and Reference            | Semantics Description |
|----------------|----------|-------|----------------------------------|-----------------------|
| Measurement ID |          |       | INTEGER(0 .. 2 <sup>20</sup> -1) |                       |

### 9.2.1.38 Measurement Increase/Decrease Threshold

The Measurement Increase/Decrease Threshold defines the threshold that shall trigger Event C or D.

| IE/Group Name  | Presence | Range | IE Type and Reference   | Semantics Description  | Criticality | Assigned Criticality |
|--|----------|-------|-------------------------|--|-------------|----------------------|
| CHOICE<br><i>Measurement Increase/Decrease Threshold</i> | M        |       |                         |  | –           |                      |
| > <i>SIR</i>   |          |       |                         |  |             |                      |
| >> <i>SIR</i>  | M        |       | INTEGER(0..62)          | 0: 0 dB<br>1: 0.5 dB<br>2: 1 dB<br>...<br>62: 31dB                               | –           |                      |
| > <i>SIR Error</i>                                       |          |       |                         | FDD Only   |             |                      |
| >> <i>SIR Error</i>                                      | M        |       | INTEGER(0..124)         | 0: 0 dB<br>1: 0.5 dB<br>2: 1 dB<br>...<br>124: 62 dB                             | –           |                      |
| > <i>Transmitted Code Power</i>                          |          |       |                         |  |             |                      |
| >> <i>Transmitted Code Power</i>                         | M        |       | INTEGER(0..112<br>,...) | 0: 0 dB<br>1: 0.5 dB<br>2: 1 dB<br>...<br>112: 56 dB                             | –           |                      |
| > <i>RSCP</i>  |          |       |                         | TDD Only   |             |                      |
| >> <i>RSCP</i>   | M        |       | INTEGER(0..126)         | 0: 0 dB<br>1: 0.5 dB<br>2: 1 dB<br>...<br>126: 63 dB                             | –           |                      |
| > <i>Round Trip Time</i>                                 |          |       |                         | FDD Only   |             |                      |
| >> <i>Round Trip Time</i>                                | M        |       | INTEGER(0..327<br>66)   | 0: 0 chips<br>1: 0.0625 chips<br>2: 0.1250 chips<br>...<br>32766: 2047.875 chips | –           |                      |
| > <i>Additional Measurement Thresholds</i>               |          |       |                         |  |             |                      |
| >> <i>Load</i>   |          |       |                         |  |             |                      |
| >>> <i>Load</i>  | M        |       | INTEGER(0..100)         | Units are the same as for the Uplink Load Value IE and Downlink Load Value IE.   | –           |                      |
| >> <i>Transmitted Carrier Power</i>                      |          |       |                         |  |             |                      |
| >>> <i>Transmitted Carrier Power</i>                     | M        |       | INTEGER(0..100)         | According to mapping in [23] and [24].   | YES         | reject               |
| >> <i>Received Total Wide Band Power</i>                 |          |       |                         |  |             |                      |
| >>> <i>Received Total Wide Band Power</i>                | M        |       | INTEGER(0..620)         | 0: 0dB<br>1: 0.1dB<br>2: 0.2dB<br>...<br>620: 62dB                               | YES         | reject               |
| >> <i>UL Timeslot ISCP</i>                               |          |       |                         | TDD Only   |             |                      |
| >>> <i>UL Timeslot ISCP</i>                              | M        |       | INTEGER(0..126)         | 0: 0dB<br>1: 0.5dB<br>2: 1dB<br>...<br>126: 63dB                                 | YES         | reject               |
| >> <i>RT Load</i>  |          |       |                         |  |             |                      |

|                                |   |  |                      |  |     |        |
|--------------------------------|---|--|----------------------|--|-----|--------|
| >>>RT Load                     | M |  | INTEGER(0..100 )     | Units are the same as for the <i>Uplink RT Load Value</i> IE and <i>Downlink RT Load Value</i> IE. | YES | reject |
| >> <i>NRT Load Information</i> |   |  |                      |  |     |        |
| >>>NRT Load Information        | M |  | INTEGER(0..3)        |  | YES | reject |
| >> <i>UpPTS interference</i>   |   |  |                      | 1.28Mcps TDD Only  |     |        |
| >>>UpPTS interference Value    | M |  | INTEGER (0..127,...) | According to mapping in [24]   | YES | reject |

### 9.2.1.38A Measurement Recovery Behavior

This IE controls the Measurement Recovery Behavior.

| IE/Group Name                 | Presence | Range | IE Type and Reference | Semantics Description |
|-------------------------------|----------|-------|-----------------------|-----------------------|
| Measurement Recovery Behavior |          |       | NULL                  |                       |

### 9.2.1.38B Measurement Recovery Reporting Indicator

This IE indicates the Measurement Recovery Reporting.

| IE/Group Name                            | Presence | Range | IE Type and Reference | Semantics Description |
|--|----------|-------|-----------------------|-----------------------|
| Measurement Recovery Reporting Indicator |          |       | NULL                  |                       |

### 9.2.1.38C Measurement Recovery Support Indicator

This IE indicates the Measurement Recovery Support.

| IE/Group Name                          | Presence | Range | IE Type and Reference | Semantics Description |
|--|----------|-------|-----------------------|-----------------------|
| Measurement Recovery Support Indicator |          |       | NULL                  |                       |

### 9.2.1.39 Measurement Threshold

The Measurement Threshold defines which threshold that shall trigger Event A, B, E, F or On Modification.

| IE/Group Name  | Presence | Range | IE Type and Reference | Semantics Description   | Criticality | Assigned Criticality |
|--|----------|-------|-----------------------|---|-------------|----------------------|
| CHOICE<br><i>Measurement Threshold</i>                             |          |       |                       |   | -           |                      |
| > <i>SIR</i>   |          |       |                       |   |             |                      |
| >> <i>SIR</i>  | M        |       | INTEGER(0..63)        | According to mapping in ref. [23] and [24].                             | -           |                      |
| > <i>SIR Error</i>   |          |       |                       | FDD Only  |             |                      |
| >> <i>SIR Error</i>  | M        |       | INTEGER(0..125)       | According to mapping in [23]  | -           |                      |
| > <i>Transmitted Carrier Power</i>                                 |          |       |                       |   |             |                      |
| >> <i>Transmitted Code Power</i>                                   | M        |       | INTEGER(0..127)       | According to mapping in ref. [23] and [24].                             | -           |                      |
| > <i>RSCP</i>  |          |       |                       | TDD Only  |             |                      |
| >> <i>RSCP</i>   | M        |       | INTEGER(0..127)       | According to mapping in ref. [24]                                       | -           |                      |
| > <i>Rx Timing Deviation</i>                                       |          |       |                       | Applicable to 3.84Mcps TDD Only   |             |                      |
| >> <i>Rx Timing Deviation</i>                                      | M        |       | INTEGER(0..8191)      | According to mapping in [24]  | -           |                      |
| > <i>Round Trip Time</i>   |          |       |                       | FDD Only  |             |                      |
| >> <i>Round Trip Time</i>  | M        |       | INTEGER(0..32767)     | According to mapping in [23]  | -           |                      |
| > <i>Additional Measurement Thresholds</i>                         |          |       |                       |   |             |                      |
| >> <i>T<sub>UTRAN-GPS</sub> Measurement Threshold Information</i>  |          |       |                       |   |             |                      |
| >>> <i>T<sub>UTRAN-GPS</sub> Measurement Threshold Information</i> | M        |       | 9.2.1.59C             |   | YES         | reject               |
| >> <i>SFN-SFN Measurement Threshold Information</i>                |          |       |                       |   |             |                      |
| >>> <i>SFN-SFN Measurement Threshold Information</i>               | M        |       | 9.2.1.52B             |   | YES         | reject               |
| >> <i>Load</i>   |          |       |                       |   |             |                      |
| >>> <i>Load</i>  | M        |       | INTEGER(0..100)       | 0 is the minimum indicated load, and 100 is the maximum indicated load. | YES         | reject               |
| >> <i>Transmitted Carrier Power</i>                                |          |       |                       |   |             |                      |
| >>> <i>Transmitted Carrier Power</i>                               | M        |       | INTEGER(0..100)       | According to mapping in [23] and [24].                                  | YES         | reject               |
| >> <i>Received Total Wide Band Power</i>                           |          |       |                       |   |             |                      |
| >>> <i>Received Total Wide Band Power</i>                          | M        |       | INTEGER(0..621)       | According to mapping in [23] and [24].                                  | YES         | reject               |
| >> <i>UL Timeslot ISCP</i>   |          |       |                       | TDD Only  |             |                      |
| >>> <i>UL Timeslot ISCP</i>  | M        |       | INTEGER(0..127)       | According to mapping in [24]  | YES         | reject               |
| >> <i>RT Load</i>  |          |       |                       |   |             |                      |
| >>> <i>RT Load</i>   | M        |       | INTEGER(0..100)       |   | YES         | reject               |
| >> <i>NRT Load</i>   |          |       |                       |   |             |                      |

|   |   |  |                         |  |     |        |
|---|---|--|-------------------------|--|-----|--------|
| <i>Information</i>  |   |  |                         |  |     |        |
| >>>NRT Load Information                                       | M |  | INTEGER(0..3)           |  | YES | reject |
| >>Rx Timing Deviation LCR                                     |   |  |                         | Applicable to 1.28Mcps TDD Only                              |     |        |
| >>>Rx Timing Deviation LCR                                    | M |  | INTEGER(0..511)         | According to mapping in [24]                                 | YES | reject |
| >>HS-SICH reception quality                                   |   |  |                         | Applicable to TDD Only                                       |     |        |
| >>>HS-SICH reception quality                                  | M |  | INTEGER (0..20)         | According to mapping in [24]                                 | YES | reject |
| >>UpPTS interference  |   |  |                         | 1.28Mcps TDD Only  |     |        |
| >>>UpPTS interference Value                                   | M |  | INTEGER (0..127,...)    | According to mapping in [24]                                 | YES | reject |
| >>Rx Timing Deviation 768                                     |   |  |                         | Applicable to 7.68Mcps TDD Only                              |     |        |
| >>>Rx Timing Deviation 768                                    | M |  | INTEGER(0..65535)       | According to mapping in [24]                                 | YES | reject |
| >>Rx Timing Deviation 384 Extended                            |   |  |                         | Applicable to 3.84Mcps TDD Only                              |     |        |
| >>>Rx Timing Deviation 384 Extended                           | M |  | INTEGER(0..32767)       | According to mapping in [24]                                 | YES | reject |
| >>Extended Round Trip Time                                    |   |  |                         | FDD Only   |     |        |
| >>>Extended Round Trip Time Value                             | M |  | INTEGER (32767..103041) | Continuation of intervals with step size as defined in [23]. | YES | reject |
| >>T <sub>UTRAN-GANSS</sub> Measurement Threshold Information  |   |  |                         |  |     |        |
| >>>T <sub>UTRAN-GANSS</sub> Measurement Threshold Information | M |  | 9.2.1.113               |  | YES | reject |

### 9.2.1.39A Message Structure

The *Message Structure IE* gives information for each level with assigned criticality in an hierarchical message structure from top level down to the lowest level above the reported level for the occurred error (reported in the *Information Element Criticality Diagnostics IE*).

| IE/Group Name            | Presence | Range              | IE Type and Reference | Semantics Description  | Criticality | Assigned Criticality |
|--------------------------|----------|--------------------|-----------------------|--|-------------|----------------------|
| <b>Message structure</b> |          | 1..<maxnooflevels> |                       | The first repetition of the <i>Message Structure</i> IE corresponds to the top level of the message. The last repetition of the <i>Message Structure</i> IE corresponds to the level above the reported level for the occurred error of the message.   | –           |                      |
| >IE ID                   | M        |                    | INTEGER(0..65535)     | The IE ID of this level's IE containing the not understood or missing IE.  | –           |                      |
| >Repetition Number       | O        |                    | INTEGER(1..256)       | The <i>Repetition Number</i> IE gives, if applicable, the number of occurrences of this level's reported IE up to and including the occurrence containing the not understood or missing IE.<br>Note: All the counted occurrences of the reported IE must have the same topdown hierarchical message structure of IEs with assigned criticality above them. | –           |                      |

| Range bound   | Explanation  |
|---------------|--|
| maxnooflevels | Maximum no. of message levels to report. The value for maxnooflevels is 256. |

#### 9.2.1.40 Message Type

The Message Type uniquely identifies the message being sent.



| IE/Group Name       | Presence | Range | IE Type and Reference | Semantics Description   |
|---------------------|----------|-------|-----------------------|---|
| <b>Procedure ID</b> |          | 1     |                       |   |
| >Procedure Code     | M        |       | INTEGER (0..255)      | <p>"0" = Common Transport Channel Resources Initialisation<br/> "1" = Common Transport Channel Resources Release<br/> "2" = Compressed Mode Command<br/> "3" = Downlink Power Control<br/> "4" = Downlink Power Timeslot Control<br/> "5" = Downlink Signalling Transfer<br/> "6" = Error Indication<br/> "7" = Dedicated Measurement Failure<br/> "8" = Dedicated Measurement Initiation<br/> "9" = Dedicated Measurement Reporting</p> <p>"10" = Dedicated Measurement Termination<br/> "11" = Paging<br/> "12" = Physical Channel Reconfiguration<br/> "14" = Radio Link Addition<br/> "15" = Radio Link Deletion<br/> "16" = Radio Link Failure<br/> "17" = Radio Link Preemption<br/> "18" = Radio Link Restoration<br/> "19" = Radio Link Setup<br/> "20" = Relocation Commit<br/> "21" = Synchronised Radio Link Reconfiguration Cancellation<br/> "22" = Synchronised Radio Link Reconfiguration Commit<br/> "23" = Synchronised Radio Link Reconfiguration Preparation<br/> "24" = UnSynchronised Radio Link Reconfiguration<br/> "25" = Uplink Signalling Transfer<br/> "26" = Common Measurement Failure<br/> "27" = Common Measurement Initiation</p> <p>"28" = Common Measurement Reporting<br/> "29" = Common Measurement Termination<br/> "30" = Information Exchange Failure<br/> "31" = Information Exchange Initiation<br/> "32" = Information Reporting<br/> "33" = Information Exchange Termination<br/> "34" = Radio Link Congestion<br/> "35" = Reset<br/> "36" = Radio Link Activation<br/> "37" = GERAN Uplink Signalling Transfer<br/> "38" = Radio Link Parameter Update<br/> "39" = UE Measurement Failure<br/> "40" = UE Measurement Initiation<br/> "41" = UE Measurement Reporting<br/> "42" = UE Measurement Termination<br/> "43" = Iur Deactivate Trace<br/> "44" = Iur Invoke Trace<br/> "45" = MBMS Attach<br/> "46" = MBMS Detach<br/> "48" = Direct Information Transfer<br/> "49" = Enhanced Relocation<br/> "50" = Enhanced Relocation Cancel<br/> "51" = Enhanced Relocation Signalling Transfer<br/> "52" = Enhanced Relocation Release<br/> "53" = MBSFN MCCH Information</p> |

|                 |   |  |   |                                 |
|-----------------|---|--|---|---------------------------------|
| >Ddmode         | M |  | ENUMERATED(FDD, TDD, Common, ...)   | Common = common to FDD and TDD. |
| Type of Message | M |  | ENUMERATED(Initiating Message, Successful Outcome, Unsuccessful Outcome, Outcome) |                                 |

#### 9.2.1.41 Multiple URAs Indicator

The Multiple URAs Indicator indicates whether the accessed cell has multiple URAs.

| IE/Group Name           | Presence | Range | IE Type and Reference                              | Semantics Description |
|-------------------------|----------|-------|--|-----------------------|
| Multiple URAs Indicator |          |       | ENUMERATED(Multiple URAs exist, Single URAs Exist) |                       |

#### 9.2.1.41a NACC Related Data

The *NACC related data* IE provides NACC related information for the indicated GSM cell.

| IE/Group Name                 | Presence | Range | IE Type and Reference | Semantics Description                          |
|-------------------------------|----------|-------|-----------------------|--|
| CHOICE GERAN System Info Type | M        |       |                       |  |
| >SI                           |          |       |                       |  |
| >>SI                          | M        |       | 9.2.1.30Fc            | GERAN system information SI3, SI13, SI1 [47]   |
| >PSI                          |          |       |                       |  |
| >>PSI                         | M        |       | 9.2.1.30Fc            | GERAN system information PSI1, PSI2, PSI4 [47] |

#### 9.2.1.41A Neighbouring UMTS Cell Information

The *Neighbouring UMTS Cell Information* IE provides information for UMTS Cells that are neighbouring cells to a cell in the DRNC. The neighbouring cell information is provided for each RNC (including the DRNC) that has cells that are neighbouring cells to the cell in the DRNC.

| IE/Group Name                             | Presence | Range                                     | IE Type and Reference | Semantics Description  | Criticality | Assigned Criticality |
|---|----------|---|-----------------------|--|-------------|----------------------|
| <b>Neighbouring UMTS Cell Information</b> |          | <i>1..&lt;maxnoofneighbouringRNCs&gt;</i> |                       |  | EACH        | ignore               |
| >RNC-ID                                   | M        |   | 9.2.1.50              | If the <i>Extended RNC-ID</i> IE is included in the <i>Neighbouring UMTS Cell Information</i> IE, the <i>RNC-ID</i> IE shall be ignored. | –           |                      |
| >CN PS Domain Identifier                  | O        |   | 9.2.1.12              |  | –           |                      |
| >CN CS Domain Identifier                  | O        |   | 9.2.1.11              |  | –           |                      |
| >Neighbouring FDD Cell Information        | O        |   | 9.2.1.41B             |  | –           |                      |
| >Neighbouring TDD Cell Information        | O        |   | 9.2.1.41D             |  | –           |                      |
| >Neighbouring TDD Cell Information LCR    | O        |   | 9.2.1.72              |  | YES         | ignore               |
| >Extended RNC-ID                          | O        |   | 9.2.1.50a             | The <i>Extended RNC-ID</i> IE shall be used if the RNC identity has a value larger than 4095.  | YES         | reject               |

| Range bound                    | Explanation                          |
|--------------------------------|--------------------------------------|
| <i>maxnoofneighbouringRNCs</i> | Maximum number of neighbouring RNCs. |

### 9.2.1.41B Neighbouring FDD Cell Information

The *Neighbouring FDD Cell Information* IE provides information for FDD cells that are neighbouring cells to a cell in the DRNC.

| IE/Group Name                            | Presence                     | Range                                    | IE Type and Reference | Semantics Description         | Criticality | Assigned Criticality |
|--|------------------------------|--|-----------------------|-------------------------------|-------------|----------------------|
| <b>Neighbouring FDD Cell Information</b> |                              | <i>1..&lt;max noofFDD neighbours&gt;</i> |                       |                               | –           |                      |
| >C-ID                                    | M                            |  | 9.2.1.6               |                               | –           |                      |
| >UL UARFCN                               | M                            |  | UARFCN<br>9.2.1.66    | Corresponds to Nu in ref. [6] | –           |                      |
| >DL UARFCN                               | M                            |  | UARFCN<br>9.2.1.66    | Corresponds to Nd in ref. [6] | –           |                      |
| >Frame Offset                            | O                            |  | 9.2.1.30              |                               | –           |                      |
| >Primary Scrambling Code                 | M                            |  | 9.2.1.45              |                               | –           |                      |
| >Primary CPICH Power                     | O                            |  | 9.2.1.44              |                               | –           |                      |
| >Cell Individual Offset                  | O                            |  | 9.2.1.7               |                               | –           |                      |
| >Tx Diversity Indicator                  | M                            |  | 9.2.2.50              |                               | –           |                      |
| >STTD Support Indicator                  | O                            |  | 9.2.2.45              |                               | –           |                      |
| >Closed Loop Mode1 Support Indicator     | O                            |  | 9.2.2.2               |                               | –           |                      |
| >Not Used                                | O                            |  | NULL                  |                               | –           |                      |
| >Restriction State Indicator             | O                            |  | 9.2.1.48C             |                               | YES         | ignore               |
| >DPC Mode Change Support Indicator       | O                            |  | 9.2.2.56              |                               | YES         | ignore               |
| >Coverage Indicator                      | O                            |  | 9.2.1.12G             |                               | YES         | ignore               |
| >Antenna Co-location Indicator           | O                            |  | 9.2.1.2C              |                               | YES         | ignore               |
| >HCS Prio                                | O                            |  | 9.2.1.30N             |                               | YES         | ignore               |
| >Cell Capability Container FDD           | O                            |  | 9.2.2.D               |                               | YES         | ignore               |
| >SNA Information                         | O                            |  | 9.2.1.52Ca            |                               | YES         | ignore               |
| >Frequency Band Indicator                | O                            |  | 9.2.2.59              |                               | YES         | ignore               |
| >Max UE DTX Cycle                        | C-CPC-<br>DTX-<br>DRXCapable |  | 9.2.2.87              |                               | YES         | ignore               |
| >Multiple PLMN List                      | O                            |  | 9.2.1.117             |                               | YES         | ignore               |
| >Secondary Serving Cell List             | C-MC-<br>Capable             |  | 9.2.2.101             |                               | YES         | ignore               |
| >Cell Capability Container Extension FDD | O                            |  | 9.2.2.106             |                               | YES         | ignore               |

| Range bound                 | Explanation   |
|-----------------------------|---|
| <i>maxnoofFDDneighbours</i> | Maximum number of neighbouring FDD cell for one cell. |

| Condition          | Explanation   |
|--------------------|---|
| CPC-DTX-DRXCapable | The IE shall be present if the the fifteenth bit Continuous Packet Connectivity DTX-DRX Support Indicator in the <i>Cell Capability Container FDD</i> IE is set to the value "1". |
| MC-Capable         | The IE shall be present if the the Multi Cell Support Indicator in the <i>Cell Capability Container FDD</i> IE is set to the value "1".   |

### 9.2.1.41C Neighbouring GSM Cell Information

The *Neighbouring GSM Cell Information* IE provides information for all GSM Cells that are a neighbouring cell to a cell in the DRNC.

| IE/Group Name                            | Presence | Range                                     | IE Type and Reference                         | Semantics Description  | Criticality | Assigned Criticality |
|--|----------|---|---|--|-------------|----------------------|
| <b>Neighbouring GSM Cell Information</b> |          | <i>1..&lt;max noofGS Mneighb ours&gt;</i> |   |  | GLOBAL      | ignore               |
| >CGI                                     |          | 1   |   | Cell Global Identity as defined in ref. [1].   | –           |                      |
| >>LAI                                    |          | 1   |   |  | –           |                      |
| >>>PLMN Identity                         | M        |   | OCTET STRING (3)                              | - digits 0 to 9, two digits per octet,<br>- each digit encoded 0000 to 1001,<br>- 1111 used as filler<br>- bit 4 to 1 of octet n encoding digit 2n-1<br>- bit 8 to 5 of octet n encoding digit 2n<br>-The PLMN Identity consists of 3 digits from MCC followed by either<br>-a filler plus 2 digits from MNC (in case of 2 digit MNC) or<br>-3 digits from MNC (in case of a 3 digit MNC). | –           |                      |
| >>>LAC                                   | M        |   | OCTET STRING (2)                              | 0000 and FFFE not allowed  | –           |                      |
| >>CI                                     | M        |   | OCTET STRING (2)                              |  | –           |                      |
| >Cell Individual Offset                  | O        |   | 9.2.1.7                                       | The Cell Individual Offset to be used for UEs using DCHs. If the <i>Extended GSM Cell Individual Offset</i> IE is present, the <i>Cell Individual Offset</i> IE shall be set to<br>a) –10dB if the <i>Extended GSM Cell Individual Offset</i> IE is < -10dB<br>and<br>b) 10dB if the <i>Extended GSM Cell Individual Offset</i> IE is > 10dB.  | –           |                      |
| >BSIC                                    |          | 1   |   | Base Station Identity Code as defined in ref. [1].   | –           |                      |
| >>NCC                                    | M        |   | BIT STRING(3)                                 | Network Colour Code.   | –           |                      |
| >>BCC                                    | M        |   | BIT STRING(3)                                 | Base Station Colour Code.  | –           |                      |
| >Band Indicator                          | M        |   | ENUMERATED(DCS 1800 band, PCS 1900 band, ...) | Indicates whether or not the BCCH ARFCN belongs to the 1800 band or 1900 band of GSM frequencies.  | –           |                      |
| >BCCH ARFCN                              | M        |   | INTEGER(0..1023)                              | BCCH Frequency as defined in ref. [29].  | –           |                      |
| >Coverage Indicator                      | O        |   | 9.2.1.12G                                     |  | YES         | ignore               |
| >Antenna Co-location Indicator           | O        |   | 9.2.1.2C                                      |  | YES         | ignore               |
| >HCS Prio                                | O        |   | 9.2.1.30N                                     |  | YES         | ignore               |

|                                      |   |  |            |  |     |        |
|--------------------------------------|---|--|------------|--|-----|--------|
| > SNA Information                    | O |  | 9.2.1.52Ca |  | YES | ignore |
| >GERAN Cell Capability               | O |  | 9.2.1.30Fa |  | YES | ignore |
| >GERAN Classmark                     | O |  | 9.2.1.30Fb |  | YES | ignore |
| >Extended GSM Cell Individual Offset | O |  | 9.2.1.26Bb | The Extended GSM Cell Individual Offset to be used for UEs using DCHs, for values that exceed the range of the <i>Cell Individual Offset</i> IE. | YES | ignore |

| Range bound                 | Explanation  |
|-----------------------------|--|
| <i>maxnoofGSMneighbours</i> | Maximum number of neighbouring GSM cells for one cell. |

### 9.2.1.41D Neighbouring TDD Cell Information

The *Neighbouring TDD Cell Information* IE provides information for 3.84Mcps TDD or 7.68Mcps TDD cells that are neighbouring cells to a cell in the DRNC.

| IE/Group Name                            | Presence | Range                                  | IE Type and Reference | Semantics Description         | Criticality | Assigned Criticality |
|--|----------|--|-----------------------|-------------------------------|-------------|----------------------|
| <b>Neighbouring TDD Cell Information</b> |          | <i>1..&lt;maxnoofTDDneighbours&gt;</i> |                       |                               | –           |                      |
| >C-ID                                    | M        |  | 9.2.1.6               |                               | –           |                      |
| >UARFCN                                  | M        |  | 9.2.1.66              | Corresponds to Nt in ref. [7] | –           |                      |
| >Frame Offset                            | O        |  | 9.2.1.30              |                               | –           |                      |
| >Cell Parameter ID                       | M        |  | 9.2.1.8               |                               | –           |                      |
| >Sync Case                               | M        |  | 9.2.1.54              |                               | –           |                      |
| >Time Slot For SCH                       | C-Case1  |  | Time Slot<br>9.2.1.56 |                               | –           |                      |
| >SCH Time Slot                           | C-Case2  |  | 9.2.1.51              |                               | –           |                      |
| >SCTD Indicator                          | M        |  | 9.2.1.78              |                               | –           |                      |
| >Cell Individual Offset                  | O        |  | 9.2.1.7               |                               | –           |                      |
| >DPCH Constant Value                     | O        |  | 9.2.1.23              |                               | –           |                      |
| >PCCPCH Power                            | O        |  | 9.2.1.43              |                               | –           |                      |
| >Restriction State Indicator             | O        |  | 9.2.1.48C             |                               | YES         | ignore               |
| >Coverage Indicator                      | O        |  | 9.2.1.12G             |                               | YES         | ignore               |
| >Antenna Co-location Indicator           | O        |  | 9.2.1.2C              |                               | YES         | ignore               |
| >HCS Prio                                | O        |  | 9.2.1.30N             |                               | YES         | ignore               |
| >Cell Capability Container TDD           | O        |  | 9.2.3.1a              |                               | YES         | ignore               |
| >Cell Capability Container 7.68Mcps TDD  | O        |  | 9.2.3.31              |                               | YES         | ignore               |
| > SNA Information                        | O        |  | 9.2.1.52Ca            |                               | YES         | ignore               |
| >Multiple PLMN List                      | O        |  | 9.2.1.117             |                               | YES         | ignore               |

| Condition | Explanation   |
|-----------|---|
| Case1     | The IE shall be present if the <i>Sync Case</i> IE is set to "Case1". |
| Case2     | The IE shall be present if the <i>Sync Case</i> IE is set to "Case2". |

| Range bound                 | Explanation  |
|-----------------------------|--|
| <i>maxnoofTDDneighbours</i> | Maximum number of neighbouring 3.84Mcps TDD or 7.68Mcps TDD cell for one cell. |

### 9.2.1.41Dd Neighbouring TDD Cell Measurement Information LCR

This IE provides information on the 1.28Mcps TDD neighbouring cells used for the purpose of Measurements. Since the measurement can be performed on every time slot and midamble shift, the *Time slot LCR* IE and *Midamble shift LCR* IE shall be included if available.

| IE/Group Name         | Presence | Range | IE Type and Reference | Semantics Description  |
|-----------------------|----------|-------|-----------------------|------------------------|
| UTRAN Cell Identifier | M        |       | 9.2.1.71              |                        |
| UARFCN                | M        |       | 9.2.1.66              | Corresponds to Nt [15] |
| Cell Parameter ID     | M        |       | 9.2.1.8               |                        |
| Time Slot LCR         | O        |       | 9.2.3.12a             |                        |
| Midamble shift LCR    | O        |       | 9.2.3.4C              |                        |

### 9.2.1.41De Neighbouring E-UTRA Cell Information

The *Neighbouring E-UTRA Cell Information* IE provides information for all E-UTRA Cells that are a neighbouring cell to a cell in the DRNC.

| IE/Group Name                               | Presence | Range                                     | IE Type and Reference | Semantics Description  | Criticality | Assigned Criticality |
|---|----------|---|-----------------------|--|-------------|----------------------|
| <b>Neighbouring E-UTRA Cell Information</b> |          | <i>1..&lt;max noofEUTRAneighbours&gt;</i> |                       |  | –           |                      |
| >ECGI                                       |          | 1   |                       | EUTRAN Cell Global Identity as defined in ref. [61].   | –           |                      |
| >>PLMN Identity                             | M        |   | OCTET STRING (3)      | - digits 0 to 9, two digits per octet,<br>- each digit encoded 0000 to 1001,<br>- 1111 used as filler<br>- bit 4 to 1 of octet n encoding digit 2n-1<br>- bit 8 to 5 of octet n encoding digit 2n<br>-The PLMN Identity consists of 3 digits from MCC followed by either<br>-a filler plus 2 digits from MNC (in case of 2 digit MNC) or<br>-3 digits from MNC (in case of a 3 digit MNC). | –           |                      |
| >>E-UTRAN Cell Identifier                   | M        |   | BIT STRING (28)       | The leftmost bits of the <i>E-UTRAN Cell Identifier</i> IE value correspond to the value of the eNB ID.  | –           |                      |
| >CHOICE EARFCN Information                  | M        |   |                       |  | –           |                      |
| >>FDD                                       |          |   |                       |  |             |                      |
| >>>EARFCN-FDD                               |          | 1   |                       |  |             |                      |
| >>>UL EARFCN                                | M        |   | 9.2.1.41Df EARFCN     | Corresponds to NuL in [62]   | –           |                      |
| >>>DL EARFCN                                | M        |   | 9.2.1.41Df EARFCN     | Corresponds to NdL in [62]   | –           |                      |
| >>TDD                                       |          |   |                       |  |             |                      |
| >>> EARFCN                                  | M        |   | 9.2.1.41Df EARFCN     | Corresponds to NdL in [62]   | –           |                      |

| Range bound                 | Explanation  |
|-----------------------------|--|
| <i>maxnoofLTEneighbours</i> | Maximum number of neighbouring LTE cells for one cell. |

### 9.2.1.41Df EARFCN

The EARFCN (E-UTRA Absolute Radio Frequency Channel Number) defines the carrier.

| IE/Group Name | Presence | Range | IE Type and Reference  | Semantics Description |
|---------------|----------|-------|------------------------|-----------------------|
| EARFCN        |          |       | INTEGER (0..maxEARFCN) | Defined in [62].      |

### 9.2.1.41E Paging Cause

Cause for a CN originated page.

| IE/Group Name | Presence | Range | IE Type and Reference  | Semantics Description |
|---------------|----------|-------|--|-----------------------|
| Paging Cause  |          |       | ENUMERATED (Terminating Conversational Call, Terminating Streaming Call, Terminating Interactive Call, Terminating Background Call, Terminating Low Priority Signalling, ... , Terminating High Priority Signalling, Terminating – cause unknown ) | See in [16]           |

### 9.2.1.41F Paging Record Type

| IE/Group Name      | Presence | Range | IE Type and Reference   | Semantics Description |
|--------------------|----------|-------|---|-----------------------|
| Paging Record Type |          |       | ENUMERATED (IMSI (GSM-MAP), TMSI (GSM-MAP), P-TMSI (GSM-MAP), IMSI (DS-41), TMSI (DS-41),...) | See ref. [16]         |



### 9.2.1.41Fa Partial Reporting Indicator

This IE indicates if DRNS may report partially successful measurements.

| IE/Group Name               | Presence | Range | IE type and reference                  | Semantics description |
|-----------------------------|----------|-------|--|-----------------------|
| Partial Reporting Indicator |          |       | ENUMERATED (partial reporting allowed) |                       |

### 9.2.1.41G Neighbouring FDD Cell Measurement Information

This IE provides information on the FDD neighbouring cells used for the purpose of Measurements.

| IE/Group Name           | Presence | Range | IE Type and Reference | Semantics Description |
|-------------------------|----------|-------|-----------------------|-----------------------|
| UTRAN Cell Identifier   | M        |       | 9.2.1.71              |                       |
| UARFCN                  | M        |       | 9.2.1.66              | Corresponds to Nd [6] |
| Primary Scrambling Code | M        |       | 9.2.1.45              |                       |

### 9.2.1.41H Neighbouring TDD Cell Measurement Information

This IE provides information on the 3.84Mcps TDD neighbouring cells used for the purpose of Measurements. Since the measurement can be performed on every time slot and midamble shift, the *Time slot* IE and *Midamble shift and burst type* IE shall be included if available.

| IE/Group Name                 | Presence | Range | IE Type and Reference | Semantics Description  |
|-------------------------------|----------|-------|-----------------------|------------------------|
| UTRAN Cell Identifier         | M        |       | 9.2.1.71              |                        |
| UARFCN                        | M        |       | 9.2.1.66              | Corresponds to Nt [15] |
| Cell Parameter ID             | M        |       | 9.2.1.8               |                        |
| Time slot                     | O        |       | 9.2.1.56              |                        |
| Midamble Shift And Burst Type | O        |       | 9.2.3.4               |                        |

### 9.2.1.41I NRT Load Information Value

The *NRT Load Information* IE indicates the load situation on the cell for the Non Real-Time traffic. Non Real Time traffic corresponds to the Interactive and Background traffic classes.

| IE/Group Name                       | Presence | Range | IE Type and Reference | Semantics Description   |
|-------------------------------------|----------|-------|-----------------------|---|
| Uplink NRT Load Information Value   | M        |       | INTEGER(0..3)         | Mapping of the status:<br>0: low: The Uplink NRT load is low.<br>1: medium: The Uplink NRT load is medium.<br>2: high: Uplink NRT load is high. Probability to admit a new user is low.<br>3: overloaded: Uplink NRT overload. The probability to admit a new user is low, packets are discarded and the source is recommended to reduce the data flow.         |
| Downlink NRT Load Information Value | M        |       | INTEGER(0..3)         | Mapping of the status:<br>0: low: The Downlink NRT load is low.<br>1: medium: The Downlink NRT load is medium.<br>2: high: Downlink NRT load is high. Probability to admit a new user is low.<br>3: overloaded: Downlink NRT overload. The probability to admit a new user is low, packets are discarded and the source is recommended to reduce the data flow. |

#### 9.2.1.42 Payload CRC Present Indicator

This parameter indicates whether FP payload 16 bit CRC is used or not.

| IE/Group Name                  | Presence | Range | IE Type and Reference                      | Semantics Description |
|--------------------------------|----------|-------|--|-----------------------|
| Payload CRC Presence Indicator |          |       | ENUMERATED(CRC Included, CRC not included) |                       |

#### 9.2.1.43 PCCPCH Power

Primary CCPCH power is the power that shall be used for reference power value in a TDD cell. The reference point is the antenna connector. If Transmit Diversity is applied to the Primary CCPCH, the PCCPCH Power is the linear sum of the power that is used for transmitting the PCCPCH on all branches.

| IE/Group Name | Presence | Range | IE Type and Reference   | Semantics Description   |
|---------------|----------|-------|-------------------------|---|
| PCCPCH Power  |          |       | INTEGER (-150..400,...) | Unit dBm Range -15.0 to 40.0 dBm,<br>Step size 0.1 dB.<br>-15.0 shall indicate $P_{\leq} -15\text{dBm}$<br>+40.0 shall indicate $P_{\geq} 40\text{dBm}$ . |

### 9.2.1.44 Primary CPICH Power

Primary CPICH power is the power that is used for transmitting the Primary CPICH in a cell. The reference point is the antenna connector. If Transmit Diversity is applied to the Primary CPICH, the Primary CPICH Power is the linear sum of the power that is used for transmitting the Primary CPICH on all branches.

| IE/Group Name       | Presence | Range | IE Type and Reference | Semantics Description   |
|---------------------|----------|-------|-----------------------|---|
| Primary CPICH Power |          |       | INTEGER (-100..500)   | Value = Primary CPICH Power/10<br>Unit dBm<br>Range -10.0..+50.0<br>Step 0.1 dB |

### 9.2.1.45 Primary Scrambling Code

The Primary scrambling code to be used in the cell.

| IE/Group Name           | Presence | Range | IE Type and Reference | Semantics Description |
|-------------------------|----------|-------|-----------------------|-----------------------|
| Primary Scrambling Code |          |       | INTEGER(0..511)       |                       |

### 9.2.1.45A Priority Queue ID

The *Priority Queue ID* IE provides the identity of the Priority Queue. The Priority Queue ID is unique across all MAC-d flows that are currently allocated for one UE Context or across all Common MAC flows within a cell.

| IE/Group Name     | Presence | Range | IE Type and Reference | Semantics Description |
|-------------------|----------|-------|-----------------------|-----------------------|
| Priority Queue ID |          |       | INTEGER (0..7)        |                       |

### 9.2.1.45B Process Memory Size

The *Process Memory Size* IE is the size of an HARQ process in the DRNS expressed in bits. It provides the maximum number of soft channel bits in the virtual IR buffer [9] or [46].

| IE/Group Name       | Presence | Range | IE Type and Reference  | Semantics Description |
|---------------------|----------|-------|--|-----------------------|
| Process Memory Size |          |       | ENUMERATED (800, 1600, 2400, 3200, 4000, 4800, 5600, 6400, 7200, 8000, 8800, 9600, 10400, 11200, 12000, 12800, 13600, 14400, 15200, 16000, 17600, 19200, 20800, 22400, 24000, 25600, 27200, 28800, 30400, 32000, 36000, 40000, 44000, 48000, 52000, 56000, 60000, 64000, 68000, 72000, 76000, 80000, 88000, 96000, 104000, 112000, 120000, 128000, 136000, 144000, 152000, 160000, 176000, 192000, 208000, 224000, 240000, 256000, 272000, 288000, 304000,...) |                       |

### 9.2.1.46 Puncture Limit

The maximum amount of puncturing for a transport channel in rate matching.

| IE/Group Name  | Presence | Range | IE Type and Reference | Semantics Description  |
|----------------|----------|-------|-----------------------|--|
| Puncture Limit |          |       | INTEGER<br>(0..15)    | 0: 40%<br>1: 44 %<br>...<br>14: 96%<br>15: 100% (no puncturing)<br>[FDD - Value 0 is not applicable for E-DPCH.] |

### 9.2.1.46A QE-Selector

The QE-Selector indicates from which source the value for the quality estimate (QE) shall be taken.

| IE/Group Name | Presence | Range | IE Type and Reference              | Semantics Description |
|---------------|----------|-------|------------------------------------|-----------------------|
| QE-Selector   |          |       | ENUMERATED(selected, non-selected) |                       |

### 9.2.1.47 RANAP Relocation Information

This parameter is transparent to the RNSAP. The parameter contains information for the Relocation procedure as defined in [2].

| IE/Group Name                | Presence | Range | IE Type and Reference | Semantics Description               |
|------------------------------|----------|-------|-----------------------|-------------------------------------|
| RANAP Relocation Information |          |       | BIT STRING            | The content is defined in ref. [2]. |

### 9.2.1.48 Report Characteristics

The Report Characteristics, defines how the reporting shall be performed.

| IE/Group Name                             | Presence | Range | IE Type and Reference          | Semantics Description  | Criticality | Assigned Criticality |
|---|----------|-------|--------------------------------|--|-------------|----------------------|
| CHOICE <i>Report Characteristics</i>      | M        |       |                                |  | –           |                      |
| > <i>On Demand</i>                        |          |       | NULL                           |  | –           |                      |
| > <i>Periodic</i>                         |          |       |                                |  |             |                      |
| >>Report Periodicity                      | M        |       | 9.2.1.48a                      | The periodicity with which the DRNS shall send measurement reports.                                | –           |                      |
| > <i>Event A</i>                          |          |       |                                |  |             |                      |
| >>Measurement Threshold                   | M        |       | 9.2.1.39                       | The threshold for which the DRNS shall trigger a measurement report.                               | –           |                      |
| >>Measurement Hysteresis Time             | O        |       | 9.2.1.36A                      |  | –           |                      |
| > <i>Event B</i>                          |          |       |                                |  |             |                      |
| >>Measurement Threshold                   | M        |       | 9.2.1.39                       | The threshold for which the DRNS shall trigger a measurement report.                               | –           |                      |
| >>Measurement Hysteresis Time             | O        |       | 9.2.1.36A                      |  | –           |                      |
| > <i>Event C</i>                          |          |       |                                |  |             |                      |
| >>Measurement Increase/Decrease Threshold | M        |       | 9.2.1.38                       |  | –           |                      |
| >>Measurement Change Time                 | M        |       | 9.2.1.35B                      | The time within which the measurement entity shall rise, in order to trigger a measurement report. | –           |                      |
| > <i>Event D</i>                          |          |       |                                |  |             |                      |
| >>Measurement Increase/Decrease Threshold | M        |       | 9.2.1.38                       |  | –           |                      |
| >>Measurement Change Time                 | M        |       | 9.2.1.35B                      | The time within which the measurement entity shall fall, in order to trigger a measurement report. | –           |                      |
| > <i>Event E</i>                          |          |       |                                |  |             |                      |
| >>Measurement Threshold 1                 | M        |       | Measurement Threshold 9.2.1.39 |  | –           |                      |
| >>Measurement Threshold 2                 | O        |       | Measurement Threshold          |  | –           |                      |

| IE/Group Name                              | Presence | Range | IE Type and Reference          | Semantics Description   | Criticality | Assigned Criticality |
|--|----------|-------|--------------------------------|---|-------------|----------------------|
|  |          |       | 9.2.1.39                       |   |             |                      |
| >>Measurement Hysteresis Time              | O        |       | 9.2.1.36A                      | The hysteresis time in ms   | –           |                      |
| >>Report Periodicity                       | O        |       | 9.2.1.48a                      | The periodicity with which the DRNS shall send measurement reports. | –           |                      |
| > <i>Event F</i>                           |          |       |                                |   |             |                      |
| >>Measurement Threshold 1                  | M        |       | Measurement Threshold 9.2.1.39 |   | –           |                      |
| >>Measurement Threshold 2                  | O        |       | Measurement Threshold 9.2.1.39 |   | –           |                      |
| >>Measurement Hysteresis Time              | O        |       | 9.2.1.36A                      | The hysteresis time in ms   | –           |                      |
| >>Report Periodicity                       | O        |       | 9.2.1.48a                      | The periodicity with which the DRNS shall send measurement reports. | –           |                      |
| > <i>Additional Report Characteristics</i> |          |       |                                |   |             |                      |
| >> <i>On Modification</i>                  |          |       |                                |   |             |                      |
| >>> <b>On Modification</b>                 |          | 1     |                                |   | YES         | reject               |
| >>>>Measurement Threshold                  | M        |       | 9.2.1.39                       |   |             |                      |

### 9.2.1.48a Report Periodicity

The Report Periodicity defines the frequency at which the Node B shall send measurement reports.

| IE/Group Name                          | Presence | Range | IE Type and Reference | Semantics Description                          |
|--|----------|-------|-----------------------|--|
| CHOICE <i>Report Periodicity Scale</i> | M        |       |                       |  |
| > <i>millisecond</i>                   |          |       |                       |  |
| >>Report Periodicity Value             | M        |       | INTEGER (1..6000,...) | Unit: ms<br>Range: 10..60000 ms<br>Step: 10 ms |
| > <i>minute</i>                        |          |       |                       |  |
| >>Report Periodicity Value             | M        |       | INTEGER (1..60,...)   | Unit: min<br>Range: 1..60 min<br>Step: 1 min   |

### 9.2.1.48A Requested Data Value

The Requested Data Value contains the relevant data concerned the ongoing information exchange. *Requested Data Value* IE shall include at least one of the following IE.

| IE/Group Name   | Presence   | Range                | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|---|------------|----------------------|-----------------------|-----------------------|-------------|----------------------|
| UTRAN Access Point Position with Altitude             | O          |                      | 9.2.1.75              |                       | –           |                      |
| IPDL Parameters                                       | O          |                      | 9.2.1.31F             |                       | –           |                      |
| DGPS Corrections                                      | O          |                      | 9.2.1.19B             |                       | –           |                      |
| GPS Navigation Model and Time Recovery                | O          |                      | 9.2.1.30I             |                       | –           |                      |
| GPS Ionospheric Model                                 | O          |                      | 9.2.1.30H             |                       | –           |                      |
| GPS UTC Model   | O          |                      | 9.2.1.30L             |                       | –           |                      |
| GPS Almanac   | O          |                      | 9.2.1.30G             |                       | –           |                      |
| GPS Real-Time Integrity                               | O          |                      | 9.2.1.30J             |                       | –           |                      |
| GPS RX Pos  | O          |                      | 9.2.1.30K             |                       | –           |                      |
| SFN-SFN Measurement Reference Point Position          | O          |                      | 9.2.1.74              |                       | –           |                      |
| Cell Capacity Class Value                             | O          |                      | 9.2.1.5C              |                       | YES         | ignore               |
| NACC Related Data                                     | O          |                      | 9.2.1.41a             |                       | YES         | ignore               |
| MBMS Bearer Service Full Address                      | O          |                      | 9.2.1.84              |                       | YES         | ignore               |
| Inter-frequency Cell Information                      | O          |                      | 9.2.1.31G             |                       | YES         | ignore               |
| <b>GANSS Common Data</b>                              |            | 0..1                 |                       |                       | YES         | ignore               |
| >GANSS Ionospheric Model                              | O          |                      | 9.2.1.105             |                       | –           |                      |
| >GANSS RX Pos   | O          |                      | 9.2.1.109             |                       | –           |                      |
| >GANSS Additional Ionospheric Model                   | O          |                      | 9.2.1.105a            |                       | YES         | Ignore               |
| >GANSS Earth Orientation Parameters                   | O          |                      | 9.2.1.122a            |                       | YES         | Ignore               |
| <b>GANSS Generic Data</b>                             |            | 0..<maxno of GANSS > |                       |                       | GLOBAL      | ignore               |
| >GANSS ID   | O          |                      | 9.2.1.119             |                       | –           |                      |
| >DGANSS Corrections                                   | O          |                      | 9.2.1.102             |                       | –           |                      |
| >GANSS Navigation Model And Time Recovery             | O          |                      | 9.2.1.120             |                       | –           |                      |
| >GANSS Time Model                                     | O          |                      | 9.2.1.110             |                       | –           |                      |
| >GANSS UTC Model                                      | O          |                      | 9.2.1.111             |                       | –           |                      |
| >GANSS Almanac  | O          |                      | 9.2.1.103             |                       | –           |                      |
| >GANSS Real Time Integrity                            | O          |                      | 9.2.1.108             |                       | –           |                      |
| >GANSS Data Bit Assistance                            | O          |                      | 9.2.1.118             |                       | –           |                      |
| >GANSS Additional Time Models                         | O          |                      | 9.2.1.110a            |                       | YES         | Ignore               |
| >GANSS Additional Navigation Models And Time Recovery | O          |                      | 9.2.1.120a            |                       | YES         | Ignore               |
| >GANSS Additional UTC Models                          | O          |                      | 9.2.1.111a            |                       | YES         | Ignore               |
| >GANSS Auxiliary Information                          | O          |                      | 9.2.1.122c            |                       | YES         | Ignore               |
| >SBAS ID  | C-GANSS-ID |                      | 9.2.1.122b            |                       | YES         | Ignore               |
| Counting Information                                  | O          |                      | 9.2.2.94              | FDD only              | YES         | ignore               |
| Transmission Mode Information                         | O          |                      | 9.2.2.95              | FDD only              | YES         | ignore               |
| MBMS Neighbouring Cell Information                    | O          |                      | 9.2.2.96              | FDD only              | YES         | ignore               |
| RLC Sequene Number                                    | O          |                      | 9.2.2.97              | FDD only              | YES         | ignore               |

| Condition | Explanation   |
|-----------|---|
| GANSS-ID  | This IE shall be present if the GANSS ID IE indicates "SBAS". |

| Range Bound         | Explanation                     |
|---------------------|---------------------------------|
| <i>maxnoofGANSS</i> | Maximum number of GANSS Systems |

### 9.2.1.48B Requested Data Value Information

The *Requested Data Value Information* IE provides information on whether or not the Requested Data Value is available in the message and also the Requested Data Value itself if available. In case of "Periodic" and "On Modification" reporting, "Information Not Available" shall be used when at least one part of the requested information was not available at the moment of initiating the Information Reporting procedure.

| IE/Group Name                                    | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|--|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| CHOICE <i>Information Availability Indicator</i> | M        |       |                       |                       | –           |                      |
| > <i>Information Available</i>                   |          |       |                       |                       | –           |                      |
| >>Requested Data Value                           | M        |       | 9.2.1.48A             |                       | –           |                      |
| > <i>Information not Available</i>               |          |       | NULL                  |                       | –           |                      |

### 9.2.1.48C Restriction State Indicator

The Restriction state indicator is the identifier indicates whether the cell is "Cell Reserved for Operator Use" or not. It is provided by DRNS and reported to SRNC.

| IE/Group Name               | Presence | Range | IE Type and Reference  | Semantics Description |
|-----------------------------|----------|-------|--|-----------------------|
| Restriction state indicator |          |       | ENUMERATED (Cell Not Reserved for Operator Use, Cell Reserved for Operator Use, ...) |                       |

### 9.2.1.48D RLC Mode

The *RLC Mode* IE indicates the RLC Mode used for a Priority Queue.

| IE/Group Name | Presence | Range | IE Type and Reference            | Semantics Description |
|---------------|----------|-------|----------------------------------|-----------------------|
| RLC Mode      |          |       | ENUMERATED ( RLC-AM, RLC-UM,...) |                       |

### 9.2.1.49 RL ID

The RL ID is the unique identifier for one RL associated with a UE.

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description |
|---------------|----------|-------|-----------------------|-----------------------|
| RL ID         |          |       | INTEGER (0..31)       |                       |



### 9.2.1.49A RL Specific DCH Information

The *RL Specific DCH Information* IE provides RL Specific DCH Information for DCHs. In case of a set of co-ordinated DCHs requiring a new transport bearer on Iur, the *Transport Layer Address* IE and the *Binding ID* IE in the *RL Specific DCH Information* IE shall be included only for one of the DCHs in the set of co-ordinated DCHs.

| IE/Group Name                             | Presence | Range             | IE Type and Reference | Semantics Description                                | Criticality | Assigned Criticality |
|---|----------|-------------------|-----------------------|--|-------------|----------------------|
| <b>RL Specific DCH Information</b>        |          | 1..<maxno ofDCHs> |                       |  | –           |                      |
| >DCH ID                                   | M        |                   | 9.2.1.16              |  | –           |                      |
| >Binding ID                               | O        |                   | 9.2.1.3               | Shall be ignored if bearer establishment with ALCAP. | –           |                      |
| >Transport Layer Address                  | O        |                   | 9.2.1.62              | Shall be ignored if bearer establishment with ALCAP. | –           |                      |
| >Transport Bearer Not Requested Indicator | O        |                   | 9.2.2.4S              | FDD Only   | YES         | Ignore               |

| Range bound        | Explanation                        |
|--------------------|------------------------------------|
| <i>maxnoofDCHs</i> | Maximum number of DCHs for one UE. |

### 9.2.1.50 RNC-ID

This is the identifier of one RNC in UTRAN.

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description |
|---------------|----------|-------|-----------------------|-----------------------|
| RNC-ID        |          |       | INTEGER(0..4095)      |                       |

### 9.2.1.50a Extended RNC-ID

This is the identifier of one RNC in UTRAN.

| IE/Group Name   | Presence | Range | IE Type and Reference | Semantics Description   |
|-----------------|----------|-------|-----------------------|---|
| Extended RNC-ID |          |       | INTEGER(4096..65535)  | Note: Application of the <i>Extended RNC-ID</i> IE to very large networks is FFS. |

### 9.2.1.50A SAT ID

The SAT ID indicates the identity of the satellite.

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description  |
|---------------|----------|-------|-----------------------|--|
| SAT ID        |          |       | INTEGER(0..63)        | Identifies the satellite and is equal to (SV ID No - 1) where SV ID No is defined in [30]. |

### 9.2.1.50B RT Load Value

The *RT Load Value* IE indicates in percents the ratio of the load generated by Real Time traffic, relative to the measured Load Value. Real Time traffic corresponds to the Conversational and Streaming traffic classes.

| IE/Group Name          | Presence | Range | IE Type and Reference | Semantics Description |
|------------------------|----------|-------|-----------------------|-----------------------|
| Uplink RT Load Value   | M        |       | INTEGER(0..100)       |                       |
| Downlink RT Load Value | M        |       | INTEGER(0..100)       |                       |

### 9.2.1.51 SCH Time Slot

The *SCH Time Slot* IE represents the first time slot (k) of a pair of time slots inside a Radio Frame that is assigned to the Physical Channel SCH. The *SCH Time Slot* IE is only applicable if the value of *Sync Case* IE is Case 2 since in this case the SCH is allocated in TS#k and TS#k+8.

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description |
|---------------|----------|-------|-----------------------|-----------------------|
| SCH Time Slot |          |       | INTEGER(0..6)         |                       |

### 9.2.1.51A Scheduling Priority Indicator

Indicates the relative priority of the FACH, [TDD - DSCH, USCH,] HS-DSCH [FDD - or E-DCH] data frame. Used by the DRNC when scheduling FACH, [TDD - DSCH, USCH,] HS-DSCH [FDD - or E-DCH] traffic.

| IE/Group Name                 | Presence | Range | IE Type and Reference | Semantics Description  |
|-------------------------------|----------|-------|-----------------------|--|
| Scheduling Priority Indicator |          |       | INTEGER(0..15)        | Relative priority of the FACH, [TDD - DSCH, USCH,] HS-DSCH [FDD - or E-DCH] data frame:<br>0=Lowest Priority<br>...<br>15=Highest Priority |

### 9.2.1.52 Service Area Identifier (SAI)

This information element is used to identify an area consisting of one or more cells belonging to the same Location Area. Such an area is called a Service Area and can be used for indicating the location of a UE to the CN. For this protocol, only a Service Area that is defined to be applicable to the PS and CS domains shall be used.

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description  |
|---------------|----------|-------|-----------------------|--|
| PLMN Identity | M        |       | OCTET STRING (3)      | - digits 0 to 9, two digits per octet,<br>- each digit encoded 0000 to 1001,<br>- 1111 used as filler<br>- bit 4 to 1 of octet n encoding digit 2n-1<br>- bit 8 to 5 of octet n encoding digit 2n<br>-The PLMN Identity consists of 3 digits from MCC followed by either<br>-a filler plus 2 digits from MNC (in case of 2 digit MNC) or<br>-3 digits from MNC (in case of a 3 digit MNC). |
| LAC           | M        |       | OCTET STRING (2)      | 0000 and FFFE not allowed  |
| SAC           | M        |       | OCTET STRING (2)      |  |

### 9.2.1.52A SFN

System Frame Number of the cell, see ref. [17].

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description |
|---------------|----------|-------|-----------------------|-----------------------|
| SFN           |          |       | INTEGER(0..4095)      |                       |

### 9.2.1.52B SFN-SFN Measurement Threshold Information

The SFN-SFN Measurement Threshold Information defines the related thresholds SFN-SFN Observed Time Difference measurements which shall trigger the Event On Modification.

| IE/Group Name                     | Presence | Range | IE Type and Reference | Semantics Description   |
|-----------------------------------|----------|-------|-----------------------|---|
| SFN-SFN Change Limit              | O        |       | INTEGER(1..256)       | Change of SFN-SFN value compared to previously reported value, which shall trigger a new report.<br>Unit in 1/16 chip.      |
| Predicted SFN-SFN Deviation Limit | O        |       | INTEGER(1..256)       | Deviation the Predicted SFN-SFN from the latest measurement result, which shall trigger a new report.<br>Unit in 1/16 chip. |

### 9.2.1.52C SFN-SFN Measurement Value Information

The SFN-SFN Measurement Value Information IE indicates the measurement result related to SFN-SFN Observed Time Difference measurements as well as other related information.

| IE/Group Name  | Presence | Range                                 | IE Type and Reference | Semantics Description   |
|--|----------|---------------------------------------|-----------------------|---|
| <b>Successful Neighbouring cell SFN-SFN Observed Time Difference Measurement Information</b>   |          | <i>1..&lt;maxnoofMeasN Cell&gt;</i>   |                       |   |
| >UTRAN Cell Identifier   | M        |                                       | 9.2.1.71              |   |
| >SFN-SFN Value   | M        |                                       | 9.2.1.77              |   |
| >SFN-SFN Quality   | O        |                                       | INTEGER(0..255)       | Indicates the standard deviation (std) of the SFN-SFN otd (observed time difference) measurements in 1/16 chip. SFN-SFN Quality = $\sqrt{E[(x-\mu)^2]}$ = std of reported SFN-SFN Value, where x is the reported SFN-SFN Value and $\mu = E[x]$ is the expectation value of x.              |
| >SFN-SFN Drift Rate  | M        |                                       | INTEGER(-100..100)    | Indicates the SFN-SFN drift rate in 1/256 chip per second. A positive value indicates that the Reference cell clock is running at a greater frequency than the measured neighbouring cell.  |
| >SFN-SFN Drift Rate Quality  | O        |                                       | INTEGER(0..100)       | Indicates the standard deviation (std) of the SFN-SFN drift rate measurements in 1/256 chip per second. SFN-SFN Drift Rate Quality = $\sqrt{E[(x-\mu)^2]}$ = std of reported SFN-SFN Drift Rate, where x is the reported SFN-SFN Drift Rate and $\mu = E[x]$ is the expectation value of x. |
| >SFN-SFN Measurement Time Stamp  | M        |                                       | 9.2.1.76              |   |
| <b>Unsuccessful Neighbouring cell SFN-SFN Observed Time Difference Measurement Information</b> |          | <i>0..&lt;maxnoofMeasN Cell-1&gt;</i> |                       |   |
| >UTRAN Cell Identifier   | M        |                                       | 9.2.1.71              |   |

| Range bound             | Explanation  |
|-------------------------|--|
| <i>maxnoofMeasNCell</i> | Maximum number of neighbouring cells on which measurements can be performed. |

### 9.2.1.52Ca Shared Network Area (SNA) Information

This information element contains a list of Shared Network Areas, identified by the Shared Network Area Code (SNAC, see [1]) which a certain cell belongs to. For a broader description of the SNA access control see [40].

| IE/Group Name | Presence | Range             | IE type and reference | Semantics description  |
|---------------|----------|-------------------|-----------------------|--|
| PLMN Identity | M        |                   | OCTET STRING (3)      | - digits 0 to 9, two digits per octet,<br>- each digit encoded 0000 to 1001,<br>- 1111 used as filler<br>- bit 4 to 1 of octet n encoding digit 2n-1<br>- bit 8 to 5 of octet n encoding digit 2n<br>-The PLMN Identity consists of 3 digits from MCC followed by either<br>-a filler plus 2 digits from MNC (in case of 2 digit MNC) or<br>-3 digits from MNC (in case of a 3 digit MNC). |
| List of SNAs  |          | 0..<maxnoofSNAs > |                       |  |
| > SNAC        | M        |                   | INTEGER (0.. 65535)   |  |

| Range bound | Explanation                                     |
|-------------|---|
| maxnoofSNAs | Maximum number of SNAs one cell can be part of. |

### 9.2.1.52D SID

The *SID* IE provides the identity of the Size Index.

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description |
|---------------|----------|-------|-----------------------|-----------------------|
| SID           |          |       | INTEGER (0..7)        |                       |

### 9.2.1.53 S-RNTI

The S-RNTI identifies the UE in the SRNC.

| IE/Group Name | Presence | Range | IE Type and Reference          | Semantics Description |
|---------------|----------|-------|--------------------------------|-----------------------|
| S-RNTI        |          |       | INTEGER(0..2 <sup>20</sup> -1) |                       |

### 9.2.1.53a S-RNTI Group

The S-RNTI Group identifies a group of UEs in the SRNC.

| IE/Group Name         | Presence | Range | IE Type and Reference        | Semantics Description |
|-----------------------|----------|-------|------------------------------|-----------------------|
| S-RNTI                | M        |       | 9.2.1.53                     |                       |
| S-RNTI bit mask index | M        |       | Enumerated(b1, b2,..b19,...) |                       |

The S-RNTI group is identified by all S-RNTI values whose bits starting from the most significant bit down to, and including, the bit indicated by S-RNTI bit mask index, are equal to the corresponding bits of the S-RNTI in this IE.

The bits of the S-RNTI in this IE that are less significant than the bit position indicated by the S-RNTI bit mask index shall be ignored.

### 9.2.1.54 Sync Case

The SCH and PCCPCH in a TDD cell are mapped on one or two downlink slots per frame. There are two cases of Sync Case as follows:

- Case 1) SCH and PCCPCH allocated in a single TS#k
- Case 2) SCH allocated in two TS: TS#k and TS#k+8  
PCCPCH allocated in TS#k

[1.28Mcps TDD - There is no Sync Case indication needed for 1.28Mcps TDD. If the *Sync Case* IE must be included in a message from DRNC to SRNC used for 1.28Mcps TDD, the DRNC shall indicate Sync Case 1 and the SRNC shall ignore it.]

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description |
|---------------|----------|-------|-----------------------|-----------------------|
| Sync Case     |          |       | INTEGER<br>(1..2,...) |                       |

### 9.2.1.54A T1

The *T1* IE is used as described in ref [41] subclause 11.6.2.3.

| IE/Group Name | Presence | Range | IE type and reference   | Semantics description  |
|---------------|----------|-------|---|--|
| T1            |          |       | ENUMERATED (10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 120, 140, 160, 200, 300, 400, ...) | Unit: ms<br>Node B may use this value to stop the re-transmission of the corresponding MAC-hs PDU. |

### 9.2.1.55 TFCI Presence

The TFCI Presence parameter indicates whether the TFCI shall be included. [TDD - If it is present in the timeslot, it will be mapped to the channelisation code defined by [12].]

| IE/Group Name | Presence | Range | IE Type and Reference             | Semantics Description |
|---------------|----------|-------|-----------------------------------|-----------------------|
| TFCI Presence |          |       | ENUMERATED (Present, not present) |                       |

### 9.2.1.56 Time Slot

The Time Slot represents the time interval assigned to a Physical Channel referred to the start of a Radio Frame.

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description |
|---------------|----------|-------|-----------------------|-----------------------|
| Time Slot     |          |       | INTEGER<br>(0..14)    |                       |

### 9.2.1.56A TNL QoS

This IE indicates the TNL QoS characteristics of the transport bearer for the uplink data traffic.

When the *DS field* IE is used, the value of this IE is configurable by the operator.

When the *Generic Traffic Category* IE is used, generic traffic categories are implementation-specific (e.g. they may be determined by the sender from the application parameters). The value assigned to each of these categories and sent in the *Generic Traffic Category* IE is configurable by the operator, as well as the mapping of this value to DS field [44] at the DRNS side.

| IE/Group Name                     | Presence | Range | IE Type and Reference | Semantics Description  |
|-----------------------------------|----------|-------|-----------------------|--|
| CHOICE <i>TNL QoS type</i>        | M        |       |                       |  |
| > <i>DS Field</i>                 |          |       |                       |  |
| >>DS field                        | M        |       | BIT STRING (8)        | DS field as defined in [44]. Typically used when the DRNS and its SRNC are in the same DS domain as defined in [45]. |
| > <i>Generic Traffic Category</i> |          |       |                       |  |
| >>Generic Traffic Category        | M        |       | BIT STRING (8)        |  |

### 9.2.1.57 ToAWE

ToAWE is the window endpoint. DL data frames are expected to be received before this window endpoint. ToAWE is defined with a positive value relative Latest Time of Arrival (LToA). A data frame arriving after ToAWE gives a Timing Adjustment Control frame response.

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description |
|---------------|----------|-------|-----------------------|-----------------------|
| ToAWE         |          |       | INTEGER (0..2559)     | Unit: msec.           |

### 9.2.1.58 ToAWS

ToAWS is the window startpoint. DL data frames are expected to be received after this window startpoint. ToAWS is defined with a positive value relative Time of Arrival Window Endpoint (ToAWE). A data frame arriving before ToAWS gives a Timing Adjustment Control frame response.

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description |
|---------------|----------|-------|-----------------------|-----------------------|
| ToAWS         |          |       | INTEGER (0..1279)     | Unit: msec.           |

### 9.2.1.58a Trace Depth

The *Trace Depth* IE is Trace Configuration Parameter what should be traced by the DRNC on the indicated interfaces.

| IE/Group Name | Presence | Range | IE Type and Reference                      | Semantics Description                          |
|---------------|----------|-------|--|--|
| Trace Depth   |          |       | ENUMERATED ( Minimum, Medium, Maximum,...) | Meaning of this parameter is described in [49] |

### 9.2.1.58b Trace Recording Session Reference

The *Trace Recording Session Reference* IE provides a Trace Recording Session Reference allocated by the triggering entity.

| IE/Group Name                     | Presence | Range | IE Type and Reference | Semantics Description |
|-----------------------------------|----------|-------|-----------------------|-----------------------|
| Trace Recording Session Reference |          |       | INTEGER (0..65535)    |                       |

### 9.2.1.58c Trace Reference

The *Trace Reference* IE provides a Trace Reference allocated by the triggering entity.

| IE/Group Name   | Presence | Range | IE Type and Reference     | Semantics Description |
|-----------------|----------|-------|---------------------------|-----------------------|
| Trace Reference |          |       | OCTET STRING (SIZE(2..3)) |                       |

### 9.2.1.58A Traffic Class

This IE indicates the type of application the Radio Bearer is optimised for.

| IE/Group Name | Presence | Range | IE Type and Reference  | Semantics Description |
|---------------|----------|-------|--|-----------------------|
| Traffic Class |          |       | ENUMERATED (conversational, streaming, interactive, background, ...) |                       |

### 9.2.1.59 Transaction ID

The Transaction ID is used to associate all the messages belonging to the same procedure. Messages belonging to the same procedure shall use the same Transaction ID.

The Transaction ID is determined by the initiating peer of a procedure.

For procedures addressed to a specific UE Context, the Transaction ID shall uniquely identify a procedure among all ongoing parallel procedures for the same UE using the same procedure code, and initiated by the same protocol peer.

For procedures not addressed to a specific UE Context, the Transaction ID shall uniquely identify a procedure among all ongoing parallel procedures using the same procedure code, and initiated by the same protocol peer.

| IE/Group Name                       | Presence | Range | IE Type and Reference | Semantics Description  |
|-------------------------------------|----------|-------|-----------------------|--|
| CHOICE <i>Transaction ID Length</i> |          |       |                       | The Transaction ID shall be interpreted for its integer value, not for the type of encoding ("short" or "long"). |
| > <i>Short</i>                      |          |       |                       |  |
| >>Transaction ID Value              | M        |       | INTEGER (0..127)      |  |
| > <i>Long</i>                       |          |       |                       |  |
| >>Transaction ID Value              | M        |       | INTEGER (0..32767)    |  |



### 9.2.1.59A Transmitted Carrier Power

The *Transmitted Carrier Power* IE contains the Transmitted Carrier Power in a cell, as defined in [11] & [14].

| IE/Group Name             | Presence | Range | IE Type and Reference | Semantics Description                  |
|---------------------------|----------|-------|-----------------------|--|
| Transmitted Carrier Power |          |       | INTEGER(0..100)       | According to mapping in [23] and [24]. |

### 9.2.1.59B $T_{\text{UTRAN-GPS}}$ Accuracy Class

| IE/Group Name                         | Presence | Range | IE Type and Reference  | Semantics Description  |
|---------------------------------------|----------|-------|--|--|
| $T_{\text{UTRAN-GPS}}$ Accuracy Class |          |       | ENUMERATED(Accuracy Class A, Accuracy Class B, Accuracy Class C,...) | More information about Measurement Accuracy Class is included in [23]. |

### 9.2.1.59C $T_{\text{UTRAN-GPS}}$ Measurement Threshold Information

The  $T_{\text{UTRAN-GPS}}$  Measurement Threshold Information defines the related thresholds for UTRAN GPS Timing of Cell Frames for UE Positioning measurements shall trigger the Event On Modification.

| IE/Group Name                                    | Presence | Range | IE Type and Reference | Semantics Description   |
|--|----------|-------|-----------------------|---|
| $T_{\text{UTRAN-GPS}}$ Change Limit              | O        |       | INTEGER(1..256)       | Change of $T_{\text{UTRAN-GPS}}$ value compared to previously reported value, which shall trigger a new report.<br>Unit in 1/16 chip.         |
| Predicted $T_{\text{UTRAN-GPS}}$ Deviation Limit | O        |       | INTEGER(1..256)       | Deviation of the Predicted $T_{\text{UTRAN-GPS}}$ from the latest measurement result, which shall trigger a new report.<br>Unit in 1/16 chip. |

### 9.2.1.59D $T_{\text{UTRAN-GPS}}$ Measurement Value Information

The  $T_{\text{UTRAN-GPS}}$  *Measurement Value Information* IE indicates the measurement results related to the UTRAN GPS Timing of Cell Frames for UE Positioning measurements.

| IE/Group Name                             | Presence | Range | IE Type and Reference   | Semantics Description  |
|---|----------|-------|-------------------------|--|
| T <sub>UTRAN-GPS</sub>                    |          | 1     |                         | Indicates the UTRAN GPS Timing of Cell Frames for UE Positioning. According to mapping in [23] and [24]; significant values range from 0 to 37158911999999.  |
| >MS                                       | M        |       | INTEGER (0..16383)      | Most Significant Part  |
| >LS                                       | M        |       | INTEGER (0..4294967295) | Least Significant Part   |
| T <sub>UTRAN-GPS</sub> Quality            | O        |       | INTEGER(0..255)         | Indicates the standard deviation (std) of the T <sub>UTRAN-GPS</sub> measurements in 1/16 chip. $T_{UTRAN-GPS} \text{ Quality} = \sqrt{E[(x-\mu)^2]}$ = std of reported T <sub>UTRAN-GPS</sub> Value, where x is the reported T <sub>UTRAN-GPS</sub> Value and $\mu = E[x]$ is the expectation value of x.   |
| T <sub>UTRAN-GPS</sub> Drift Rate         | M        |       | INTEGER(-50..50)        | Indicates the T <sub>UTRAN-GPS</sub> drift rate in 1/256 chip per second. A positive value indicates that the UTRAN clock is running at a lower frequency than GPS clock.  |
| T <sub>UTRAN-GPS</sub> Drift Rate Quality | O        |       | INTEGER(0..50)          | Indicates the standard deviation (std) of the T <sub>UTRAN-GPS</sub> drift rate measurements in 1/256 chip per second. $T_{UTRAN-GPS} \text{ Drift Rate Quality} = \sqrt{E[(x-\mu)^2]}$ = std of reported T <sub>UTRAN-GPS</sub> Drift Rate, where x is the reported T <sub>UTRAN-GPS</sub> Drift Rate and $\mu = E[x]$ is the expectation value of x. |

### 9.2.1.60 Transport Bearer ID

The Transport Bearer ID uniquely identifies an Iur transport bearer.

| IE/Group Name       | Presence | Range | IE Type and Reference | Semantics Description |
|---------------------|----------|-------|-----------------------|-----------------------|
| Transport Bearer ID |          |       | INTEGER(0..4095)      |                       |

### 9.2.1.61 Transport Bearer Request Indicator

Indicates whether a new Iur transport bearer needs to be established for carrying the corresponding data stream(s), or whether an existing transport bearer will be used.

| IE/Group Name                      | Presence | Range | IE Type and Reference                                   | Semantics Description |
|------------------------------------|----------|-------|---|-----------------------|
| Transport Bearer Request Indicator |          |       | ENUMERATED(Bearer Requested, Bearer not Requested, ...) |                       |

### 9.2.1.62 Transport Layer Address

In case of transport bearer establishment with ALCAP [3] [35], this IE contains the address to be used for Transport Network Control Plane signalling to establish the transport bearer according to [3] [35].

In order to allow transport bearer establishment without ALCAP, this IE contains the address of the transport bearer to be used for the user plane transport.

For details on the Transport Address used see [3].

| IE/Group Name           | Presence | Range | IE Type and Reference          | Semantics Description |
|-------------------------|----------|-------|--------------------------------|-----------------------|
| Transport Layer Address |          |       | BIT<br>STRING(1..1<br>60, ...) |                       |

### 9.2.1.63 Transport Format Combination Set (TFCS)

The Transport Format Combination Set is defined as a set of Transport Format Combinations on a Coded Composite Transport Channel. It is the allowed Transport Format Combinations of the corresponding Transport Channels. The DL Transport Format Combination Set is applicable to DL Transport Channels.

| IE/Group Name              | Presence       | Range                | IE Type and Reference | Semantics Description   |
|----------------------------|----------------|----------------------|-----------------------|---|
| CHOICE TFCS Values         | M              |                      |                       |   |
| >Always Used               |                |                      |                       | This choice is always made.   |
| >>TFCS                     |                | 1..<maxnoofTFCS<br>> |                       | The first instance of the parameter corresponds to TFCI zero, the second to 1 and so on.<br>[TDD - The first entry (for TFCI 0) should be ignored by the receiver.] |
| >>>CTFC                    | M              |                      | 9.2.1.14A             |   |
| >>>CHOICE Gain Factors     | C-<br>PhysChan |                      |                       |   |
| >>>>Signalled Gain Factors |                |                      |                       |   |
| >>>>Gain Factor $\beta_c$  | M              |                      | INTEGER(0..15)        | [FDD - For UL DPCCH or control part of PRACH ref. [21].]<br>[TDD - $\beta$ for UL DPCH mapping in accordance to [13].]  |
| >>>>Gain Factor $\beta_D$  | M              |                      | INTEGER(0..15)        | [FDD - For UL DPDCH or data part of PRACH ref. [21].]<br>[TDD - Should be set to 0 by the sender, and shall be ignored by the receiver.]                            |
| >>>>Reference TFC nr       | O              |                      | INTEGER(0..15)        | If this TFC is a reference TFC, this IE indicates the reference number  |
| >>>>Computed Gain Factors  |                |                      |                       |   |
| >>>>Reference TFC nr       | M              |                      | INTEGER(0..15)        | Indicates the reference TFC to be used to calculate the gain factors for this TFC   |
| >Not Used                  |                |                      | NULL                  | This choice shall never be made by the SRNC and the DRNC shall consider the procedure as failed if it is received.  |

| Condition | Explanation  |
|-----------|--|
| PhysChan  | The choice shall be present if the TFCS concerns a UL DPCH [FDD – or PRACH channel]. |

| Range bound | Explanation  |
|-------------|--|
| maxnoofTFCS | The maximum number of Transport Format Combinations. |

### 9.2.1.64 Transport Format Set

The Transport Format Set is defined as the set of Transport Formats associated to a Transport Channel, e.g. DCH.

[TDD - The Transport Format Set for each transport channel within the same CCTrCH shall have the same value for the 2<sup>nd</sup> Interleaving Mode IE.]

| IE/Group Name                                   | Presence     | Range              | IE Type and Reference                               | Semantics Description   |
|---|--------------|--------------------|---|---|
| <b>Dynamic Transport Format Information</b>     |              | $1..<maxTFcount>$  |   | The first instance of the parameter corresponds to TFI zero, the second to 1 and so on.   |
| >Number of Transport Blocks                     | M            |                    | INTEGER (0..512)                                    |   |
| >Transport Block Size                           | C – Blocks   |                    | INTEGER (0..5000)                                   | Unit: Bits  |
| >CHOICE Mode                                    | M            |                    |   |   |
| >>TDD   |              |                    |   |   |
| >>>Transmission Time Interval Information       | C-TTIdynamic | $1..<maxTTIcount>$ |   |   |
| >>>>Transmission Time Interval                  | M            |                    | ENUMERATED(10, 20, 40, 80,...)                      | Unit: msec  |
| <b>Semi-static Transport Format Information</b> |              | 1                  |   |   |
| >Transmission Time Interval                     | M            |                    | ENUMERATED (10, 20, 40, 80, dynamic, ...)           | Unit: msec<br>Value "dynamic" for TDD only.<br>For FDD DCH, the value "80" is applicable only when <i>DL DPCH Slot Format</i> IE indicates a slot format with SF=512. |
| >Type of Channel Coding                         | M            |                    | ENUMERATED (No codingTDD, Convolutional, Turbo,...) | [FDD - The value "No codingTDD" shall be treated as logical error if received]  |
| >Coding Rate                                    | C – Coding   |                    | ENUMERATED (1/2, 1/3,...)                           |   |
| >Rate Matching Attribute                        | M            |                    | INTEGER (1..maxRM)                                  |   |
| >CRC size                                       | M            |                    | ENUMERATED (0, 8, 12, 16, 24,...)                   |   |
| >CHOICE Mode                                    | M            |                    |   |   |
| >>TDD   |              |                    |   |   |
| >>>2 <sup>nd</sup> Interleaving Mode            | M            |                    | ENUMERATED(Frame related, Timeslot related,...)     |   |

| Condition  | Explanation  |
|------------|--|
| Blocks     | The IE shall be present if the <i>Number of Transport Blocks</i> IE is set to a value greater than 0.  |
| Coding     | The IE shall be present if <i>Type of Channel Coding</i> IE is set to "Convolutional" or "Turbo".  |
| TTIdynamic | The IE shall be present if the <i>Transmission Time Interval</i> IE in the <i>Semi-static Transport Format Information</i> IE is set to "dynamic". |

| Range bound        | Explanation   |
|--------------------|---|
| <i>maxTFcount</i>  | The maximum number of different transport formats that can be included in the Transport format set for one transport channel. |
| <i>maxRM</i>       | The maximum number that could be set as rate matching attribute for a transport channel.                                      |
| <i>maxTTIcount</i> | The amount of different TTI that are possible for that transport format is.   |

### 9.2.1.65 TrCH Source Statistics Descriptor

Defines the statistics of the data transmitted in the transport channel. This information may be used in reserving resources in the DRNS.

| IE/Group Name                     | Presence | Range | IE Type and Reference                 | Semantics Description   |
|-----------------------------------|----------|-------|---------------------------------------|---|
| TrCH Source Statistics Descriptor |          |       | ENUMERATED(Speech, RRC, Unknown, ...) | "Speech" = Statistics of the data corresponds to speech.<br>"RRC" = Statistics of the data corresponds to RRC signalling<br>"Unknown" = The statistics of the data is unknown |

### 9.2.1.66 UARFCN

The UTRA Absolute Radio Frequency Channel Number defines the carrier.

| IE/Group Name | Presence | Range | IE Type and Reference  | Semantics Description  |
|---------------|----------|-------|------------------------|--|
| UARFCN        |          |       | INTEGER(0..16383, ...) | Corresponds to: 0.0Hz..3276.6MHz<br>see ref. [6] and ref. [7]. |

### 9.2.1.66A UE Identity

The *UE Identity* IE identifies the UE by one of its Permanent NAS Identifier.

| IE/Group Name             | Presence | Range | IE Type and Reference | Semantics Description |
|---------------------------|----------|-------|-----------------------|-----------------------|
| CHOICE <i>UE Identity</i> | M        |       |                       |                       |
| > <i>IMSI</i>             |          |       |                       |                       |
| >>IMSI                    | M        |       | 9.2.1.31              |                       |
| > <i>IMEI</i>             |          |       |                       |                       |
| >>IMEI                    | M        |       | 9.2.1.30T             |                       |
| > <i>IMEISV</i>           |          |       |                       |                       |
| >>IMEISV                  | M        |       | 9.2.1.30U             |                       |

### 9.2.1.67 UL FP Mode

This parameter defines if normal or silent mode of the Frame Protocol shall be used for the UL.

| IE/Group Name | Presence | Range | IE Type and Reference          | Semantics Description |
|---------------|----------|-------|--------------------------------|-----------------------|
| UL FP Mode    |          |       | ENUMERATED(Normal, Silent,...) |                       |

## 9.2.1.68 UL Interference Level

Void

## 9.2.1.68A Uncertainty Ellipse

This IE contains the uncertainty ellipse used to describe a possible shape of the geographical area of a cell.

| IE/Group Name             | Presence | Range | IE Type and Reference | Semantics Description   |
|---------------------------|----------|-------|-----------------------|---|
| Uncertainty semi-major    | M        |       | INTEGER(0..127)       | The uncertainty "r" is derived from the "uncertainty code" k by<br>$r = 10 \times (1.1^{k-1})$  |
| Uncertainty semi-minor    | M        |       | INTEGER(0..127)       | The uncertainty "r" is derived from the "uncertainty code" k by<br>$r = 10 \times (1.1^{k-1})$  |
| Orientation of major axis | M        |       | INTEGER(0..179)       | The relation between the IE value (N) and the angle (a) in degrees it describes is $2N \leq a < 2(N+1)$ . The values 90..179 shall not be used. |

## 9.2.1.68B Unidirectional DCH Indicator

The *Unidirectional DCH Indicator* IE indicates that the DCH is unidirectional.

| IE/Group Name                | Presence | Range | IE Type and Reference                           | Semantics Description |
|------------------------------|----------|-------|---|-----------------------|
| Unidirectional DCH Indicator |          |       | ENUMERATED (Downlink DCH only, Uplink DCH only) |                       |

## 9.2.1.69 Uplink SIR

The UL SIR indicates a received UL SIR.

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description  |
|---------------|----------|-------|-----------------------|--|
| Uplink SIR    |          |       | INTEGER (-82..173)    | Value = Uplink SIR/10<br>Unit dB<br>Range -8.2..+17.3<br>Step 0.1 dB |

## 9.2.1.70 URA ID

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description |
|---------------|----------|-------|-----------------------|-----------------------|
| URA ID        |          |       | INTEGER(0..65 535)    |                       |

## 9.2.1.70A UTRAN Access Point Position

The UTRAN Access Point Position indicates the exact geographical position of the base station antenna.

| IE/Group Name        | Presence | Range | IE Type and Reference                          | Semantics Description   |
|----------------------|----------|-------|--|---|
| Latitude Sign        | M        |       | ENUMERATED(North, South)                       |   |
| Degrees of Latitude  | M        |       | INTEGER(0..2 <sup>23</sup> -1)                 | The IE value (N) is derived by this formula:<br>$N \leq 2^{23} X / 90 < N+1$<br>X being the latitude in degree (0°.. 90°)       |
| Degrees of Longitude | M        |       | INTEGER(-2 <sup>23</sup> ..2 <sup>23</sup> -1) | The IE value (N) is derived by this formula:<br>$N \leq 2^{24} X / 360 < N+1$<br>X being the longitude in degree (-180°..+180°) |

### 9.2.1.70B URA Information

The *URA Information* IE contains URA Information for one cell.

| IE/Group Name                              | Presence | Range                 | IE Type and Reference | Semantics Description   | Criticality | Assigned Criticality |
|--|----------|-----------------------|-----------------------|---|-------------|----------------------|
| URA ID                                     | M        |                       | 9.2.1.70              |   | –           |                      |
| Multiple URAs Indicator                    | M        |                       | 9.2.1.41              |   | –           |                      |
| <b>RNCs with Cells in the Accessed URA</b> |          | 0 .. <maxRNCin URA-1> |                       | Other RNCs having at least one cell in the URA identified by the <i>URA ID</i> IE.                                    | –           |                      |
| >RNC-ID                                    | M        |                       | 9.2.1.50              | If the <i>Extended RNC-ID</i> IE is included in the <i>URA Information</i> IE, the <i>RNC-ID</i> IE shall be ignored. | –           |                      |
| >Extended RNC-ID                           | O        |                       | 9.2.1.50a             | The <i>Extended RNC-ID</i> IE shall be used if the RNC identity has a value larger than 4095.                         | YES         | reject               |

| Range Bound | Explanation                       |
|-------------|-----------------------------------|
| maxRNCinURA | Maximum number of RNC in one URA. |

### 9.2.1.70C User Plane Congestion Fields Inclusion

The *User Plane Congestion Fields Inclusion* IE is used by the DRNC to indicate to the SRNC to include in the HS-DSCH Data Frames the User Plane fields related to TNL Congestion Control for HSDPA (namely the Frame Sequence Number and the DRT, see [32]).

| IE/Group Name                          | Presence | Range | IE Type and Reference           | Semantics Description |
|--|----------|-------|---------------------------------|-----------------------|
| User Plane Congestion Fields Inclusion |          |       | ENUMERATED ( Shall be included) |                       |



### 9.2.1.71 UTRAN Cell Identifier (UC-ID)

The UC-ID (UTRAN Cell identifier) is the identifier of a cell in one UTRAN.

| IE/Group Name   | Presence | Range | IE Type and Reference | Semantics Description   |
|-----------------|----------|-------|-----------------------|---|
| RNC-ID          | M        |       | 9.2.1.50              | If the <i>Extended RNC-ID</i> IE is included in the <i>UC-ID</i> IE, the <i>RNC-ID</i> IE shall be ignored. |
| C-ID            | M        |       | 9.2.1.6               |   |
| Extended RNC-ID | O        |       | 9.2.1.50a             | The <i>Extended RNC-ID</i> IE shall be used if the RNC identity has a value larger than 4095.               |

### 9.2.1.72 Neighbouring TDD Cell Information LCR

The *Neighbouring TDD Cell Information LCR* IE provides information for 1.28Mcps TDD cells that are neighbouring cells to a cell in the DRNC.

| IE/Group Name                                | Presence | Range  | IE Type and Reference | Semantics Description         | Criticality | Assigned Criticality |
|--|----------|--|-----------------------|-------------------------------|-------------|----------------------|
| <b>Neighbouring TDD Cell Information LCR</b> |          | <i>1..&lt;maxno ofLCRTDD neighbour s&gt;</i> |                       |                               | –           |                      |
| >C-ID  | M        |  | 9.2.1.6               |                               | –           |                      |
| >UARFCN                                      | M        |  | 9.2.1.66              | Corresponds to Nt in ref. [7] | –           |                      |
| >Frame Offset                                | O        |  | 9.2.1.30              |                               | –           |                      |
| >Cell Parameter ID                           | M        |  | 9.2.1.8               |                               | –           |                      |
| >SCTD Indicator                              | M        |  | 9.2.1.78              |                               | –           |                      |
| >Cell Individual Offset                      | O        |  | 9.2.1.7               |                               | –           |                      |
| >DPCH Constant Value                         | O        |  | 9.2.1.23              |                               | –           |                      |
| >PCCPCH Power                                | O        |  | 9.2.1.43              |                               | –           |                      |
| >Restriction State Indicator                 | O        |  | 9.2.1.48C             |                               | –           |                      |
| >Coverage Indicator                          | O        |  | 9.2.1.12G             |                               | YES         | ignore               |
| >Antenna Co-location Indicator               | O        |  | 9.2.1.2C              |                               | YES         | ignore               |
| >HCS Prio                                    | O        |  | 9.2.1.30N             |                               | YES         | ignore               |
| >Cell Capability Container TDD LCR           | O        |  | 9.2.3.1b              |                               | YES         | ignore               |
| > SNA Information                            | O        |  | 9.2.1.52Ca            |                               | YES         | ignore               |
| >Multiple PLMN List                          | O        |  | 9.2.1.117             |                               | YES         | ignore               |

| Range bound                    | Explanation  |
|--------------------------------|--|
| <i>maxnoofLCRTDDneighbours</i> | Maximum number of neighbouring 1.28Mcps TDD cell for one cell. |

### 9.2.1.73 Permanent NAS UE Identity

This element is used to identify the UE in UTRAN.

| IE/Group Name                           | Presence | Range | IE Type and Reference | Semantics Description |
|---|----------|-------|-----------------------|-----------------------|
| Choice <i>Permanent NAS UE Identity</i> |          |       |                       |                       |
| >IMSI                                   |          |       |                       |                       |
| >>IMSI                                  | M        |       | 9.2.1.31              |                       |

### 9.2.1.74 SFN-SFN Measurement Reference Point Position

The SFN-SFN Measurement Reference Point Position indicates the exact geographical position of the SFN-SFN measurement reference point. The altitude shall be included when available.

| IE/Group Name            | Presence | Range | IE Type and Reference | Semantics Description |
|--------------------------|----------|-------|-----------------------|-----------------------|
| Geographical Coordinates | M        |       | 9.2.1.30F             |                       |
| Altitude and direction   | O        |       | 9.2.1.2B              |                       |

### 9.2.1.75 UTRAN Access Point Position with Altitude

The UTRAN Access Point Position with Altitude indicates the exact geographical position of the base station antenna. The altitude shall be included when available.

| IE/Group Name            | Presence | Range | IE Type and Reference | Semantics Description |
|--------------------------|----------|-------|-----------------------|-----------------------|
| Geographical Coordinates | M        |       | 9.2.1.30F             |                       |
| Altitude and direction   | O        |       | 9.2.1.2B              |                       |

### 9.2.1.76 SFN-SFN Measurement Time Stamp

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description   |
|---------------|----------|-------|-----------------------|---|
| CHOICE Mode   | M        |       |                       |   |
| >FDD          |          |       |                       |   |
| >>SFN         | M        |       | 9.2.1.52A             | Indicates the SFN of the reference cell at which the measurement has been performed.        |
| >TDD          |          |       |                       |   |
| >>SFN         | M        |       | 9.2.1.52A             | Indicates the SFN of the reference cell at which the measurement has been performed.        |
| >>Time Slot   | M        |       | 9.2.1.56              | Indicates the Time Slot of the reference cell at which this measurement has been performed. |

### 9.2.1.77 SFN-SFN Value

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description         |
|---------------|----------|-------|-----------------------|-------------------------------|
| CHOICE Mode   | M        |       |                       |                               |
| >FDD          |          |       |                       |                               |
| >>SFN-SFN     | M        |       | INTEGER(0..614399)    | According to mapping in [23]. |
| >TDD          |          |       |                       | 1.28Mcps or 3.84Mcps TDD      |
| >>SFN-SFN     | M        |       | INTEGER(0..40961)     | According to mapping in [24]. |
| >TDD 7.68Mcps |          |       |                       |                               |
| >>SFN-SFN     | M        |       | INTEGER(0..81923)     | According to mapping in [24]. |

### 9.2.1.78 SCTD Indicator

Indicates if SCTD antenna diversity is applied or not to the PCCPCH and PICH [3.84Mcps TDD].

| IE/Group Name  | Presence | Range | IE Type and Reference         | Semantics Description |
|----------------|----------|-------|-------------------------------|-----------------------|
| SCTD Indicator |          |       | ENUMERATED (active, inactive) |                       |

### 9.2.1.79 Congestion Cause

The *Congestion Cause* IE indicates the cause of a congestion situation:

| IE/Group Name    | Presence | Range | IE Type and Reference   | Semantics Description |
|------------------|----------|-------|---|-----------------------|
| Congestion Cause |          |       | ENUMERATED (UTRAN Dynamic Resources, UTRAN Semistatic Resources, ...) |                       |

The meaning of the different congestion cause values is described in the following table:

| Congestion cause           | Meaning   |
|----------------------------|---|
| UTRAN Dynamic Resources    | UL and/or DL resource congestion situation mainly caused by the UL and/or DL UTRAN Dynamic Resources. This type of congestion situation is, e.g. related to the limitation of the DL transmitted carrier power of the cell(s), or the UL Interference situation in the concerned cell(s). |
| UTRAN Semistatic Resources | UL and/or DL resource congestion situation mainly related to UTRAN Semistatic Resources (e.g. channelisation codes, Node-B resources, ..).  |

### 9.2.1.80 TMGI

The TMGI is the unique identifier for an MBMS bearer service, see ref.[1].

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description  |
|---------------|----------|-------|-----------------------|--|
| PLMN Identity | M        |       | OCTET STRING (3)      | - digits 0 to 9, two digits per octet,<br>- each digit encoded 0000 to 1001,<br>- 1111 used as filler<br>- bit 4 to 1 of octet n encoding digit 2n-1<br>- bit 8 to 5 of octet n encoding digit 2n<br>-The PLMN Identity consists of 3 digits from MCC followed by either<br>-a filler plus 2 digits from MNC (in case of 2 digit MNC) or<br>-3 digits from MNC (in case of a 3 digit MNC). |
| Service ID    | M        |       | OCTET STRING (3)      |  |

### 9.2.1.81 Transmission Mode

The *Transmission Mode* IE indicates the transmission mode used for MBMS data transmission in one cell.

| IE/Group Name     | Presence | Range | IE Type and Reference               | Semantics Description  |
|-------------------|----------|-------|-------------------------------------|--|
| Transmission Mode |          |       | ENUMERATED(PTP, PTM, Not Provided). | PTP: The MBMS data is transmitted through point to point channel.<br>PTM: The MBMS data is transmitted through point to multipoint channel.<br>Not Provided: The MBMS data is not transmitted in the DRNC. |

### 9.2.1.82 Access Point Name

The APN and IP Multicast Address uniquely identify an MBMS bearer service.

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description |
|---------------|----------|-------|-----------------------|-----------------------|
| APN           | M        |       | OCTET STRING (1..255) |                       |

### 9.2.1.83 IP Multicast Address

The APN and IP Multicast Address uniquely identify an MBMS bearer service.

| IE/Group Name        | Presence | Range | IE Type and Reference | Semantics Description |
|----------------------|----------|-------|-----------------------|-----------------------|
| IP Multicast Address | M        |       | OCTET STRING (4..16)  |                       |

### 9.2.1.84 MBMS Bearer Service Full Address

This IE provides the full address of an MBMS Bearer Service otherwise identified by its TMGI.

| IE/Group Name        | Presence | Range | IE Type and Reference | Semantics Description |
|----------------------|----------|-------|-----------------------|-----------------------|
| Access Point Name    | M        |       | 9.2.1.82              |                       |
| IP Multicast Address | M        |       | 9.2.1.83              |                       |

### 9.2.1.85 Provided Information

This IE contains the relevant data concerned the direct information transfer procedure. *Provided Information* IE shall include at least one of the following IEs.

| IE/Group Name                              | Presence | Range | IE Type and Reference | Semantics Description             | Criticality | Assigned Criticality |
|--|----------|-------|-----------------------|-----------------------------------|-------------|----------------------|
| MBMS Channel Type Information              | O        |       | 9.2.1.86              |                                   |             |                      |
| MBMS Preferred Frequency Layer Information | O        |       | 9.2.1.87              |                                   |             |                      |
| UpPCH Information LCR                      | O        |       | 9.2.3.55              | Applicable to 1.28Mcps TDD only . | YES         | ignore               |

### 9.2.1.86 MBMS Channel Type Information

This IE contains the channel types of a MBMS Bearer Service indicated by *TMGI* IE in one or more cells. *MBMS Channel Type Information* IE shall include at least one *C-ID* IE and *Affected UE Information for MBMS* IE in the *PTM Cell List* IE, the *PTP Cell List* IE and/or *Not Provided Cell List* IE.

| IE/Group Name                               | Presence | Range              | IE Type and Reference | Semantics Description |
|---|----------|--------------------|-----------------------|-----------------------|
| TMGI  | M        |                    | 9.2.1.80              |                       |
| <b>PTM Cell List</b>                        |          | 0..<maxnoofCells>  |                       |                       |
| >C-ID                                       | M        |                    | 9.2.1.6               |                       |
| <b>&gt;Affected UE Information for MBMS</b> |          | 0..<maxnoofUEs>    |                       |                       |
| >>S-RNTI                                    | M        |                    | 9.2.1.53              |                       |
| <b>PTP Cell List</b>                        |          | 0.. <maxnoofCells> |                       |                       |
| >C-ID                                       | M        |                    | 9.2.1.6               |                       |
| <b>&gt;Affected UE Information for MBMS</b> |          | 0..<maxnoofUEs>    |                       |                       |
| >>S-RNTI                                    | M        |                    | 9.2.1.53              |                       |
| <b>Not Provided Cell List</b>               |          | 0.. <maxnoofCells> |                       |                       |
| >C-ID                                       | M        |                    | 9.2.1.6               |                       |
| <b>&gt;Affected UE Information for MBMS</b> |          | 0..<maxnoofUEs>    |                       |                       |
| >>S-RNTI                                    | M        |                    | 9.2.1.53              |                       |

| Range Bound         | Explanation   |
|---------------------|---|
| <i>maxnoofCells</i> | Maximum number of cells that can be indicated in the corresponding IE.          |
| <i>maxnoofUEs</i>   | Maximum number of S-RNTIs that can be indicated per cell in the respective IEs. |

### 9.2.1.87 MBMS Preferred Frequency Layer Information

This IE contains the preferred frequency layer of a MBMS Bearer Service indicated by *TMGI* IE in one or more cells that host at least one *CELL\_DCH* UE whose *UE Link* contains the concerned MBMS Bearer Service and whose *SRNC* is different from the *CRNC*.

| IE/Group Name                                | Presence | Range                    | IE Type and Reference | Semantics Description  |
|--|----------|--------------------------|-----------------------|--|
| TMGI   | M        |                          | 9.2.1.80              |  |
| <b>Preferred Frequency Layer Information</b> |          |                          |                       |  |
| >Default Preferred Frequency                 | M        |                          | UARFCN<br>9.2.1.66    |  |
| <b>&gt;Additional Preferred Frequency</b>    |          | 0..<maxnoofAddFreq>      |                       | Preferred frequencies different from default preferred frequency |
| >>DL UARFCN                                  | M        |                          | UARFCN<br>9.2.1.66    |  |
| <b>&gt;&gt;Corresponding Cells</b>           |          | 1..<maxnoofCellsPerFreq> |                       |  |
| >>>C-ID                                      | M        |                          | 9.2.1.6               |  |

| Range Bound                | Explanation  |
|----------------------------|--|
| <i>maxnoofAddFreq</i>      | Maximum number of additional preferred frequencies different from default preferred frequency in an RNC. |
| <i>maxnoofCellsPerFreq</i> | Maximum number of cells whose preferred frequency is the same.   |

### 9.2.1.88 E-DCH DDI Value

The *E-DCH DDI Value* IE is the Data Description Indicator value identifying a unique combination of E-DCH MAC-d Flow ID and MAC-d PDU Size.

| IE/Group Name   | Presence | Range | IE Type and Reference | Semantics Description |
|-----------------|----------|-------|-----------------------|-----------------------|
| E-DCH DDI Value |          |       | INTEGER<br>(0..62)    |                       |

### 9.2.1.89 E-DCH MAC-d Flow Multiplexing List

The E-DCH MAC-d Flow Multiplexing List indicates which E-DCH MAC-d flows are allowed to be multiplexed within a MAC-e PDU with the MAC-d flow it is associated to. If the E-DCH MAC-d Flow Multiplexing List is signalled for an E-DCH MAC-d flow it indicates that E-DCH MAC-d PDUs of this E-DCH MAC-d flow are the first E-DCH MAC-d PDU in the MAC-e PDU. If an E-DCH MAC-d Flow Multiplexing List was already received within a previous Radio Link related procedure and no E-DCH MAC-d Flow Multiplexing List is signalled for a E-DCH MAC-d flow, the DRNS shall continue to use the previously received one. If no E-DCH MAC-d Flow Multiplexing List was ever received for an E-DCH MAC-d flow no restrictions shall be assumed for the related E-DCH MAC-d flow for multiplexing E-DCH MAC-d flows.

| IE/Group Name                      | Presence | Range | IE Type and Reference | Semantics Description   |
|------------------------------------|----------|-------|-----------------------|---|
| E-DCH MAC-d Flow Multiplexing List |          |       | BIT STRING<br>(8)     | The first Bit corresponds to E-DCH MAC-d flow 0, the second bit corresponds to E-DCH MAC-d flow 1, etc. |

### 9.2.1.90 E-DCH MAC-d Flows To Delete

The *E-DCH MAC-d Flows To Delete* IE is used for the removal of E-DCH MAC-d flows.

| IE/Group Name                      | Presence | Range                                   | IE Type and Reference | Semantics Description |
|------------------------------------|----------|---|-----------------------|-----------------------|
| <b>E-DCH MAC-d Flows To Delete</b> |          | <i>1..&lt;maxnoofEDCH MACdFlows&gt;</i> |                       |                       |
| >E-DCH MAC-d Flow ID               | M        |   | 9.2.1.91              |                       |

| Range Bound                 | Explanation                         |
|-----------------------------|-------------------------------------|
| <i>maxnoofEDCHMACdFlows</i> | Maximum number of E-DCH MAC-d flows |

### 9.2.1.91 E-DCH MAC-d Flow ID

The *E-DCH MAC-d Flow ID* IE is the unique identifier for one MAC-d flow on E-DCH.

| IE/Group Name       | Presence | Range | IE Type and Reference                              | Semantics Description |
|---------------------|----------|-------|--|-----------------------|
| E-DCH MAC-d Flow ID |          |       | INTEGER<br>(0..<br>maxnoofEDC<br>HMACdFlow<br>s-1) |                       |

| Range Bound                 | Explanation                         |
|-----------------------------|-------------------------------------|
| <i>maxnoofEDCHMACdFlows</i> | Maximum number of E-DCH MAC-d flows |

### 9.2.1.91A E-DCH MAC-d PDU Size Format

The *E-DCH MAC-d PDU Size Format* IE provides information about the type of MAC-d PDU Size Format that shall be used for the E-DCH in the new configuration. "Fixed MAC-d PDU Size" uses MAC-d PDU sizes defined in *MAC-d PDU Size List* IE of the *E-DCH Logical Channel Information* IE. "Flexible MAC-d PDU Size" uses a flexible MAC-d PDU size with a maximum PDU size as defined by *Maximum MAC-d PDU Size Extended* IE of *E-DCH Logical Channel Information* IE. The actual MAC-d PDU size is determined as specified in [24] and [32].

| IE/Group Name               | Presence | Range | IE Type and Reference   | Semantics Description |
|-----------------------------|----------|-------|---|-----------------------|
| E-DCH MAC-d PDU Size Format |          |       | ENUMERATED<br>(Fixed MAC-d PDU Size, Flexible MAC-d PDU Size) |                       |

### 9.2.1.92 E-DCH Logical Channel Information

The *E-DCH Logical Channel Information* IE is used for the establishment of E-DCH Logical Channels.

| IE/Group Name                            | Presence | Range                                    | IE Type and Reference              | Semantics Description  | Criticality | Assigned Criticality |
|--|----------|--|------------------------------------|--|-------------|----------------------|
| <b>E-DCH Logical Channel Information</b> |          | <i>1..&lt;maxnooflogicalchannels&gt;</i> |                                    |  | –           |                      |
| >Logical Channel ID                      | M        |  | 9.2.1.97                           |  | –           |                      |
| >Scheduling Priority Indicator           | M        |  | 9.2.1.51A                          |  | –           |                      |
| >Scheduling Information                  | M        |  | 9.2.1.101                          |  | –           |                      |
| >MAC-es Guaranteed Bit Rate              | O        |  | 9.2.1.98                           |  | –           |                      |
| >E-DCH DDI Value                         | M        |  | 9.2.1.88                           | If more than 1 MAC-d PDU size is configured for this Logical Channel, the different sizes will use subsequent DDI values starting from this DDI value. Value "0x3F" is reserved. Shall be ignored if <i>Maximum MAC-d PDU Size Extended</i> IE is present. | –           |                      |
| <b>&gt;MAC-d PDU Size List</b>           |          | <i>1..&lt;maxnoofMACdPDUSize&gt;</i>     |                                    |  | –           |                      |
| >>MAC-d PDU Size                         | M        |  | 9.2.1.34A                          | Shall be ignored if <i>Maximum MAC-d PDU Size Extended</i> IE is present.  | –           |                      |
| >Maximum MAC-d PDU Size Extended         | O        |  | MAC PDU Size Extended<br>9.2.1.34D |  | YES         | reject               |
| >MAC-es Maximum Bit Rate LCR             | O        |  | 9.2.3.59                           | 1.28Mcps<br>TDD only   | YES         | ignore               |

| Range Bound                   | Explanation   |
|-------------------------------|---|
| <i>maxnooflogicalchannels</i> | Maximum number of logical channels                    |
| <i>maxnoofMACdPDUSize</i>     | Maximum number of MAC-d PDU size per Logical Channels |

### 9.2.1.93 E-DCH Logical Channel To Modify

The *E-DCH Logical Channel To Modify* IE is used for the reconfiguration of E-DCH Logical Channels.



| IE/Group Name                            | Presence | Range                         | IE Type and Reference              | Semantics Description  | Criticality | Assigned Criticality |
|--|----------|-------------------------------|------------------------------------|--|-------------|----------------------|
| <b>E-DCH Logical Channel Information</b> |          | $1..<maxnooflogicalchannels>$ |                                    |  | –           |                      |
| >Logical Channel ID                      | M        |                               | 9.2.1.97                           |  | –           |                      |
| >Scheduling Priority Indicator           | O        |                               | 9.2.1.51A                          |  | –           |                      |
| >Scheduling Information                  | O        |                               | 9.2.1.101                          |  | –           |                      |
| >MAC-es Guaranteed Bit Rate              | O        |                               | 9.2.1.98                           |  | –           |                      |
| >E-DCH DDI Value                         | O        |                               | 9.2.1.88                           | If more than 1 MAC-d PDU size is configured for this Logical Channel, the different sizes will use subsequent DDI values starting from this DDI value. Value "0x3F" is reserved. Shall be ignored if <i>Maximum MAC-d PDU Size Extended</i> IE is present. | –           |                      |
| <b>&gt;MAC-d PDU Size List</b>           |          | $0..<maxnoofMACdPDUSize>$     |                                    |  | –           |                      |
| >>MAC-d PDU Size                         | M        |                               | 9.2.1.34A                          |  | –           |                      |
| >Maximum MAC-d PDU Size Extended         | O        |                               | MAC PDU Size Extended<br>9.2.1.34D |  | YES         | reject               |
| >MAC-es Maximum Bit Rate LCR             | O        |                               | 9.2.3.59                           | 1.28Mcps TDD only  | YES         | ignore               |

| Range Bound                   | Explanation   |
|-------------------------------|---|
| <i>maxnooflogicalchannels</i> | Maximum number of logical channels                    |
| <i>maxnoofMACdPDUSize</i>     | Maximum number of MAC-d PDU size per Logical Channels |

### 9.2.1.94 E-RNTI

The *E-RNTI* IE is needed for the UE (or UE group) specific CRC in E-AGCH, see ref. [52].

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description |
|---------------|----------|-------|-----------------------|-----------------------|
| E-RNTI        |          |       | INTEGER<br>(0..65535) |                       |

### 9.2.1.95 E-DCH Processing Overload Level

The *E-DCH Processing Overload Level* IE defines the threshold that determines when DRNS shall indicate processing issue problems to the SRNC.

| IE/Group Name                   | Presence | Range | IE type and reference | Semantics description  |
|---------------------------------|----------|-------|-----------------------|--|
| E-DCH Processing Overload Level |          |       | INTEGER (0..10,...)   | Number of consecutive TTIs.<br>The value "0" is a special value, that means infinity, i.e. when this value is used, the DRNS shall never indicate processing issue to the RNC. |

### 9.2.1.96 E-DCH Power Offset for Scheduling Info

The E-DCH Power Offset for Scheduling Info is used to calculate the [FDD - E-DPDCH][TDD – E-PUCH] power for transmission of scheduling information without any MAC-d PDUs.

| IE/Group Name                          | Presence | Range | IE Type and Reference | Semantics Description  |
|--|----------|-------|-----------------------|------------------------|
| E-DCH Power Offset for Scheduling Info |          |       | INTEGER (0..6)        | Unit: dB<br>Step: 1 dB |

### 9.2.1.97 Logical channel ID

The *Logical Channel ID* IE is used to identify a E-DCH logical channel in Scheduling Information that is sent over  $U_u$ .

| IE/Group Name      | Presence | Range           | IE Type and Reference | Semantics Description |
|--------------------|----------|-----------------|-----------------------|-----------------------|
| Logical Channel ID |          | INTEGER (1..15) |                       |                       |

### 9.2.1.98 MAC-es Guaranteed Bit Rate

The *MAC-es Guaranteed Bit Rate* IE indicates the guaranteed number of bits per second to be delivered over the air interface under normal operating conditions (provided there is data to deliver) for which the Node B shall provide sufficient UL resources. If the *MAC-es Guaranteed Bit Rate* IE is received with the value set to 0 during RL set up or modification, no guarantee is applied.

| IE/Group Name              | Presence | Range | IE type and reference   | Semantics description |
|----------------------------|----------|-------|---|-----------------------|
| MAC-es Guaranteed Bit Rate |          |       | INTEGER (0..2 <sup>24</sup> -1, ..., 2 <sup>24</sup> ..256,000,000) | Unit: bit/s           |

### 9.2.1.99 MAC-e Reset Indicator

Indicates the MAC-e (or MAC-i) Reset is performed in UE.

| IE/Group Name         | Presence | Range | IE Type and Reference    | Semantics Description   |
|-----------------------|----------|-------|--------------------------|---|
| MAC-e Reset Indicator |          |       | ENUMERATED (MAC-e Reset) | Means MAC-i Reset in case Maximum MAC-d PDU Size Extended is configured for an E-DCH Logical Channel. |

### 9.2.1.100 Maximum Number of Retransmissions for E-DCH

The *Maximum Number of Retransmissions for E-DCH* IE specifies the upper boundary for retransmissions for a single MAC-d flow.

| IE/Group Name                               | Presence | Range | IE Type and Reference | Semantics Description |
|---|----------|-------|-----------------------|-----------------------|
| Maximum Number of Retransmissions for E-DCH |          |       | INTEGER (0..15)       |                       |

### 9.2.1.101 Scheduling Information

The *Scheduling Information* IE indicates whether the scheduling information is included for the E-DCH logical channel or not.

| IE/Group Name          | Presence | Range | IE Type and Reference               | Semantics Description |
|------------------------|----------|-------|-------------------------------------|-----------------------|
| Scheduling Information |          |       | ENUMERATED (Included, Not Included) |                       |

### 9.2.1.102 DGANSS Corrections

This IE contains DGANSS corrections.

| IE/Group name                        | Presence        | Range               | IE Type and Reference  | Semantics description   |
|--------------------------------------|-----------------|---------------------|--|---|
| DGANSS Reference Time                | M               |                     | INTEGER(0..3570 by step of 30)   | Seconds. Time in GNSS system time (modulo 3600 s) when the DGANSS corrections were calculated |
| <b>DGANSS Information</b>            |                 | 1 to <maxSgnType>   |  |   |
| >GANSS Signal ID                     | O               |                     | 9.2.1.121  |   |
| >Status/Health                       | M               |                     | ENUMERATED(UDRE scale 1.0, UDRE scale 0.75, UDRE scale 0.5, UDRE scale 0.3, UDRE scale 0.2, UDRE scale 0.1, no data, invalid data) |   |
| <b>&gt;DGANSS Signal Information</b> | C-Status/Health | 1 to <maxDGANSSSat> |  | If the Cipher information is included these fields are ciphered                               |
| >>Sat ID                             | M               |                     | INTEGER(0..63)   | Defined in [16].  |
| >>IOD                                | M               |                     | BIT STRING(10)   |   |

| IE/Group name | Presence | Range | IE Type and Reference   | Semantics description   |
|---------------|----------|-------|---|---|
| >>UDRE        | M        |       | ENUMERATED(UDRE ≤ 1.0 m, 1.0m < UDRE ≤ 4.0m, 4.0m < UDRE ≤ 8.0m, 8.0m < UDRE) | The value in this field shall be multiplied by the UDRE Scale Factor in the IE Status/Health to determine the final UDRE estimate for the particular satellite. |
| >>PRC         | M        |       | INTEGER(-2047..2047)  | Scaling factor 0.32 meters  |
| >>RRC         | M        |       | INTEGER(-127..127)  | Scaling factor 0.032 meters/sec   |

| Condition            | Explanation  |
|----------------------|--|
| <i>Status/Health</i> | This IE shall be present if the <i>Status/Health</i> IE value is not equal to "no data" or "invalid data". |

| Range Bound        | Explanation   |
|--------------------|---|
| <i>maxGANSSSat</i> | Maximum number of satellites for which data is included in the IE |
| <i>maxSgnType</i>  | Maximum number of signals for which data is included in the IE    |

## 9.2.1.103 GANSS Almanac

This IE contains a reduced-precision subset of the ephemeris and clock correction parameters.

| IE/Group name                    | Presence | Range                     | IE Type and Reference | Semantics description  | Criticality | Assigned Criticality |
|----------------------------------|----------|---------------------------|-----------------------|--|-------------|----------------------|
| Week Number                      | M        |                           | INTEGER(0..255)       | Almanac reference week , number of weeks since the beginning of GANSS specific system time (mod 256) | –           |                      |
| CHOICE <i>Almanac Model</i>      | M        |                           |                       |  | –           |                      |
| > <i>Keplerian Parameters</i>    |          |                           |                       | Model 1  |             |                      |
| >>T <sub>oa</sub>                | M        |                           | INTEGER(0..255)       | Scaling factor 2 <sup>12</sup> s<br>Reference time of almanac within week in GANSS TOD time base     | –           |                      |
| >>IOD <sub>a</sub>               | M        |                           | INTEGER(0..3)         | Issue-Of –Data, common to all satellites   | –           |                      |
| >>>Satellite Information KP      |          | 1 to <maxGANSSSatAlmanac> |                       | Almanacs are in the order of the SV IDs, the smallest ID first.                                      | –           |                      |
| >>>Sat ID                        | M        |                           | INTEGER(0..63)        | Defined in [16].   | –           |                      |
| >>>e                             | M        |                           | BIT STRING(11)        | Eccentricity, dimensionless [53]   | –           |                      |
| >>>δi                            | M        |                           | BIT STRING(11)        | semi-circles [53]  | –           |                      |
| >>>OMEGADOT                      | M        |                           | BIT STRING(11)        | Longitude of Ascending Node of Orbit Plane at Weekly Epoch (semi-circles/sec) [53]                   | –           |                      |
| >>>SV Health KP                  | M        |                           | BIT STRING(4)         | dimensionless  | –           |                      |
| >>>delta A <sup>1/2</sup>        | M        |                           | BIT STRING(17)        | Semi-Major Axis delta (meters) <sup>1/2</sup> [53]   | –           |                      |
| >>>OMEGA <sub>0</sub>            | M        |                           | BIT STRING(16)        | Longitude of Ascending Node of Orbit Plane at Weekly Epoch (semi-circles) [53]                       | –           |                      |
| >>>M <sub>0</sub>                | M        |                           | BIT STRING(16)        | Mean Anomaly at Reference Time (semi-circles) [53]   | –           |                      |
| >>>ω                             | M        |                           | BIT STRING(16)        | Argument of Perigee (semi-circles) [53]  | –           |                      |
| >>>af <sub>0</sub>               | M        |                           | BIT STRING(14)        | Seconds [53]   | –           |                      |
| >>>af <sub>1</sub>               | M        |                           | BIT STRING(11)        | sec/sec [53]   | –           |                      |
| >NAV <i>Keplerian Parameters</i> |          |                           |                       | Model 2  |             |                      |
| >>Keplerian NAV Almanac          | M        |                           |                       |  | YES         | ignore               |
| >>>T <sub>oa</sub>               | M        |                           | INTEGER(0..255)       | Scaling factor 2 <sup>12</sup> s<br>Reference time of almanac within week in GANSS TOD time base     | –           |                      |
| >>>Satellite information NAV-KP  |          | 1.. <maxGANSSSatA         |                       |  | –           |                      |

|                                 |   |                          |                 |   |     |        |
|---------------------------------|---|--------------------------|-----------------|---|-----|--------|
|                                 |   | Imanac>                  |                 |   |     |        |
| >>>>Sat ID                      | M |                          | INTEGER (0..63) | Defined in [16].  | –   |        |
| >>>>e                           | M |                          | BIT STRING(16)  | Eccentricity, dimensionless [59]  | –   |        |
| >>>> $\delta_i$                 | M |                          | BIT STRING (16) | Correction to inclination, semi-circles [59]  | –   |        |
| >>>>OMEGADOT                    | M |                          | BIT STRING (16) | Rate of right ascension, semi-circles/sec [59]  | –   |        |
| >>>>SV Health                   | M |                          | BIT STRING (8)  | Satellite health [59]   | –   |        |
| >>>> $A^{1/2}$                  | M |                          | BIT STRING (24) | Square root of the semi-major axis, meters <sup>1/2</sup> [59]                                | –   |        |
| >>>>OMEGA <sub>0</sub>          | M |                          | BIT STRING (24) | Longitude of ascending node of orbit plane at weekly epoch, semi-circles [59]                 | –   |        |
| >>>> $\omega$                   | M |                          | BIT STRING (24) | Argument of perigee semi-circles [59]   | –   |        |
| >>>>M <sub>0</sub>              | M |                          | BIT STRING (24) | Mean anomaly at reference time semi-circles [59]  | –   |        |
| >>>>af <sub>0</sub>             | M |                          | BIT STRING (11) | Apparent satellite clock correction seconds [59]  | –   |        |
| >>>>af <sub>1</sub>             | M |                          | BIT STRING (11) | Apparent satellite clock correction sec/sec [59]  | –   |        |
| >Reduced Keplerian Parameters   |   |                          |                 | Model 3   |     |        |
| >>Keplerian Reduced Almanac     | M |                          |                 |   | YES | ignore |
| >>>T <sub>oa</sub>              | M |                          | INTEGER(0..255) | Scaling factor 2 <sup>12</sup> s Reference time of almanac within week in GANSS TOD time base | –   |        |
| >>>Satellite information RED-KP |   | 1..<maxGANSSSatA Imanac> |                 |   | –   |        |
| >>>>Sat ID                      | M |                          | INTEGER (0..63) | Defined in [16].  | –   |        |
| >>>> $\delta_A$                 | M |                          | BIT STRING(8)   | meters [55,56,57,59]  | –   |        |
| >>>> $\Omega_0$                 | M |                          | BIT STRING (7)  | semi-circles [55,56,57,59]  | –   |        |
| >>>> $\Phi_0$                   | M |                          | BIT STRING (7)  | semi-circles [55,56,57,59]  | –   |        |
| >>>>L1 Health                   | M |                          | BIT STRING (1)  | dimensionless [55,56,57,59]   | –   |        |
| >>>>L2 Health                   | M |                          | BIT STRING (1)  | dimensionless [55,56,57,59]   | –   |        |
| >>>>L5 Health                   | M |                          | BIT STRING (1)  | dimensionless [55,56,57,59]   | –   |        |
| >Midi Keplerian Parameters      |   |                          |                 | Model 4   |     |        |
| >> Keplerian Midi Almanac       | M |                          |                 |   | YES | ignore |
| >>>T <sub>oa</sub>              | M |                          | INTEGER(0..255) | Scaling factor 2 <sup>12</sup> s Reference time of almanac within week in GANSS TOD time      | –   |        |

|                                  |   |                           |                 |                                     |     |        |
|----------------------------------|---|---------------------------|-----------------|-------------------------------------|-----|--------|
|                                  |   |                           |                 | base                                |     |        |
| >>>Satellite information MIDI-KP |   | 1.. <maxGANSSSatA lmanac> |                 |                                     | -   |        |
| >>>>Sat ID                       | M |                           | INTEGER (0..63) | Defined in [16].                    | -   |        |
| >>>>e                            | M |                           | BIT STRING(11)  | dimensionless [55,56,57,59]         | -   |        |
| >>>> $\delta_i$                  | M |                           | BIT STRING (11) | semi-circles [55,56,57,59]          | -   |        |
| >>>> $\Omega_{dot}$              | M |                           | BIT STRING (11) | semi-circles/sec [55,56,57,59]      | -   |        |
| >>>>sqrtA                        | M |                           | BIT STRING (17) | meters <sup>1/2</sup> [55,56,57,59] | -   |        |
| >>>> $\Omega_0$                  | M |                           | BIT STRING (16) | semi-circles [55,56,57,59]          | -   |        |
| >>>> $\omega$                    | M |                           | BIT STRING (16) | semi-circles [55,56,57,59]          | -   |        |
| >>>> $M_0$                       | M |                           | BIT STRING (16) | semi-circles [55,56,57,59]          | -   |        |
| >>>>a <sub>fo</sub>              | M |                           | BIT STRING (11) | seconds [55,56,57,59]               | -   |        |
| >>>>a <sub>f1</sub>              | M |                           | BIT STRING (10) | sec/sec [55,56,57,59]               | -   |        |
| >>>>L1 Health                    | M |                           | BIT STRING (1)  | Dimensionless [55,56,57,59]         | -   |        |
| >>>>L2 Health                    | M |                           | BIT STRING (1)  | dimensionless [55,56,57,59]         | -   |        |
| >>>>L5 Health                    | M |                           | BIT STRING (1)  | dimensionless [55,56,57,59]         | -   |        |
| >GLONASS Keplerian Parameters    |   |                           |                 | Model 5                             |     |        |
| >> Keplerian GLONASS             | M |                           |                 |                                     | YES | ignore |
| >>>Satellite information GLO-KP  |   | 1.. <maxGANSSSatA lmanac> |                 |                                     | -   |        |
| >>>> $N^A$                       | M |                           | BIT STRING(11)  | days [60]                           | -   |        |
| >>>> $n^A$                       | M |                           | BIT STRING (5)  | dimensionless [60]                  | -   |        |
| >>>> $H_n^A$                     | M |                           | BIT STRING (5)  | dimensionless [60]                  | -   |        |
| >>>> $\lambda_n^A$               | M |                           | BIT STRING (21) | semi-circles [60]                   | -   |        |
| >>>> $t_{\lambda_n}^A$           | M |                           | BIT STRING (21) | seconds [60]                        | -   |        |
| >>>> $\Delta i_n^A$              | M |                           | BIT STRING (18) | semi-circles [60]                   | -   |        |
| >>>> $\Delta T_n^A$              | M |                           | BIT STRING (22) | sec/orbit period [60]               | -   |        |
| >>>> $\Delta T_{DOT_n}^A$        | M |                           | BIT STRING (7)  | sec/orbit period <sup>2</sup> [60]  | -   |        |
| >>>> $\epsilon_n^A$              | M |                           | BIT STRING (15) | dimensionless [60]                  | -   |        |
| >>>> $\omega_n^A$                | M |                           | BIT STRING (16) | semi-circles [60]                   | -   |        |
| >>>> $\tau_n^A$                  | M |                           | BIT STRING (10) | seconds [60]                        | -   |        |
| >>>> $C_n^A$                     | M |                           | BIT STRING (1)  | dimensionless [60]                  | -   |        |
| >>>> $M_n^A$                     | O |                           | BIT STRING (2)  | dimensionless [60]                  | -   |        |
| >SBAS ECEF Parameters            |   |                           |                 | Model 6                             |     |        |
| >> ECEF SBAS Almanac             | M |                           |                 |                                     | YES | ignore |

|                                    |   |                         |                 |                    |   |  |
|------------------------------------|---|-------------------------|-----------------|--------------------|---|--|
| >>>Satellite information SBAS-ECEF |   | 1..<maxGANSSSatAlmanac> |                 |                    | - |  |
| >>>>Data ID                        | M |                         | BIT STRING(2)   | Dimensionless [58] | - |  |
| >>>>SV ID                          | M |                         | INTEGER (0..63) | Defined in [16].   | - |  |
| >>>>Health                         | M |                         | BIT STRING (8)  | Dimensionless [58] | - |  |
| >>>>X <sub>G</sub>                 | M |                         | BIT STRING (15) | meters [58]        | - |  |
| >>>>Y <sub>G</sub>                 | M |                         | BIT STRING (15) | meters [58]        | - |  |
| >>>>Z <sub>G</sub>                 | M |                         | BIT STRING (9)  | meters [58]        | - |  |
| >>>>X <sub>G</sub> Rate-of-Change  | M |                         | BIT STRING (3)  | meters/sec [58]    | - |  |
| >>>>Y <sub>G</sub> Rate-of-Change  | M |                         | BIT STRING (3)  | meters/sec [58]    | - |  |
| >>>>Z <sub>G</sub> Rate-of-Change  | M |                         | BIT STRING (4)  | meters/sec [58]    | - |  |
| >>>>t <sub>0</sub>                 | M |                         | BIT STRING (11) | seconds [58]       | - |  |

| Range Bound        | Explanation   |
|--------------------|---|
| maxGANSSSatAlmanac | Maximum number of satellites for which data is included in the IE |

9.2.1.104 GANSS Clock Model

The IE contains fields needed to model the GANSS clock parameters.

| IE/Group name                | Presence | Range                   | IE Type and Reference | Semantics description  |
|------------------------------|----------|-------------------------|-----------------------|--|
| <b>Satellite Clock Model</b> |          | 1 to <maxGANSSClockMod> |                       | Model -1<br>There may be more than one clock model included if defined in SIS ICD (e.g. two for Galileo) |
| >t <sub>oc</sub>             | M        |                         | BIT STRING(14)        | defined in [53]  |
| >a <sub>i2</sub>             | M        |                         | BIT STRING(12)        | defined in [53]  |
| >a <sub>i1</sub>             | M        |                         | BIT STRING(18)        | defined in [53]  |
| >a <sub>i0</sub>             | M        |                         | BIT STRING(28)        | defined in [53]  |
| >T <sub>GD</sub>             | O        |                         | BIT STRING(10)        | defined in [53]  |
| >Model ID                    | O        |                         | INTEGER(0..1)         | Coded as defined in [16].  |

| Range bound      | Explanation  |
|------------------|--|
| maxGANSSClockMod | Maximum number of satellite clock models for which data is included in the IE. |

9.2.1.104a GANSS Additional Clock Models

The IE contains fields needed to model the GANSS clock parameters.

| IE/Group name | Presence | Range | IE Type and Reference | Semantics description |
|---------------|----------|-------|-----------------------|-----------------------|
|---------------|----------|-------|-----------------------|-----------------------|



| IE/Group name                            | Presence | Range | IE Type and Reference | Semantics description   |
|--|----------|-------|-----------------------|---|
| <i>CHOICE Additional Clock Models</i>    |          |       |                       |   |
| <i>&gt;NAV-Clock Model</i>               |          |       |                       | Model-2   |
| >> $t_{oc}$                              | M        |       | BIT STRING(16)        | Time of clock (seconds) [59]  |
| >> $af_2$                                | M        |       | BIT STRING (8)        | Clock correction polynomial coefficient (sec/sec <sup>2</sup> ) [59]                |
| >> $af_1$                                | M        |       | BIT STRING (16)       | Clock correction polynomial coefficient (sec/sec) [59]                              |
| >> $af_0$                                | M        |       | BIT STRING (22)       | Clock correction polynomial coefficient (seconds) [59]                              |
| >> $T_{GD}$                              | M        |       | BIT STRING (8)        | Group delay (seconds) [59]  |
| <i>&gt;CNAV/CNAV-2 Clock Model</i>       |          |       |                       | Model-3   |
| >> $t_{oc}$                              | M        |       | BIT STRING (11)       | Clock data reference time of week (seconds) [55, 56, 57, 59]                        |
| >> $t_{op}$                              | M        |       | BIT STRING (11)       | Clock data predict time of week (seconds) [55, 56, 57, 59]                          |
| >>URA <sub>oc</sub> Index                | M        |       | BIT STRING (5)        | SV clock accuracy index (dimensionless) [55, 56, 57, 59]                            |
| >>URA <sub>oc1</sub> Index               | M        |       | BIT STRING (3)        | SV clock accuracy change index (dimensionless) [55, 56, 57, 59]                     |
| >>URA <sub>oc2</sub> Index               | M        |       | BIT STRING (3)        | SV clock accuracy change rate index (dimensionless) [55, 56, 57, 59]                |
| >> $a_{f2-n}$                            | M        |       | BIT STRING (10)       | SV clock drift rate correction coefficient (sec/sec <sup>2</sup> ) [55, 56, 57, 59] |
| >> $a_{f1-n}$                            | M        |       | BIT STRING (20)       | SV clock drift correction coefficient (sec/sec) [55, 56, 57, 59]                    |
| >> $a_{f0-n}$                            | M        |       | BIT STRING (26)       | SV clock bias correction coefficient (seconds) [55, 56, 57, 59]                     |
| >> $T_{GD}$                              | M        |       | BIT STRING (13)       | Group delay correction (seconds) [55, 56, 57, 59]                                   |
| >>ISC <sub>L1CP</sub>                    | O        |       | BIT STRING (13)       | Inter signal group delay correction (seconds) [57, 59]                              |
| >>ISC <sub>L1CD</sub>                    | O        |       | BIT STRING (13)       | Inter signal group delay correction (seconds) [57, 59]                              |
| >>ISC <sub>L1C/A</sub>                   | O        |       | BIT STRING (13)       | Inter signal group delay correction (seconds) [55, 56, 59]                          |
| >>ISC <sub>L2C</sub>                     | O        |       | BIT STRING (13)       | Inter signal group delay correction (seconds) [55, 56, 59]                          |
| >>ISC <sub>L5I5</sub>                    | O        |       | BIT STRING (13)       | Inter signal group delay correction (seconds) [56, 59]                              |
| >>ISC <sub>L5Q5</sub>                    | O        |       | BIT STRING (13)       | Inter signal group delay correction (seconds) [56, 59]                              |
| <i>&gt;GLONASS Satellite Clock Model</i> |          |       |                       | Model-4   |

| IE/Group name                       | Presence | Range | IE Type and Reference | Semantics description   |
|-------------------------------------|----------|-------|-----------------------|---|
| > $\tau_n(t_b)$                     | M        |       | BIT STRING (22)       | Satellite clock offset (seconds) [60]                             |
| > $\gamma_n(t_b)$                   | M        |       | BIT STRING (11)       | Relative frequency offset from nominal value (dimensionless) [60] |
| > $\Delta\tau_n$                    | O        |       | BIT STRING (5)        | Time difference between transmission in G2 and G1 (seconds) [60]  |
| > <i>SBAS Satellite Clock Model</i> |          |       |                       | Model-5   |
| > $t_0$                             | M        |       | BIT STRING (13)       | (seconds) [58]  |
| > $a_{Gf_0}$                        | M        |       | BIT STRING (12)       | (seconds) [58]  |
| > $a_{Gf_1}$                        | M        |       | BIT STRING (8)        | (sec/sec) [58]  |

### 9.2.1.105 GANSS Ionospheric Model

The IE contains fields needed to model the propagation delays of the GANSS signals through the ionosphere.

| IE/Group name                                | Presence | Range | IE Type and Reference | Semantics description                     |
|--|----------|-------|-----------------------|---|
| $a_{i_0}$                                    | M        |       | BIT STRING(12)        | This parameter is used as defined in [53] |
| $a_{i_1}$                                    | M        |       | BIT STRING(12)        | This parameter is used as defined in [53] |
| $a_{i_2}$                                    | M        |       | BIT STRING(12)        | This parameter is used as defined in [53] |
| <b>GANSS Ionosphere Regional Storm Flags</b> |          | 0..1  |                       |   |
| >Storm Flag 1                                | M        |       | BOOLEAN               | This parameter is used as defined in [53] |
| >Storm Flag 2                                | M        |       | BOOLEAN               | This parameter is used as defined in [53] |
| >Storm Flag 3                                | M        |       | BOOLEAN               | This parameter is used as defined in [53] |
| >Storm Flag 4                                | M        |       | BOOLEAN               | This parameter is used as defined in [53] |
| >Storm Flag 5                                | M        |       | BOOLEAN               | This parameter is used as defined in [53] |

### 9.2.1.105a GANSS Additional Ionospheric Model

The IE contains fields needed to model the propagation delays of the GANSS signals through the ionosphere.

| IE/Group name | Presence | Range | IE Type and Reference | Semantics description |
|---------------|----------|-------|-----------------------|-----------------------|
|---------------|----------|-------|-----------------------|-----------------------|

| IE/Group name | Presence | Range | IE Type and Reference | Semantics description               |
|---------------|----------|-------|-----------------------|-------------------------------------|
| Data ID       | M        |       | BIT STRING(2)         | Coded as defined in [16]            |
| $\alpha_0$    | M        |       | BIT STRING(8)         | seconds [59]                        |
| $\alpha_1$    | M        |       | BIT STRING(8)         | sec/semi-circle [59]                |
| $\alpha_2$    | M        |       | BIT STRING(8)         | sec/(semi-circle) <sup>2</sup> [59] |
| $\alpha_3$    | M        |       | BIT STRING(8)         | sec/(semi-circle) <sup>3</sup> [59] |
| $\beta_0$     | M        |       | BIT STRING(8)         | seconds [59]                        |
| $\beta_1$     | M        |       | BIT STRING(8)         | sec/semi-circle [59]                |
| $\beta_2$     | M        |       | BIT STRING(8)         | sec/(semi-circle) <sup>2</sup> [59] |
| $\beta_3$     | M        |       | BIT STRING(8)         | sec/(semi-circle) <sup>3</sup> [59] |

### 9.2.1.106 GANSS Navigation Model

Void.

### 9.2.1.107 GANSS Orbit Model

This IE contains information for GANSS orbit model parameters.

| IE/Group name                    | Presence | Range | IE Type and Reference | Semantics description   |
|----------------------------------|----------|-------|-----------------------|---|
| <b>CHOICE <i>Orbit Model</i></b> | M        |       |                       |   |
| > <i>Keplerian Parameters</i>    |          |       |                       | Model-1   |
| >> <i>t<sub>oe</sub></i>         | M        |       | BIT STRING(14)        | Time-of-Ephemeris in seconds, scale factor 60 [53]  |
| >> <i><math>\omega</math></i>    | M        |       | BIT STRING(32)        | Argument of Perigee (semi-circles) [53]   |
| >> <i><math>\Delta n</math></i>  | M        |       | BIT STRING(16)        | Mean Motion Difference From Computed Value (semi-circles/sec) [53]  |
| >> <i>M<sub>0</sub></i>          | M        |       | BIT STRING(32)        | Mean Anomaly at Reference Time (semi-circles) [53]  |
| >> <i>OMEGA<sub>dot</sub></i>    | M        |       | BIT STRING(24)        | Longitude of Ascending Node of Orbit Plane at Weekly Epoch (semi-circles/sec) [53]                        |
| >> <i>e</i>                      | M        |       | BIT STRING(32)        | Eccentricity, scale factor 2 <sup>-33</sup> [53]  |
| >> <i>Idot</i>                   | M        |       | BIT STRING(14)        | Rate of Inclination Angle (semi-circles/sec) [53]   |
| >> <i>sqrtA</i>                  | M        |       | BIT STRING(32)        | Least significant bits of Semi-Major Axis in (meters) <sup>1/2</sup> , scale factor 2 <sup>-19</sup> [53] |
| >> <i>i<sub>0</sub></i>          | M        |       | BIT STRING(32)        | Inclination Angle at Reference Time (semi-circles) [53]   |
| >> <i>OMEGA<sub>0</sub></i>      | M        |       | BIT STRING(32)        | Longitude of Ascending Node of Orbit Plane at Weekly Epoch (semi-circles) [53]                            |
| >> <i>C<sub>rs</sub></i>         | M        |       | BIT STRING(16)        | Amplitude of the Sine Harmonic Correction Term to the Orbit Radius (meters) [53]                          |
| >> <i>C<sub>is</sub></i>         | M        |       | BIT STRING(16)        | Amplitude of the Sine Harmonic Correction Term To The Angle Of Inclination (radians) [53]                 |

| IE/Group name     | Presence | Range | IE Type and Reference | Semantics description   |
|-------------------|----------|-------|-----------------------|---|
| >>C <sub>us</sub> | M        |       | BIT STRING(16)        | Amplitude of the Sine Harmonic Correction Term To The Argument Of Latitude (radians) [53]   |
| >>C <sub>rc</sub> | M        |       | BIT STRING(16)        | Amplitude of the Cosine Harmonic Correction Term to the Orbit Radius (meters) [53]          |
| >>C <sub>ic</sub> | M        |       | BIT STRING(16)        | Amplitude of the Cosine Harmonic Correction Term To The Angle Of Inclination (radians) [53] |
| >>C <sub>uc</sub> | M        |       | BIT STRING(16)        | Amplitude of the Cosine Harmonic Correction Term To The Argument Of Latitude (radians) [53] |

### 9.2.1.107a GANSS Additional Orbit Models

This IE contains information for GANSS orbit model parameters.

| IE/Group name                         | Presence | Range | IE Type and Reference | Semantics description   |
|---------------------------------------|----------|-------|-----------------------|---|
| <i>CHOICE Additional Orbit Models</i> |          |       |                       |   |
| <i>&gt;NAV-Keplerian Parameters</i>   |          |       |                       | Model-2   |
| >>URA Index                           | M        |       | BIT STRING(4)         | SV accuracy (dimensionless) [59]  |
| >>Fit Interval Flag                   | M        |       | BIT STRING (1)        | Fit interval indication (dimensionless) [59]  |
| >>t <sub>oe</sub>                     | M        |       | BIT STRING(16)        | Time of ephemeris (seconds) [59]  |
| >> $\omega$                           | M        |       | BIT STRING (32)       | Argument of perigee (semi-circles) [59]   |
| >> $\Delta n$                         | M        |       | BIT STRING (16)       | Mean motion difference from computed value (semi-circles/sec) [59]                    |
| >>M <sub>0</sub>                      | M        |       | BIT STRING (32)       | Mean anomaly at reference time (semi-circles) [59]                                    |
| >>OMEGA <sub>dot</sub>                | M        |       | BIT STRING (24)       | Rate of right ascension (semi-circles/sec) [59]                                       |
| >>e                                   | M        |       | BIT STRING (32)       | Eccentricity (dimensionless) [59]   |
| >>I <sub>dot</sub>                    | M        |       | BIT STRING (14)       | Rate of inclination angle (semi-circles/sec) [59]                                     |
| >>sqrtA                               | M        |       | BIT STRING (32)       | Square root of semi-major axis (meters <sup>1/2</sup> ) [59]                          |
| >>i <sub>0</sub>                      | M        |       | BIT STRING (32)       | Inclination angle at reference time (semi-circles) [59]                               |
| >>OMEGA <sub>0</sub>                  | M        |       | BIT STRING (32)       | Longitude of ascending node of orbit plane at weekly epoch (semi-circles) [59]        |
| >>C <sub>rs</sub>                     | M        |       | BIT STRING (16)       | Amplitude of sine harmonic correction term to the orbit radius (meters) [59]          |
| >>C <sub>is</sub>                     | M        |       | BIT STRING (16)       | Amplitude of sine harmonic correction term to the angle of inclination (radians) [59] |

| IE/Group name     | Presence | Range | IE Type and Reference | Semantics description   |
|-------------------|----------|-------|-----------------------|---|
| >>C <sub>us</sub> | M        |       | BIT STRING (16)       | Amplitude of sine harmonic correction term to the argument of latitude (radians) [59]   |
| >>C <sub>rc</sub> | M        |       | BIT STRING (16)       | Amplitude of cosine harmonic correction term to the orbit radius (meters) [59]          |
| >>C <sub>ic</sub> | M        |       | BIT STRING (16)       | Amplitude of cosine harmonic correction term to the angle of inclination (radians) [59] |
| >>C <sub>uc</sub> | M        |       | BIT STRING (16)       | Amplitude of cosine harmonic correction term to the argument of latitude (radians) [59] |

| IE/Group name                     | Presence | Range | IE Type and Reference | Semantics description   |
|-----------------------------------|----------|-------|-----------------------|---|
| >CNAV/CNAV-2 Keplerian Parameters |          |       |                       | Model-3   |
| >>t <sub>op</sub>                 | M        |       | BIT STRING (11)       | Data predict time of week (seconds) [55,56,57,59]   |
| >>URA <sub>oe</sub> Index         | M        |       | BIT STRING (5)        | SV accuracy (dimensionless) [55,56,57,59]   |
| >>ΔA                              | M        |       | BIT STRING (26)       | Semi-major axis difference at reference time (meters) [55,56,57,59]                               |
| >>A <sub>dot</sub>                | M        |       | BIT STRING (25)       | Change rate in semi-major axis (meters/sec) [55,56,57,59]   |
| >>Δn <sub>0</sub>                 | M        |       | BIT STRING (17)       | Mean motion difference from computed value at reference time (semi-circles/sec) [55,56,57,59]     |
| >>Δn <sub>0</sub> <sub>dot</sub>  | M        |       | BIT STRING (23)       | Rate of mean motion difference from computed value (semi-circles/sec <sup>2</sup> ) [55,56,57,59] |
| >>M <sub>0-n</sub>                | M        |       | Bit String(33)        | Mean anomaly at reference time (semi-circles) [55,56,57,59]                                       |
| >>e <sub>n</sub>                  | M        |       | BIT STRING (33)       | Eccentricity (dimensionless) [55,56,57,59]  |
| >>ω <sub>n</sub>                  | M        |       | Bit String(33)        | Argument of perigee (semi-circles) [55,56,57,59]  |
| >>Ω <sub>0-n</sub>                | M        |       | BIT STRING (33)       | Reference right ascension angle (semi-circles) [55,56,57,59]                                      |
| >>ΔΩ <sub>dot</sub>               | M        |       | BIT STRING (17)       | Rate of right ascension difference (semi-circles/sec) [55,56,57,59]                               |
| >>i <sub>0-n</sub>                | M        |       | BIT STRING (33)       | Inclination angle at reference time (semi-circles) [55,56,57,59]                                  |
| >>i <sub>0-n</sub> <sub>dot</sub> | M        |       | BIT STRING (15)       | Rate of inclination angle (semi-circles/sec) [55,56,57,59]  |
| >>C <sub>is-n</sub>               | M        |       | BIT STRING (16)       | Amplitude of sine harmonic correction term to the angle of inclination (radians) [55,56,57,59]    |
| >>C <sub>ic-n</sub>               | M        |       | BIT STRING (16)       | Amplitude of cosine harmonic correction term to the angle of inclination (radians) [55,56,57,59]  |
| >>C <sub>rs-n</sub>               | M        |       | BIT STRING (24)       | Amplitude of sine harmonic correction term to the orbit radius (meters) [55,56,57,59]             |
| >>C <sub>rc-n</sub>               | M        |       | BIT STRING (24)       | Amplitude of cosine harmonic correction term to the orbit radius (meters) [55,56,57,59]           |
| >>C <sub>us-n</sub>               | M        |       | BIT STRING (21)       | Amplitude of sine harmonic correction term to the argument of latitude (radians) [55,56,57,59]    |
| >>C <sub>uc-n</sub>               | M        |       | BIT STRING (21)       | Amplitude of cosine harmonic correction term to the argument of latitude (radians) [55,56,57,59]  |

| IE/Group name                                   | Presence     | Range | IE Type and Reference | Semantics description   |
|---|--------------|-------|-----------------------|---|
| >GLONASS Earth-Centered, Earth-fixed Parameters |              |       |                       | Model-4   |
| >>E <sub>n</sub>                                | M            |       | BIT STRING (5)        | Age of data (days) [60]   |
| >>P1  | M            |       | BIT STRING (2)        | Time interval between two adjacent values of t <sub>b</sub> (minutes) [60]                        |
| >>P2  | M            |       | BIT STRING (1)        | Change of t <sub>b</sub> flag (dimensionless) [60]  |
| >>M   | O            |       | BIT STRING (2)        | Type of satellite (dimensionless) [60]  |
| >> x <sub>n</sub> (t <sub>b</sub> )             | M            |       | BIT STRING (27)       | x-coordinate of satellite at time t <sub>b</sub> (kilometers) [60]                                |
| >> $\dot{x}_n(t_b)$                             | M            |       | BIT STRING (24)       | x-coordinate of satellite velocity at time t <sub>b</sub> (kilometers/sec) [60]                   |
| >> $\ddot{x}_n(t_b)$                            | M            |       | BIT STRING (5)        | x-coordinate of satellite acceleration at time t <sub>b</sub> (kilometers/sec <sup>2</sup> ) [60] |
| >> y <sub>n</sub> (t <sub>b</sub> )             | M            |       | BIT STRING (27)       | y-coordinate of satellite at time t <sub>b</sub> (kilometers) [60]                                |
| >> $\dot{y}_n(t_b)$                             | M            |       | BIT STRING (24)       | y-coordinate of satellite velocity at time t <sub>b</sub> (kilometers/sec) [60]                   |
| >> $\ddot{y}_n(t_b)$                            | M            |       | BIT STRING (5)        | y-coordinate of satellite acceleration at time t <sub>b</sub> (kilometers/sec <sup>2</sup> ) [60] |
| >> z <sub>n</sub> (t <sub>b</sub> )             | M            |       | BIT STRING (27)       | z-coordinate of satellite at time t <sub>b</sub> (kilometers) [60]                                |
| >> $\dot{z}_n(t_b)$                             | M            |       | BIT STRING (24)       | z-coordinate of satellite velocity at time t <sub>b</sub> (kilometers/sec) [60]                   |
| >> $\ddot{z}_n(t_b)$                            | M            |       | BIT STRING (5)        | z-coordinate of satellite acceleration at time t <sub>b</sub> (kilometers/sec <sup>2</sup> ) [60] |
| >SBAS Earth-Centered, Earth-fixed Parameters    |              |       |                       | Model-5   |
| >>t <sub>0</sub>                                | C-ClockModel |       | BIT STRING (13)       | Time of applicability (seconds) [58]  |
| >>Accuracy                                      | M            |       | BIT STRING (4)        | (dimensionless) [58]  |
| >>X <sub>G</sub>                                | M            |       | BIT STRING (30)       | (meters) [58]   |
| >>Y <sub>G</sub>                                | M            |       | BIT STRING (30)       | (meters) [58]   |
| >>Z <sub>G</sub>                                | M            |       | BIT STRING (25)       | (meters) [58]   |
| >>X <sub>G</sub> Rate-of-Change                 | M            |       | BIT STRING (17)       | (meters/sec) [58]   |
| >>Y <sub>G</sub> Rate-of-Change                 | M            |       | BIT STRING (17)       | (meters/sec) [58]   |
| >>Z <sub>G</sub> Rate-of-Change                 | M            |       | BIT STRING (18)       | (meters/sec) [58]   |
| >>X <sub>G</sub> Acceleration                   | M            |       | BIT STRING (10)       | (meters/sec <sup>2</sup> ) [58]   |
| >>Y <sub>G</sub> Acceleration                   | M            |       | BIT STRING (10)       | (meters/sec <sup>2</sup> ) [58]   |
| >>Z <sub>G</sub> Acceleration                   | M            |       | BIT STRING (10)       | (meters/sec <sup>2</sup> ) [58]   |

| Condition         | Explanation   |
|-------------------|---|
| <i>ClockModel</i> | This IE shall be present if "SBAS Earth-Centered, Earth-fixed Parameters" (Model-5) in IE <i>GANSS Additional Clock Models</i> is not included in <i>GANSS Additional Navigation Models</i> IE. |

### 9.2.1.108 GANSS Real Time Integrity

This IE contains parameters that describe the real-time status of the GANSS constellation.

| IE/Group name                | Presence | Range              | IE Type and Reference | Semantics description     |
|------------------------------|----------|--------------------|-----------------------|---------------------------|
| <b>Satellite Information</b> |          | 1 to <maxGANSSSat> |                       |                           |
| >Bad GANSS Sat ID            | M        |                    | INTEGER(0..63)        | Defined in [16].          |
| >Bad GANSS Signal ID         | O        |                    | BIT STRING(8)         | Coded as defined in [16]. |

| Range Bound        | Explanation   |
|--------------------|---|
| <i>maxGANSSSat</i> | Maximum number of satellites for which data is included in the IE |

### 9.2.1.109 GANSS Receiver Geographical Position (GANSS RX Pos)

The *GANSS Receiver Geographical Position* IE is used to identify the geographical coordinates of a GANSS receiver relevant for a certain Information Exchange Object.

| IE/Group Name         | Presence | Range | IE Type and Reference                           | Semantics Description  |
|-----------------------|----------|-------|---|--|
| Latitude Sign         | M        |       | ENUMERATED (North, South)                       |  |
| Degrees of Latitude   | M        |       | INTEGER (0..2 <sup>31</sup> -1)                 | The IE value (N) is derived by this formula:<br>N ≤ 2 <sup>31</sup> X / 90 < N+1<br>X being the latitude in degree (0°.. 90°)  |
| Degrees of Longitude  | M        |       | INTEGER (-2 <sup>31</sup> ..2 <sup>31</sup> -1) | The IE value (N) is derived by this formula:<br>N ≤ 2 <sup>32</sup> X / 360 < N+1<br>X being the longitude in degree (-180°..+180°)  |
| Direction of Altitude | M        |       | ENUMERATED (Height, Depth)                      |  |
| Altitude              | M        |       | INTEGER (0..2 <sup>15</sup> -1)                 | The relation between the value (N) and the altitude (a) in meters it describes is N ≤ a < N+1, except for N=2 <sup>15</sup> -1 for which the range is extended to include all greater values of (a). |

### 9.2.1.110 GANSS Time Model

The *GANSS Time Model* IE contains a set of parameters needed to relate GANSS time to selected time reference indicated by *GNSS\_TO\_ID*.



| IE/Group name                   | Presence | Range | IE Type and Reference                       | Semantics description  |
|---------------------------------|----------|-------|---|--|
| GANSS Time Model Reference Time | M        |       | INTEGER(0..37799)                           | GANSS reference time (modulo 1 week) in seconds. The scale factor is $2^4$ |
| $T_{A0}$                        | M        |       | INTEGER(-2147483648..2147483647)            | Seconds, scale factor $2^{-35}$  |
| $T_{A1}$                        | O        |       | INTEGER (-8388608..8388607)                 | sec/sec, scale factor $2^{-51}$  |
| $T_{A2}$                        | O        |       | INTEGER (-64..63)                           | sec/sec <sup>2</sup> , scale factor $2^{-68}$                              |
| GNSS_TO_ID                      | M        |       | ENUMERATED(GPS,..., Galileo, QZSS, GLONASS) |  |
| Week Number                     | O        |       | INTEGER(0..8191)                            | Reference week of GANSS Time Model   |

### 9.2.1.110a GANSS Additional Time Models

The *GANSS Additional Time Models* IE contains a set of parameters needed to relate GANSS time to selected time references.

| IE/Group name               | Presence | Range          | IE Type and Reference | Semantics description |
|-----------------------------|----------|----------------|-----------------------|-----------------------|
| <b>GNSS-GNSS Time Model</b> |          | 1..<maxGNSS-1> |                       |                       |
| >GANSS Time Model           |          |                | 9.2.1.110             |                       |

| Range Bound | Explanation  |
|-------------|--|
| maxGNSS-1   | Maximum number of GANSS systems for which data is included in this IE. |

### 9.2.1.111 GANSS UTC Model

The *GANSS UTC Model* IE contains a set of parameters needed to relate GANSS time to Universal Time Coordinate (UTC).

| IE/Group name    | Presence | Range | IE Type and Reference | Semantics description |
|------------------|----------|-------|-----------------------|-----------------------|
| $A_1$            | M        |       | BIT STRING(24)        | sec/sec [53]          |
| $A_0$            | M        |       | BIT STRING(32)        | seconds [53]          |
| $t_{ot}$         | M        |       | BIT STRING(8)         | seconds [53]          |
| $WN_t$           | M        |       | BIT STRING(8)         | weeks [53]            |
| $\Delta t_{LS}$  | M        |       | BIT STRING(8)         | seconds [53]          |
| $WN_{LSF}$       | M        |       | BIT STRING(8)         | weeks [53]            |
| DN               | M        |       | BIT STRING(8)         | days [53]             |
| $\Delta t_{LSF}$ | M        |       | BIT STRING(8)         | seconds [53]          |

### 9.2.1.111a GANSS Additional UTC Models

The *GANSS Additional UTC Models* IE contains several sets of parameters needed to relate GANSS time to Universal Time Coordinate (UTC), as defined in [55,56,57,58,59,60].

| IE/Group name | Presence | Range | IE Type and Reference | Semantics description |
|---------------|----------|-------|-----------------------|-----------------------|
|---------------|----------|-------|-----------------------|-----------------------|

| IE/Group name                       | Presence | Range | IE Type and Reference | Semantics description   |
|-------------------------------------|----------|-------|-----------------------|---|
| <i>CHOICE Additional UTC Models</i> |          |       |                       |   |
| <i>&gt;Model Set 1</i>              |          |       |                       |   |
| >A <sub>0-n</sub>                   | M        |       | BIT STRING(16)        | Bias coefficient of GNSS time scale relative to UTC time scale (seconds) [55,56,57,59]                                |
| >A <sub>1-n</sub>                   | M        |       | BIT STRING (13)       | Drift coefficient of GNSS time scale relative to UTC time scale (sec/sec) [55,56,57,59]                               |
| >A <sub>2-n</sub>                   | M        |       | BIT STRING (7)        | Drift rate correction coefficient of GNSS time scale relative to UTC time scale (sec/sec <sup>2</sup> ) [55,56,57,59] |
| >Δt <sub>LS</sub>                   | M        |       | BIT STRING (8)        | Current or past leap second count (seconds) [55,56,57,59]   |
| >t <sub>ot</sub>                    | M        |       | BIT STRING (16)       | Time data reference time of week (seconds) [55,56,57,59]  |
| >WN <sub>ot</sub>                   | M        |       | BIT STRING (13)       | Time data reference week number (weeks) [55,56,57,59]   |
| >WN <sub>LSF</sub>                  | M        |       | BIT STRING (8)        | Leap second reference week number (weeks) [55,56,57,59]   |
| >DN                                 | M        |       | BIT STRING (4)        | Leap second reference day number (days) [55,56,57,59]   |
| >Δt <sub>LSF</sub>                  | M        |       | BIT STRING (8)        | Current or future leap second count (seconds) [55,56,57,59]   |
| <i>&gt;Model Set 2</i>              |          |       |                       |   |
| >N <sup>A</sup>                     | M        |       | BIT STRING (11)       | Callendar day number within four-year period beginning since the leap year (days) [60]                                |
| >τ <sub>c</sub>                     | M        |       | BIT STRING (32)       | GLONASS time scale correction to UTC(SU) (seconds) [60]   |
| >Delta UT1                          | O        |       |                       |   |
| >>B1                                | M        |       | BIT STRING (11)       | Coefficient to determine ΔUT1 (seconds) [60]  |
| >>B2                                | M        |       | BIT STRING (10)       | Coefficient to determine ΔUT1 (seconds/msd) [60]  |
| >KP                                 | O        |       | BIT STRING (2)        | Notification of expected leap second correction (dimensionless) [60]  |
| <i>&gt;Model Set 3</i>              |          |       |                       |   |
| >A <sub>1WNT</sub>                  | M        |       | BIT STRING (24)       | sec/sec ([58], Message Type 12)   |
| >A <sub>0WNT</sub>                  | M        |       | BIT STRING (32)       | seconds ([58], Message Type 12)   |
| >t <sub>ot</sub>                    | M        |       | BIT STRING (8)        | seconds ([58], Message Type 12)   |
| >WN <sub>t</sub>                    | M        |       | BIT STRING (8)        | weeks ([58], Message Type 12)   |
| >Δt <sub>LS</sub>                   | M        |       | BIT STRING (8)        | seconds ([58], Message Type 12)   |
| >WN <sub>LSF</sub>                  | M        |       | BIT STRING (8)        | weeks ([58], Message Type 12)   |
| >DN                                 | M        |       | BIT STRING (8)        | days ([58], Message Type 12)  |
| >Δt <sub>LSF</sub>                  | M        |       | BIT STRING (8)        | seconds ([58], Message Type 12)   |

| IE/Group name    | Presence | Range | IE Type and Reference | Semantics description                     |
|------------------|----------|-------|-----------------------|---|
| >UTC Standard ID | M        |       | BIT STRING<br>(3)     | dimensionless<br>Coded as defined in [16] |

### 9.2.1.112 $T_{\text{UTRAN-GANSS}}$ Accuracy Class

The  $T_{\text{UTRAN-GANSS}}$  *Accuracy Class* IE indicates the accuracy class of the UTRAN GANSS Timing of Cell Frames for UE Positioning measurement.

| IE/Group Name                           | Presence | Range | IE Type and Reference  | Semantics Description  |
|---|----------|-------|--|--|
| $T_{\text{UTRAN-GANSS}}$ Accuracy Class |          |       | ENUMERATED<br>(Accuracy Class A, Accuracy Class B, Accuracy Class C,...) | More information about Measurement Accuracy Class is included in [23]. |

### 9.2.1.113 $T_{\text{UTRAN-GANSS}}$ Measurement Threshold Information

The  $T_{\text{UTRAN-GANSS}}$  *Measurement Threshold Information* IE defines the related thresholds for UTRAN GANSS Timing of Cell Frames for UE Positioning measurements shall trigger the Event On Modification.

| IE/Group Name                                      | Presence | Range | IE Type and Reference | Semantics Description   |
|--|----------|-------|-----------------------|---|
| $T_{\text{UTRAN-GANSS}}$ Change Limit              | O        |       | INTEGER(1..256)       | Change of $T_{\text{UTRAN-GANSS}}$ value compared to previously reported value, which shall trigger a new report.<br>Unit in 1/16 chip.         |
| Predicted $T_{\text{UTRAN-GANSS}}$ Deviation Limit | O        |       | INTEGER(1..256)       | Deviation of the Predicted $T_{\text{UTRAN-GANSS}}$ from the latest measurement result, which shall trigger a new report.<br>Unit in 1/16 chip. |

### 9.2.1.114 $T_{\text{UTRAN-GANSS}}$ Measurement Value Information

The  $T_{\text{UTRAN-GANSS}}$  *Measurement Value Information* IE indicates the measurement results related to the UTRAN GANSS Timing of Cell Frames for UE Positioning measurements.

| IE/Group Name                               | Presence | Range | IE Type and Reference  | Semantics Description  | Criticality | Assigned Criticality |
|---|----------|-------|------------------------|--|-------------|----------------------|
| $T_{\text{UTRAN-GANSS}}$                    | M        |       |                        | Indicates the UTRAN GANSS Timing of Cell Frames for UE Positioning. According to mapping in [23] and [24]; significant values range from 0 to 371589119999.99.   | –           |                      |
| >MS   | M        |       | INTEGER(0..16383)      | Most Significant Part  | –           |                      |
| >LS   | M        |       | INTEGER(0..4294967295) | Least Significant Part   | –           |                      |
| $T_{\text{UTRAN-GANSS}}$ Quality            | O        |       | INTEGER(0..255)        | Indicates the standard deviation (std) of the $T_{\text{UTRAN-GANSS}}$ measurements in 1/16 chip.<br>$T_{\text{UTRAN-GANSS}}$ Quality = $\sqrt{E[(x-\mu)^2]}$ = std of reported $T_{\text{UTRAN-GANSS}}$ Value, where x is the reported $T_{\text{UTRAN-GANSS}}$ Value and $\mu = E[x]$ is the expectation value of x. | –           |                      |
| $T_{\text{UTRAN-GANSS}}$ Drift Rate         | M        |       | INTEGER(-50..50)       | Indicates the $T_{\text{UTRAN-GANSS}}$ drift rate in 1/256 chip per second. A positive value indicates that the UTRAN clock is running at a lower frequency than GANSS clock.  | –           |                      |
| $T_{\text{UTRAN-GANSS}}$ Drift Rate Quality | O        |       | INTEGER(0..50)         | Indicates the standard deviation (std) of the $T_{\text{UTRAN-GANSS}}$ drift rate measurements in 1/256 chip per second.<br>$T_{\text{UTRAN-GANSS}}$ Drift Rate Quality = $\sqrt{E[(x-\mu)^2]}$ = std of reported $T_{\text{UTRAN-GANSS}}$ Drift Rate, where x is the reported $T_{\text{UTRAN-GANSS}}$                | –           |                      |

|               |   |  |            |  |     |        |
|---------------|---|--|------------|--|-----|--------|
|               |   |  |            | GANSS Drift Rate and $\mu = E[x]$ is the expectation value of x. |     |        |
| GANSS Time ID | O |  | 9.2.1.119a | Absence of this IE means Galileo system time.                    | YES | ignore |

### 9.2.1.115 GANSS Reference Time

Void.

9.2.1.116 HARQ Memory Partitioning

| IE/Group Name   | Presence | Range                      | IE Type and Reference      | Semantics Description   | Criticality | Assigned Criticality |
|---|----------|----------------------------|----------------------------|---|-------------|----------------------|
| CHOICE <i>HARQ Memory Partitioning</i>                    |          | 1                          |                            |   | –           |                      |
| > <i>Implicit</i>   |          |                            |                            |   | –           |                      |
| >>Number of Processes                                     | M        |                            | INTEGER (1..8,...12,14,16) | For HARQ process IDs going from 0 to "Number of Processes" – 1 the Total number of soft channel bits [42] is partitioned equally between all HARQ processes according to the rules in [16].   | –           |                      |
| > <i>Explicit</i>   |          |                            |                            |   | –           |                      |
| >>HARQ Memory Partitioning Information                    |          | 1..<maxno ofHARQprocesses> |                            | The first instance of the parameter corresponds to HARQ process with identifier 0, the second instance to HARQ process with identifier 1, and so on.  | –           |                      |
| >>>Process Memory Size                                    | M        |                            | 9.2.1.49D                  | See [16]  | –           |                      |
| >>HARQ Memory Partitioning Information Extension For MIMO |          | 0, 4, 6 or 8               |                            | FDD and 1.28Mcps TDD only<br>The 1 <sup>st</sup> instance corresponds to HARQ process with identifier set to "maxnoofHARQprocesses", the 2 <sup>nd</sup> instance to HARQ process with identifier set to "maxnoofHARQprocesses+1", and so on. | GLOBAL      | ignore               |
| >>>Process Memory Size                                    | M        |                            | 9.2.1.49D                  | See [16]  | –           |                      |

| Range Bound                 | Explanation  |
|-----------------------------|--|
| <i>MaxnoofHARQprocesses</i> | Maximum number of HARQ processes for one UE [FDD - per stream (the maximum number of HARQ processes per UE is 2 * <i>MaxnoofHARQprocesses</i> in dual stream transmission mode)] |

9.2.1.117 Multiple PLMN List

This information element contains a list of PLMN identities, which identifies the broadcasted PLMN Identities in MOCN and GWCN shared network configurations. The mandatory PLMN Identity in the MIB (called common PLMN in [54]) is the first PLMN.

| IE/Group Name  | Presence | Range                        | IE type and reference   | Semantics description  |
|----------------|----------|------------------------------|-------------------------|--|
| PLMN Identity  | M        |                              | OCTET STRING (SIZE (3)) | - digits 0 to 9, two digits per octet,<br>- each digit encoded 0000 to 1001,<br>- 1111 used as filler<br>- bit 4 to 1 of octet n encoding digit 2n-1<br>- bit 8 to 5 of octet n encoding digit 2n<br><br>-The PLMN identity consists of 3 digits from MCC followed by either<br>-a filler plus 2 digits from MNC (in case of 2 digit MNC) or<br>-3 digits from MNC (in case of a 3 digit MNC). |
| List of PLMNs  |          | 0 .. <maxNrOfBroadcastPLMNs> |                         |  |
| >PLMN Identity | M        |                              | OCTET STRING (SIZE (3)) | - digits 0 to 9, two digits per octet,<br>- each digit encoded 0000 to 1001,<br>- 1111 used as filler<br>- bit 4 to 1 of octet n encoding digit 2n-1<br>- bit 8 to 5 of octet n encoding digit 2n<br><br>-The PLMN identity consists of 3 digits from MCC followed by either<br>-a filler plus 2 digits from MNC (in case of 2 digit MNC) or<br>-3 digits from MNC (in case of a 3 digit MNC). |

| Range bound           | Explanation   |
|-----------------------|---|
| maxNrOfBroadcastPLMNs | Maximum number of additional PLMN identities that can be broadcasted in a cell involved in a MOCN or GWCN Shared Network configuration. The value for maxNrOfBroadcastPLMNs is 5. |

9.2.1.118 GANSS Data Bit Assistance



| IE/Group Name                           | Presence | Range                | IE Type and Reference  | Semantics Description  |
|---|----------|----------------------|------------------------|--|
| GANSS TOD                               | M        |                      | INTEGER(0..59,...)     | Reference time (modulo 1 minute) of the first bit of the data in <i>Data Bits</i> IE, in seconds.    |
| <b>Data Bit Assistance List</b>         |          | 1..<maxGANS<br>SSat> |                        |  |
| >Sat ID                                 | M        |                      | INTEGER(0..63)         | Defined in [16].   |
| <b>&gt;Data Bit Assistance Sgn List</b> |          | 1..<maxSgnTy<br>pe>  |                        |  |
| >>GANSS Signal ID                       | M        |                      | 9.2.1.121              |  |
| >>Data Bits                             | M        |                      | BIT<br>STRING(1..1024) | Raw data bits as transmitted from a specific satellite at the time indicated by GANSS_TOD. See [16]. |

| Range Bound        | Explanation   |
|--------------------|---|
| <i>maxGANSSSat</i> | Maximum number of satellites for which data is included in the IE |
| <i>maxSgnType</i>  | Maximum number of GANSS signals included in the IE                |

### 9.2.1.119 GANSS ID

This IE defines a particular GANSS.

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description                              |
|---------------|----------|-------|-----------------------|--|
| GANSS ID      | M        |       | INTEGER(0..7<br>...)  | Defines the GANSS and is coded as defined in [16]. |

### 9.2.1.119a GANSS Time ID

This IE defines a particular GANSS system time.

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description  |
|---------------|----------|-------|-----------------------|--|
| GANSS Time ID | M        |       | INTEGER(0..7<br>...)  | Defines the GANSS system time for the UTRAN GANSS Timing of Cell Frames for UE Positioning.<br>Coded as defined in [16], subclause 10.3.7.93a. |

### 9.2.1.120 GANSS Navigation Model And Time Recovery

This IE contain information required to manage the transfer of precise navigation data to the GANSS-capable UE.

| IE/Group name  | Presence | Range              | IE Type and Reference | Semantics description   |
|--|----------|--------------------|-----------------------|---|
| GANSS Transmission Time  | M        |                    | 9.2.1.122             | GANSS Time when the Navigation model has been retrieved   |
| Non-Broadcast Indication   | O        |                    | ENUMERATED(true)      | If this IE is present, GANSS navigation model is not derived from satellite broadcast. See NOTE 1 |
| <b>Satellite Information</b>   |          | 1 to <maxGANSSSat> |                       |   |
| >Sat ID  | M        |                    | INTEGER(0..63)        | Defined in [16].  |
| >SV Health   | M        |                    | BIT STRING(5)         | Coded as defined in [53]  |
| >IOD   | M        |                    | BIT STRING(10)        |   |
| >GANSS Clock Model   | M        |                    | 9.2.1.104             |   |
| >GANSS Orbit Model   | M        |                    | 9.2.1.107             |   |
| NOTE 1: The Non-Broadcast Indication allows to inform that the navigation model is not bit-to-bit the one broadcast by the satellite. If it is set to 1, the UE is informed that techniques such as data wiping off applied to the navigation model may not work for instance. |          |                    |                       |   |

| Condition          | Explanation  |
|--------------------|--|
| <i>Orbit model</i> | The IE shall be present if the <i>GANSS Orbit Model</i> IE indicates "Keplerian Parameters". |

| Range bound        | Explanation  |
|--------------------|--|
| <i>maxGANSSSat</i> | Maximum number of satellites for which data is included in the IE. |

### 9.2.1.120a GANSS Additional Navigation Models And Time Recovery

This IE contain information required to manage the transfer of precise navigation data to the GANSS-capable UE.

| IE/Group name                  | Presence | Range            | IE Type and Reference                       | Semantics description   |
|--------------------------------|----------|------------------|---|---|
| GANSS Transmission Time        | M        |                  | 9.2.1.122                                   | GANSS Time when the Navigation model has been retrieved   |
| Non-Broadcast Indication       | O        |                  | ENUMERATED(true)                            | If this IE is present, GANSS navigation model is not derived from satellite broadcast. See NOTE 1 in 9.2.1.120. |
| <b>Satellite Information</b>   |          | 1..<maxGANSSSat> |   |   |
| >Sat ID                        | M        |                  | INTEGER(0..63)                              | Defined in [16].  |
| >SV Health                     | M        |                  | BIT STRING(6)                               | Coded as defined in [16].   |
| >IOD                           | M        |                  | BIT STRING(11)                              | Coded as defined in [16].   |
| >GANSS Additional Clock Models | M        |                  | GANSS Additional Clock Models<br>9.2.1.104a |   |
| >GANSS Additional Orbit Models | M        |                  | GANSS Additional Orbit Models<br>9.2.1.107a |   |

| Range bound | Explanation   |
|-------------|---|
| maxGANSSSat | Maximum number of satellites for which data is included in this IE.<br>The value of maxGANSSSat is 64 |

### 9.2.1.121 GANSS Signal ID

This IE defines a specific signal within a particular GANSS.

| IE/Group Name   | Presence | Range | IE Type and Reference | Semantics Description     |
|-----------------|----------|-------|-----------------------|---------------------------|
| GANSS Signal ID | M        |       | INTEGER(0..7,...)     | Coded as defined in [16]. |

### 9.2.1.122 GANSS Transmission Time

This IE indicates the GANSS Transmission Time.

| IE/Group name | Presence | Range | IE Type and Reference | Semantics description  |
|---------------|----------|-------|-----------------------|--|
| GANSS Day     | O        |       | INTEGER(0..8191)      | The sequential number of days from the origin of the GNSS system time (indicated by the GANSS_ID given in the <i>Requested Data Value</i> IE) modulo 8192 days (about 22 years). |
| GANSS TOD     | M        |       | INTEGER(0..86399)     | GANSS Time of Day in seconds   |

### 9.2.1.122a GANSS Earth Orientation Parameters

| IE/Group Name     | Presence | Range | IE Type and Reference | Semantics Description   |
|-------------------|----------|-------|-----------------------|---|
| $t_{EOP}$         | M        |       | BIT STRING(16)        | EOP data reference time<br>(seconds) [55]                             |
| PM_X              | M        |       | BIT STRING (21)       | X-axis polar motion value at reference time<br>(arc-seconds) [55]     |
| PM_X_dot          | M        |       | BIT STRING (15)       | X-axis polar motion drift at reference time<br>(arc-seconds/day) [55] |
| PM_Y              | M        |       | BIT STRING (21)       | Y-axis polar motion value at reference time<br>(arc-seconds) [55]     |
| PM_Y_dot          | M        |       | BIT STRING (15)       | Y-axis polar motion drift at reference time<br>(arc-seconds/day) [55] |
| $\Delta UT1$      | M        |       | BIT STRING (31)       | UT1-UTC difference at reference time<br>(seconds) [55]                |
| $\Delta UT1\_dot$ | M        |       | BIT STRING (19)       | Rate of UT1-UTC difference at reference time<br>(seconds/day) [55]    |

### 9.2.1.122b SBAS ID

This IE defines a specific SBAS.

| IE/Group Name | Presence | Range | IE Type and Reference                                   | Semantics Description |
|---------------|----------|-------|---|-----------------------|
| SBAS ID       | M        |       | ENUMERATED(<br>WAAS,<br>EGNOS,<br>MSAS,<br>GAGAN, ... ) |                       |

### 9.2.1.122c GANSS Auxiliary Information

| IE/Group name | Presence | Range | IE Type and Reference | Semantics description |
|---------------|----------|-------|-----------------------|-----------------------|
|---------------|----------|-------|-----------------------|-----------------------|

| IE/Group name          | Presence | Range                     | IE Type and Reference | Semantics description  |
|------------------------|----------|---------------------------|-----------------------|--|
| CHOICE <i>GANSS-ID</i> |          |                           |                       |  |
| > <i>GANSS-ID-1</i>    |          |                           |                       | This choice may only be present if GANSS ID indicated "Modernized GPS"   |
| >>Aux Info List        |          | 1 ..<br><maxGAN<br>SSSat> |                       |  |
| >>>Sat ID              | M        |                           | INTEGER(0..63)        | Defined in [16].   |
| >>>Signals Available   | M        |                           | BIT<br>STRING(8)      | Coded as defined in [16].  |
| > <i>GANSS-ID-3</i>    |          |                           |                       | This choice may be present if GANSS ID indicated "GLONASS"   |
| >>Aux Info List        |          | 1 ..<br><maxGAN<br>SSSat> |                       |  |
| >>>Sat ID              | M        |                           | INTEGER(0..63)        | Defined in [16].   |
| >>>Signals Available   | M        |                           | BIT<br>STRING(8)      | Coded as defined in [16].  |
| >>>Channel Number      | M        |                           | INTEGER<br>(-7..13)   | This field indicates the GLONASS carrier frequency number of the satellite identified by <i>Sat ID</i> , as defined in [60]. |

| Range Bound | Explanation   |
|-------------|---|
| maxGANSSSat | Maximum number of GANSS satellites for which data is included in this IE. |

#### 9.2.1.122d Additional Ionospheric Model Request

| IE/Group Name                        | Presence | Range | IE Type and Reference | Semantics Description  |
|--------------------------------------|----------|-------|-----------------------|--|
| Additional Ionospheric Model Request | M        |       | BIT<br>STRING(2)      | Data ID for GANSS Additional Ionospheric Model as defined in [16], subclause 10.3.7.92b. |

#### 9.2.1.122e Earth Orientation Parameters Request

| IE/Group Name                        | Presence | Range | IE Type and Reference | Semantics Description |
|--------------------------------------|----------|-------|-----------------------|-----------------------|
| Earth Orientation Parameters Request | M        |       | BOOLEAN               | True means requested. |

#### 9.2.1.122f GANSS Additional Navigation Models And Time Recovery Request

| IE/Group Name  | Presence | Range | IE Type and Reference | Semantics Description |
|--|----------|-------|-----------------------|-----------------------|
| GANSS Additional Navigation Models And Time Recovery Request | M        |       | BOOLEAN               | True means requested. |

## 9.2.1.122g GANSS Additional UTC Models Request

| IE/Group Name                       | Presence | Range | IE Type and Reference | Semantics Description |
|-------------------------------------|----------|-------|-----------------------|-----------------------|
| GANSS Additional UTC Models Request | M        |       | BOOLEAN               | True means requested. |

## 9.2.1.122h GANSS Auxiliary Information Request

| IE/Group Name                       | Presence | Range | IE Type and Reference | Semantics Description |
|-------------------------------------|----------|-------|-----------------------|-----------------------|
| GANSS Auxiliary Information Request | M        |       | BOOLEAN               | True means requested. |

## 9.2.1.123 SixtyfourQAM DL Support Indicator

The *SixtyfourQAM DL Support Indicator* indicates whether the particular cell is capable to support Sixtyfour QAM in DL or not.

| IE/Group Name                     | Presence | Range | IE Type and Reference  | Semantics Description |
|-----------------------------------|----------|-------|--|-----------------------|
| SixtyfourQAM DL Support Indicator |          |       | ENUMERATED<br>(SixtyfourQAM DL Supported, SixtyfourQAM DL Not Supported) |                       |

## 9.2.1.124 RANAP Enhanced Relocation Information Request

This parameter is transparent to the RNSAP. The parameter contains information for the Enhanced Relocation procedure as defined in [2].

| IE/Group Name                                 | Presence | Range | IE Type and Reference | Semantics Description               |
|---|----------|-------|-----------------------|-------------------------------------|
| RANAP Enhanced Relocation Information Request |          |       | BIT STRING            | The content is defined in ref. [2]. |

## 9.2.1.125 RANAP Enhanced Relocation Information Response

This parameter is transparent to the RNSAP. The parameter contains information for the Enhanced Relocation procedure as defined in [2].

| IE/Group Name                                  | Presence | Range | IE Type and Reference | Semantics Description               |
|--|----------|-------|-----------------------|-------------------------------------|
| RANAP Enhanced Relocation Information Response |          |       | BIT STRING            | The content is defined in ref. [2]. |

## 9.2.1.126 Released CN Domain

The parameter indicates the CD Domain(s) which the RNC shall release the related resource for.

| IE/Group Name                    | Presence | Range | IE Type and Reference | Semantics Description |
|----------------------------------|----------|-------|-----------------------|-----------------------|
| CHOICE <i>Released CN Domain</i> | M        |       |                       |                       |
| > <i>PS Domain</i>               |          |       | NULL                  |                       |
| > <i>CS Domain</i>               |          |       | NULL                  |                       |
| > <i>PS and CS Domain</i>        |          |       | NULL                  |                       |

### 9.2.1.127 Secondary CCPCH system information MBMS

The parameter contains information for the Secondary CCPCH system information MBMS as defined in [16].

| IE/Group Name                           | Presence | Range | IE Type and Reference | Semantics Description                |
|---|----------|-------|-----------------------|--------------------------------------|
| Secondary CCPCH system information MBMS |          |       | BIT STRING            | The content is defined in ref. [16]. |

### 9.2.1.128 MBSFN Cluster Identity

The parameter is the identifier of a MBSFN cluster in one PLMN.

| IE/Group Name          | Presence | Range | IE Type and Reference | Semantics Description                         |
|------------------------|----------|-------|-----------------------|---|
| MBSFN Cluster Identity |          |       | INTEGER (0..65535)    | the identifier of a MBSFN cluster in one PLMN |

### 9.2.1.129 MBSFN Scheduling Transmission Time Interval

The parameter is the identifier of an MBSFN Scheduling Transmission Time Interval.

| IE/Group Name                               | Presence | Range | IE Type and Reference          | Semantics Description |
|---|----------|-------|--------------------------------|-----------------------|
| MBSFN Scheduling Transmission Time Interval |          |       | INTEGER (4,8,16,32,64,128,256) | Number of TTIs        |

### 9.2.1.130 MAC-ehs Reset Timer

The *MAC-ehs Reset Timer* IE is used as Reset Timer(*Treset*) described in ref [41] subclause 11.6.4.5.

| IE/Group Name       | Presence | Range | IE type and reference        | Semantics description   |
|---------------------|----------|-------|------------------------------|---|
| MAC-ehs Reset Timer |          |       | ENUMERATED (1, 2, 3, 4, ...) | Timer in multiples of T1 values (milliseconds). Used when MAC-ehs reordering queue is reset in CELL_FACH and CELL_PCH |

### 9.2.1.131 Enhanced FACH Support Indicator

This IE indicates the Enhanced FACH Support. [1.28Mcps TDD - This IE indicates the Enhanced FACH Support in both downlink and uplink.]

| IE/Group Name                   | Presence | Range | IE Type and Reference | Semantics Description |
|---------------------------------|----------|-------|-----------------------|-----------------------|
| Enhanced FACH Support Indicator |          |       | NULL                  |                       |

### 9.2.1.132 Enhanced PCH Capability

This IE indicates the UE is capable of Enhanced PCH or not.

| IE/Group Name           | Presence | Range | IE Type and Reference  | Semantics Description |
|-------------------------|----------|-------|--|-----------------------|
| Enhanced PCH Capability |          |       | ENUMERATED<br>(Enhanced PCH Capable, Enhanced PCH Not Capable) |                       |

### 9.2.1.133 Priority Queue Information for Enhanced FACH/PCH

The *Priority Queue Information for Enhanced FACH/PCH* IE provides information associated to HSDPA Priority Queue used for Enhanced FACH and/or Enhanced PCH.

| IE/Group Name                     | Presence | Range                               | IE Type and Reference              | Semantics Description |
|-----------------------------------|----------|-------------------------------------|------------------------------------|-----------------------|
| <b>Priority Queue Information</b> |          | <i>1..&lt;maxnoofPrioQueues&gt;</i> |                                    |                       |
| >Priority Queue ID                | M        |                                     | 9.2.1.45A                          |                       |
| >Scheduling Priority Indicator    | M        |                                     | 9.2.1.51A                          |                       |
| >T1                               | M        |                                     | 9.2.1.54A                          |                       |
| >MAC-ehs Reset Timer              | M        |                                     | 9.2.1.130                          |                       |
| >Discard Timer                    | O        |                                     | 9.2.1.19C                          |                       |
| >MAC-hs Window Size               | M        |                                     | 9.2.1.34C                          |                       |
| >Maximum MAC-d PDU Size           | M        |                                     | MAC PDU Size Extended<br>9.2.1.34D |                       |

| Range Bound              | Explanation                       |
|--------------------------|-----------------------------------|
| <i>maxnoofPrioQueues</i> | Maximum number of Priority Queues |

### 9.2.1.134 MIMO Activation Indicator

| IE/Group Name             | Presence | Range | IE Type and Reference | Semantics Description |
|---------------------------|----------|-------|-----------------------|-----------------------|
| MIMO Activation Indicator | M        |       | NULL                  |                       |

### 9.2.1.135 MIMO Mode Indicator

| IE/Group Name       | Presence | Range | IE Type and Reference                | Semantics Description |
|---------------------|----------|-------|--------------------------------------|-----------------------|
| MIMO Mode Indicator |          |       | ENUMERATED<br>(Activate, Deactivate) |                       |

### 9.2.1.136 DL RLC PDU Size Format

The *DL RLC PDU Size Format* IE indicates the downlink RLC PDU size format used for a Priority Queue.



| IE/Group Name          | Presence | Range | IE Type and Reference  | Semantics Description |
|------------------------|----------|-------|--|-----------------------|
| DL RLC PDU Size Format |          |       | ENUMERATED ( Fixed RLC PDU size, Flexible RLC PDU size ,...) |                       |

## 9.2.2 FDD Specific Parameters

This subclause contains parameters that are specific to FDD.

### 9.2.2.a ACK-NACK Repetition Factor

The *ACK-NACK Repetition Factor* IE indicates the consecutive repetition of the ACK and NACK.

| IE/Group Name              | Presence | Range | IE type and reference | Semantics description |
|----------------------------|----------|-------|-----------------------|-----------------------|
| ACK-NACK Repetition Factor |          |       | INTEGER (1..4,...)    | Step: 1               |

### 9.2.2.b ACK Power Offset

The *ACK Power Offset* IE indicates Power offset used in the UL between the HS-DPCCH slot carrying HARQ ACK information and the associated DPCCH.

| IE/Group Name    | Presence | Range | IE type and reference | Semantics description                              |
|------------------|----------|-------|-----------------------|--|
| ACK Power Offset |          |       | INTEGER (0..8,...)    | According to mapping in ref. [21] subclause 4.2.1. |

### 9.2.2.A Active Pattern Sequence Information

Defines the parameters for the compressed mode gap pattern sequence activation. For details see ref. [16].

| IE/Group Name                                   | Presence | Range         | IE Type and Reference | Semantics Description   |
|---|----------|---------------|-----------------------|---|
| CM Configuration Change CFN                     | M        |               | CFN 9.2.1.9           |   |
| <b>Transmission Gap Pattern Sequence Status</b> |          | 0.. <maxTGPS> |                       | If the group is not present, none of the pattern sequences are activated.   |
| >TGPSI Identifier                               | M        |               | INTEGER(1..<MaxTGPS>) | Establish a reference to the compressed mode pattern sequence. Up to <MaxTGPS> simultaneous compressed mode pattern sequences can be activated. |
| >TGPRC  | M        |               | INTEGER(0..511)       | The number of transmission gap patterns within the Transmission Gap Pattern Sequence. 0=Infinity.   |
| >TGCFN  | M        |               | CFN 9.2.1.9           | Connection Frame Number of the first frame of the first pattern 1 within the Transmission Gap Pattern Sequence.                                 |

| Range bound | Explanation  |
|-------------|--|
| maxTGPS     | Maximum number of active pattern sequences. Value 6. |

### 9.2.2.B Adjustment Period

*Adjustment Period* IE defines the period to be used for power balancing.

| IE/Group Name     | Presence | Range | IE Type and Reference | Semantics Description |
|-------------------|----------|-------|-----------------------|-----------------------|
| Adjustment Period |          |       | INTEGER<br>(1 .. 256) | Unit: Frames          |

### 9.2.2.C Adjustment Ratio

*Adjustment Ratio* IE (*Radj*) defines the convergence rate used for the associated Adjustment Period.

| IE/Group Name    | Presence | Range | IE Type and Reference | Semantics Description  |
|------------------|----------|-------|-----------------------|--|
| Adjustment Ratio |          |       | INTEGER<br>(0 .. 100) | The Adjustment Ratio is given with a granularity of 0.01<br>0 -> 0.00<br>1 -> 0.01<br>...<br>100 -> 1.00 |

### 9.2.2.Ca Bundling Mode Indicator

The Bundling Mode Indicator indicates whether the bundling shall be done or shall not be done for Iur.

| IE/Group Name           | Presence | Range | IE Type and Reference                     | Semantics Description   |
|-------------------------|----------|-------|---|---|
| Bundling Mode Indicator |          |       | ENUMERATED (<br>Bundling, No<br>bundling) | The value "Bundling" is applicable only when E-TTI indicates "2ms". |

### 9.2.2.D Cell Capability Container FDD

The Cell Capability Container FDD indicates which functionalities a cell supports.

| IE/Group Name                 | Presence | Range | IE Type and Reference | Semantics Description   |
|-------------------------------|----------|-------|-----------------------|---|
| Cell Capability Container FDD |          |       | BIT STRING (32)       | <p>Each bit indicates whether a cell supports a particular functionality or not. The value 1 of a bit indicates that the corresponding functionality is supported in a cell and value 0 indicates that the corresponding functionality is not supported in a cell. Each bit is defined as follows.</p> <p>The first bit:Reserved.</p> <p>The second bit: Delayed Activation Support Indicator.</p> <p>The third bit: HS-DSCH Support Indicator.</p> <p>The fourth bit:Reserved.</p> <p>The fifth bit: F-DPCH Support Indicator.</p> <p>The sixth bit: E-DCH Support Indicator.</p> <p>The seventh bit: E-DCH TTI2ms Support Indicator.</p> <p>The eighth bit: E-DCH 2sf2and2sf4 and all inferior SFs Support Indicator.</p> <p>The ninth bit: E-DCH 2sf2 and all inferior SFs Support Indicator.</p> <p>The tenth bit: E-DCH 2sf4 and all inferior SFs Support Indicator.</p> <p>The eleventh bit: E-DCH sf4 and all inferior SFs Support Indicator.</p> <p>The twelveth bit: E-DCH sf8 and all inferior SFs Support Indicator.</p> <p>The thirteenth bit: E-DCH HARQ IR Combining Support Indicator.</p> <p>The fourteenth bit: E-DCH HARQ Chase Combining Support Indicator.</p> <p>The fifteenth bit: Continuous Packet Connectivity DTX-DRX Support Indicator.</p> <p>The sixteenth bit: Continuous Packet Connectivity HS-SCCH less Support Indicator.</p> <p>The seventeenth bit: MIMO Support Indicator.</p> <p>The eighteenth bit: SixteenQAM UL Support Indicator.</p> <p>The nineteenth bit: Flexible MAC-d PDU Size Support Indicator.</p> <p>The twentieth bit: F-DPCH Slot Format Support Indicator.</p> <p>The twentyfirst bit: SixtyfourQAM DL Support Indicator.</p> <p>The twentysecond bit:</p> |

|  |  |  |  |  |
|--|--|--|--|--|
|  |  |  |  | <p>Flexible E-DCH MAC-d PDU Size Support Indicator.<br/>                 The twentythird bit: E-DPCCH Power Boosting Support Indicator.<br/>                 The twentyfourth bit: SixtyfourQAM DL and MIMO Combined Support Indicator. This bit shall not be set to 1 if SixtyfourQAM DL Support Indicator is set to 0 or MIMO Support Indicator is set to 0.<br/>                 The twentyfifth bit: Multi Cell Support Indicator<br/>                 The twentysixth bit: MBMS Support Indicator.<br/>                 The twentyseventh bit: TX Diversity on DL Control Channels by MIMO Capable UE when MIMO operation is Active Support Indicator.<br/>                 The twentyeighth bit: Reserved<br/>                 The twenty ninth bit: Reserved<br/>                 The thirtieth bit: Preferred Precoding Weight Set Restriction Support Indicator. (See [16], the value 1 indicates preferred)</p> <p>Note that undefined bits are considered as a spare bit and spare bits shall be set to 0 by the transmitter and shall be ignored by the receiver. Note that Reserved bits are not considered as a spare bit. They shall however be set to 0 by the transmitter and shall be ignored by the receiver.</p> |
|--|--|--|--|--|

9.2.2.E Cell Portion ID

Cell Portion ID is the unique identifier for a cell portion within a cell. See [11].

| IE/Group Name   | Presence | Range | IE Type and Reference | Semantics Description |
|-----------------|----------|-------|-----------------------|-----------------------|
| Cell Portion ID |          |       | INTEGER (0..63,...)   |                       |

9.2.2.1 Chip Offset

The Chip Offset is defined as the radio timing offset inside a radio frame. The Chip Offset is used as offset for the DL DPCH relative to the Primary CPICH timing for the DL DPCH or for the F-DPCH.

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description |
|---------------|----------|-------|-----------------------|-----------------------|
| Chip Offset   |          |       | INTEGER (0..38399)    | Unit: Chips           |

### 9.2.2.2 Closed Loop Mode1 Support Indicator

The Closed Loop Mode1 Support Indicator indicates whether the particular cell is capable to support Closed loop mode1 or not

| IE/Group Name                       | Presence | Range | IE Type and Reference   | Semantics Description |
|-------------------------------------|----------|-------|---|-----------------------|
| Closed Loop Mode1 Support Indicator |          |       | ENUMERATED(Closed loop mode1 Supported, Closed loop mode1 not supported). |                       |

### 9.2.2.3 Closed Loop Mode2 Support Indicator

Void.

#### 9.2.2.3A Closed Loop Timing Adjustment Mode

Indicates when the phase/amplitude adjustment is performed in the DL in relation to the receipt of the UL feedback command in case of closed loop mode transmit diversity on DPCH.

| IE/Group Name                      | Presence | Range | IE Type and Reference            | Semantics Description  |
|------------------------------------|----------|-------|----------------------------------|--|
| Closed Loop Timing Adjustment Mode |          |       | ENUMERATED(Offset1, Offset2,...) | According to [10] subclause 7.1:<br>Offset1 = slot(j+1)mod15<br>Offset2 = slot(j+2)mod15 |

### 9.2.2.4 Compressed Mode Method

Void

#### 9.2.2.4A DCH FDD Information

The *DCH FDD Information* IE provides information for DCHs to be established.

| IE/Group Name                       | Presence | Range                          | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|-------------------------------------|----------|--------------------------------|-----------------------|-----------------------|-------------|----------------------|
| <b>DCH FDD Information</b>          |          | <i>1..&lt;maxno ofDCHs&gt;</i> |                       |                       | –           |                      |
| >Payload CRC Presence Indicator     | M        |                                | 9.2.1.42              |                       | –           |                      |
| >UL FP Mode                         | M        |                                | 9.2.1.67              |                       | –           |                      |
| >ToAWS                              | M        |                                | 9.2.1.58              |                       | –           |                      |
| >ToAWE                              | M        |                                | 9.2.1.57              |                       | –           |                      |
| <b>&gt;DCH Specific Info</b>        |          | <i>1..&lt;maxno ofDCHs&gt;</i> |                       |                       | –           |                      |
| >>DCH ID                            | M        |                                | 9.2.1.16              |                       | –           |                      |
| >>TrCH Source Statistics Descriptor | M        |                                | 9.2.1.65              |                       | –           |                      |
| >>Transport Format Set              | M        |                                | 9.2.1.64              | For the UL.           | –           |                      |
| >>Transport Format Set              | M        |                                | 9.2.1.64              | For the DL.           | –           |                      |
| >>BLER                              | M        |                                | 9.2.1.4               | For the UL.           | –           |                      |
| >>BLER                              | M        |                                | 9.2.1.4               | For the DL.           | –           |                      |
| >>Allocation/Retention Priority     | M        |                                | 9.2.1.1               |                       | –           |                      |
| >>Frame Handling Priority           | M        |                                | 9.2.1.29              |                       | –           |                      |
| >>QE-Selector                       | M        |                                | 9.2.1.46A             |                       | –           |                      |
| >>DRAC control                      | M        |                                | 9.2.2.13              |                       | –           |                      |
| >>Guaranteed Rate Information       | O        |                                | 9.2.1.30M             |                       | YES         | ignore               |
| >>Traffic Class                     | M        |                                | 9.2.1.58A             |                       | YES         | ignore               |
| >>Unidirectional DCH Indicator      | O        |                                | 9.2.1.68B             |                       | YES         | reject               |
| >TNL QoS                            | O        |                                | 9.2.1.56A             |                       | YES         | ignore               |

| Range bound        | Explanation                        |
|--------------------|------------------------------------|
| <i>maxnoofDCHs</i> | Maximum number of DCHs for one UE. |

### 9.2.2.4B E-DCH FDD Information

The E-DCH *FDD Information* IE provides information for an E-DCH to be established.

| IE/Group Name  | Presence                      | Range | IE Type and Reference                           | Semantics Description  | Criticality | Assigned Criticality |
|--|-------------------------------|-------|---|--|-------------|----------------------|
| E-DCH MAC-d Flows Information                                | M                             |       | 9.2.2.4MC                                       |  | –           |                      |
| HARQ Process Allocation For 2ms Scheduled Transmission Grant | O                             |       | HARQ Process Allocation for 2ms TTI<br>9.2.2.4O | If this IE is not included, scheduled transmission in all HARQ processes is allowed.                     | –           |                      |
| E-DCH Maximum Bitrate  | O                             |       | 9.2.2.4MG                                       |  | –           |                      |
| E-DCH Processing Overload Level                              | O                             |       | 9.2.1.95  |  | –           |                      |
| E-DCH Reference Power Offset                                 | O                             |       | 9.2.2.4MI                                       |  | –           |                      |
| E-DCH Power Offset for Scheduling Info                       | O                             |       | 9.2.1.96  |  | YES         | ignore               |
| SixteenQAM UL Operation Indicator                            | O                             |       | 9.2.2.90  |  | YES         | reject               |
| E-AGCH Table Choice  | C-<br>SixteenQAM UL Operation |       | 9.2.2.61A                                       | If the SixteenQAM UL operation is not configured for this UE, Table 16B for E-AGCH in [9] shall be used. | YES         | ignore               |

| Condition               | Explanation  |
|-------------------------|--|
| SixteenQAM UL Operation | The IE shall be present if the <i>SixteenQAM UL Operation Indicator</i> IE is set to "Activate". |

#### 9.2.2.4C E-DCH FDD Information Response

The *E-DCH FDD Information Response* IE provides information for E-DCH MAC-d flows that have been established or modified. It also provides additional E-DCH information determined within the DRNS.

| IE/Group Name   | Presence | Range                               | IE Type and Reference                        | Semantics Description   | Criticality | Assigned Criticality |
|---|----------|-------------------------------------|--|---|-------------|----------------------|
| <b>E-DCH MAC-d Flow Specific Information Response</b>             |          | $1..<maxno\ of\ EDCHM\ ACdFlows\ >$ |  |   | –           |                      |
| >E-DCH MAC-d Flow ID  | M        |                                     | 9.2.1.91                                     | If only <i>HARQ Process Allocation For 2ms Scheduled Transmission Grant</i> IE and this IE ( <i>E-DCH MAC-d Flow ID</i> ) are present in the <i>E-DCH FDD Information Response</i> IE, the content of this IE shall be considered invalid | –           |                      |
| >Binding ID   | O        |                                     | 9.2.1.3                                      |   | –           |                      |
| >Transport Layer Address  | O        |                                     | 9.2.1.62                                     |   | –           |                      |
| >HARQ Process Allocation For 2ms Non-Scheduled Transmission Grant | O        |                                     | HARQ Process Allocation for 2ms TTI 9.2.2.4O |   | –           |                      |
| >Transport Bearer Not Setup Indicator                             | O        |                                     | 9.2.2.4T                                     |   | YES         | ignore               |
| HARQ Process Allocation For 2ms Scheduled Transmission Grant      | O        |                                     | HARQ Process Allocation for 2ms TTI 9.2.2.4O |   | –           |                      |

| Range bound            | Explanation                          |
|------------------------|--------------------------------------|
| $maxnoofEDCHMACdFlows$ | Maximum number of E-DCH MAC-d flows. |

#### 9.2.2.4D E-DCH FDD DL Control Channel Information

The *E-DCH FDD DL Control Channel Information* IE provides information for E-DCH specific DL Control Channels to be provided to UE via RRC signalling.



| IE/Group Name  | Presence | Range | IE Type and Reference                      | Semantics Description   | Criticality | Assigned Criticality |
|--|----------|-------|--|---|-------------|----------------------|
| E-AGCH and E-RGCH And E-HICH FDD Scrambling Code         | O        |       | DL Scrambling Code 9.2.2.11                | Scrambling code on which E-AGCH, E-RGCH and E-HICH are transmitted. 0= Primary scrambling code of the cell 1...15 = Secondary scrambling code | –           |                      |
| E-AGCH Channelisation Code                               | O        |       | FDD DL Channelisation Code Number 9.2.2.14 |   | –           |                      |
| Primary E-RNTI   | O        |       | E-RNTI 9.2.1.94                            |   | –           |                      |
| Secondary E-RNTI   | O        |       | E-RNTI 9.2.1.94                            |   | –           |                      |
| E-RGCH and E-HICH Channelisation Code                    | M        |       | FDD DL Channelisation Code Number 9.2.2.14 |   | –           |                      |
| E-RGCH Signature Sequence                                | O        |       | INTEGER (0..maxnoof SigSeqERG HICH-1)      |   | –           |                      |
| E-HICH Signature Sequence                                | O        |       | INTEGER (0..maxnoof SigSeqERG HICH-1)      |   | –           |                      |
| Serving Grant Value                                      | O        |       | INTEGER (0..37,38)                         | (0..37) indicates E-DCH serving grant index as defined in [41]; index 38 means zero grant   | –           |                      |
| Primary/Secondary Grant Selector                         | O        |       | ENUMERATED (Primary, Secondary)            | Indicates whether the Serving Grant Value is granted with a primary E-RNTI or a secondary E-RNTI  | –           |                      |
| E-RGCH Release Indicator                                 | O        |       | 9.2.2.60                                   |   | –           |                      |
| E-RGCH and E-HICH Channelisation Code Validity Indicator | O        |       | 9.2.2.68                                   | Indicates whether the value of E-RGCH and E-HICH Channelisation Code is invalid   | YES         | ignore               |
| Default Serving Grant in DTX Cycle 2                     | O        |       | INTEGER (0..37,38)                         | Serving Grant value to be   | YES         | ignore               |

|  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|
|  |  |  |  | used in DTX-Cycle-2. (0..37) indicates E-DCH serving grant index as defined in [32]; index 38 means zero grant |  |  |
|--|--|--|--|--|--|--|

| Range bound          | Explanation  |
|----------------------|--|
| maxnoofSigSeqERGHICH | Maximum number Signature Sequences for E-RGCH / E-HICH |

#### 9.2.2.4E E-DCH RL Indication

Indicates whether a RL is an E-DCH RL.

| IE/Group Name       | Presence | Range | IE Type and Reference        | Semantics Description |
|---------------------|----------|-------|------------------------------|-----------------------|
| E-DCH RL Indication |          |       | ENUMERATED(E-DCH, non E-DCH) |                       |

#### 9.2.2.4F E-DCH FDD Information To Modify

The E-DCH *FDD Information* IE provides information for an E-DCH to be modified.

| IE/Group Name  | Presence | Range                                      | IE Type and Reference                        | Semantics Description   | Criticality | Assigned Criticality |
|--|----------|--|--|---|-------------|----------------------|
| <b>E-DCH MAC-d Flow Specific Information</b>                           |          | <i>1..&lt;maxno of EDCHM ACdFlows &gt;</i> |  | See Note1 below.  | –           |                      |
| >E-DCH MAC-d Flow ID   | M        |  | 9.2.1.91                                     |   | –           |                      |
| >Allocation/Retention Priority   | O        |  | 9.2.1.1                                      |   | –           |                      |
| >Transport Bearer Request Indicator                                    | M        |  | 9.2.1.61                                     |   | –           |                      |
| >TNL QoS   | O        |  | 9.2.1.56A                                    |   | –           |                      |
| >Maximum Number of Retransmissions for E-DCH                           | O        |  | 9.2.1.100                                    |   | –           |                      |
| >Traffic Class   | O        |  | 9.2.1.58A                                    |   | –           |                      |
| >E-DCH HARQ Power Offset FDD   | O        |  | 9.2.2.4L                                     |   | –           |                      |
| >E-DCH MAC-d Flow Multiplexing List                                    | O        |  | 9.2.1.89                                     |   | –           |                      |
| > CHOICE <i>E-DCH grant type</i>                                       | O        |  |  |   |             |                      |
| >> <i>E-DCH Non-Scheduled Transmission Grant</i>                       |          |  |  |   |             |                      |
| >>>Maximum Number of Bits per MAC-e PDU for Non-scheduled Transmission | M        |  | 9.2.2.4N                                     | If the <i>Extended Maximum Number of Bits per MAC-e PDU for Non-scheduled Transmission</i> IE is present, this IE shall be ignored. When <i>Maximum MAC-d PDU Size Extended</i> IE is configured for an E-DCH Logical Channel this IE indicates the maximum number of bits per MAC-i PDU. | –           |                      |
| >>>HARQ Process Allocation For 2ms Non-Scheduled Transmission Grant    | O        |  | HARQ Process Allocation for 2ms TTI 9.2.2.4O |   | –           |                      |

|   |   |  |          |   |     |        |
|---|---|--|----------|---|-----|--------|
| >>>Extended Maximum Number of Bits per MAC-e PDU for Non-scheduled Transmission | O |  | 9.2.2.4R | When <i>Maximum MAC-d PDU Size Extended</i> IE is configured for an E-DCH Logical Channel this IE indicates the maximum number of bits per MAC-i PDU. | YES | reject |
|---|---|--|----------|---|-----|--------|

|   |                               |                             |   |  |        |        |
|---|-------------------------------|-----------------------------|---|--|--------|--------|
| >>E-DCH Scheduled Transmission Grant  |                               |                             | NULL  |  |        |        |
| >Bundling Mode Indicator  | O                             |                             | 9.2.2.Ca  |  | –      |        |
| >E-DCH Logical Channel To Add   | O                             |                             | E-DCH Logical Channel Information<br>9.2.1.92   |  | –      |        |
| >E-DCH Logical Channel To Modify  |                               |                             | 9.2.1.93  |  | –      |        |
| >E-DCH Logical Channel To Delete  |                               | 0..<maxnooflogicalchannels> |   |  | –      |        |
| >>Logical Channel ID  | M                             |                             | 9.2.1.97  |  | –      |        |
| HARQ Process Allocation For 2ms Scheduled Transmission Grant  | O                             |                             | HARQ Process Allocation for 2ms TTI<br>9.2.2.4O |  | –      |        |
| E-DCH Maximum Bitrate   | O                             |                             | 9.2.2.4MG                                       |  | –      |        |
| E-DCH Processing Overload Level   | O                             |                             | 9.2.1.95  |  | –      |        |
| E-DCH Reference Power Offset  | O                             |                             | 9.2.2.4MI                                       |  | –      |        |
| MAC-e Reset Indicator   | O                             |                             | 9.2.1.99  |  | –      |        |
| E-DCH Power Offset for Scheduling Info  | O                             |                             | 9.2.1.96  |  | YES    | ignore |
| SixteenQAM UL Operation Indicator   | O                             |                             | 9.2.2.90  |  | YES    | reject |
| E-DCH MAC-d PDU Size Format   | O                             |                             | 9.2.1.91A                                       |  | YES    | reject |
| E-DCH DL Control Channel Grant Information  |                               | 0..<maxnofEDCHRLs>          |   |  | GLOBAL | ignore |
| >E-DCH RL ID  | M                             |                             | RL ID<br>9.2.1.49                               |  | –      |        |
| E-AGCH Table Choice   | C-<br>SixteenQAM UL Operation |                             | 9.2.2.61A                                       | If sixteenQAM UL operation is not used in the new configuration for this UE, Table 16B for E-AGCH in [9] shall be used in the new configuration. | YES    | ignore |
| Note 1: Even if no E-DCH MAC-d Flow Specific Information needs to be modified, one E-DCH MAC-d Flow Information shall be included, which only contains the <i>E-DCH MAC-d Flow ID</i> IE and the <i>Transport BearerRequest Indicator</i> IE set to "Bearer not Requested". |                               |                             |   |  |        |        |

| Condition               | Explanation  |
|-------------------------|--|
| SixteenQAM UL Operation | The IE shall be present if the <i>SixteenQAM UL Operation Indicator</i> IE is set to "Activate". |

| Range bound                  | Explanation                            |
|------------------------------|--|
| <i>maxnofEDCHMACdFlows</i>   | Maximum number of E-DCH MAC-d flows.   |
| <i>maxnoflogicalchannels</i> | Maximum number of Logical Channels     |
| <i>maxnofEDCHRLs</i>         | Maximum number of E-DCH RLs for one UE |

## 9.2.2.4G E-DCH Transport Format Combination Set Information (E-TFCS Information)

Whereas the related Transport Block sizes are standardised in [41] this IE gives details on the referenced Transport Block Size Table, the E-DCH Minimum Set E-TFCI, the Reference E-TFCIs and configuration parameters used for the calculation of the gain factors  $\beta_{ec}$  and  $\beta_{ed}$  defined in [10].

| IE/Group Name                               | Presence | Range                                | IE Type and Reference     | Semantics Description   | Criticality | Assigned Criticality |
|---|----------|--------------------------------------|---------------------------|---|-------------|----------------------|
| E-TFCI Table Index                          | M        |                                      | INTEGER (0..1, ..., 2..7) | Indicates which standardised E-TFCS Transport Block Size Table shall be used. The related tables are specified in [41].   | –           |                      |
| E-DCH Minimum Set E-TFCI                    | M        |                                      | INTEGER (0..127)          | For the concept of "E-DCH Minimum Set of TFCs" see [41] and [16].   | –           |                      |
| <b>Reference E-TFCI Information</b>         |          | <i>1..&lt;maxno ofRefETF CIs&gt;</i> |                           |   | –           |                      |
| >Reference E-TFCI                           | M        |                                      | INTEGER (0..127)          |   | –           |                      |
| >Reference E-TFCI Power Offset              | M        |                                      | 9.2.2.4P                  | If the <i>Extended Reference E-TFCI Power Offset</i> IE is present, this IE shall be ignored  | –           |                      |
| >Extended Reference E-TFCI Power Offset     | O        |                                      | 9.2.2.4Q                  |   | YES         | reject               |
| E-DCH Minimum Set E-TFCI Validity Indicator | O        |                                      | 9.2.2.69                  | Indicates whether the value of E-DCH Minimum Set E-TFCI is invalid  | YES         | reject               |
| E-TFCI Boost Information                    | O        |                                      | 9.2.2.91                  |   | YES         | reject               |
| E-DPDCH Power Interpolation                 | O        |                                      | BOOLEAN                   | True means that the E-DPDCH power interpolation formula shall be applied, False means that the E-DPDCH power extrapolation formula shall be applied for the computation of the gain factor $\beta_{ed}$ according to [10] | YES         | reject               |

| Range Bound             | Explanation                                   |
|-------------------------|---|
| <i>maxnoofRefETFCIs</i> | Maximum number of signalled reference E-TFCIs |

#### 9.2.2.4J E-TTI

The E-TTI parameter indicates the Transmission Time Interval for E-DPCH operation.

| IE/Group Name | Presence | Range | IE Type and Reference  | Semantics Description |
|---------------|----------|-------|------------------------|-----------------------|
| E-TTI         |          |       | ENUMERATED (2ms, 10ms) |                       |

#### 9.2.2.4K E-DPCCH Power Offset

The E-DPCCH Power Offset is used to calculate the E-DPCCH gain factor  $\beta_{ec}$  as defined in [10], whereas  $\beta_{ec}$  is related to the power difference between DPCCH and E-DPCCH.

| IE/Group Name        | Presence | Range | IE Type and Reference | Semantics Description                               |
|----------------------|----------|-------|-----------------------|---|
| E-DPCCH Power Offset |          |       | INTEGER (0..8)        | According to mapping in ref. [21] subclause 4.2.1.3 |

#### 9.2.2.4KA Void

#### 9.2.2.4L E-DCH HARQ Power Offset FDD

The E-DCH HARQ Power Offset FDD is used to calculate the unquantised gain factor for an E-TFC ( $\beta_{ed,j,uq}$ ) as defined in [10].

| IE/Group Name               | Presence | Range | IE Type and Reference | Semantics Description                                |
|-----------------------------|----------|-------|-----------------------|--|
| E-DCH HARQ Power Offset FDD |          |       | INTEGER (0..6)        | According to mapping in ref. [21] subclause 4.2.1.3. |

#### 9.2.2.4M Void

#### 9.2.2.4MA Void

#### 9.2.2.4MB Void

#### 9.2.2.4MC E-DCH MAC-d Flows Information

The *E-DCH MAC-d Flows Information* IE is used for the establishment of E-DCH MAC-d flows.

| IE/Group Name  | Presence | Range                                     | IE Type and Reference                        | Semantics Description   | Criticality | Assigned Criticality |
|--|----------|---|--|---|-------------|----------------------|
| <b>E-DCH MAC-d Flow Specific Information</b>                           |          | <i>1..&lt;maxno ofEDCHM ACdFlows &gt;</i> |  |   | –           |                      |
| >E-DCH MAC-d Flow ID   | M        |   | 9.2.1.91                                     |   | –           |                      |
| >Allocation/Retention Priority   | O        |   | 9.2.1.1                                      |   | –           |                      |
| >TNL QoS   | O        |   | 9.2.1.56A                                    |   | –           |                      |
| >Payload CRC Presence Indicator  | M        |   | 9.2.1.42                                     |   | –           |                      |
| >Maximum Number of Retransmissions for E-DCH                           | M        |   | 9.2.1.100                                    |   | –           |                      |
| >Traffic Class   | M        |   | 9.2.1.58A                                    |   | –           |                      |
| >E-DCH HARQ Power Offset FDD   | M        |   | 9.2.2.4L                                     |   | –           |                      |
| >E-DCH MAC-d Flow Multiplexing List                                    | O        |   | 9.2.1.89                                     |   | –           |                      |
| >CHOICE <i>E-DCH grant type</i>  | M        |   |  |   | –           |                      |
| >> <i>E-DCH Non-Scheduled Transmission Grant</i>                       |          |   |  |   |             |                      |
| >>>Maximum Number of Bits per MAC-e PDU for Non-scheduled Transmission | M        |   | 9.2.2.4N                                     | If the <i>Extended Maximum Number of Bits per MAC-e PDU for Non-scheduled Transmission</i> IE is present, this IE shall be ignored. When <i>Maximum MAC-d PDU Size Extended</i> IE is configured for an E-DCH Logical Channel this IE indicates the maximum number of bits per MAC-i PDU. | –           |                      |
| >>>HARQ Process Allocation For 2ms Non-Scheduled Transmission Grant    | O        |   | HARQ Process Allocation for 2ms TTI 9.2.2.4O | If this IE is not included, transmission in all HARQ processes is allowed.  | –           |                      |



|   |   |  |          |   |     |        |
|---|---|--|----------|---|-----|--------|
| >>>Extended Maximum Number of Bits per MAC-e PDU for Non-scheduled Transmission | O |  | 9.2.2.4R | When <i>Maximum MAC-d PDU Size Extended</i> IE is configured for an E-DCH Logical Channel this IE indicates the maximum number of bits per MAC-i PDU. | YES | reject |
| >>E-DCH Scheduled Transmission Grant  |   |  | NULL     |   |     |        |
| >Bundling Mode Indicator  | O |  | 9.2.2.Ca |   | –   |        |
| >E-DCH Logical Channel Information  | M |  | 9.2.1.92 |   | –   |        |
| >TrCH Source Statistics Descriptor  | O |  | 9.2.1.65 |   | YES | ignore |

| Range bound                 | Explanation                          |
|-----------------------------|--------------------------------------|
| <i>maxnoofEDCHMACdFlows</i> | Maximum number of E-DCH MAC-d flows. |

9.2.2.4MD Void

9.2.2.4ME Void

9.2.2.4MF Void

9.2.2.4MG E-DCH Maximum Bitrate

The E-DCH Maximum Bitrate parameter indicates the Maximum Bitrate for an E-DCH.

| IE/Group Name         | Presence | Range | IE Type and Reference              | Semantics Description                                       |
|-----------------------|----------|-------|------------------------------------|---|
| E-DCH Maximum Bitrate |          |       | INTEGER (0..5742,..., 5743..11498) | Bitrate on transport block level. Unit is kbits per second. |

9.2.2.4MH Void

9.2.2.4MI E-DCH Reference Power Offset

The E-DCH Reference Power Offset is used to estimate the E-DPDCH power from E-TFCI without decoding MAC-e PDUs.

| IE/Group Name                | Presence | Range | IE Type and Reference | Semantics Description                                |
|------------------------------|----------|-------|-----------------------|--|
| E-DCH Reference Power Offset |          |       | INTEGER (0..6)        | According to mapping in ref. [21] subclause 4.2.1.3. |

## 9.2.2.4MJ Void

## 9.2.2.4N Maximum Number of Bits per MAC-e PDU for Non-scheduled Transmission

The Maximum Number of Bits per MAC-e PDU for Non-scheduled Transmission indicates the maximum numbers of bits allowed to be included in a MAC-e (or MAC-i) PDU per E-DCH MAC-d flow configured for non-scheduled transmissions. If the range of the *Maximum Number of Bits per MAC-e PDU for Non-scheduled Transmission* IE is insufficient to represent the value to be sent to the DRNS, the *Extended Maximum Number of Bits per MAC-e PDU for Non-scheduled Transmission* IE shall be used to represent the value to be sent to the DRNS, see section 9.2.2.4R.

| IE/Group Name   | Presence | Range | IE Type and Reference | Semantics Description |
|---|----------|-------|-----------------------|-----------------------|
| Maximum Number of Bits per MAC-e PDU for Non-Scheduled Transmission |          |       | INTEGER (1..19982)    |                       |

## 9.2.2.4O HARQ Process Allocation For 2ms TTI

The HARQ Process Allocation for 2ms TTI indicates those HARQ processes that are allowed. MAC-d PDU's for a MAC-d flow are only allowed to be transmitted in those processes for which the bit is set to "1".

| IE/Group Name                       | Presence | Range | IE Type and Reference | Semantics Description  |
|-------------------------------------|----------|-------|-----------------------|--|
| HARQ Process Allocation For 2ms TTI |          |       | BIT STRING (8)        | The first Bit corresponds to HARQ process ID = 0, the second bit corresponds to HARQ process ID = 1, etc.<br>The HARQ process ID for 2ms TTI is defined in [41], chapter 11.8.1.3. |

## 9.2.2.4P Reference E-TFCI Power Offset

The Reference E-TFCI Power Offset is used to calculate the reference E-TFC gain factor  $\beta_{ed,ref}$  as defined in [10]. If the range of the *Reference E-TFCI Power Offset* IE is insufficient to represent the value to be sent to the DRNS, the *Extended Reference E-TFCI Power Offset* IE shall be used to represent the value to be sent to the DRNS, see section 9.2.2.4Q.

| IE/Group Name                 | Presence | Range | IE Type and Reference | Semantics Description                               |
|-------------------------------|----------|-------|-----------------------|---|
| Reference E-TFCI Power Offset |          |       | INTEGER (0..29)       | According to mapping in ref. [21] subclause 4.2.1.3 |

## 9.2.2.4Q Extended Reference E-TFCI Power Offset

The *Extended Reference E-TFCI Power Offset* IE shall be used if the range of the *Reference E-TFCI Power Offset* IE (see section 9.2.2.4P) is insufficient to represent the value of the Reference E-TFCI Power Offset to be sent to the DRNS.

| IE/Group Name                          | Presence | Range | IE Type and Reference | Semantics Description                               |
|--|----------|-------|-----------------------|---|
| Extended Reference E-TFCI Power Offset |          |       | INTEGER (30..31,...)  | According to mapping in ref. [21] subclause 4.2.1.3 |

### 9.2.2.4R Extended Maximum Number of Bits per MAC-e PDU for Non-scheduled Transmission

The *Extended Maximum Number of Bits per MAC-e PDU for Non-scheduled Transmission* IE shall be used if the range of the *Maximum Number of Bits per MAC-e PDU for Non-scheduled Transmission* IE (see section 9.2.2.4N) is insufficient to represent the value of the Maximum Number of Bits per MAC-e (or MAC-i) PDU for Non-scheduled Transmission to be sent to the DRNS.

| IE/Group Name  | Presence | Range | IE Type and Reference         | Semantics Description |
|--|----------|-------|-------------------------------|-----------------------|
| Extended Maximum Number of Bits per MAC-e PDU for Non-scheduled Transmission |          |       | INTEGER<br>(19983..22978,...) |                       |

### 9.2.2.4S Transport Bearer Not Requested Indicator

The Transport Bearer Not Requested Indicator parameter indicates that a transport bearer shall not be established or may not to be established for DCH or an E-DCH MAC-d flow.

| IE/Group Name                            | Presence | Range | IE Type and Reference  | Semantics Description |
|--|----------|-------|--|-----------------------|
| Transport Bearer Not Requested Indicator |          |       | ENUMERATED<br>(Transport Bearer shall not be Established, Transport Bearer may not be Established) |                       |

### 9.2.2.4T Transport Bearer Not Setup Indicator

The Transport Bearer Not Setup Indicator parameter indicates that a transport bearer will not be established for a DCH or an E-DCH MAC-d flow.

| IE/Group Name                        | Presence | Range | IE Type and Reference                      | Semantics Description |
|--------------------------------------|----------|-------|--|-----------------------|
| Transport Bearer Not Setup Indicator |          |       | ENUMERATED<br>(Transport Bearer Not Setup) |                       |

### 9.2.2.5 D-Field Length

Void

### 9.2.2.6 Diversity Control Field

Void.

### 9.2.2.7 Diversity Indication

Void.

### 9.2.2.8 Diversity Mode

Define the diversity mode to be applied.

| IE/Group Name  | Presence | Range | IE Type and Reference                                    | Semantics Description  |
|----------------|----------|-------|--|--|
| Diversity Mode |          |       | ENUMERATED(None, STTD, Closed loop mode 1, Not Used,...) | The <i>Diversity Mode</i> IE shall never be set to "Not Used". If received it shall be rejected. |

### 9.2.2.9 DL DPCH Slot Format

Indicates the slot format used in DPCH in DL, according to ref. [8].

| IE/Group Name       | Presence | Range | IE Type and Reference | Semantics Description |
|---------------------|----------|-------|-----------------------|-----------------------|
| DL DPCH Slot Format |          |       | INTEGER (0..16,...)   |                       |

### 9.2.2.9A DL DPCH Timing Adjustment

The DL DPCH Timing Adjustment indicates that a timing adjustment of the related radio link is required or that an Initial DL DPCH Timing Adjustment has been performed by the DRNS. It also indicates whether the timing adjustment consists of a timing advance or a timing delay with respect to the SFN timing. The adjustment always consists of 256 chips.

| IE/Group Name             | Presence | Range | IE Type and Reference                    | Semantics Description                           |
|---------------------------|----------|-------|--|---|
| DL DPCH Timing Adjustment |          |       | ENUMERATED(timing advance, timing delay) | The size of the timing adjustment is 256 chips. |

### 9.2.2.10 DL Power

Void

### 9.2.2.10A DL Power Balancing Information

The *DL Power Balancing Information* IE provides information for power balancing to be activated in the relevant RL(s).

| IE/Group Name                         | Presence             | Range                         | IE Type and Reference | Semantics Description      | Criticality | Assigned Criticality |
|---------------------------------------|----------------------|-------------------------------|-----------------------|----------------------------|-------------|----------------------|
| Power Adjustment Type                 | M                    |                               | 9.2.2.28              |                            | –           |                      |
| DL Reference Power                    | C-Common             |                               | DL power 9.2.1.21A    | Power on DPCH or on F-DPCH | –           |                      |
| <b>DL Reference Power Information</b> | C-Individual         | <i>1..&lt;maxnoof RLS&gt;</i> |                       |                            | –           |                      |
| >RL ID                                | M                    |                               | 9.2.1.49              |                            | –           |                      |
| >DL Reference Power                   | M                    |                               | DL power 9.2.1.21A    | Power on DPCH or on F-DPCH | –           |                      |
| Max Adjustment Step                   | C-CommonOrIndividual |                               | 9.2.2.23              |                            | –           |                      |
| Adjustment Period                     | C-CommonOrIndividual |                               | 9.2.2.B               |                            | –           |                      |
| Adjustment Ratio                      | C-CommonOrIndividual |                               | 9.2.2.C               |                            | –           |                      |

| Condition          | Explanation  |
|--------------------|--|
| Common             | The IE shall be present if the <i>Power Adjustment Type</i> IE is set to "Common".                 |
| Individual         | The IE shall be present if the <i>Power Adjustment Type</i> IE is set to "Individual".             |
| CommonOrIndividual | The IE shall be present if the <i>Power Adjustment Type</i> IE is set to "Common" or "Individual". |

| Range Bound       | Explanation                             |
|-------------------|---|
| <i>maxnoofRLs</i> | Maximum number of Radio Links for a UE. |

### 9.2.2.10B DL Power Balancing Activation Indicator

The *DL Power Balancing Activation Indicator* IE indicates that the power balancing is activated in the RL.

| IE/Group Name                           | Presence | Range | IE Type and Reference                     | Semantics Description |
|---|----------|-------|---|-----------------------|
| DL Power Balancing Activation Indicator |          |       | ENUMERATED(DL Power Balancing Activated). |                       |

### 9.2.2.10C DL Reference Power Information

The *DL Reference Power Information* IE provides reference power of the power balancing to be used in the relevant RL(s).

| IE/Group Name                                    | Presence | Range                         | IE Type and Reference | Semantics Description      | Criticality | Assigned Criticality |
|--|----------|-------------------------------|-----------------------|----------------------------|-------------|----------------------|
| Common DL Reference Power                        | O        |                               | DL power 9.2.1.21A    | Power on DPCH or on F-DPCH | –           |                      |
| <b>Individual DL Reference Power Information</b> |          | <i>0..&lt;maxnoof RLS&gt;</i> |                       |                            | –           |                      |
| >RL ID   | M        |                               | 9.2.1.49              |                            | –           |                      |
| >DL Reference Power                              | M        |                               | DL power 9.2.1.21A    | Power on DPCH or on F-DPCH | –           |                      |

| Range bound       | Explanation                     |
|-------------------|---------------------------------|
| <i>maxnoofRLs</i> | Maximum number of RLs for a UE. |

### 9.2.2.10D DL Power Balancing Updated Indicator

The *DL Power Balancing Updated Indicator* IE indicates that the power balancing related parameters is updated in the RL.

| IE/Group Name                        | Presence | Range | IE Type and Reference                   | Semantics Description |
|--------------------------------------|----------|-------|---|-----------------------|
| DL Power Balancing Updated Indicator |          |       | ENUMERATED(DL Power Balancing Updated). |                       |

### 9.2.2.11 DL Scrambling Code

DL Scrambling code to be used by the RL. One cell may have multiple DL Scrambling codes available.

| IE/Group Name      | Presence | Range | IE Type and Reference | Semantics Description   |
|--------------------|----------|-------|-----------------------|---|
| DL Scrambling Code |          |       | INTEGER (0..15)       | 0= Primary scrambling code of the cell<br>1...15= Secondary scrambling code |

### 9.2.2.12 Downlink Frame Type

Void

### 9.2.2.12A DPC Mode

The *DPC Mode* IE indicates the DPC mode to be applied [10].

| IE/Group Name | Presence | Range | IE Type and Reference          | Semantics Description  |
|---------------|----------|-------|--------------------------------|--|
| DPC Mode      |          |       | ENUMERATED (Mode0, Mode1, ...) | Mode0: The DRNS shall estimate the UE transmitted TPC command and update the DL power in every slot<br>Mode1: The DRNS shall estimate the UE transmitted TPC command over three slots and shall update the DL power in every three slots |

### 9.2.2.13 DRAC Control

The possibility to use DRAC control has been removed.

| IE/Group Name | Presence | Range | IE Type and Reference                | Semantics Description  |
|---------------|----------|-------|--------------------------------------|--|
| DRAC Control  |          |       | ENUMERATED (Not Used, Not-Requested) | The <i>DRAC Control</i> IE shall never be set to "Not Used". |

## 9.2.2.13A DSCH FDD Information

Void.

## 9.2.2.13B DSCH FDD Information Response

Void.

## 9.2.2.13Bb DSCH-RNTI

Void.

## 9.2.2.13C FDD DCHs To Modify

The *FDD DCHs To Modify* IE provides information for DCHs to be modified.

| IE/Group Name                       | Presence | Range                          | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|-------------------------------------|----------|--------------------------------|-----------------------|-----------------------|-------------|----------------------|
| <b>FDD DCHs To Modify</b>           |          | <i>1..&lt;maxno ofDCHs&gt;</i> |                       |                       | –           |                      |
| >UL FP Mode                         | O        |                                | 9.2.1.67              |                       | –           |                      |
| >ToAWS                              | O        |                                | 9.2.1.58              |                       | –           |                      |
| >ToAWE                              | O        |                                | 9.2.1.57              |                       | –           |                      |
| >Transport Bearer Request Indicator | M        |                                | 9.2.1.61              |                       | –           |                      |
| <b>&gt;DCH Specific Info</b>        |          | <i>1..&lt;maxno ofDCHs&gt;</i> |                       |                       | –           |                      |
| >>DCH ID                            | M        |                                | 9.2.1.16              |                       | –           |                      |
| >>Transport Format Set              | O        |                                | 9.2.1.64              | For the UL.           | –           |                      |
| >>Transport Format Set              | O        |                                | 9.2.1.64              | For the DL.           | –           |                      |
| >>Allocation/Retention Priority     | O        |                                | 9.2.1.1               |                       | –           |                      |
| >>Frame Handling Priority           | O        |                                | 9.2.1.29              |                       | –           |                      |
| >>Not Used                          | O        |                                | NULL                  |                       | –           |                      |
| >>Guaranteed Rate Information       | O        |                                | 9.2.1.30M             |                       | YES         | ignore               |
| >>Traffic Class                     | O        |                                | 9.2.1.58A             |                       | YES         | ignore               |
| >>Unidirectional DCH Indicator      | O        |                                | 9.2.1.68B             |                       | YES         | reject               |
| >TNL QoS                            | O        |                                | 9.2.1.56A             |                       | YES         | ignore               |

| Range bound        | Explanation                        |
|--------------------|------------------------------------|
| <i>maxnoofDCHs</i> | Maximum number of DCHs for one UE. |

## 9.2.2.13D Enhanced DSCH PC

Void.

## 9.2.2.13E Enhanced DSCH PC Counter

Void.

## 9.2.2.13F Enhanced DSCH PC Indicator

Void.

## 9.2.2.13G Enhanced DSCH PC Wnd

Void.

## 9.2.2.13H Enhanced DSCH Power Offset

Void.

## 9.2.2.13I Enhanced Primary CPICH Ec/No

Energy per PN chip divided by the total received power spectral density measured on the Primary CPICH by the UE.

| IE/Group Name                | Presence | Range | IE Type and Reference | Semantics Description  |
|------------------------------|----------|-------|-----------------------|--|
| Enhanced Primary CPICH Ec/No |          |       | INTEGER(0..49)        | According to the mapping of the Primary CPICH Ec/No UE measurement defined in ref. [23] and [24] |

## 9.2.2.14 FDD DL Channelisation Code Number

The DL Channelisation Code Number indicates the DL Channelisation Code number for a specific DL physical channel.

| IE/Group Name                     | Presence | Range | IE Type and Reference | Semantics Description  |
|-----------------------------------|----------|-------|-----------------------|--|
| FDD DL Channelisation Code Number |          |       | INTEGER(0..511)       | According to the mapping in [27]. The maximum value is equal to the DL spreading factor –1 |

## 9.2.2.14A FDD DL Code Information

The *FDD DL Code Information* IE provides FDD DL Code information for all DPCHs or for the F-DPCH of one Radio Link.

| IE/Group Name  | Presence | Range                              | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|--|----------|------------------------------------|-----------------------|-----------------------|-------------|----------------------|
| <b>FDD DL Code Information</b>                                 |          | 1..<br><i>&lt;maxnoof DL Codes</i> |                       |                       | –           |                      |
| >DL Scrambling Code  | M        |                                    | 9.2.2.11              |                       | –           |                      |
| >FDD DL Channelisation Code Number                             | M        |                                    | 9.2.2.14              |                       | –           |                      |
| >Transmission Gap Pattern Sequence Scrambling Code Information | O        |                                    | 9.2.2.47B             |                       | –           |                      |

| Range bound            | Explanation   |
|------------------------|---|
| <i>maxnoofDL Codes</i> | Maximum number of DL Channelisation Codes for one UE. |

## 9.2.2.15 FDD S-CCPCH Offset

Void.

## 9.2.2.16 FDD TPC Downlink Step Size

This parameter indicates step size for the DL power adjustment.



| IE/Group Name              | Presence | Range | IE Type and Reference          | Semantics Description |
|----------------------------|----------|-------|--------------------------------|-----------------------|
| FDD TPC Downlink Step Size |          |       | ENUMERATED(0.5, 1, 1.5, 2,...) |                       |

### 9.2.2.16A First RLS Indicator

The First *RLS Indicator* IE indicates if a specific Radio Link and all Radio Links which are part of the same Radio Link Set, shall be considered as the first radio links established towards the UE or not.

| IE/Group Name       | Presence | Range | IE Type and Reference                | Semantics Description |
|---------------------|----------|-------|--------------------------------------|-----------------------|
| First RLS Indicator |          |       | ENUMERATED(first RLS, not first RLS) |                       |

### 9.2.2.17 Gap Position Mode

Void.

### 9.2.2.18 Gap Period (TGP)

Void.

### 9.2.2.19 Gap Starting Slot Number (SN)

Void

### 9.2.2.19a HS-DSCH FDD Information

The *HS-DSCH FDD Information* IE is used for initial addition of HS-DSCH information to UE Context.

| IE/Group Name                                     | Presence    | Range | IE Type and Reference   | Semantics Description  | Criticality | Assigned Criticality |
|---|-------------|-------|---|--|-------------|----------------------|
| HS-DSCH MAC-d Flows Information                   | M           |       | 9.2.1.300A  |  | –           |                      |
| <b>UE Capabilities Information</b>                |             | 1     |   |  | –           |                      |
| >HS-DSCH Physical Layer Category                  | M           |       | 9.2.1.300a  |  | –           |                      |
| >1.28 Mcps TDD uplink physical channel capability | O           |       | 9.2.3.10D   | Not to be used.  | YES         | ignore               |
| >Number of Supported Carriers                     | O           |       | ENUMERATE D ( One-one carrier, One-three carrier, Three-three carrier, One-six carrier, Tree-six carrier, Six-six carrier, ...) | Not to be used.  | YES         | reject               |
| >Multi-carrier HS-DSCH Physical Layer Category    | O           |       | 9.2.1.300a  | Not to be used.  | YES         | ignore               |
| MAC-hs Reordering Buffer Size for RLC-UM          | M           |       | 9.2.1.34Ab  |  | –           |                      |
| CQI Feedback Cycle k                              | M           |       | 9.2.2.24a   |  | –           |                      |
| CQI Repetition Factor                             | C-CQICyclek |       | 9.2.2.24c   |  | –           |                      |
| ACK-NACK Repetition Factor                        | M           |       | 9.2.2.a   |  | –           |                      |
| CQI Power Offset                                  | M           |       | 9.2.2.24b   |  | –           |                      |
| ACK Power Offset                                  | M           |       | 9.2.2.b   |  | –           |                      |
| NACK Power Offset                                 | M           |       | 9.2.2.26a   |  | –           |                      |
| HS-SCCH Power Offset                              | O           |       | 9.2.2.19d   |  | –           |                      |
| HARQ Preamble Mode                                | O           |       | 9.2.2.57  |  | YES         | ignore               |
| MIMO Activation Indicator                         | O           |       | 9.2.1.134   |  | YES         | reject               |
| HS-DSCH MAC-d PDU Size Format                     | O           |       | 9.2.1.300C  | If not present, "Indexed MAC-d PDU Size" shall be used.  | YES         | reject               |
| Sixtyfour QAM Usage Allowed Indicator             | O           |       | 9.2.2.79A   |  | YES         | ignore               |
| UE with enhanced HS-SCCH support indicator        | O           |       | NULL  | UE supports enhanced HS-SCCH functionality:<br>- UE supports different HS-SCCH in consecutive TTIs and,<br>- in HS-SCCH-less operation mode the UE supports HS-SCCH orders | YES         | ignore               |
| Enhanced HS Serving CC Abort                      | O           |       | ENUMERATE D (Abort Enhanced HS Serving CC, ...)   | Shall be ignored in Radio Link Setup and Radio Link Addition procedures.   | YES         | reject               |
| UE Support Indicator Extension                    | O           |       | 9.2.2.103   |  | YES         | ignore               |

|   |   |  |           |  |     |        |
|---|---|--|-----------|--|-----|--------|
| Power Offset For S-CPICH for MIMO Request Indicator | O |  | 9.2.2.105 |  | YES | ignore |
|---|---|--|-----------|--|-----|--------|

| Condition | Explanation   |
|-----------|---|
| CQICyclek | The IE shall be present if the <i>CQI Feedback Cycle k</i> IE is set to a value greater than 0. |

### 9.2.2.19aa HS-DSCH FDD Secondary Serving Information

The *HS-DSCH FDD Secondary Serving Information* IE is used for initial addition of Secondary Serving HS-DSCH information to UE Context and defines the cell specific parameters for the secondary serving HS-DSCH Radio Link.

| IE/Group Name                         | Presence | Range | IE Type and Reference | Semantics Description   | Criticality | Assigned Criticality |
|---------------------------------------|----------|-------|-----------------------|---|-------------|----------------------|
| HS-SCCH Power Offset                  | O        |       | 9.2.2.19d             |   | -           |                      |
| Sixtyfour QAM Usage Allowed Indicator | O        |       | 9.2.2.79A             |   | -           |                      |
| Diversity Mode                        | O        |       | 9.2.2.8               | If Diversity mode = "Closed loop mode 1" the procedure shall be rejected. | YES         | reject               |
| Transmit Diversity Indicator          | O        |       | 9.2.2.48              |   | YES         | reject               |

### 9.2.2.19b HS-DSCH FDD Information Response

The *HS-DSCH FDD Information Response* IE provides information for HS-DSCH MAC-d flows that have been established or modified. It also provides additional HS-DSCH information determined within the DRNS.

| IE/Group Name   | Presence | Range                                | IE Type and Reference          | Semantics Description | Criticality | Assigned Criticality |
|---|----------|--------------------------------------|--------------------------------|-----------------------|-------------|----------------------|
| <b>HS-DSCH MAC-d Flow Specific Information Response</b> |          | <i>0..&lt;maxnoofMACdFlows&gt;</i>   |                                |                       | –           |                      |
| >HS-DSCH MAC-d Flow ID                                  | M        |                                      | 9.2.1.30O                      |                       | –           |                      |
| >Binding ID   | O        |                                      | 9.2.1.3                        |                       | –           |                      |
| >Transport Layer Address                                | O        |                                      | 9.2.1.62                       |                       | –           |                      |
| >HS-DSCH Initial Capacity Allocation                    | O        |                                      | 9.2.1.30Na                     |                       | –           |                      |
| <b>HS-SCCH Specific Information Response</b>            |          | <i>0..&lt;maxnoofHSSCCHcodes&gt;</i> |                                |                       | –           |                      |
| >Code Number  | M        |                                      | INTEGER (0..127)               |                       | –           |                      |
| HS-PDSCH And HS-SCCH Scrambling Code                    | O        |                                      | DL Scrambling Code<br>9.2.2.11 |                       | –           |                      |
| Measurement Power Offset                                | O        |                                      | 9.2.2.24d                      |                       | –           |                      |
| HARQ Memory Partitioning                                | O        |                                      | 9.2.1.116                      |                       | –           |                      |
| User Plane Congestion Fields Inclusion                  | O        |                                      | 9.2.1.70C                      |                       | YES         | ignore               |
| HARQ Preamble Mode Activation Indicator                 | O        |                                      | 9.2.2.58                       |                       | YES         | ignore               |
| MIMO Information Response                               | O        |                                      | 9.2.2.78                       |                       | YES         | Ignore               |
| SixtyfourQAM DL Usage Indicator                         | O        |                                      | 9.2.2.79B                      |                       | YES         | Ignore               |
| HS-DSCH TB Size Table Indicator                         | O        |                                      | 9.2.2.19G                      |                       | YES         | ignore               |
| Power Offset For S-CPICH for MIMO                       | O        |                                      | 9.2.2.104                      |                       | YES         | ignore               |

| Range bound               | Explanation                      |
|---------------------------|----------------------------------|
| <i>maxnoofMACdFlows</i>   | Maximum number of MAC-d flows.   |
| <i>maxnoofHSSCCHcodes</i> | Maximum number of HS-SCCH codes. |

### 9.2.2.19ba HS-DSCH FDD Secondary Serving Information Response

The *HS-DSCH FDD Secondary Serving Information Response* IE provides Secondary Serving HS-DSCH information determined within the DRNS.

| IE/Group Name  | Presence | Range                                | IE Type and Reference       | Semantics Description |
|--|----------|--------------------------------------|-----------------------------|-----------------------|
| <b>HS-SCCH Specific Secondary Serving Information Response</b> |          | <i>0..&lt;maxnoofHSSCCHcodes&gt;</i> |                             |                       |
| >Code Number   | M        |                                      | INTEGER (0..127)            |                       |
| HS-PDSCH And HS-SCCH Scrambling Code                           | O        |                                      | DL Scrambling Code 9.2.2.11 |                       |
| Measurement Power Offset                                       | O        |                                      | 9.2.2.24d                   |                       |
| SixtyfourQAM DL Usage Indicator                                | O        |                                      | 9.2.2.79B                   |                       |
| HS-DSCH TB Size Table Indicator                                | O        |                                      | 9.2.2.19G                   |                       |

| Range bound               | Explanation                      |
|---------------------------|----------------------------------|
| <i>maxnoofHSSCCHcodes</i> | Maximum number of HS-SCCH codes. |

### 9.2.2.19bb HS-DSCH FDD Secondary Serving Information To Modify

The *HS-DSCH FDD Secondary Serving Information To Modify* IE is used for modification of Secondary Serving HS-DSCH information in a UE Context.

| IE/Group Name                         | Presence        | Range | IE Type and Reference          | Semantics Description   | Criticality | Assigned Criticality |
|---------------------------------------|-----------------|-------|--------------------------------|---|-------------|----------------------|
| HS-SCCH Power Offset                  | O               |       | 9.2.2.19d                      |   | -           |                      |
| HS-SCCH Code Change Grant             | O               |       | 9.2.1.30S                      |   | -           |                      |
| Sixtyfour QAM Usage Allowed Indicator | O               |       | 9.2.2.79A                      |   | -           |                      |
| Diversity Mode                        | O               |       | 9.2.2.8                        | If Diversity mode = "Closed loop mode 1" the procedure shall be rejected.                           | YES         | reject               |
| Transmit Diversity Indicator          | C-DiversityMode |       | 9.2.2.48                       |   | YES         | reject               |
| Non Cell Specific Tx Diversity        | O               |       | ENUMERATED (Tx Diversity, ...) | Value = "Tx Diversity": Diversity Mode and Transmit Diversity Indicator shall be non cell specific. | YES         | reject               |

| Condition     | Explanation   |
|---------------|---|
| DiversityMode | The IE shall be present if <i>Diversity Mode</i> IE is present and not set to "None". |

### 9.2.2.19bc HS-DSCH FDD Secondary Serving Information To Modify Unsynchronised

The *HS-DSCH FDD Secondary Serving Information To Modify Unsynchronised* IE is used for modification of Secondary Serving HS-DSCH information in a UE Context with the Unsynchronised Radio Link Reconfiguration procedure.

| IE/Group Name                         | Presence | Range | IE Type and Reference | Semantics Description |
|---------------------------------------|----------|-------|-----------------------|-----------------------|
| HS-SCCH Power Offset                  | O        |       | 9.2.2.19d             |                       |
| Sixtyfour QAM Usage Allowed Indicator | O        |       | 9.2.2.79A             |                       |

### 9.2.2.19c HS-DSCH FDD Update Information

The *HS-DSCH FDD Update Information* IE provides information for HS-DSCH to be updated. At least one IE shall be presented.

| IE/Group name                  | Presence | Range | IE Type and Reference | Semantic Description | Criticality | Assigned Criticality |
|--------------------------------|----------|-------|-----------------------|----------------------|-------------|----------------------|
| HS-SCCH Code Change Indicator  | O        |       | 9.2.1.30R             |                      | –           |                      |
| CQI Feedback Cycle k           | O        |       | 9.2.2.24a             |                      | –           |                      |
| CQI Repetition Factor          | O        |       | 9.2.2.24c             |                      | –           |                      |
| ACK-NACK Repetition Factor     | O        |       | 9.2.2.a               |                      | –           |                      |
| CQI Power Offset               | O        |       | 9.2.2.24b             |                      | –           |                      |
| ACK Power Offset               | O        |       | 9.2.2.b               |                      | –           |                      |
| NACK Power Offset              | O        |       | 9.2.2.26a             |                      | –           |                      |
| HS-PDSCH Code Change Indicator | O        |       | 9.2.1.30V             |                      | YES         | ignore               |

### 9.2.2.19ca HS-DSCH FDD Secondary Serving Update Information

The *HS-DSCH FDD Secondary Serving Update Information* IE provides information for HS-DSCH to be updated. At least one IE shall be presented.

| IE/Group name                  | Presence | Range | IE Type and Reference | Semantic Description  |
|--------------------------------|----------|-------|-----------------------|---|
| HS-SCCH Code Change Indicator  | O        |       | 9.2.1.30R             |   |
| HS-PDSCH Code Change Indicator | O        |       | 9.2.1.30V             | This IE shall never be included. If received it shall be ignored. |

### 9.2.2.19C HS-DSCH configured indicator

The *HS-DSCH Configured Indicator* IE indicates the configuration of HS-DSCH for the UE. The *HS-DSCH Configured Indicator* IE shall be used for the configuration of the E-DPDCH IQ branch mapping [21].

| IE/Group Name                | Presence | Range | IE type and reference                                   | Semantics description  |
|------------------------------|----------|-------|---|--|
| HS-DSCH Configured Indicator |          |       | ENUMERATED (HS-DSCH configured, HS-DSCH not configured) | Indicator of the HS-DSCH configuration for configuration of the E-DPDCHs IQ branch mapping [21]. |

### 9.2.2.19d HS-SCCH Power Offset

The *HS-SCCH Power Offset* IE indicates the Power offset relative to the pilot bits on the DL DPCCH except when FDPCH is configured. When F-DPCH is configured, the *HS-SCCH Power Offset* IE indicates the Power offset relative to the power of transmitted TPC bits on the F-DPCH.

| IE/Group Name        | Presence | Range | IE type and reference | Semantics description             |
|----------------------|----------|-------|-----------------------|-----------------------------------|
| HS-SCCH Power Offset |          |       | INTEGER (0..255)      | Step 0.25 dB, range -32-+31.75 dB |

### 9.2.2.19e E-DCH FDD Update Information

The *E-DCH FDD Update Information* IE provides information for E-DCH to be updated. At least one IE shall be present.

| IE/Group Name   | Presence | Range                                  | IE Type and Reference                        | Semantics Description | Criticality | Assigned Criticality |
|---|----------|--|--|-----------------------|-------------|----------------------|
| <b>E-DCH MAC-d Flow Specific Update Information</b>               |          | <i>0..&lt;maxnoofEDCHMACdFlows&gt;</i> |  |                       | –           |                      |
| >E-DCH MAC-d Flow ID  | M        |  | 9.2.1.91                                     |                       | –           |                      |
| >HARQ Process Allocation For 2ms Non-Scheduled Transmission Grant | O        |  | HARQ Process Allocation for 2ms TTI 9.2.2.40 |                       | –           |                      |
| HARQ Process Allocation For 2ms Scheduled Transmission Grant      | O        |  | HARQ Process Allocation for 2ms TTI 9.2.2.40 |                       | –           |                      |
| <b>E-DCH DL Control Channel Change Information</b>                |          | <i>0..&lt;maxnoofEDCHRLs&gt;</i>       |  |                       | GLOBAL      | ignore               |
| >E-DCH RL ID  | M        |  | RL ID 9.2.1.49                               |                       | –           |                      |

| Range bound                 | Explanation                            |
|-----------------------------|--|
| <i>maxnoofEDCHMACdFlows</i> | Maximum number of E-DCH MAC-d flows.   |
| <i>maxnoofEDCHRLs</i>       | Maximum number of E-DCH RLs for one UE |

### 9.2.2.19f HS-DSCH Serving Cell Change Information

The *HS-DSCH Serving Cell Change Information* IE contains information which is used in HS-DSCH Serving Cell change.

| IE/Group Name   | Presence | Range | IE Type and Reference             | Semantics Description | Criticality | Assigned Criticality |
|---|----------|-------|-----------------------------------|-----------------------|-------------|----------------------|
| HS-PDSCH RL ID  | M        |       | RL ID 9.2.1.49                    |                       | –           |                      |
| HS-DSCH Information                                     | O        |       | HS-DSCH FDD Information 9.2.2.19a |                       | –           |                      |
| Continuous Packet Connectivity HS-SCCH less Information | O        |       | 9.2.2.74                          |                       | YES         | reject               |

### 9.2.2.19g HS-DSCH Serving Cell Change Information Response

The *HS-DSCH Serving Cell Change Information Response* IE contains information which is used in HS-DSCH Serving Cell change.

| IE/Group Name  | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|--|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| <b>CHOICE Serving Cell Change</b>                                  |          |       |                       |                       | –           |                      |
| >Successful  |          |       |                       |                       | –           |                      |
| >>HS-DSCH FDD Information Response                                 | M        |       | 9.2.2.19b             |                       | –           |                      |
| >>HS-DSCH-RNTI   | M        |       | 9.2.1.30P             |                       | –           |                      |
| >>Continuous Packet Connectivity HS-SCCH less Information Response | O        |       | 9.2.2.75              |                       | YES         | Ignore               |
| >Unsuccessful  |          |       |                       |                       | –           |                      |
| >>Cause  | M        |       | 9.2.1.5               |                       | –           |                      |

### 9.2.2.19ga HS-DSCH Secondary Serving Cell Change Information Response

The *HS-DSCH Secondary Serving Cell Change Information Response* IE contains information which is used in HS-DSCH Secondary Serving Cell change.

| IE/Group Name  | Presence | Range | IE Type and Reference | Semantics Description |
|--|----------|-------|-----------------------|-----------------------|
| <b>CHOICE Secondary Serving Cell Change</b>          |          |       |                       |                       |
| >Successful  |          |       |                       |                       |
| >>HS-DSCH FDD Secondary Serving Information Response | M        |       | 9.2.2.19ba            |                       |
| >>HS-DSCH-RNTI                                       | M        |       | 9.2.1.30P             |                       |
| >Unsuccessful  |          |       |                       |                       |
| >>Cause  | M        |       | 9.2.1.5               |                       |

### 9.2.2.19G HS-DSCH TB Size Table Indicator

The *HS-DSCH TB Size Table Indicator* IE is used to indicate that octet aligned table [41] shall be used.

| IE/Group Name                   | Presence | Range | IE Type and Reference      | Semantics Description |
|---------------------------------|----------|-------|----------------------------|-----------------------|
| HS-DSCH TB Size Table Indicator |          |       | ENUMERATED (octet aligned) |                       |

### 9.2.2.19h E-DCH Serving Cell Change Information Response

The *E-DCH Serving Cell Change Information Response* IE contains information which is used in E-DCH Serving Cell change.

| IE/Group Name                               | Presence | Range            | IE Type and Reference | Semantics Description |
|---|----------|------------------|-----------------------|-----------------------|
| <b>CHOICE Serving Cell Change</b>           |          |                  |                       |                       |
| >Successful                                 |          |                  |                       |                       |
| >>RL Information Response                   |          | 0..<maxno ofRLs> |                       |                       |
| >>>RL ID                                    | M        |                  | 9.2.1.49              |                       |
| >>>E-DCH FDD DL Control Channel Information | M        |                  | 9.2.2.4D              |                       |
| >Unsuccessful                               |          |                  |                       |                       |
| >>Cause                                     | M        |                  | 9.2.1.5               |                       |



| Range bound       | Explanation                      |
|-------------------|----------------------------------|
| <i>maxnoofRLs</i> | Maximum number of RLs for one UE |

### 9.2.2.20 IB\_SG\_POS

Void.

### 9.2.2.21 IB\_SG\_REP

Void.

### 9.2.2.21a Inner Loop DL PC Status

The *Inner Loop DL PC Status* IE indicates whether inner loop DL control shall be active or inactive for all radio links for the UE Context.

| IE/Group Name           | Presence | Range | IE Type and Reference         | Semantics Description |
|-------------------------|----------|-------|-------------------------------|-----------------------|
| Inner Loop DL PC Status |          |       | ENUMERATED (Active, Inactive) |                       |

### 9.2.2.21b Initial DL DPCH Timing Adjustment Allowed

The *Initial DL DPCH Timing Adjustment Allowed* IE indicates that the DRNS is allowed to perform a timing adjustment (either a timing advance or a timing delay with respect to the SFN timing) when establishing a radio link.

| IE/Group Name                             | Presence | Range | IE Type and Reference                                  | Semantics Description |
|---|----------|-------|--|-----------------------|
| Initial DL DPCH Timing Adjustment Allowed |          |       | ENUMERATED (initial DL DPCH Timing Adjustment Allowed) |                       |

### 9.2.2.21A Limited Power Increase

The parameter is used for a more efficient use of the inner loop DL power control for non real time data.

If the limited power increase is used, DRNS shall use the limited power increase algorithm as specified in [10], subclause 5.2.

| IE/Group Name          | Presence | Range | IE Type and Reference          | Semantics Description |
|------------------------|----------|-------|--------------------------------|-----------------------|
| Limited Power Increase |          |       | ENUMERATED (Used, Not used , ) |                       |

### 9.2.2.21B IPDL FDD Parameters

The *IPDL FDD Parameters* IE provides the information for the IPDL Configuration applied in FDD mode.

| IE/Group name         | Presence | Range | IE Type and Reference                 | Semantics Description |
|-----------------------|----------|-------|---------------------------------------|-----------------------|
| IP spacing FDD        | M        |       | ENUMERATED(5,7,10,15,20,30,40,50,...) | See [10]              |
| IP length             | M        |       | ENUMERATED(5,10,...)                  | See [10]              |
| IP offset             | M        |       | INTEGER(0..9)                         | See [10]              |
| Seed                  | M        |       | INTEGER(0..63)                        | See [10]              |
| Burst mode parameters | O        |       | 9.2.1.4B                              |                       |

### 9.2.2.21C Length of TFCI2

Void.

### 9.2.2.21D Void

### 9.2.2.21E Void

### 9.2.2.21F Void

### 9.2.2.22 Max Adjustment Period

Void.

### 9.2.2.23 Max Adjustment Step

Defines the maximum allowed value for the change of DL power level during a certain number of slots that can be utilised by the downlink power balancing algorithm. *Max Adjustment Step* IE defines a time period, in terms of number of slots, in which the accumulated power adjustments shall be maximum 1 dB. This value does not include the DL inner loop PC adjustment.

| IE/Group Name       | Presence | Range | IE Type and Reference | Semantics Description |
|---------------------|----------|-------|-----------------------|-----------------------|
| Max Adjustment Step |          |       | INTEGER (1..10)       | Slots                 |

### 9.2.2.24 Max Number of UL DPDCHs

Maximum number of uplink DPDCHs during the connection. Needed by the rate matching algorithm.

| IE/Group Name           | Presence | Range | IE Type and Reference | Semantics Description |
|-------------------------|----------|-------|-----------------------|-----------------------|
| Max Number of UL DPDCHs |          |       | INTEGER (1..6)        |                       |

### 9.2.2.24a CQI Feedback Cycle k

The *CQI Feedback Cycle k* IE provides the duration of the CQI feedback cycle.

| IE/Group Name        | Presence | Range | IE Type and Reference   | Semantics Description |
|----------------------|----------|-------|---|-----------------------|
| CQI Feedback Cycle k |          |       | ENUMERATED (0, 2, 4, 8, 10, 20, 40, 80, 160, ..., 16, 32, 64) | Unit ms               |

#### 9.2.2.24b CQI Power Offset

The *CQI Power Offset* IE indicates Power offset used in the UL between the HS-DPCCH slots carrying CQI information and the associated DPCCH.

| IE/Group Name    | Presence | Range | IE type and reference | Semantics description                              |
|------------------|----------|-------|-----------------------|--|
| CQI Power Offset |          |       | INTEGER (0..8,...)    | According to mapping in ref. [21] subclause 4.2.1. |

#### 9.2.2.24c CQI Repetition Factor

The *CQI Repetition Factor* IE indicates the consecutive repetition of the CQI.

| IE/Group Name         | Presence | Range | IE type and reference | Semantics description |
|-----------------------|----------|-------|-----------------------|-----------------------|
| CQI Repetition Factor |          |       | INTEGER (1..4,...)    | Step: 1               |

#### 9.2.2.24d Measurement Power Offset

The *Measurement Power Offset* IE is used as defined in [10] subclause 6A.2.

| IE/Group Name            | Presence | Range | IE Type and Reference | Semantics Description                      |
|--------------------------|----------|-------|-----------------------|--|
| Measurement Power Offset |          |       | INTEGER (-12..26)     | Unit: dB<br>Range: -6..13dB<br>Step: 0.5dB |

#### 9.2.2.24e Maximum Set of E-DPDCHs

The Maximum Set of E-DPDCHs as defined in [9]. Needed by rate matching algorithm.

| IE/Group Name           | Presence | Range | IE Type and Reference  | Semantics Description |
|-------------------------|----------|-------|--|-----------------------|
| Maximum Set of E-DPDCHs |          |       | ENUMERATED (vN256, vN128, vN64, vN32, vN16, vN8, vN4, v2xN4, v2xN2, v2xN2plus2xN4, ..., v2xM2plus2xM4) |                       |

#### 9.2.2.24f Void

#### 9.2.2.24A Min DL Channelisation Code Length

Void

### 9.2.2.25 Min UL Channelisation Code Length

Minimum UL channelisation code length (spreading factor) of a DPDCH during the connection. Needed by rate matching algorithm.

| IE/Group Name                     | Presence | Range | IE Type and Reference            | Semantics Description |
|-----------------------------------|----------|-------|----------------------------------|-----------------------|
| Min UL Channelisation Code Length |          |       | ENUMERATED(4,8,16,32,64,128,256) |                       |

### 9.2.2.26 Multiplexing Position

Multiplexing Position specifies whether fixed or flexible positions of transport channels shall be used in the physical channel.

| IE/Group Name         | Presence | Range | IE Type and Reference       | Semantics Description |
|-----------------------|----------|-------|-----------------------------|-----------------------|
| Multiplexing Position |          |       | ENUMERATED(Fixed, Flexible) |                       |

### 9.2.2.26a NACK Power Offset

The *NACK Power Offset* IE indicates Power offset used in the UL between the HS-DPCCH slot carrying HARQ NACK information and the associated DPCCH.

| IE/Group Name     | Presence | Range | IE type and reference | Semantics description                              |
|-------------------|----------|-------|-----------------------|--|
| NACK Power Offset |          |       | INTEGER (0..8,...)    | According to mapping in ref. [21] subclause 4.2.1. |

### 9.2.2.26A Number of DL Channelisation Codes

This parameter notifies DRNS of the number of DL channelisation codes required for the Radio Link(s).

| IE/Group Name                     | Presence | Range | IE Type and Reference | Semantics Description |
|-----------------------------------|----------|-------|-----------------------|-----------------------|
| Number of DL Channelisation Codes |          |       | INTEGER (1..8)        |                       |

### 9.2.2.27 Pattern Duration (PD)

Void

### 9.2.2.27a PC Preamble

Indicates DPDCH power control preamble length see ref. [7].

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description |
|---------------|----------|-------|-----------------------|-----------------------|
| PCP Preamble  |          |       | INTEGER (0..7,...)    | In number of frames.  |

### 9.2.2.27A PDSCH Code Mapping

Void.

### 9.2.2.27B Phase Reference Update Indicator

The *Phase Reference Update Indicator* IE indicates that the phase reference for the radio link needs to be changed.

| IE/Group Name                    | Presence | Range | IE Type and Reference                               | Semantics Description |
|----------------------------------|----------|-------|---|-----------------------|
| Phase Reference Update indicator |          |       | ENUMERATED<br>(Phase Reference needs to be changed) |                       |

### 9.2.2.28 Power Adjustment Type

Defines the characteristic of the power adjustment.

| IE/Group Name         | Presence | Range | IE Type and Reference                    | Semantics Description |
|-----------------------|----------|-------|--|-----------------------|
| Power Adjustment Type |          |       | ENUMERATED<br>(None, Common, Individual) |                       |

### 9.2.2.29 Power Control Mode (PCM)

Void.

### 9.2.2.30 Power Offset

This IE defines a power offset relative to the Downlink transmission power of a DPCH in case the UE Context is configured to use DPCH in the downlink.

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description                      |
|---------------|----------|-------|-----------------------|--|
| Power Offset  |          |       | INTEGER<br>(0..24)    | Unit dB,<br>Step 0.25 dB,<br>Range 0..6 dB |

### 9.2.2.31 Power Resume Mode (PRM)

Void.

### 9.2.2.31A Preamble Signatures

Void.

### 9.2.2.32 Primary CPICH Ec/No

Energy per chip divided by the power density per band measured on the Primary CPICH by the terminal.

| IE/Group Name       | Presence | Range | IE Type and Reference | Semantics Description   |
|---------------------|----------|-------|-----------------------|---|
| Primary CPICH Ec/No |          |       | INTEGER<br>(-30..+30) | Unit dB, step 1 dB<br>The value range is typically within the range of -24 dB to 0 dB according to the CPICH Ec/No UE measurement defined in ref. [23]. |

### 9.2.2.32A Primary CPICH Usage For Channel Estimation

The *Primary CPICH Usage For Channel Estimation* IE indicates whether the Primary CPICH may be used for channel estimation or not.

| IE/Group Name                              | Presence | Range | IE Type and Reference  | Semantics Description |
|--|----------|-------|--|-----------------------|
| Primary CPICH Usage For Channel Estimation |          |       | ENUMERATED<br>(Primary CPICH may be used, Primary CPICH shall not be used) |                       |

### 9.2.2.33 Propagation Delay (PD)

Propagation delay is the one-way propagation delay of the radio signal from the UE to the Node B. If the range of the *Propagation Delay* IE is insufficient to represent the measured value, it shall be set to its maximum value, and the *Extended Propagation Delay* IE (see 9.2.2.33a) shall be used to represent the propagation delay value.

| IE/Group Name     | Presence | Range | IE Type and Reference | Semantics Description                                       |
|-------------------|----------|-------|-----------------------|---|
| Propagation Delay |          |       | INTEGER<br>(0..255)   | Unit: Chips. Step: 3 chips.<br>0=0 chips,<br>1=3 chips, ... |

### 9.2.2.33a Extended Propagation Delay

The Extended Propagation delay is the one-way propagation delay of the radio signal from the MS to the Node B. It shall be used if the *Propagation Delay* IE (see 9.2.2.33) cannot represent the measured value, due to range limitation.

| IE/Group Name              | Presence | Range | IE Type and Reference  | Semantics Description  |
|----------------------------|----------|-------|------------------------|--|
| Extended Propagation Delay |          |       | INTEGER<br>(255..1023) | Continuation of intervals as defined in [23].<br>Unit: chip<br>Range: 765..3069 chips<br>Step: 3 chips |

### 9.2.2.33A PRACH Minimum Spreading Factor

Void.

### 9.2.2.34 QE-Selector

Void.

### 9.2.2.34a Qth Parameter

Void.

### 9.2.2.34A RACH Sub Channel Numbers

Void.

### 9.2.2.35 RL Set ID

The RL Set ID uniquely identifies one RL Set within a UE Context.

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description |
|---------------|----------|-------|-----------------------|-----------------------|
| RL Set ID     |          |       | INTEGER (0..31)       |                       |

### 9.2.2.35a RL Specific E-DCH Information

The *RL Specific E-DCH Information* IE provides RL specific E-DCH Information.

| IE/Group Name                             | Presence | Range                                    | IE Type and Reference | Semantics Description                                | Criticality | Assigned Criticality |
|---|----------|--|-----------------------|--|-------------|----------------------|
| <b>RL Specific E-DCH Information</b>      |          | <i>1..&lt;maxnoof EDCHMACd Flows&gt;</i> |                       |  | –           |                      |
| >E-DCH MAC-d Flow ID                      | M        |  | 9.2.1.91              |  | –           |                      |
| >Binding ID                               | O        |  | 9.2.1.3               | Shall be ignored if bearer establishment with ALCAP. | –           |                      |
| >Transport Layer Address                  | O        |  | 9.2.1.62              | Shall be ignored if bearer establishment with ALCAP. | –           |                      |
| >Transport Bearer Not Requested Indicator | O        |  | 9.2.2.4S              |  | YES         | ignore               |
| E-AGCH Power Offset                       | O        |  | 9.2.2.61              |  | –           |                      |
| E-RGCH Power Offset                       | O        |  | 9.2.2.62              |  | –           |                      |
| E-HICH Power Offset                       | O        |  | 9.2.2.63              |  | –           |                      |

| Range Bound                 | Explanation                         |
|-----------------------------|-------------------------------------|
| <i>maxnoofEDCHMACdFlows</i> | Maximum number of E-DCH MAC-d flows |

### 9.2.2.35A Received Total Wide Band Power

The parameter indicates the Received total wide band power in a cell, see ref. [11].

| IE/Group Name                  | Presence | Range | IE Type and Reference | Semantics Description         |
|--------------------------------|----------|-------|-----------------------|-------------------------------|
| Received Total Wide Band Power |          |       | INTEGER(0..621)       | According to mapping in [23]. |

### 9.2.2.36 S-Field Length

Void.

### 9.2.2.36A Void

### 9.2.2.37 Scrambling Code Change

Void.

### 9.2.2.37A Scrambling Code Number

Void.

## 9.2.2.37B Secondary CCPCH Info

Void.

## 9.2.2.38 Secondary CCPCH Slot Format

Void.

## 9.2.2.38A Secondary CPICH Information

The *Secondary CPICH Information* IE provides the information on the Secondary CPICH when it can be used for channel estimation.

| IE/Group Name                     | Presence | Range | IE Type and Reference | Semantics Description |
|-----------------------------------|----------|-------|-----------------------|-----------------------|
| DL Scrambling Code                | M        |       | 9.2.2.11              |                       |
| FDD DL Channelisation Code Number | M        |       | 9.2.2.14              |                       |

## 9.2.2.38B Secondary CPICH Information Change

The *Secondary CPICH Information Change* IE indicates modification of information of the Secondary CPICH for channel estimation.

| IE/Group Name                                    | Presence | Range | IE Type and Reference | Semantics Description |
|--|----------|-------|-----------------------|-----------------------|
| CHOICE <i>Secondary CPICH Information Change</i> | M        |       |                       |                       |
| > <i>New Secondary CPICH</i>                     |          |       |                       |                       |
| >> <i>Secondary CPICH Information</i>            | M        |       | 9.2.2.38A             |                       |
| > <i>Secondary CPICH Shall Not Be Used</i>       |          |       | NULL                  |                       |

## 9.2.2.38C Serving E-DCH RL

The *Serving E-DCH RL* IE indicates whether the Serving E-DCH RL is in the DRNS.

| IE/Group Name                              | Presence | Range | IE Type and Reference | Semantics Description |
|--|----------|-------|-----------------------|-----------------------|
| CHOICE <i>Serving E-DCH RL</i>             | M        |       |                       |                       |
| > <i>Serving E-DCH RL in this DRNS</i>     |          |       |                       |                       |
| >> <i>Serving E-DCH RL ID</i>              | M        |       | RL ID<br>9.2.1.49     |                       |
| > <i>Serving E-DCH RL not in this DRNS</i> |          |       | NULL                  |                       |

## 9.2.2.39 Slot Number (SN)

Void

## 9.2.2.39a Split Type

Void.



### 9.2.2.39A SRB Delay

Indicates the number of frames after the PC Preamble period during which transmission of data on some RRC Signalling Bearers shall be prohibited by UE in accordance with ref. [16].

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description |
|---------------|----------|-------|-----------------------|-----------------------|
| SRB Delay     |          |       | INTEGER(0..7,...)     | In number of frames.  |

### 9.2.2.40 SS DT Cell Identity

Void.

### 9.2.2.40A SS DT Cell Identity for EDSCHPC

Void.

### 9.2.2.41 SS DT Cell Identity Length

Void.

### 9.2.2.42 SS DT Indication

Void.

### 9.2.2.43 SS DT Support Indicator

The possibility to use SS DT Support Indicator has been removed.

| IE/Group Name           | Presence | Range | IE Type and Reference                      | Semantics Description   |
|-------------------------|----------|-------|--|---|
| SS DT Support Indicator |          |       | ENUMERATED(Not Used, SS DT not supported). | The <i>SS DT Support Indicator</i> IE shall never be set to "Not Used". |

### 9.2.2.44 STTD Indicator

Void.

### 9.2.2.45 STTD Support Indicator

The STTD Support Indicator indicates whether the STTD can be applied to DL DPCH and F-DPCH in the cell or not.

| IE/Group Name          | Presence | Range | IE Type and Reference                           | Semantics Description |
|------------------------|----------|-------|---|-----------------------|
| STTD Support Indicator |          |       | ENUMERATED(STTD Supported, STTD not Supported). |                       |

### 9.2.2.45A Synchronisation Indicator

The *Synchronisation Indicator* IE indicates that Timing Maintained Synchronisation shall be used at start of Radio Link, see also [10].

| IE/Group Name             | Presence | Range | IE Type and Reference                                 | Semantics Description |
|---------------------------|----------|-------|---|-----------------------|
| Synchronisation Indicator |          |       | ENUMERATED<br>(Timing Maintained Synchronisation,...) |                       |

#### 9.2.2.46 TFCI Signalling Mode

This parameter indicates has only one value with any meaning.

| IE/Group Name        | Presence | Range | IE Type and Reference        | Semantics Description  |
|----------------------|----------|-------|------------------------------|--|
| TFCI Signalling Mode |          |       | ENUMERATED(Normal, Not Used) | The value "Not Used" shall not be used by the SRNC. The procedure shall be rejected by the DRNC if the value "Not Used" is received. |

#### 9.2.2.46A TFCI PC Support Indicator

Void.

#### 9.2.2.47 Transmission Gap Distance (TGD)

Void.

#### 9.2.2.47A Transmission Gap Pattern Sequence Information

Defines the parameters for the compressed mode gap pattern sequence. For details see [16].

| IE/Group Name  | Presence | Range        | IE Type and Reference                                    | Semantics Description  |
|--|----------|--------------|--|--|
| <b>Transmission Gap Pattern Sequence Information</b> |          | 1..<maxTGPS> |  |  |
| >TGPSI Identifier                                    | M        |              | INTEGER(1..<MaxTGPS>)                                    | Transmission Gap Pattern Sequence Identifier<br>Establish a reference to the compressed mode pattern sequence. Up to <MaxTGPS> simultaneous compressed mode pattern sequences can be used.   |
| >TGSN  | M        |              | INTEGER(0..14)   | Transmission Gap Starting Slot Number<br>The slot number of the first transmission gap slot within the TGCFN.  |
| >TGL1  | M        |              | INTEGER(1..14)   | The length of the first Transmission Gap within the transmission gap pattern expressed in number of slots.   |
| >TGL2  | O        |              | INTEGER(1..14)   | The length of the second Transmission Gap within the transmission gap pattern. If omitted, then TGL2=TGL1.   |
| >TGD   | M        |              | INTEGER(0, 15.. 269)                                     | Transmission gap distance indicates the number of slots between the starting slots of two consecutive transmission gaps within a transmission gap pattern. If there is only one transmission gap in the transmission gap pattern, this parameter shall be set to 0 (0 =undefined). |
| >TGPL1   | M        |              | INTEGER(1..144,...)                                      | The duration of transmission gap pattern 1 in frames.  |
| >Not-to-be-used-1                                    | O        |              | INTEGER(1..144,...)                                      | This IE shall never be included in the IE group. If received it shall be ignored.  |
| >UL/DL mode  | M        |              | ENUMERATED(UL only, DL only, UL/DL)                      | Defines whether only DL, only UL, or combined UL/DL compressed mode is used.   |
| >Downlink Compressed Mode Method                     | C-DL     |              | ENUMERATED(not Used, SF/2, higher layer scheduling, ...) | Method for generating downlink compressed mode gap<br>The <i>Downlink Compressed Mode Method</i> IE shall never be set to "not Used".  |
| >Uplink Compressed Mode Method                       | C-UL     |              | ENUMERATED(SF/2, higher layer scheduling, ...)           | Method for generating uplink compressed mode gap.  |
| >Downlink Frame Type                                 | M        |              | ENUMERATED(A, B,...)                                     | Defines if frame type "A" or "B" shall be used in downlink compressed mode.  |
| >DeltaSIR1   | M        |              | INTEGER(0..30)   | Delta in SIR target value to be set in the DRNS during the frame containing the start of the first transmission gap in the transmission gap pattern (without including the effect of the bit-rate increase)<br>Step 0.1 dB, Range 0-3dB  |
| >DeltaSIRafter1                                      | M        |              | INTEGER(0..30)   | Delta in SIR target value to be set in the DRNS one frame after  |

|                 |   |  |                    |  |
|-----------------|---|--|--------------------|--|
|                 |   |  |                    | the frame containing the start of the first transmission gap in the transmission gap pattern,.<br>Step 0.1 dB, Range 0-3dB   |
| >DeltaSIR2      | O |  | INTEGER<br>(0..30) | Delta in SIR target value to be set in the DRNS during the frame containing the start of the second transmission gap in the transmission gap pattern (without including the effect of the bit-rate increase)<br>When omitted, DeltaSIR2 = DeltaSIR1.<br>Step 0.1 dB, Range 0-3dB |
| >DeltaSIRafter2 | O |  | INTEGER<br>(0..30) | Delta in SIR target value to be set in the DRNS one frame after the frame containing the start of the second transmission gap in the transmission gap pattern.<br>When omitted, DeltaSIRafter2 = DeltaSIRafter1.<br>Step 0.1 dB, Range 0-3dB                                     |

| Condition | Explanation   |
|-----------|---|
| UL        | The IE shall be present if the <i>UL/DL mode</i> IE is set to "UL only" or "UL/DL". |
| DL        | The IE shall be present if the <i>UL/DL mode</i> IE is set to "DL only" or "UL/DL". |

| Range bound    | Explanation   |
|----------------|---|
| <i>maxTGPS</i> | Maximum number of transmission gap pattern sequences. |

### 9.2.2.47B Transmission Gap Pattern Sequence Scrambling Code Information

This IE indicates whether or not the alternative scrambling code will be used in the DRNS for the Downlink compressed mode method "SF/2" in the Transmission Gap Pattern Sequence. For details see ref. [16].

| IE/Group Name   | Presence | Range | IE Type and Reference                   | Semantics Description                                   |
|---|----------|-------|---|---|
| Transmission Gap Pattern Sequence Scrambling Code Information |          |       | ENUMERATED(code change, no code change) | Code change = alternative scrambling code will be used. |

### 9.2.2.48 Transmit Diversity Indicator

The Transmit Diversity Indicator indicates whether Transmit Diversity shall be active or not.

| IE/Group Name                | Presence | Range | IE Type and Reference        | Semantics Description |
|------------------------------|----------|-------|------------------------------|-----------------------|
| Transmit Diversity Indicator |          |       | ENUMERATED(active, inactive) |                       |

### 9.2.2.49 Transmit Gap Length (TGL)

Void

### 9.2.2.50 Tx Diversity Indicator

The Tx Diversity Indicator indicates if the following conditions are satisfied:

- Primary CPICH is broadcast from two antennas
- STTD is applied to Primary CCPCH
- TSTD is applied to Primary SCH and Secondary SCH

| IE/Group Name          | Presence | Range | IE Type and Reference     | Semantics Description |
|------------------------|----------|-------|---------------------------|-----------------------|
| Tx Diversity Indicator |          |       | ENUMERATED (true, false). |                       |

### 9.2.2.50A UE Support Of Dedicated Pilots For Channel Estimation

Void.

### 9.2.2.50B UE Support Of Dedicated Pilots For Channel Estimation Of HS-DSCH

Void.

### 9.2.2.51 UL/DL Compressed Mode Selection

Void

### 9.2.2.52 UL DPCCH Slot Format

Indicates the slot format used in DPCCH in UL, according to ref. [8].

| IE/Group Name        | Presence | Range | IE Type and Reference | Semantics Description   |
|----------------------|----------|-------|-----------------------|---|
| UL DPCCH Slot Format |          |       | INTEGER (0..5,...)    | Value 5 shall not be used. If value 5 is received, the procedure shall be rejected. |

### 9.2.2.52A UL DPDCH Indicator for E-DCH operation

This IE indicates whether the requested configuration actually contains an UL DPDCH.

| IE/Group Name                          | Presence | Range | IE Type and Reference                               | Semantics Description |
|--|----------|-------|---|-----------------------|
| UL DPDCH Indicator for E-DCH operation |          |       | ENUMERATED (UL-DPDCH present, UL-DPDCH not present) |                       |

### 9.2.2.53 UL Scrambling Code

The UL Scrambling Code is the scrambling code used by UE. Every UE has its specific UL Scrambling Code.

| IE/Group Name             | Presence | Range | IE Type and Reference     | Semantics Description |
|---------------------------|----------|-------|---------------------------|-----------------------|
| UL Scrambling Code Number | M        |       | INTEGER (0.. $2^{24}-1$ ) |                       |
| UL Scrambling Code Length | M        |       | ENUMERATED(Short, Long)   |                       |

#### 9.2.2.54 Uplink Delta SIR

Void

#### 9.2.2.55 Uplink Delta SIR After

Void

#### 9.2.2.56 DPC Mode Change Support Indicator

The *DPC Mode Change Support Indicator* IE indicates that the particular cell is capable to support DPC mode change.

| IE/Group Name                     | Presence | Range | IE Type and Reference                  | Semantics Description |
|-----------------------------------|----------|-------|--|-----------------------|
| DPC Mode Change Support Indicator |          |       | ENUMERATED (DPC Mode Change Supported) |                       |

#### 9.2.2.57 HARQ Preamble Mode

The *HARQ Preamble Mode* IE is used as described as described in ref [10].

| IE/Group Name      | Presence | Range | IE Type and Reference    | Semantics Description  |
|--------------------|----------|-------|--------------------------|--|
| HARQ Preamble Mode |          |       | ENUMERATED(mode0, mode1) | "mode0" means HARQ Preamble Mode =0<br>"mode1" means HARQ Preamble Mode =1 |

#### 9.2.2.58 HARQ Preamble Mode Activation Indicator

The HARQ Preamble Activation Indicator indicates if the configured HARQ Preamble Mode has been activated in the DRNS.

| IE/Group Name                           | Presence | Range | IE Type and Reference                     | Semantics Description |
|---|----------|-------|---|-----------------------|
| HARQ Preamble Mode Activation Indicator |          |       | ENUMERATED(HARQ Preamble Mode Activated). |                       |

#### 9.2.2.59 Frequency Band Indicator

The *Frequency Band Indicator* IE indicates frequency band as defined in [6].

| IE/Group Name            | Presence | Range | IE type and reference  | Semantics description |
|--------------------------|----------|-------|--|-----------------------|
| Frequency Band Indicator |          |       | ENUMERATED (Band I, Band II, Band III, Band IV, Band V, Band VI, Band VII, Band VIII, Band IX, Band X, Band XI, Band XII, Band XIII, Band XIV, Band XV, Band XVI, Band XVII, Band XVIII, Band XIX, Band XX, Band XXI, Band XXII,...) |                       |

### 9.2.2.60 E-RGCH Release Indicator

Indicates that the E-RGCH is released..

| IE/Group Name            | Presence | Range | IE Type and Reference        | Semantics Description |
|--------------------------|----------|-------|------------------------------|-----------------------|
| E-RGCH Release Indicator |          |       | ENUMERATED (E-RGCH released) |                       |

### 9.2.2.61 E-AGCH Power Offset

The *E-AGCH Power Offset* IE indicates the Power offset relative to the pilot bits on the DL DPCCCH except when F-DPCH is configured. When F-DPCH is configured, the *E-AGCH Power Offset* IE indicates the Power offset relative to the power of transmitted TPC bits on the F-DPCH.

| IE/Group Name       | Presence | Range | IE Type and Reference | Semantics Description                                |
|---------------------|----------|-------|-----------------------|--|
| E-AGCH Power Offset |          |       | INTEGER (0..255,...)  | Unit: dB<br>Range: -32 .. +31.75 dB<br>Step: 0.25 dB |

### 9.2.2.61A E-AGCH Table Choice

The E-AGCH Table Choice IE indicates the choice of the E-AGCH table in[9].

| IE/Group Name       | Presence | Range | IE Type and Reference                    | Semantics Description  |
|---------------------|----------|-------|--|--|
| E-AGCH Table Choice | M        |       | ENUMERATED (Table 16B, Table 16B-1, ...) | Table 16B indicates the Table 16B: Mapping of Absolute Grant Value in [9] and Table 16B-1 indicates the Table 16B.1: Alternative Mapping of Absolute Grant Value in [9]. |

### 9.2.2.62 E-RGCH Power Offset

The *E-RGCH Power Offset* IE indicates the Power offset relative to the pilot bits on the DL DPCCCH except when F-DPCH is configured. When F-DPCH is configured, the *E-RGCH Power Offset* IE indicates the Power offset relative to the power of transmitted TPC bits on the F-DPCH.

| IE/Group Name       | Presence | Range | IE Type and Reference   | Semantics Description                                |
|---------------------|----------|-------|-------------------------|--|
| E-RGCH Power Offset |          |       | INTEGER<br>(0..255,...) | Unit: dB<br>Range: -32 .. +31.75 dB<br>Step: 0.25 dB |

### 9.2.2.63 E-HICH Power Offset

The *E-HICH Power Offset* IE indicates the Power offset relative to the pilot bits on the DL DPCCCH except when F-DPCH is configured. When F-DPCH is configured, the *E-HICH Power Offset* IE indicates the Power offset relative to the power of transmitted TPC bits on the F-DPCH.

| IE/Group Name       | Presence | Range | IE Type and Reference   | Semantics Description                                |
|---------------------|----------|-------|-------------------------|--|
| E-HICH Power Offset |          |       | INTEGER<br>(0..255,...) | Unit: dB<br>Range: -32 .. +31.75 dB<br>Step: 0.25 dB |

### 9.2.2.64 E-RGCH 2-Index-Step Threshold

The E-RGCH 2-index-step-threshold IE is used to determine the Serving Grant.

| IE/Group Name                 | Presence | Range | IE Type and Reference | Semantics Description                            |
|-------------------------------|----------|-------|-----------------------|--|
| E-RGCH 2-Index-Step Threshold |          |       | INTEGER<br>(0..37)    | Refers to an index in the "SG-Table" (see [41]). |

### 9.2.2.65 E-RGCH 3-Index-Step Threshold

The E-RGCH 3-index-step-threshold IE is used to determine the Serving Grant.

| IE/Group Name                 | Presence | Range | IE Type and Reference | Semantics Description                            |
|-------------------------------|----------|-------|-----------------------|--|
| E-RGCH 3-Index-Step Threshold |          |       | INTEGER<br>(0..37)    | Refers to an index in the "SG-Table" (see [41]). |

### 9.2.2.66 HARQ Info for E-DCH

The HARQ Info for E-DCH is used to indicate the use of redundancy version (RV) for the EDCH HARQ transmissions.

| IE/Group name       | Presence | Range | IE Type and Reference     | Semantics description   |
|---------------------|----------|-------|---------------------------|---|
| HARQ Info for E-DCH |          |       | ENUMERATED (rv0, rvtable) | "rv0" indicates that the UE will only use E_DCH RV index 0.<br>"rvtable" indicates that the UE will use an RSN based RV index as specified in [9] |



### 9.2.2.67 DCH Indicator For E-DCH-HSDPA Operation

The *DCH Indicator For E-DCH-HSDPA Operation* parameter indicates whether *DCH Information* IE should be ignored in the message in which the *DCH Indicator For E-DCH-HSDPA Operation* IE is included.

| IE/Group Name                           | Presence | Range | IE Type and Reference           | Semantics Description |
|---|----------|-------|---------------------------------|-----------------------|
| DCH Indicator For E-DCH-HSDPA Operation |          |       | ENUMERATED<br>(DCH not present) |                       |

### 9.2.2.68 E-RGCH and E-HICH Channelisation Code Validity Indicator

The *E-RGCH and E-HICH Channelisation Code Validity Indicator* parameter indicates if the *E-RGCH and E-HICH Channelisation Code* IE shall be ignored in the *E-DCH FDD DL Control Channel Information* IE in which the *E-RGCH and E-HICH Channelisation Code Validity Indicator* IE was included.

| IE/Group Name  | Presence | Range | IE Type and Reference   | Semantics Description |
|--|----------|-------|---|-----------------------|
| E-RGCH and E-HICH Channelisation Code Validity Indicator |          |       | ENUMERATED<br>(E-RGCH and E-HICH Channelisation Code not valid) |                       |

### 9.2.2.69 E-DCH Minimum Set E-TFCI Validity Indicator

The *E-DCH Minimum Set E-TFCI Validity Indicator* parameter indicates if the *E-DCH Minimum Set E-TFCI* IE shall be ignored in the *E-DCH Transport Format Combination Set Information* IE in which the *E-DCH Minimum Set E-TFCI Validity Indicator* IE was included.

| IE/Group Name                               | Presence | Range | IE Type and Reference                              | Semantics Description |
|---|----------|-------|--|-----------------------|
| E-DCH Minimum Set E-TFCI Validity Indicator |          |       | ENUMERATED<br>(E-DCH Minimum Set E-TFCI not valid) |                       |

### 9.2.2.70 Fast Reconfiguration Mode

The *Fast Reconfiguration Mode* IE is used to notify the DRNS that the SRNC would like to use the activation time "when the UE is detected on the new configuration" as the timing for the reconfiguration.

| IE/Group Name             | Presence | Range | IE Type and Reference | Semantics Description |
|---------------------------|----------|-------|-----------------------|-----------------------|
| Fast Reconfiguration Mode |          |       | ENUMERATED (<br>Fast) |                       |

### 9.2.2.71 Fast Reconfiguration Permission

The *Fast Reconfiguration Permission* IE is used to indicate to the SRNC that the DRNS can apply the activation time "when the UE is detected on the new configuration" for this reconfiguration.

| IE/Group Name                   | Presence | Range | IE Type and Reference    | Semantics Description |
|---------------------------------|----------|-------|--------------------------|-----------------------|
| Fast Reconfiguration Permission |          |       | ENUMERATED (<br>Allowed) |                       |

## 9.2.2.72 Continuous Packet Connectivity DTX-DRX Information

The *Continuous Packet Connectivity DTX-DRX Information* IE defines the parameters used for Continuous Packet Connectivity DTX-DRX operation (see ref. [10]).

| IE/Group Name                                 | Presence | Range       | IE Type and Reference   | Semantics Description   |
|---|----------|-------------|---|---|
| UE DTX DRX Offset                             | M        |             | INTEGER (0..159)  | Units of subframes. Offset of the UE DTX and DRX cycles at the given TTI                          |
| Enabling Delay                                | M        |             | ENUMERATED (0, 1, 2, 4, 8, 16, 32, 64, 128)                     | Units of radio frames   |
| <b>DTX Information</b>                        |          | <i>1</i>    |   |   |
| >CHOICE E-DCH TTI Length                      | M        |             |   |   |
| >>2ms   |          |             |   |   |
| >>>UE DTX Cycle 1                             | M        |             | ENUMERATED (1, 4, 5, 8, 10, 16, 20)                             | Units of subframes  |
| >>>UE DTX Cycle 2                             | M        |             | ENUMERATED (4, 5, 8, 10, 16, 20, 32, 40, 64, 80, 128, 160)      | Units of subframes  |
| >>>MAC DTX Cycle                              | M        |             | ENUMERATED (1, 4, 5, 8, 10, 16, 20)                             | Units of subframes  |
| >>10ms  |          |             |   |   |
| >>>UE DTX Cycle 1                             | M        |             | ENUMERATED (1, 5, 10, 20)                                       | Units of subframes  |
| >>>UE DTX Cycle 2                             | M        |             | ENUMERATED (5, 10, 20, 40, 80, 160)                             | Units of subframes  |
| >>>MAC DTX Cycle                              | M        |             | ENUMERATED (5, 10, 20)  | Units of subframes  |
| >Inactivity Threshold for UE DTX Cycle 2      | M        |             | ENUMERATED (1, 4, 8, 16, 32, 64, 128, 256)                      | Units of E-DCH TTIs   |
| >UE DTX Long Preamble                         | M        |             | ENUMERATED (2,4,15)   | Units of slots  |
| >MAC Inactivity Threshold                     | M        |             | ENUMERATED (1, 2, 4, 8, 16, 32, 64, 128, 256, 512, Infinity)    | Units of E-DCH TTIs   |
| >CQI DTX Timer                                | M        |             | ENUMERATED (0, 1, 2, 4, 8, 16, 32, 64, 128, 256, 512, Infinity) | Units of subframes  |
| >UE DPCCH burst1                              | M        |             | ENUMERATED (1, 2, 5)  | Units of subframes  |
| >UE DPCCH burst2                              | M        |             | ENUMERATED (1, 2, 5)  | Units of subframes  |
| <b>DRX Information</b>                        |          | <i>0..1</i> |   |   |
| >UE DRX Cycle                                 | M        |             | ENUMERATED (4, 5, 8, 10, 16, 20)                                | Units of subframes  |
| >Inactivity Threshold for UE DRX Cycle        | M        |             | ENUMERATED (0, 1, 2, 4, 8, 16, 32, 64, 128, 256, 512)           | Units of subframes  |
| >Inactivity Threshold for UE Grant Monitoring | M        |             | ENUMERATED (0, 1, 2, 4, 8, 16, 32, 64, 128, 256)                | Units of E-DCH TTIs   |
| >UE DRX Grant Monitoring                      | M        |             | BOOLEAN   | True: DRX Grant Monitoring shall be applied.<br>False: DRX Grant Monitoring shall not be applied. |

### 9.2.2.73 Continuous Packet Connectivity DTX-DRX Information To Modify

The *Continuous Packet Connectivity DTX-DRX Information To Modify* IE is used for modification of Continuous Packet Connectivity DTX-DRX information in a UE Context. The *Continuous Packet Connectivity DTX-DRX Information To Modify* IE shall include at least one of the following IE.

| IE/Group Name                                  | Presence | Range | IE Type and Reference   | Semantics Description   |
|--|----------|-------|---|---|
| UE DTX DRX Offset                              | O        |       | INTEGER (0..159)  | Units of subframes. Offset of the UE DTX and DRX cycles at the given TTI                            |
| Enabling Delay                                 | O        |       | ENUMERATED (0, 1, 2, 4, 8, 16, 32, 64, 128)                     | Units of radio frames   |
| CHOICE <i>DTX Information To Modify</i>        | O        |       |   |   |
| > <i>Modify</i>                                |          |       |   |   |
| >>CHOICE E-DCH TTI Length                      | O        |       |   |   |
| >>>2ms   |          |       |   |   |
| >>>>UE DTX Cycle 1                             | O        |       | ENUMERATED (1, 4, 5, 8, 10, 16, 20)                             | Units of subframes  |
| >>>>UE DTX Cycle 2                             | O        |       | ENUMERATED (4, 5, 8, 10, 16, 20, 32, 40, 64, 80, 128, 160)      | Units of subframes  |
| >>>>MAC DTX Cycle                              | O        |       | ENUMERATED (1, 4, 5, 8, 10, 16, 20)                             | Units of subframes  |
| >>>10ms  |          |       |   |   |
| >>>>UE DTX Cycle 1                             | O        |       | ENUMERATED (1, 5, 10, 20)                                       | Units of subframes  |
| >>>>UE DTX Cycle 2                             | O        |       | ENUMERATED (5, 10, 20, 40, 80, 160)                             | Units of subframes  |
| >>>>MAC DTX Cycle                              | O        |       | ENUMERATED (5, 10, 20)  | Units of subframes  |
| >>Inactivity Threshold for UE DTX Cycle 2      | O        |       | ENUMERATED (1, 4, 8, 16, 32, 64, 128, 256)                      | Units of E-DCH TTIs   |
| >>UE DTX Long Preamble                         | O        |       | ENUMERATED (2,4,15)   | Units of slots  |
| >>MAC Inactivity Threshold                     | O        |       | ENUMERATED (1, 2, 4, 8, 16, 32, 64, 128, 256, 512, Infinity)    | Units of E-DCH TTIs   |
| >>CQI DTX Timer                                | O        |       | ENUMERATED (0, 1, 2, 4, 8, 16, 32, 64, 128, 256, 512, Infinity) | Units of subframes  |
| >>UE DPCCH burst1                              | O        |       | ENUMERATED (1, 2, 5)  | Units of subframes  |
| >>UE DPCCH burst2                              | O        |       | ENUMERATED (1, 2, 5)  | Units of subframes  |
| > <i>Deactivate</i>                            |          |       |   |   |
| CHOICE <i>DRX Information To Modify</i>        | O        |       |   |   |
| > <i>Modify</i>                                |          |       |   |   |
| >>UE DRX Cycle                                 | O        |       | ENUMERATED (4, 5, 8, 10, 16, 20)                                | Units of subframes  |
| >>Inactivity Threshold for UE DRX Cycle        | O        |       | ENUMERATED (0, 1, 2, 4, 8, 16, 32, 64, 128, 256, 512)           | Units of subframes  |
| >>Inactivity Threshold for UE Grant Monitoring | O        |       | ENUMERATED (0, 1, 2, 4, 8, 16, 32, 64, 128, 256)                | Units of E-DCH TTIs   |
| >>UE DRX Grant Monitoring                      | O        |       | BOOLEAN   | True = DRX Grant Monitoring shall be applied.<br>False = DRX Grant Monitoring shall not be applied. |

|             |  |  |      |  |
|-------------|--|--|------|--|
| >Deactivate |  |  | NULL |  |
|-------------|--|--|------|--|

### 9.2.2.74 Continuous Packet Connectivity HS-SCCH less Information

The *Continuous Packet Connectivity HS-SCCH less Information* IE defines the parameters used for Continuous Packet Connectivity HS-SCCH less operation (see ref. [10]).

| IE/Group Name                 | Presence | Range                               | IE Type and Reference           | Semantics Description  |
|-------------------------------|----------|-------------------------------------|---------------------------------|--|
| Transport Block Size List     |          | 1..<maxno ofHS-DSCHTBSsHS-SCCHless> |                                 |  |
| >Transport Block Size Index   | M        |                                     | INTEGER (1..maxnoofHS-DSCHTBSs) |  |
| >HS-PDSCH Second Code Support | M        |                                     | BOOLEAN                         | True = The second HS-PDSCH code shall also be used<br>False = The second HS-PDSCH code shall not be used |

| Range Bound                   | Explanation   |
|-------------------------------|---|
| maxnoofHS-DSCHTBSsHS-SCCHless | Maximum number of HS-DSCH Transport Block Sizes used for HS-SCCH-less operation |
| maxnoofHS-DSCHTBSs            | Maximum number of HS-DSCH Transport Block Sizes                                 |

### 9.2.2.75 Continuous Packet Connectivity HS-SCCH less Information Response

The *Continuous Packet Connectivity HS-SCCH less Information Response* IE provides information for HS-SCCH less operation determined within the Node B (see ref. [10]).

| IE/Group Name   | Presence | Range | IE Type and Reference                | Semantics Description                      |
|---|----------|-------|--------------------------------------|--|
| HS-PDSCH First Code Index   | M        |       | INTEGER (1..maxHS-PDSCHCodeNrComp-1) | Index of first HS-PDSCH code               |
| HS-PDSCH Second Code Index  | O        |       | INTEGER (1..maxHS-PDSCHCodeNrComp-1) | Index of second HS-PDSCH code. See Note 1. |
| NOTE 1: The "HS-PDSCH second code index" value is the value of IE "HS-PDSCH First Code Index" incremented by 1. |          |       |                                      |  |

| Range Bound           | Explanation  |
|-----------------------|--|
| maxHS-PDSCHCodeNrComp | Maximum number of codes at the defined spreading factor, within the complete code tree |

### 9.2.2.75A Continuous Packet Connectivity HS-SCCH Less Deactivate Indicator

The *Continuous Packet Connectivity HS-SCCH Less Deactivate Indicator* IE is used to deactivate HS-SCCH less operation.

| IE/Group Name  | Presence | Range | IE Type and Reference | Semantics Description |
|--|----------|-------|-----------------------|-----------------------|
| Continuous Packet Connectivity HS-SCCH Less Deactivate Indicator | M        |       | NULL                  |                       |

### 9.2.2.76 MIMO Activation Indicator

Void

### 9.2.2.77 MIMO Mode Indicator

Void

### 9.2.2.78 MIMO Information Response

| IE/Group Name                       | Presence | Range | IE Type and Reference  | Semantics Description |
|-------------------------------------|----------|-------|--|-----------------------|
| CHOICE Pilot Configuration          | M        |       |  |                       |
| >Primary and Secondary CPICH        |          |       |  |                       |
| >>MIMO S-CPICH Channelisation Code  | M        |       | INTEGER (0..255)   |                       |
| >Normal and Diversity Primary CPICH |          |       | NULL   |                       |
| MIMO N/M Ratio                      | M        |       | ENUMERATED (1/2, 2/3, 3/4, 4/5, 5/6, 6/7, 7/8, 8/9, 9/10, 1/1,...) |                       |

### 9.2.2.79 SixtyfourQAM DL Support Indicator

Void.

### 9.2.2.79A Sixtyfour QAM Usage Allowed Indicator

The *Sixtyfour QAM Usage Allowed Indicator* IE indicates whether the Node B is allowed to use 64 QAM modulation for HS-DSCH transmission or not.

| IE/Group Name                         | Presence | Range | IE Type and Reference             | Semantics Description |
|---------------------------------------|----------|-------|-----------------------------------|-----------------------|
| Sixtyfour QAM Usage Allowed Indicator | M        |       | ENUMERATED (Allowed, Not-Allowed) |                       |

### 9.2.2.79B SixtyfourQAM DL Usage Indicator

The *SixtyfourQAM DL Usage Indicator* IE indicates if the Node B is using 64 QAM modulation for the HS-DSCH transmission, or if the Node B is not using 64 QAM modulation.

| IE/Group Name                   | Presence | Range | IE Type and Reference                                       | Semantics Description |
|---------------------------------|----------|-------|---|-----------------------|
| SixtyfourQAM DL Usage Indicator |          |       | ENUMERATED (SixtyfourQAM DL Used, SixtyfourQAM DL Not Used) |                       |

9.2.2.80 Enhanced FACH *Support Indicator*

Void.

9.2.2.81 Enhanced PCH *Support Indicator*

Void.

## 9.2.2.82 Priority Queue Information for Enhanced FACH/PCH

Void.

## 9.2.2.83 SixteenQAM UL Information

Void.

## 9.2.2.84 SixteenQAM UL Information To Modify

Void.

## 9.2.2.85 F-DPCH Slot Format

The *F-DPCH Slot Format* IE defines the F-DPCH slot format for the TPC bits, as defined in [8].

| IE/Group Name      | Presence | Range | IE Type and Reference | Semantics Description |
|--------------------|----------|-------|-----------------------|-----------------------|
| F-DPCH Slot Format |          |       | INTEGER (0..9)        |                       |

## 9.2.2.86 F-DPCH Slot Format Support Request

| IE/Group Name                      | Presence | Range | IE Type and Reference | Semantics Description |
|------------------------------------|----------|-------|-----------------------|-----------------------|
| F-DPCH Slot Format Support Request |          |       | NULL                  |                       |

## 9.2.2.87 Max UE DTX Cycle

The *Max UE DTX Cycle* IE defines the maximum UE DTX cycle supported by the Node B for Continuous Packet Connectivity DTX-DRX operation.

| IE/Group Name    | Presence | Range | IE Type and Reference                                    | Semantics Description |
|------------------|----------|-------|--|-----------------------|
| Max UE DTX Cycle | M        |       | ENUMERATED (v5, v10, v20, v40, v64, v80, v128, v160,...) | Units of subframes    |

9.2.2.88 Enhanced PCH *Capability*

Void.

## 9.2.2.89 MAC-ehs Reset Timer

Void.

## 9.2.2.90 SixteenQAM UL Operation Indicator

| IE/Group Name                     | Presence | Range | IE Type and Reference             | Semantics Description |
|-----------------------------------|----------|-------|-----------------------------------|-----------------------|
| SixteenQAM UL Operation Indicator | O        |       | ENUMERATED (Activate, Deactivate) |                       |

## 9.2.2.91 E-TFCI Boost Information

| IE/Group Name       | Presence                    | Range | IE Type and Reference | Semantics Description   |
|---------------------|-----------------------------|-------|-----------------------|---|
| E-TFCI BetaEC Boost | M                           |       | INTEGER (0..127,...)  | E-TFCI threshold beyond which boosting of E-DPCCH is enabled                    |
| UL Delta T2TP       | <i>C-E-TFCIboost</i><br>127 |       | INTEGER (0..6,...)    | Total E-DPDCH power across all codes to the combined power of DPCCH and E-DPCCH |

| Condition      | Explanation   |
|----------------|---|
| E-TFCIboost127 | The IE shall be present if the E-TFCI BetaEC Boost IE value is not set o 127. |

9.2.2.92 Common E-DCH *Support Indicator*

This IE indicates the Common E-DCH Support.

| IE/Group Name                  | Presence | Range | IE Type and Reference | Semantics Description |
|--------------------------------|----------|-------|-----------------------|-----------------------|
| Common E-DCH Support Indicator |          |       | NULL                  |                       |

## 9.2.2.93 Common E-DCH MAC-d Flow Specific Information

The *Common E-DCH MAC-d Flow Specific Information* IE provides information associated to Common E-DCH MAC-d Flow used for Common E-DCH.

| IE/Group Name                                       | Presence | Range                                     | IE Type and Reference              | Semantics Description |
|---|----------|---|------------------------------------|-----------------------|
| <b>Common E-DCH MAC-d Flow Specific Information</b> |          | <i>1..&lt;maxno ofEDCHMACdFlows&gt;</i>   |                                    |                       |
| >Common E-DCH MAC-d Flow ID                         | M        |   | E-DCH MAC-d flow<br>9.2.1.91       |                       |
| >Maximum Number Of Retransmissions For E-DCH        | M        |   | 9.2.1.100                          |                       |
| >E-DCH HARQ Power Offset FDD                        | M        |   | 9.2.2.4L                           |                       |
| >E-DCH MAC-d Flow Multiplexing List                 | O        |   | 9.2.1.89                           |                       |
| <b>&gt;Common E-DCH Logical Channel information</b> | M        | <i>1..&lt;maxno oflogicalchannels&gt;</i> |                                    |                       |
| >>Logical Channel ID                                | M        |   | 9.2.1.97                           |                       |
| >>Maximum MAC-d PDU Size Extended                   | M        |   | MAC PDU Size Extended<br>9.2.1.34D |                       |

| Range bound                   | Explanation                         |
|-------------------------------|-------------------------------------|
| <i>maxnoofEDCHMACdFlows</i>   | Maximum number of E-DCH MAC-d Flows |
| <i>maxnooflogicalchannels</i> | Maximum number of logical channels  |

### 9.2.2.94 Counting Information

The *Counting Information* IE provides counting result for MBMS service for each cell.

| IE/Group Name               | Presence | Range                                   | IE Type and Reference | Semantics Description   |
|-----------------------------|----------|---|-----------------------|---|
| <b>Counting Information</b> |          | <i>1..&lt;maxno ofFDDneighbours&gt;</i> |                       |   |
| >C-ID                       | M        |   | 9.2.1.6               |   |
| >Counting Result            | M        |   | INTEGER (0..63)       | The number of UEs listen to the MBMS Service. If the number of the UE is more than 63, this IE set to 63. |

| Range bound                 | Explanation   |
|-----------------------------|---|
| <i>maxnoofFDDneighbours</i> | Maximum number of neighbouring FDD cell for one cell. |

### 9.2.2.95 Transmission Mode Information

The *Transmission Mode Information* IE provides transmission mode for MBMS service for each cell.

| IE/Group Name               | Presence | Range                                   | IE Type and Reference | Semantics Description |
|-----------------------------|----------|---|-----------------------|-----------------------|
| <b>Counting Information</b> |          | <i>1..&lt;maxno ofFDDneighbours&gt;</i> |                       |                       |
| >C-ID                       | M        |   | 9.2.1.6               |                       |
| >Transmission Mode          | M        |   | 9.2.1.81              |                       |

| Range bound                 | Explanation   |
|-----------------------------|---|
| <i>maxnoofFDDneighbours</i> | Maximum number of neighbouring FDD cell for one cell. |



### 9.2.2.96 MBMS Neighbouring Cell Information

The parameter contains information for the MBMS p-t-m radio bearer configuration procedure as defined in [16].

| IE/Group Name                             | Presence | Range   | IE Type and Reference | Semantics Description   |
|---|----------|---|-----------------------|---|
| <b>MBMS Neighbouring Cell Information</b> |          |   |                       |   |
| > MBMS Concatenated Service List          |          | 1.. <<br><i>maxlengthMBMSconcat<br/>servlists</i> > |                       | TMGI shall be uniquely defined by a reference to this index from the <i>MBMS short transmission identity</i> IE [16] in the <i>L3 Information</i> IE. |
| >>TMGI                                    | M        |   | 9.2.1.80              |   |
| >L3 Information                           | O        |   | 9.2.1.32              | The IE Contains MBMS COMMON P-T-M RB INFORMATION defined in ref. [16].  |
| >L3 Information                           | O        |   | 9.2.1.32              | The IE Contains MBMS CURRENT CELL P-T-M RB INFORMATION defined in ref. [16].  |

| Range bound                         | Explanation   |
|-------------------------------------|---|
| <i>maxlengthMBMSconcatservlists</i> | Maximum length of the concatenated service lists contained in MBMS MODIFIED SERVICES INFORMATION and the MBMS UNMODIFIED SERVICES INFORMATION messages defined in ref. [16] |

### 9.2.2.97 RLC Sequence Number

This parameter indicates the RLC Sequence Number.

| IE/Group Name       | Presence | Range | IE Type and Reference | Semantics Description |
|---------------------|----------|-------|-----------------------|-----------------------|
| RLC Sequence Number |          |       | INTEGER (0..127)      |                       |

### 9.2.2.98 Time Stamp

This parameter indicates the Time Stamp used for Inter-RNC MBMS synchronisation.

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description |
|---------------|----------|-------|-----------------------|-----------------------|
| Time Stamp    |          |       | INTEGER (0..9999)     | Units: 10ms           |

### 9.2.2.99 HS-DSCH Preconfiguration Info

The *HS-DSCH Preconfiguration Info* IE provides information of the target cell preconfiguration in the DRNS as defined in [18].

| IE/Group Name  | Presence | Range                   | IE Type and Reference       | Semantics Description   | Criticality | Assigned Criticality |
|--|----------|-------------------------|-----------------------------|---|-------------|----------------------|
| <b>Sets of HS-SCCH Codes</b>                                     |          | 1...<maxnoofHSDSCH>     |                             | Index 1 refers to the primary serving HS-DSCH cell<br>Index 2...<maxnoofHSDSCH> refer to secondary serving HS-DSCH cells in the order as listed in 9.2.2.100 HS-DSCH Preconfiguration Setup. Max index is 2 in this 3GPP release. | –           |                      |
| <b>&gt; HS-SCCH Preconfigured Codes</b>                          |          | 1...<maxnoofHSSCHcodes> |                             |   | –           |                      |
| >> Code Number   | M        |                         | INTEGER (0..127)            |   | –           |                      |
| > HS-DSCH-RNTI   | M        |                         | 9.2.1.31J                   |   | –           |                      |
| > HS-PDSCH And HS-SCCH Scrambling Code                           | M        |                         | DL Scrambling Code 9.2.2.11 |   | –           |                      |
| >SixtyfourQAM DL Support Indicator                               | O        |                         | 9.2.1.123                   |   | –           |                      |
| > SixtyfourQAM DL Usage Indicator                                | O        |                         | 9.2.2.79B                   |   | –           |                      |
| > HS-DSCH TB Size Table Indicator                                | O        |                         | 9.2.2.19G                   |   | –           |                      |
| HARQ Memory Partitioning   | M        |                         | 9.2.1.116                   |   | –           |                      |
| E-DCH FDD DL Control Channel Information                         | O        |                         | 9.2.2.4D                    |   | –           |                      |
| HARQ Preamble Mode Activation Indicator                          | O        |                         | 9.2.2.58                    |   | –           |                      |
| MIMO Information Response  | O        |                         | 9.2.2.78                    |   | –           |                      |
| Continuous Packet Connectivity HS-SCCH less Information Response | O        |                         | 9.2.2.75                    |   | –           |                      |
| Power Offset For S-CPICH for MIMO                                | O        |                         | 9.2.2.104                   |   | YES         | ignore               |

| Range bound              | Explanation   |
|--------------------------|---|
| <i>maxnoofHSSCHcodes</i> | Maximum number of HS-SCCH codes   |
| <i>maxnoofHSDSCH</i>     | Maximum number of Primary Serving plus Secondary Serving HS-DSCH cells for one UE |

### 9.2.2.100 HS-DSCH Preconfiguration Setup

The *HS-DSCH Preconfiguration Setup* IE indicates that the DRNS shall preconfigure set(s) of HS-SCCH codes and may contain a list of secondary serving HS-DSCH cells to be preconfigured for Enhanced Service Cell Change. The Cell Change procedure for Dual Cell operation is described in [63]

| IE/Group Name   | Presence | Range                 | IE Type and Reference                       | Semantics Description  | Criticality | Assigned Criticality |
|---|----------|-----------------------|---|--|-------------|----------------------|
| <b>MAC-hs/ehs reset scheme</b>                          | M        |                       | ENUMERATED (Always, Inter NodeB Change)     | MAC-hs/ehs reset handling at enhanced HS serving cell change:<br>"Always" means always reset<br>"Inter NodeB Change" means Only reset at inter Node B cell change          | -           |                      |
| HS-DSCH Physical Layer Category                         | M        |                       | 9.2.1.30Oa                                  |  | -           |                      |
| MAC-hs Reordering Buffer Size for RLC-UM                | M        |                       | 9.2.1.34Ab                                  |  | -           |                      |
| <b>Secondary Cells</b>                                  |          | 0...<maxnoofHSDSCH-1> |   | Preconfigured secondary serving HS-DSCH cell.<br><i>maxnoofHSDSCH-1</i> is max 1 in this 3GPP release.   | -           |                      |
| >Secondary C-ID   | M        |                       | 9.2.1.9                                     | C-ID of the preconfigured secondary serving HS-DSCH cell   | -           |                      |
| >Num Secondary HS-SCCH Codes                            | O        |                       | INTEGER (1..<br><i>maxnoofHSSCCHcodes</i> ) | For the secondary serving HS-DSCH cell   | -           |                      |
| >Sixtyfour QAM Usage Allowed Indicator                  | O        |                       | 9.2.2.79A                                   | For the secondary serving HS-DSCH cell   | -           |                      |
| Num Primary HS-SCCH Codes                               | O        |                       | INTEGER (1..<br><i>maxnoofHSSCCHcodes</i> ) | For the primary serving HS-DSCH cell   | -           |                      |
| HARQ Preamble Mode                                      | O        |                       | 9.2.1.134                                   |  | -           |                      |
| MIMO Activation Indicator                               | O        |                       | 9.2.2.76                                    |  | -           |                      |
| HS-DSCH MAC-d PDU Size Format                           | O        |                       | 9.2.1.30OC                                  | If not present, "Indexed MAC-d PDU Size" shall be assumed.   | -           |                      |
| Sixtyfour QAM Usage Allowed Indicator                   | O        |                       | 9.2.2.79A                                   | For the primary serving HS-DSCH cell   | -           |                      |
| UE with enhanced HS-SCCH support indicator              | O        |                       | NULL  | UE supports enhanced HS-SCCH functionality:<br>- UE supports different HS-SCCH in consecutive TTIs and,<br>- in HS-SCCH-less operation mode the UE supports HS-SCCH orders | -           |                      |
| Continuous Packet Connectivity HS-SCCH less Information | O        |                       | 9.2.2.74                                    |  | -           |                      |
| UE Support Indicator Extension                          | O        |                       | 9.2.2.103                                   |  | YES         | ignore               |
| Power Offset For S-CPICH for MIMO Request Indicator     | O        |                       | 9.2.2.105                                   |  | YES         | ignore               |

| Range bound               | Explanation  |
|---------------------------|--|
| <i>maxnoofHSDSCH-1</i>    | Maximum number of Secondary Serving HS-DSCH cells for one UE |
| <i>maxnoofHSSCCHcodes</i> | Maximum number of HS-SCCH codes                              |

### 9.2.2.101 Secondary Serving Cell List

This Secondary Serving Cell List IE identifies the possible secondary serving cells for a Multi Cell capable serving Cell.

| IE/Group Name                               | Presence | Range                              | IE Type and Reference | Semantics Description   |
|---|----------|------------------------------------|-----------------------|---|
| <b>Possible Secondary Serving Cell List</b> |          | <i>1..&lt;maxno ofHSDSCH-1&gt;</i> |                       | For secondary serving HS-DSCH cell. Max 1 in this 3GPP release. |
| >Possible Secondary Serving Cell            | M        |                                    | C-ID<br>9.2.1.9       |   |

| Range bound            | Explanation   |
|------------------------|---|
| <i>maxnoofHSDSCH-1</i> | Maximum number of Secondary Serving HS-DSCH cells for one UE. |

### 9.2.2.102 Minimum Reduced E-DPDCH Gain Factor

The minimum gain factor  $(\beta_{ed,k, reduced, min})$  defined in [10].

| IE/Group Name                       | Presence | Range | IE Type and Reference  | Semantics Description |
|-------------------------------------|----------|-------|--|-----------------------|
| Minimum Reduced E-DPDCH Gain Factor |          |       | ENUMERATED<br>(8/15, 11/15, 15/15, 21/15, 30/15, 42/15, 60/15, 84/15, ...) |                       |

### 9.2.2.103 UE Support Indicator Extension

The *UE Support Indicator Extension* IE is used to indicate the support level in the UE for optional HSDPA functions to the DRNS.

| IE/Group Name                  | Presence | Range | IE Type and Reference | Semantics Description   |
|--------------------------------|----------|-------|-----------------------|---|
| UE support indicator extension |          |       | BIT STRING (32)       | <p>Each bit indicates whether the UE supports a particular HSDPA function or not. The value 1 of a bit indicates that the corresponding functionality is supported in the UE and value 0 indicates that the corresponding functionality is not supported in the UE. Each bit is defined as follows:</p> <p>the first bit: Different HS-SCCH In Consecutive TTIs Support Indicator,</p> <p>the second bit: HS-SCCH orders in HS-SCCH-less Operation Support Indicator.</p> <p>Note that undefined bits are considered as a spare bit and spare bits shall be set to 0 by the transmitter and shall be ignored by the receiver.</p> |

#### 9.2.2.104 Power Offset For S-CPICH for MIMO

The *Power Offset For S-CPICH for MIMO* IE indicates the the relative transmit power of the S-CPICH compared to the primary CPICH transmit power, when S-CPICH is used as a phase reference for a second transmit antenna in MIMO mode [10].

| IE/Group Name                     | Presence | Range | IE Type and Reference | Semantics Description |
|-----------------------------------|----------|-------|-----------------------|-----------------------|
| Power Offset For S-CPICH for MIMO |          |       | INTEGER(-6 .. 0)      | Offset in dB          |

#### 9.2.2.105 Power Offset For S-CPICH for MIMO Request Indicator

The *Power Offset For S-CPICH for MIMO Request Indicator* IE is present when the SRNC needs the DRNS to supply, if possible, the *Power Offset For S-CPICH for MIMO* IE when S-CPICH is used as a phase reference for a second transmit antenna in MIMO mode [10].

| IE/Group Name                                       | Presence | Range | IE Type and Reference | Semantics Description |
|---|----------|-------|-----------------------|-----------------------|
| Power Offset For S-CPICH for MIMO Request Indicator |          |       | NULL                  |                       |

#### 9.2.2.106 Cell Capability Container Extension FDD

The *Cell Capability Container Extension FDD* IE is an extension to the *Cell Capability Container FDD* IE and indicates the cell capability in the same way as *Cell Capability Container Extension FDD* IE.

The cell capability of multi-cell related functions may depend on that the cell also is multi-cell capable (adjacent carrier). These capability indicators shall be ignored if the Multi Cell Support Indicator in the *Cell Capability Container FDD* IE is set to 0. These support indicators are indicated in the table below with /Multi-cell/. Support indicators marked /Multi-cell/ indicates the support regardless of multi-cell type.

| IE/Group Name                           | Presence | Range | IE Type and Reference | Semantics Description   |
|---|----------|-------|-----------------------|---|
| Cell Capability Container Extension FDD |          |       | BIT STRING (128)      | <p>Each bit indicates whether a cell supports a particular functionality or not. The value 1 of a bit indicates that the corresponding functionality is supported in a cell and value 0 indicates that the corresponding functionality is not supported in a cell. Each bit is defined as follows.</p> <p>The first bit: Cell Specific Tx Diversity Handling For Multi Cell Operation Support Indicator, /Multi-cell/.</p> <p>Note that undefined bits are considered as a spare bit and spare bits shall be set to 0 by the transmitter and shall be ignored by the receiver. Note that Reserved bits are not considered as a spare bit. They shall however be set to 0 by the transmitter and shall be ignored by the receiver.</p> |

### 9.2.3 TDD Specific Parameters

This subclause contains parameters that are specific to TDD.

#### 9.2.3.a Alpha Value

Used to support signalling of cell specific Alpha Value to SRNS.

| IE/Group Name | Presence | Range | IE Type and Reference                               | Semantics Description |
|---------------|----------|-------|---|-----------------------|
| Alpha Value   |          |       | ENUMERATED(0, 1/8, 2/8, 3/8, 4/8, 5/8, 6/8, 7/8, 1) |                       |

#### 9.2.3.A Block STTD Indicator

Void.

#### 9.2.3.1 Burst Type

Void.

#### 9.2.3.1a Cell Capability Container TDD

The Cell Capability Container TDD indicates which functionalities a 3.84Mcps TDD cell supports.

| IE/Group Name                 | Presence | Range | IE Type and Reference | Semantics Description  |
|-------------------------------|----------|-------|-----------------------|--|
| Cell Capability Container TDD |          |       | BIT STRING (32)       | <p>Each bit indicates whether a cell supports a particular functionality or not. The value 1 of a bit indicates that the corresponding functionality is supported in a cell and value 0 indicates that the corresponding functionality is not supported in a cell. Each bit is defined as follows.</p> <p>The first bit: Delayed Activation Support Indicator.</p> <p>The second bit: HS-DSCH Support Indicator.</p> <p>The third bit: DSCH Support Indicator.</p> <p>The fourth bit: Flexible MAC-d PDU Size Support Indicator.</p> <p>The fifth: MBMS Support Indicator.</p> <p>Note that undefined bits are considered as a spare bit and spare bits shall be set to 0 by the transmitter and shall be ignored by the receiver.</p> |

### 9.2.3.1b Cell Capability Container TDD LCR

The Cell Capability Container TDD LCR indicates which functionalities a cell supports.

| IE/Group Name                     | Presence | Range | IE Type and Reference | Semantics Description  |
|-----------------------------------|----------|-------|-----------------------|--|
| Cell Capability Container TDD LCR |          |       | BIT STRING (32)       | <p>Each bit indicates whether a cell supports a particular functionality or not. The value 1 of a bit indicates that the corresponding functionality is supported in a cell and value 0 indicates that the corresponding functionality is not supported in a cell. Each bit is defined as follows.</p> <p>The first bit: Delayed Activation Support Indicator.</p> <p>The second bit: HS-DSCH Support Indicator.</p> <p>The third bit: DSCH Support Indicator.</p> <p>The fourth bit: Flexible MAC-d PDU Size Support Indicator.</p> <p>Note that undefined bits are considered as a spare bit and spare bits shall be set to 0 by the transmitter and shall be ignored by the receiver.</p> |

### 9.2.3.2 CCTrCH ID

The CCTrCH ID identifies unambiguously a CCTrCH inside a Radio Link.



| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description |
|---------------|----------|-------|-----------------------|-----------------------|
| CCTrCH ID     |          |       | INTEGER (0..15)       |                       |

### 9.2.3.2A DCH TDD Information

The *DCH TDD Information* IE provides information for DCHs to be established.

| IE/Group Name                       | Presence   | Range                          | IE Type and Reference | Semantics Description                | Criticality | Assigned Criticality |
|-------------------------------------|------------|--------------------------------|-----------------------|--------------------------------------|-------------|----------------------|
| <b>DCH Information</b>              |            | <i>1..&lt;maxno ofDCHs&gt;</i> |                       |                                      | –           |                      |
| >Payload CRC Presence Indicator     | M          |                                | 9.2.1.42              |                                      | –           |                      |
| >UL FP Mode                         | M          |                                | 9.2.1.67              |                                      | –           |                      |
| >ToAWS                              | M          |                                | 9.2.1.58              |                                      | –           |                      |
| >ToAWE                              | M          |                                | 9.2.1.57              |                                      | –           |                      |
| <b>&gt;DCH Specific Info</b>        |            | <i>1..&lt;maxno ofDCHs&gt;</i> |                       |                                      | –           |                      |
| >>DCH ID                            | M          |                                | 9.2.1.16              |                                      | –           |                      |
| >>CCTrCH ID                         | M          |                                | 9.2.3.2               | UL CCTrCH in which the DCH is mapped | –           |                      |
| >>CCTrCH ID                         | M          |                                | 9.2.3.2               | DL CCTrCH in which the DCH is mapped | –           |                      |
| >>TrCH Source Statistics Descriptor | M          |                                | 9.2.1.65              |                                      | –           |                      |
| >>Transport Format Set              | M          |                                | 9.2.1.64              | For the UL.                          | –           |                      |
| >>Transport Format Set              | M          |                                | 9.2.1.64              | For the DL.                          | –           |                      |
| >>BLER                              | M          |                                | 9.2.1.4               | For the UL.                          | –           |                      |
| >>BLER                              | M          |                                | 9.2.1.4               | For the DL.                          | –           |                      |
| >>Allocation/Retention Priority     | M          |                                | 9.2.1.1               |                                      | –           |                      |
| >>Frame Handling Priority           | M          |                                | 9.2.1.29              |                                      | –           |                      |
| >>QE-Selector                       | C-CoordDCH |                                | 9.2.1.46A             |                                      | –           |                      |
| >>Guaranteed Rate Information       | O          |                                | 9.2.1.30M             |                                      | YES         | ignore               |
| >>Traffic Class                     | M          |                                | 9.2.1.58A             |                                      | YES         | ignore               |
| >>Unidirectional DCH Indicator      | O          |                                | 9.2.1.68B             |                                      | YES         | reject               |
| >TNL QoS                            | O          |                                | 9.2.1.56A             |                                      | YES         | ignore               |

| Condition | Explanation  |
|-----------|--|
| CoordDCH  | The IE shall be present if this DCH is part of a set of coordinated DCHs (number of instances of the <i>DCH Specific Info</i> IE is greater than 1). |

| Range bound        | Explanation                        |
|--------------------|------------------------------------|
| <i>maxnoofDCHs</i> | Maximum number of DCHs for one UE. |

### 9.2.3.2B DCH TDD Information Response

Void

### 9.2.3.2C DL Timeslot Information

The *DL Timeslot Information* IE provides information on the time slot allocation for a DL DPCH at 3.84Mcps.

| IE/Group Name                  | Presence | Range           | IE Type and Reference               | Semantics Description | Criticality | Assigned Criticality |
|--------------------------------|----------|-----------------|-------------------------------------|-----------------------|-------------|----------------------|
| <b>DL Timeslot Information</b> |          | 1..<maxno OFTS> |                                     |                       | –           |                      |
| >Time Slot                     | M        |                 | 9.2.1.56                            |                       | –           |                      |
| >Midamble Shift And Burst Type | M        |                 | 9.2.3.4                             |                       | –           |                      |
| >TFCI Presence                 | M        |                 | 9.2.1.55                            |                       | –           |                      |
| >DL Code Information           | M        |                 | TDD DL Code Information<br>9.2.3.8C |                       | –           |                      |

| Range bound | Explanation                           |
|-------------|---------------------------------------|
| maxnoofTSS  | Maximum number of Timeslots for a UE. |

### 9.2.3.2D DL Time Slot ISCP Info

The *DL Time Slot ISCP Info* IE gives interference level for each DL time slot within the Radio Link.

| IE/Group Name                 | Presence | Range             | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|-------------------------------|----------|-------------------|-----------------------|-----------------------|-------------|----------------------|
| <b>DL Time Slot ISCP Info</b> |          | 1..<maxno ofDLts> |                       |                       | –           |                      |
| >Time Slot                    | M        |                   | 9.2.1.56              |                       | –           |                      |
| >DL Timeslot ISCP             | M        |                   | 9.2.3.12              |                       | –           |                      |

| Range bound | Explanation  |
|-------------|--|
| maxnoofDLts | Maximum number of downlink time slots per Radio Link for 3.84Mcps TDD. |

### 9.2.3.2E DL Timeslot Information LCR

The *DL Timeslot Information LCR* IE provides information for DL Timeslot to be established for 1.28Mcps TDD.

| IE/Group Name                      | Presence | Range                        | IE Type and Reference                            | Semantics Description                  | Criticality | Assigned Criticality |
|------------------------------------|----------|------------------------------|--|--|-------------|----------------------|
| <b>DL Timeslot Information LCR</b> |          | 1 ..<br><maxnoof<br>DLtsLCR> |  |  | –           |                      |
| >Time Slot LCR                     | M        |                              | 9.2.3.12a  |  | –           |                      |
| >Midamble Shift LCR                | M        |                              | 9.2.3.4C   |  | –           |                      |
| >TFCI Presence                     | M        |                              | 9.2.1.57   |  | –           |                      |
| >DL Code Information LCR           | M        |                              | TDD DL<br>Code<br>Information<br>LCR<br>9.2.3.8D |  | –           |                      |
| >Maximum DL TX Power               | O        |                              | DL Power<br>9.2.1.21A                            | Maximum<br>allowed<br>power on<br>DPCH | YES         | ignore               |
| >Minimum DL TX Power               | O        |                              | DL Power<br>9.2.1.21A                            | Minimum<br>allowed<br>power on<br>DPCH | YES         | ignore               |

| Range bound           | Explanation  |
|-----------------------|--|
| <i>maxnoofDLtsLCR</i> | Maximum number of Downlink time slots per Radio Link for 1.28Mcps TDD. |

### 9.2.3.2F DL Time Slot ISCP Info LCR

The *DL Time Slot ISCP Info LCR* IE provides information for DL Interference level for each time slot within the Radio Link for 1.28Mcps TDD.

| IE/Group Name                     | Presence | Range                        | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|-----------------------------------|----------|------------------------------|-----------------------|-----------------------|-------------|----------------------|
| <b>DL Time Slot ISCP Info LCR</b> |          | 1 ..<br><maxnoofUL<br>tsLCR> |                       |                       | –           |                      |
| >Time Slot LCR                    | M        |                              | 9.2.3.12a             |                       | –           |                      |
| >DL Timeslot ISCP                 | M        |                              | 9.2.3.12              |                       | –           |                      |

| Range bound           | Explanation   |
|-----------------------|---|
| <i>maxnoofULtsLCR</i> | Maximum number of Uplink time slots per Radio Link for 1.28Mcps TDD |

### 9.2.3.3 DPCH ID

The DPCH ID identifies unambiguously a DPCH inside a Radio Link.

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description |
|---------------|----------|-------|-----------------------|-----------------------|
| DPCH ID       |          |       | INTEGER<br>(0..239)   |                       |

### 9.2.3.3a DSCH TDD Information

The *DSCH TDD Information* IE provides information for DSCHs to be established.

| IE/Group Name                      | Presence | Range                           | IE Type and Reference | Semantics Description                                | Criticality | Assigned Criticality |
|------------------------------------|----------|---------------------------------|-----------------------|--|-------------|----------------------|
| <b>DSCH TDD Information</b>        |          | <i>1..&lt;maxno ofDSCHs&gt;</i> |                       |  | –           |                      |
| >DSCH ID                           | M        |                                 | 9.2.3.3ae             |  | –           |                      |
| >CCTrCH ID                         | M        |                                 | 9.2.3.2               | DL CCTrCH in which the DSCH is mapped.               | –           |                      |
| >TrCH Source Statistics Descriptor | M        |                                 | 9.2.1.65              |  | –           |                      |
| >Transport Format Set              | M        |                                 | 9.2.1.64              |  | –           |                      |
| >Allocation/Retention Priority     | M        |                                 | 9.2.1.1               |  | –           |                      |
| >Scheduling Priority Indicator     | M        |                                 | 9.2.1.51A             |  | –           |                      |
| >BLER                              | M        |                                 | 9.2.1.4               |  | –           |                      |
| >Traffic Class                     | M        |                                 | 9.2.1.58A             |  | YES         | ignore               |
| >Binding ID                        | O        |                                 | 9.2.1.3               | Shall be ignored if bearer establishment with ALCAP. | YES         | ignore               |
| >Transport Layer Address           | O        |                                 | 9.2.1.62              | Shall be ignored if bearer establishment with ALCAP. | YES         | ignore               |
| >TNL QoS                           | O        |                                 | 9.2.1.56A             | Shall be ignored if bearer establishment with ALCAP. | YES         | ignore               |

| Range bound         | Explanation                         |
|---------------------|-------------------------------------|
| <i>maxnoofDSCHs</i> | Maximum number of DSCHs for one UE. |

### 9.2.3.3aa HS-DSCH TDD Information

The *HS-DSCH TDD Information* IE is used for initial addition of HS-DSCH information to a UE Context.

| IE/Group Name                                     | Presence | Range | IE Type and Reference   | Semantics Description  | Criticality | Assigned Criticality |
|---|----------|-------|---|--|-------------|----------------------|
| HS-DSCH MAC-d Flows Information                   | M        |       | 9.2.1.300A  |  | –           |                      |
| <b>UE Capabilities Information</b>                |          | 1     |   |  | –           |                      |
| >HS-DSCH Physical Layer Category                  | M        |       | 9.2.1.300a  |  | –           |                      |
| >1.28 Mcps TDD uplink physical channel capability | O        |       | 9.2.3.10D   | Applicable to 1.28Mcps TDD only  | YES         | ignore               |
| >Number of Supported Carriers                     | O        |       | ENUMERATE D ( One-one carrier, One-three carrier, Three-three carrier, One-six carrier, Tree-six carrier, Six-six carrier, ...) | Applicable to 1.28Mcps TDD only<br>This IE indicates the number of carrier that UE can support at the same time, where " One-three carrier" means the number of supported carrier is one for the uplink, and three for the downlink. | YES         | reject               |
| >Multi-carrier HS-DSCH Physical Layer Category    | O        |       | 9.2.1.300a  | Applicable to 1.28Mcps TDD only  | YES         | ignore               |
| >MIMO SF Mode Supported For HS-PDSCH dual stream  | O        |       | Enumerated (SF1, SF1/SF16)  | Applicable to 1.28Mcps TDD only  | YES         | ignore               |
| MAC-hs Reordering Buffer Size for RLC-UM          | M        |       | 9.2.1.34Ab  |  | –           |                      |
| TDD ACK NACK Power Offset                         | M        |       | 9.2.3.7I  |  | –           |                      |
| HS-DSCH MAC-d PDU Size Format                     | O        |       | 9.2.1.300C  | If not present, "Indexed MAC-d PDU Size" shall be used.  | YES         | reject               |
| HS-SICH SIR Target                                | O        |       | UL SIR 9.2.1.69   | Applicable to 1.28Mcps TDD only  | YES         | ignore               |
| HS-SICH TPC step size                             | O        |       | 9.2.3.10a   | Applicable to 1.28Mcps TDD only  | YES         | ignore               |
| TSN-Length  | O        |       | 9.2.3.3ai   | Applicable for 1.28Mcps TDD when using multiple frequencies  | YES         | reject               |
| MIMO Activation Indicator                         | O        |       | 9.2.1.134   |  | YES         | reject               |

### 9.2.3.3ab HS-DSCH TDD Information Response

The *HS-DSCH TDD Information Response* IE provides information for HS-DSCH that have been established or modified. It also provides additional HS-DSCH information determined within the DRNS.

| IE/Group Name   | Presence | Range                                  | IE Type and Reference           | Semantics Description   | Criticality | Assigned Criticality |
|---|----------|--|---------------------------------|---|-------------|----------------------|
| <b>HS-DSCH MAC-d Flow Specific Information Response</b> |          | <i>0..&lt;maxno ofMACdFlows&gt;</i>    |                                 |   | –           |                      |
| >HS-DSCH MAC-d Flow ID                                  | M        |  | 9.2.1.30O                       |   | –           |                      |
| >Binding ID   | O        |  | 9.2.1.3                         |   | –           |                      |
| >Transport Layer Address                                | O        |  | 9.2.1.62                        |   | –           |                      |
| >HS-DSCH Initial Capacity Allocation                    | O        |  | 9.2.1.30Na                      |   | –           |                      |
| <b>HS-SCCH Specific Information Response</b>            |          | <i>0..&lt;maxno ofHSSCC Hcodes&gt;</i> |                                 | Not applicable to 1.28 Mcps TDD or 7.68Mcps TDD   | GLOBAL      | reject               |
| >Time Slot  | M        |  | 9.2.1.56                        |   | –           |                      |
| >Midamble Shift And Burst Type                          | M        |  | 9.2.3.4                         |   | –           |                      |
| >TDD Channelisation Code                                | M        |  | 9.2.3.8                         |   | –           |                      |
| <b>&gt;HS-SICH Information</b>                          |          | <i>1</i>                               |                                 |   | –           |                      |
| >>HS SICH ID  | M        |  | 9.2.3.3ad                       |   | –           |                      |
| >>Time Slot   | M        |  | 9.2.1.56                        |   | –           |                      |
| >>Midamble Shift And Burst Type                         | M        |  | 9.2.3.4                         |   | –           |                      |
| >>TDD Channelisation Code                               | M        |  | 9.2.3.8                         |   | –           |                      |
| <b>HS-SCCH Specific Information Response LCR</b>        |          | <i>0..&lt;maxno ofHSSCC Hcodes&gt;</i> |                                 | Not applicable to 3.84 Mcps TDD or 7.68Mcps TDD   | GLOBAL      | reject               |
| >Time Slot LCR  | M        |  | 9.2.3.12a                       |   | –           |                      |
| >Midamble shift LCR                                     | M        |  | 9.2.3.4C                        |   | –           |                      |
| >First TDD Channelisation Code                          | M        |  | TDD Channelisation Code 9.2.3.8 |   | –           |                      |
| >Second TDD Channelisation Code                         | M        |  | TDD Channelisation Code 9.2.3.8 |   | –           |                      |
| <b>&gt;HS-SICH Information LCR</b>                      |          | <i>1</i>                               |                                 |   | –           |                      |
| >>HS SICH ID  | M        |  | 9.2.3.3ad                       |   | –           |                      |
| >>Time Slot LCR   | M        |  | 9.2.3.12a                       |   | –           |                      |
| >>Midamble shift LCR                                    | M        |  | 9.2.3.4C                        |   | –           |                      |
| >>TDD Channelisation Code                               | M        |  | 9.2.3.8                         |   | –           |                      |
| >Used Frequency   | O        |  | UARFCN 9.2.1.66                 | Applicable for 1.28Mcps TDD when using multiple frequencies. this IE indicates the frequency which is actually used by the HS-SCCH. | YES         | reject               |
| >UARFCN   | O        |  | 9.2.1.66                        | Corresponds to Nt (3GPP TS 25.105) Applicable   | YES         | ignore               |

| IE/Group Name   | Presence | Range                                   | IE Type and Reference           | Semantics Description   | Criticality | Assigned Criticality |
|---|----------|---|---------------------------------|---|-------------|----------------------|
|   |          |   |                                 | for 1.28Mcps TDD when using multiple frequencies. See note1 below |             |                      |
| <b>HS-SCCH Specific Information Response 7.68 Mcps</b>          |          | <i>0..&lt;maxno ofHSSCC Hcodes&gt;</i>  |                                 | Applicable to 7.68 Mcps TDD only                                  | YES         | ignore               |
| >Time Slot  | M        |   | 9.2.1.56                        |   | –           |                      |
| >Midamble Shift And Burst Type 7.68Mcps                         | M        |   | 9.2.3.23                        |   | –           |                      |
| >TDD Channelisation Code 7.68Mcps                               | M        |   | 9.2.3.25                        |   | –           |                      |
| <b>&gt;HS-SICH Information</b>                                  |          | 1                                       |                                 |   | –           |                      |
| >>HS SICH ID  | M        |   | 9.2.3.3ad                       |   | –           |                      |
| >>Time Slot   | M        |   | 9.2.1.56                        |   | –           |                      |
| >>Midamble Shift And Burst Type 7.68Mcps                        | M        |   | 9.2.3.23                        |   | –           |                      |
| >>TDD Channelisation Code 7.68Mcps                              | M        |   | 9.2.3.25                        |   | –           |                      |
| <b>HS-PDSCH Timeslot Specific Information Response</b>          |          | <i>0..&lt;maxno ofDLts&gt;</i>          |                                 | Not Applicable to 1.28Mcps TDD or 7.68Mcps TDD.                   | GLOBAL      | reject               |
| >Time Slot  | M        |   | 9.2.1.56                        |   | –           |                      |
| >Midamble Shift And Burst Type                                  | M        |   | 9.2.3.4                         |   | –           |                      |
| <b>HS-PDSCH Timeslot Specific Information Response LCR</b>      |          | <i>0..&lt;maxno ofDLtsLCR &gt;</i>      |                                 | Not Applicable to 3.84Mcps TDD or 7.68Mcps TDD.                   | GLOBAL      | reject               |
| >Time Slot LCR  | M        |   | 9.2.3.12a                       |   | –           |                      |
| >Midamble Shift LCR   | M        |   | 9.2.3.4C                        |   | –           |                      |
| <b>HS-PDSCH Timeslot Specific Information Response 7.68Mcps</b> |          | <i>0..&lt;maxno ofDLts&gt;</i>          |                                 | Applicable to 7.68Mcps TDD only.                                  | YES         | Ignore               |
| >Time Slot  | M        |   | 9.2.1.56                        |   | –           |                      |
| >Midamble Shift And Burst Type 7.68Mcps                         | M        |   | 9.2.3.23                        |   | –           |                      |
| HARQ Memory Partitioning  | O        |   | 9.2.1.116                       |   | –           |                      |
| User Plane Congestion Fields Inclusion                          | O        |   | 9.2.1.70C                       |   | YES         | ignore               |
| <b>HS-SCCH Specific Information Response LCR per UARFCN</b>     |          | <i>0..&lt;maxH SDPAFreq uency-1&gt;</i> |                                 | Applicable for 1.28Mcps TDD                                       | GLOBAL      | reject               |
| <b>&gt;HS-SCCH Specific Information Response LCR</b>            |          | <i>1..&lt;maxNo OfHSSCC Hcodes&gt;</i>  |                                 |   | –           |                      |
| >>Time Slot LCR   | M        |   | 9.2.3.12a                       |   | –           |                      |
| >>Midamble Shift LCR  | M        |   | 9.2.3.4C                        |   | –           |                      |
| >>First TDD Channelisation Code                                 | M        |   | TDD Channelisation Code 9.2.3.8 |   | –           |                      |
| >>Second TDD Channelisation Code                                | M        |   | TDD Channelisation Code 9.2.3.8 |   | –           |                      |

| IE/Group Name                         | Presence | Range                      | IE Type and Reference             | Semantics Description   | Criticality | Assigned Criticality |
|---------------------------------------|----------|----------------------------|-----------------------------------|---|-------------|----------------------|
| >>HS-SICH Information LCR             |          | 1                          |                                   |   | –           |                      |
| >>>HS SICH ID                         | M        |                            | 9.2.3.3ad                         |   |             |                      |
| >>>Time Slot LCR                      | M        |                            | 9.2.3.12a                         |   | –           |                      |
| >>>Midamble Shift LCR                 | M        |                            | 9.2.3.4C                          |   | –           |                      |
| >>>TDD Channelisation Code            | M        |                            | 9.2.3.8                           |   | –           |                      |
| >>Used Frequency                      | O        |                            | UARFCN<br>9.2.1.66                | Applicable for 1.28Mcps TDD when using multiple frequencies. this IE indicates the frequency which is actually used by the HS-SCCH. | YES         | reject               |
| >UARFCN                               | O        |                            | 9.2.1.66                          | Corresponds to Nt 3GPP TS 25.105<br>Applicable for 1.28Mcps TDD when using multiple frequencies. See note 1 below                   | YES         | ignore               |
| >HARQ Memory Partitioning per UARFCN  |          | $0..<maxHSDPAFrequency-1>$ |                                   |   |             |                      |
| >>HARQ Memory Partitioning            | O        |                            | 9.2.1.116                         |   | –           |                      |
| >UARFCN                               | O        |                            | 9.2.1.66                          | Corresponds to Nt 3GPP TS 25.105<br>Applicable for 1.28Mcps TDD when using multiple frequencies. See note 1 below                   | YES         | ignore               |
| Multi-Carrier number                  | O        |                            | Integer( $1..maxHSDPAFrequency$ ) | Applicable for 1.28Mcps TDD when using multiple frequencies.  | YES         | ignore               |
| MIMO SF Mode for HS-PDSCH dual stream | O        |                            | Enumerated (SF1, SF1/SF16)        | Applicable for 1.28Mcps TDD when MIMO is configured   | YES         | reject               |
| MIMO Reference Signal Information     | O        | $0..<maxNoOfHSSCHcodes>$   |                                   | Applicable for 1.28Mcps TDD when MIMO is configured   | YES         | reject               |
| >HS-SICH Reference Signal Information | M        |                            | 9.2.3.72                          |   | YES         |                      |



| IE/Group Name   | Presence | Range | IE Type and Reference                   | Semantics Description                   | Criticality | Assigned Criticality |
|---|----------|-------|---|---|-------------|----------------------|
| Out-of-sync Detection Window  | O        |       | ENUMERATED (40, 80, 160, 320, 640, ...) | Unit: ms<br>Applicable to 1.28Mcps TDD. | YES         | reject               |
| Note 1: This information element is a simplified representation of the ASN.1 description. |          |       |   |   |             |                      |

| Range bound               | Explanation  |
|---------------------------|--|
| <i>maxnoofMACdFlows</i>   | Maximum number of MAC-d flows.   |
| <i>maxnoofHSSCCHcodes</i> | Maximum number of HS-SCCH codes.                                       |
| <i>maxnoofDLts</i>        | Maximum number of downlink time slots per Radio Link for 3.84Mcps TDD. |
| <i>maxnoofDLtsLCR</i>     | Maximum number of Downlink time slots per Radio Link for 1.28Mcps TDD. |
| <i>maxHSDPAFrequency</i>  | Maximum number of Frequency that UE can support HSDPA                  |

### 9.2.3.3ac HS-DSCH TDD Update Information

The *HS-DSCH TDD Update Information* IE provides information for HS-DSCH to be updated. At least one IE shall be presented.

| IE/Group name                 | Presence | Range | IE Type and Reference | Semantic Description | Criticality | Assigned Criticality |
|-------------------------------|----------|-------|-----------------------|----------------------|-------------|----------------------|
| HS-SCCH Code Change Indicator | O        |       | 9.2.1.30R             |                      | –           |                      |
| TDD ACK NACK Power Offset     | O        |       | 9.2.3.71              |                      | –           |                      |

### 9.2.3.3ad HS-SICH ID

The HS-SICH ID identifies unambiguously a HS-SICH.

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description  |
|---------------|----------|-------|-----------------------|--|
| HS SICH ID    |          |       | INTEGER (0..31)       | For 1.28Mcps TDD, the IE is INTEGER (0..255). In ASN.1, it is presented by another IE for the value beyond the 31. |

### 9.2.3.3ae DSCH ID

The DSCH ID is the identifier of an active downlink shared channel. It is unique for each active DSCH among the active DSCHs simultaneously allocated for the same UE.

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description |
|---------------|----------|-------|-----------------------|-----------------------|
| DSCH ID       |          |       | INTEGER (0..255)      |                       |

### 9.2.3.3af DSCH Initial Window Size

Indicates the initial number of MAC-c/sh SDUs that may be transmitted before new credits are received from the DRNC.

| IE/Group Name            | Presence | Range | IE type and reference | Semantics description   |
|--------------------------|----------|-------|-----------------------|---|
| DSCH Initial Window Size |          |       | INTEGER (1..255)      | Number of MAC-c/sh SDUs: 255 = Unlimited number of MAC-c/sh SDUs. |

### 9.2.3.3ag DSCH Flow Control Information

The *DSCH Flow Control Information* IE provides flow control information for each scheduling priority class for the DSCH FP over Iur.

| IE/Group Name                        | Presence | Range                        | IE Type and Reference                   | Semantics Description | Criticality | Assigned Criticality |
|--------------------------------------|----------|------------------------------|---|-----------------------|-------------|----------------------|
| <b>DSCH Flow Control Information</b> |          | 1..16                        |   |                       | –           |                      |
| >DSCH Scheduling Priority            | M        |                              | Scheduling Priority Indicator 9.2.1.51A |                       | –           |                      |
| <b>&gt;MAC-c/sh SDU Length</b>       |          | 1..<maxNb MAC-c/shSDULength> |   |                       | –           |                      |
| >>MAC-c/sh SDU Length                | M        |                              | 9.2.1.34                                |                       | –           |                      |
| >DSCH Initial Window Size            | O        |                              | 9.2.3.3af                               |                       | YES         | ignore               |

| Range bound                   | Explanation                                       |
|-------------------------------|---|
| <i>maxNbMAC-c/shSDULength</i> | Maximum number of different MAC-c/sh SDU lengths. |

### 9.2.3.3ah DSCH-RNTI

DSCH-RNTI is the UE identifier allocated by DRNS to be used over the radio interface by UEs having one or several DSCHs and/or USCHs. It is unique within a cell.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---------------|----------|-------|-----------------------|-----------------------|
| DSCH-RNTI     |          |       | INTEGER(0..65535)     |                       |

### 9.2.3.3ai TSN-Length

The IE indicates the TSN length.

| IE/Group Name | Presence | Range | IE Type and Reference             | Semantics Description |
|---------------|----------|-------|-----------------------------------|-----------------------|
| TSN-Length    |          |       | ENUMERATED (tsn-6bits, tsn-9bits) |                       |

### 9.2.3.3A Maximum Number of Timeslots

Defines the maximum number of timeslots the UE has the capability of receiving or transmitting. [3.84Mcps TDD and 7.68Mcps TDD – in a frame] [1.28Mcps TDD – in a subframe]

| IE/Group Name               | Presence | Range | IE Type and Reference | Semantics Description                                  |
|-----------------------------|----------|-------|-----------------------|--|
| Maximum Number of Timeslots |          |       | INTEGER (1..14)       | For 1.28Mcps TDD the values 7 through 14 are not used. |

### 9.2.3.3B Maximum Number of UL Physical Channels per Timeslot

Defines the maximum number of physical channels [3.84Mcps TDD and 7.68Mcps TDD – per frame] [1.28Mcps TDD – per subframe] that the UE is capable to transmit.

| IE/Group Name                                       | Presence | Range | IE Type and Reference | Semantics Description |
|---|----------|-------|-----------------------|-----------------------|
| Maximum Number of UL Physical Channels per Timeslot |          |       | INTEGER (1..2)        |                       |

### 9.2.3.3C Maximum Number of DL Physical Channels

Defines the maximum number of physical channels [3.84Mcps TDD – per frame] [1.28Mcps TDD – per subframe] that the UE is capable to receive.

| IE/Group Name                          | Presence | Range | IE Type and Reference | Semantics Description                                    |
|--|----------|-------|-----------------------|--|
| Maximum Number of DL Physical Channels |          |       | INTEGER (1..224)      | For 1.28Mcps TDD the values 97 through 224 are not used. |

### 9.2.3.3D Maximum Number of DL Physical Channels per Timeslot

Defines the maximum number of physical channels per timeslot that the UE is capable to receive.

| IE/Group Name                                       | Presence | Range | IE Type and Reference | Semantics Description |
|---|----------|-------|-----------------------|-----------------------|
| Maximum Number of DL Physical Channels per Timeslot |          |       | INTEGER (1..16)       |                       |

### 9.2.3.4 Midamble Shift And Burst Type

This information element indicates burst type and midamble allocation.

Three different midamble allocation schemes exist:

- Default midamble: the midamble is allocated by layer 1 depending on the associated channelisation code (DL and UL);
- Common midamble: the midamble is allocated by layer 1 depending on the number of channelisation codes (possible in DL only);
- UE specific midamble: a UE specific midamble is explicitly assigned (DL and UL).

| IE/Group Name                                | Presence | Range | IE Type and Reference   | Semantics Description |
|--|----------|-------|---|-----------------------|
| CHOICE <i>Burst Type</i>                     |          |       |   |                       |
| > <i>Type 1</i>                              |          |       |   |                       |
| >> Midamble Configuration Burst Type 1 And 3 | M        |       | ENUMERATED(4, 8, 16)  | As defined in [12]    |
| >>Midamble Allocation Mode                   | M        |       | ENUMERATED(Default midamble, Common midamble, UE specific midamble) |                       |
| >>Midamble Shift Long                        | C-UE     |       | INTEGER(0..15)  |                       |
| > <i>Type 2</i>                              |          |       |   |                       |
| >> Midamble Configuration Burst Type 2       | M        |       | ENUMERATED (3, 6)   | As defined in [12]    |
| >>Midamble Allocation Mode                   | M        |       | ENUMERATED(Default midamble, Common midamble, UE specific midamble) |                       |
| >>Midamble Shift Short                       | C-UE     |       | INTEGER (0..15)   |                       |
| > <i>Type 3</i>                              |          |       |   | UL only               |
| >> Midamble Configuration Burst Type 1 And 3 | M        |       | ENUMERATED (4, 8, 16)   | As defined in [12]    |
| >>Midamble Allocation Mode                   | M        |       | ENUMERATED(Default midamble, UE specific midamble)                  |                       |
| >>Midamble Shift Long                        | C-UE     |       | INTEGER(0..15)  |                       |

| Condition | Explanation   |
|-----------|---|
| UE        | The IE shall be present if the <i>Midamble Allocation Mode</i> IE is set to "UE-specific midamble". |

#### 9.2.3.4A Minimum Spreading Factor

Defines the minimum spreading factor the UE has the capability of receiving or transmitting.

| IE/Group Name            | Presence | Range | IE Type and Reference | Semantics Description |
|--------------------------|----------|-------|-----------------------|-----------------------|
| Minimum Spreading Factor |          |       | INTEGER (1..16)       |                       |

#### 9.2.3.4B IPDL TDD parameters

The *IPDL TDD Parameters* IE provides the information for the IPDL Configuration applied in 3.84Mcps TDD mode.

| IE/Group name         | Presence | Range | IE Type and Reference                               | Semantics Description |
|-----------------------|----------|-------|---|-----------------------|
| IP Spacing TDD        | M        |       | ENUMERATED(30,40,50,70,100,...)                     | See [22]              |
| IP Start              | M        |       | INTEGER(0..4095)                                    | See [22]              |
| IP Slot               | M        |       | INTEGER(0..14)                                      | See [22]              |
| IP P-CCPCH            | M        |       | ENUMERATED(Switch off 1 frame, Switch off 2 frames) | See [22]              |
| Burst mode parameters | O        |       | 9.2.1.4B  |                       |

### 9.2.3.4Bb IPDL TDD parameters LCR

The *IPDL TDD Parameters LCR* IE provides the information for the IPDL Configuration applied in 1.28Mcps TDD mode.

| IE/Group name         | Presence | Range | IE Type and Reference           | Semantics Description |
|-----------------------|----------|-------|---------------------------------|-----------------------|
| IP Spacing TDD        | M        |       | ENUMERATED(30,40,50,70,100,...) | See [22]              |
| IP Start              | M        |       | INTEGER(0..4095)                | See [22]              |
| IP_Sub                | M        |       | ENUMERATED(First,Second,Both)   | See [22]              |
| Burst mode parameters | O        |       | 9.2.1.4B                        |                       |

### 9.2.3.4C Midamble shift LCR

This information element indicates midamble allocation in 1.28Mcps TDD.

Three different midamble allocation schemes exist:

- Default midamble: the midamble is allocated by layer 1 depending on the associated channelisation code (DL and UL);
- Common midamble: the midamble is allocated by layer 1 depending on the number of channelisation codes (possible in DL only);
- UE specific midamble: a UE specific midamble is explicitly assigned (DL and UL).

| IE/Group name              | Presence | Range | IE Type and Reference   | Semantics Description |
|----------------------------|----------|-------|---|-----------------------|
| Midamble Allocation Mode   | M        |       | ENUMERATED(Default midamble, Common midamble, UE specific midamble,...) |                       |
| Midamble Shift Long        | C-UE     |       | INTEGER(0..15)  |                       |
| Midamble Configuration LCR | M        |       | ENUMERATED(2, 4, 6, 8, 10, 12, 14, 16, ...)                             | As defined in [12]    |

| Condition | Explanation   |
|-----------|---|
| UE        | The IE shall be present if the <i>Midamble Allocation Mode</i> IE is set to "UE-specific midamble". |

#### 9.2.3.4D Neighbouring TDD Cell Information LCR

Void

#### 9.2.3.5 Primary CCPCH RSCP

Received Signal Code Power is the received power on PCCPCH of the target cell after despreading. The reference point for the RSCP is the antenna connector at the UE, see ref. [14].

| IE/Group Name      | Presence | Range | IE Type and Reference | Semantics Description   |
|--------------------|----------|-------|-----------------------|---|
| Primary CCPCH RSCP |          |       | INTEGER(0..91)        | According to mapping of the non-negative values in ref. [24]. |

#### 9.2.3.5a Primary CCPCH RSCP Delta

Primary CCPCH RSCP Delta is the offset used to report the negative reporting range of P-CCPCH RSCP as per [24].

| IE/Group Name            | Presence | Range | IE Type and Reference | Semantics Description   |
|--------------------------|----------|-------|-----------------------|---|
| Primary CCPCH RSCP Delta |          |       | INTEGER(-5..-1,...)   | If present, the actual value of Primary CCPCH RSCP = Primary CCPCH RSCP Delta |

#### 9.2.3.5A PRACH Midamble

Void.

#### 9.2.3.5B RB Identity

The RB Identity is the identifier of a radio bearer. It is unique for each active Radio bearer among the active radio bearers simultaneously allocated for the same UE.

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description            |
|---------------|----------|-------|-----------------------|----------------------------------|
| RB Identity   |          |       | INTEGER(0..31)        | In line with [16], ch. 10.3.4.11 |

#### 9.2.3.6 Repetition Length

The Repetition Length represents the number of consecutive Radio Frames inside a Repetition Period in which the same Time Slot is assigned to the same Physical Channel see ref. [16].

[1.28Mcps TDD- When applied to configure the E-DCH Non-scheduled Grant Information, the Repetition Length represents the number of consecutive Subframes, i.e. 5ms inside a Repetition Period in which the same Time Slot is assigned to the same Physical Channel see ref. [16].]

| IE/Group Name     | Presence | Range | IE Type and Reference | Semantics Description |
|-------------------|----------|-------|-----------------------|-----------------------|
| Repetition Length |          |       | INTEGER(1..63)        |                       |

### 9.2.3.7 Repetition Period

The Repetition Period represents the number of consecutive Radio Frames after which the same assignment scheme of Time Slots to a Physical Channel is repeated. This means that if the Time Slot  $K$  is assigned to a physical channel in the Radio Frame  $J$ , it is assigned to the same physical channel also in all the Radio Frames  $J+n*Repetition\ Period$  (where  $n$  is an integer) see ref. [16].

[1.28Mcps TDD- When applied to configure the E-DCH Non-scheduled Grant Information, the Repetition Period represents the number of consecutiveSubframes, i.e. 5ms after which the same assignment scheme of Time Slots to a Physical Channel is repeated see ref. [16].]

| IE/Group Name     | Presence | Range | IE Type and Reference            | Semantics Description |
|-------------------|----------|-------|----------------------------------|-----------------------|
| Repetition Period |          |       | ENUMERATED<br>(1,2,4,8,16,32,64) |                       |

### 9.2.3.7A Rx Timing Deviation

Measured Rx Timing Deviation as a basis for timing advance, either measured directly from a RACH burst, or calculated from the Rx Timing Deviation measurement on the USCH by adding the current Timing Advance value. For 1.28Mcps TDD this IE must be set to 0.

| IE/Group Name       | Presence | Range | IE Type and Reference | Semantics Description            |
|---------------------|----------|-------|-----------------------|----------------------------------|
| Rx Timing Deviation |          |       | INTEGER<br>(0..127)   | As specified in [5], ch. 6.2.7.6 |

### 9.2.3.7B Secondary CCPCH Info TDD

The *Secondary CCPCH Info TDD* IE provides information on the Secondary CCPCH that carries the logical channel SHCCH for the UE.

| IE/Group Name                         | Presence | Range                              | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|---------------------------------------|----------|------------------------------------|-----------------------|-----------------------|-------------|----------------------|
| TFCS                                  | M        |                                    | 9.2.1.63              | For the DL.           | –           |                      |
| TFCI Coding                           | M        |                                    | 9.2.3.11              |                       | –           |                      |
| <b>Secondary CCPCH</b>                |          | <i>0..&lt;maxno ofSCCPC Hs&gt;</i> |                       |                       | –           |                      |
| >Time Slot                            | M        |                                    | 9.2.1.56              |                       | –           |                      |
| >Midamble Shift And Burst Type        | M        |                                    | 9.2.3.4               |                       | –           |                      |
| >TFCI Presence                        | M        |                                    | 9.2.1.55              |                       | –           |                      |
| >Secondary CCPCH TDD Code Information | M        |                                    | 9.2.3.7C              |                       | –           |                      |
| >TDD Physical Channel Offset          | M        |                                    | 9.2.3.9               |                       | –           |                      |
| >Repetition Length                    | M        |                                    | 9.2.3.6               |                       | –           |                      |
| >Repetition Period                    | M        |                                    | 9.2.3.7               |                       | –           |                      |
| <b>FACH</b>                           |          | <i>0..maxnoo fFACHs</i>            |                       |                       | –           |                      |
| >TFS                                  | M        |                                    | 9.2.1.64              | For the DL.           | –           |                      |
| <b>PCH</b>                            |          | <i>0..1</i>                        |                       |                       | –           |                      |
| >TFS                                  | M        |                                    | 9.2.1.64              | For the DL.           | –           |                      |

| Range bound            | Explanation  |
|------------------------|--|
| <i>maxnoofSCCPC Hs</i> | Maximum number of Secondary CCPCHs per CCTrCH.         |
| <i>maxnoofFACHs</i>    | Maximum number of FACHs mapped onto a Secondary CCPCH. |

### 9.2.3.7C Secondary CCPCH TDD Code Information

The *Secondary CCPCH TDD Code Information* IE provides TDD Channelisation Code information for all SCCPCHs of one Time Slot.

| IE/Group Name                               | Presence | Range                              | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|---|----------|------------------------------------|-----------------------|-----------------------|-------------|----------------------|
| <b>Secondary CCPCH TDD Code Information</b> |          | <i>1..&lt;maxno OfSCCPC Hs&gt;</i> |                       |                       | –           |                      |
| >TDD Channelisation Code                    | M        |                                    | 9.2.3.8               |                       | –           |                      |

| Range bound          | Explanation                               |
|----------------------|---|
| <i>maxnoofSCCPCs</i> | Maximum number of SCCPCHs for one CCTrCH. |

### 9.2.3.7D Special Burst Scheduling

The number of frames between special burst transmissions during DTX.

| IE/Group Name            | Presence | Range | IE Type and Reference          | Semantics Description   |
|--------------------------|----------|-------|--------------------------------|---|
| Special Burst Scheduling |          |       | <i>INTEGER(1, 2, ..., 256)</i> | Number of frames between special burst transmissions during DTX |

### 9.2.3.7E Synchronisation Configuration

The Synchronisation Configuration parameters that are used by the DRNS in the Radio Link Failure/Restore procedure.

| IE/Group Name | Presence | Range | IE Type and Reference                     | Semantics Description |
|---------------|----------|-------|---|-----------------------|
| N_INSYNC_IND  | M        |       | <i>INTEGER(1, 2, ..., 256)</i>            |                       |
| N_OUTSYNC_IND | M        |       | <i>INTEGER(1, 2, ..., 256)</i>            |                       |
| T_RLFAILURE   | M        |       | <i>ENUMERATED(0, 0.1, 0.2, ..., 25.5)</i> | Unit: seconds         |

### 9.2.3.7F Secondary CCPCH Info TDD LCR

The *Secondary CCPCH Info TDD LCR* IE provides information on the Secondary CCPCH that carries the logical channel SHCCH for the UE.



| IE/Group Name                             | Presence | Range                             | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|---|----------|-----------------------------------|-----------------------|-----------------------|-------------|----------------------|
| TFCS                                      | M        |                                   | 9.2.1.63              | For the DL.           | –           |                      |
| TFCI Coding                               | M        |                                   | 9.2.3.11              |                       | –           |                      |
| <b>Secondary CCPCH</b>                    |          | <i>0..&lt;maxno ofSCCPCHs&gt;</i> |                       |                       | –           |                      |
| >Time Slot LCR                            | M        |                                   | 9.2.3.12a             |                       | –           |                      |
| >Midamble Shift LCR                       | M        |                                   | 9.2.3.4C              |                       | –           |                      |
| >TFCI Presence                            | M        |                                   | 9.2.1.55              |                       | –           |                      |
| >Secondary CCPCH TDD Code Information LCR | M        |                                   | 9.2.3.7G              |                       | –           |                      |
| >TDD Physical Channel Offset              | M        |                                   | 9.2.3.9               |                       | –           |                      |
| >Repetition Length                        | M        |                                   | 9.2.3.6               |                       | –           |                      |
| >Repetition Period                        | M        |                                   | 9.2.3.7               |                       | –           |                      |
| <b>FACH</b>                               |          | <i>0..&lt;maxno ofFACHs&gt;</i>   |                       |                       | –           |                      |
| >TFS                                      | M        |                                   | 9.2.1.64              | For the DL.           | –           |                      |
| <b>PCH</b>                                |          | <i>0..1</i>                       |                       |                       | –           |                      |
| >TFS                                      | M        |                                   | 9.2.1.64              | For the DL.           | –           |                      |

| Range bound           | Explanation  |
|-----------------------|--|
| <i>maxnoofSCCPCHs</i> | Maximum number of Secondary CCPCHs per CCTrCH.         |
| <i>maxnoofFACHs</i>   | Maximum number of FACHs mapped onto a Secondary CCPCH. |

### 9.2.3.7G Secondary CCPCH TDD Code Information LCR

The *Secondary CCPCH TDD Code Information LCR* IE provides LCR TDD Channelisation Code information for all SCCPCHs of one Time Slot.

| IE/Group Name                               | Presence | Range                             | IE Type and Reference                        | Semantics Description | Criticality | Assigned Criticality |
|---|----------|-----------------------------------|--|-----------------------|-------------|----------------------|
| <b>Secondary CCPCH TDD Code Information</b> |          | <i>1..&lt;maxno ofSCCPCHs&gt;</i> |  |                       | –           |                      |
| >TDD Channelisation Code LCR                | M        |                                   | 9.2.3.8a                                     |                       | –           |                      |
| >SCCPCH Time Slot Format LCR                | M        |                                   | TDD DL DPCH Time Slot Format LCR<br>9.2.3.8E |                       | –           |                      |

| Range bound           | Explanation                               |
|-----------------------|---|
| <i>maxnoofSCCPCHs</i> | Maximum number of SCCPCHs for one CCTrCH. |

### 9.2.3.7H Support of 8PSK

The *Support of 8PSK* IE indicates whether 8PSK is supported or not.

| IE/Group Name   | Presence | Range | IE Type and Reference | Semantics Description |
|-----------------|----------|-------|-----------------------|-----------------------|
| Support of 8PSK |          |       | ENUMERATED(supported) |                       |

### 9.2.3.71 TDD ACK NACK Power Offset

The *TDD ACK NACK Power Offset* IE indicates Power offset used in the UL in the HS-SICH between transmissions carrying positive and negative acknowledgements as per [16].

| IE/Group Name             | Presence | Range | IE type and reference | Semantics description                      |
|---------------------------|----------|-------|-----------------------|--|
| TDD ACK NACK Power Offset |          |       | INTEGER (-7..8,...)   | Unit: dB<br>Range: -7..+8 dB<br>Step: 1 dB |

### 9.2.3.8 TDD Channelisation Code

The Channelisation Code Number indicates which Channelisation Code is used for a given Physical Channel. In TDD the Channelisation Code is an Orthogonal Variable Spreading Factor code that can have a spreading factor of 1, 2, 4, 8 or 16.

| IE/Group Name           | Presence | Range | IE Type and Reference  | Semantics Description |
|-------------------------|----------|-------|--|-----------------------|
| TDD Channelisation Code |          |       | ENUMERATED<br>((1/1), (2/1),<br>(2/2), (4/1), ..<br>(4/4), (8/1), ..<br>(8/8), (16/1), ..<br>(16/16),... ) |                       |

### 9.2.3.8a TDD Channelisation Code LCR

The Channelisation Code Number indicates which Channelisation Code is used for a given Physical Channel. In 1.28Mcps TDD the Channelisation Code is an Orthogonal Variable Spreading Factor code, that can have a spreading factor of 1, 2, 4, 8 or 16 and there is a choice between QPSK and 8PSK modulation.

| IE/Group Name           | Presence | Range | IE Type and Reference   | Semantics Description   |
|-------------------------|----------|-------|---|---|
| TDD Channelisation Code | M        |       | ENUMERATED<br>ED((1/1),<br>(2/1), (2/2),<br>(4/1),...(4/4),<br>(8/1), .. (8/8),<br>(16/1)..<br>(16/16) ,... ) |   |
| Modulation              | M        |       | ENUMERATED<br>ED(QPSK,<br>8PSK, ...)  | Modulation options for<br>1.28Mcps TDD in contrast to<br>3.84Mcps TDD |

### 9.2.3.8A TDD DPCH Offset

The Offset represents the phase information for the allocation of a group of dedicated physical channels. The *Offset Type* IE = "No Initial Offset" is used when a starting offset is not required and the TDD Physical channel offset for each DPCH in the CCTrCH shall be directly determined from the TDD DPCH Offset. The *Offset Type* IE = "Initial Offset" is used when a starting offset is required. The TDD DPCH Offset shall map to the CFN and the TDD Physical Channel Offset for each DPCH in this CCTrCH shall be calculated by TDD DPCH Offset *mod* Repetition period, see ref. [16].

| IE/Group Name              | Presence | Range | IE Type and Reference | Semantics Description |
|----------------------------|----------|-------|-----------------------|-----------------------|
| CHOICE <i>Offset Type</i>  |          |       |                       |                       |
| > <i>Initial Offset</i>    |          |       |                       |                       |
| >>TDD DPCH Offset Value    | M        |       | INTEGER (0..255)      |                       |
| > <i>No Initial Offset</i> |          |       |                       |                       |
| >>TDD DPCH Offset Value    | M        |       | INTEGER (0..63)       |                       |

### 9.2.3.8B TDD DCHs To Modify

The *TDD DCHs To Modify* IE provides information for DCHs to be modified.

| IE/Group Name                       | Presence | Range                          | IE Type and Reference | Semantics Description                 | Criticality | Assigned Criticality |
|-------------------------------------|----------|--------------------------------|-----------------------|---------------------------------------|-------------|----------------------|
| <b>TDD DCHs To Modify</b>           |          | <i>1..&lt;maxno ofDCHs&gt;</i> |                       |                                       | –           |                      |
| >UL FP Mode                         | O        |                                | 9.2.1.67              |                                       | –           |                      |
| >ToAWS                              | O        |                                | 9.2.1.58              |                                       | –           |                      |
| >ToAWE                              | O        |                                | 9.2.1.57              |                                       | –           |                      |
| >Transport Bearer Request Indicator | M        |                                | 9.2.1.61              |                                       | –           |                      |
| <b>&gt;DCH Specific Info</b>        |          | <i>1..&lt;maxno ofDCHs&gt;</i> |                       |                                       | –           |                      |
| >>DCH ID                            | M        |                                | 9.2.1.16              |                                       | –           |                      |
| >>CCTrCH ID                         | O        |                                | 9.2.3.2               | UL CCTrCH in which the DCH is mapped. | –           |                      |
| >>CCTrCH ID                         | O        |                                | 9.2.3.2               | DL CCTrCH in which the DCH is mapped  | –           |                      |
| >>Transport Format Set              | O        |                                | 9.2.1.64              | For the UL.                           | –           |                      |
| >>Transport Format Set              | O        |                                | 9.2.1.64              | For the DL.                           | –           |                      |
| >>Allocation/Retention Priority     | O        |                                | 9.2.1.1               |                                       | –           |                      |
| >>Frame Handling Priority           | O        |                                | 9.2.1.29              |                                       | –           |                      |
| >>Guaranteed Rate Information       | O        |                                | 9.2.1.30M             |                                       | YES         | ignore               |
| >>Traffic Class                     | O        |                                | 9.2.1.58A             |                                       | YES         | ignore               |
| >TNL QoS                            | O        |                                | 9.2.1.56A             |                                       | YES         | ignore               |

| Range bound        | Explanation                        |
|--------------------|------------------------------------|
| <i>maxnoofDCHs</i> | Maximum number of DCHs for one UE. |

### 9.2.3.8C TDD DL Code Information

The *TDD DL Code Information* IE provides TDD DL Code information for all DPCHs of one DL Time Slot.

| IE/Group Name                  | Presence | Range                            | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|--------------------------------|----------|----------------------------------|-----------------------|-----------------------|-------------|----------------------|
| <b>TDD DL Code Information</b> |          | <i>1..&lt;maxno OfDPCHs &gt;</i> |                       |                       | –           |                      |
| >DPCH ID                       | M        |                                  | 9.2.3.3               |                       | –           |                      |
| >TDD Channelisation Code       | M        |                                  | 9.2.3.8               |                       | –           |                      |

| Range bound         | Explanation                             |
|---------------------|---|
| <i>maxnoofDPCHs</i> | Maximum number of DPCHs for one CCTrCH. |

### 9.2.3.8D TDD DL Code Information LCR

The *TDD DL Code Information LCR* IE provides DL Code information for the RL for 1.28Mcps TDD.

| IE/Group Name                      | Presence | Range                                | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|------------------------------------|----------|--------------------------------------|-----------------------|-----------------------|-------------|----------------------|
| <b>TDD DL Code Information LCR</b> |          | 1 ..<br>< <i>maxnoOfDPCHLCR</i><br>> |                       |                       | –           |                      |
| >DPCH ID                           | M        |                                      | 9.2.3.5               |                       | –           |                      |
| >TDD Channelisation Code LCR       | M        |                                      | 9.2.3.8a              |                       | –           |                      |
| > TDD DL DPCH Time Slot Format LCR | M        |                                      | 9.2.3.8E              |                       | –           |                      |

| Range bound           | Explanation   |
|-----------------------|---|
| <i>maxnoOfDPCHLCR</i> | Maximum number of DPCH in one CCTrCH for 1.28Mcps TDD |

### 9.2.3.8E TDD DL DPCH Time Slot Format LCR

TDD DL DPCH Time Slot Format LCR indicates the time slot formats used in DL DPCH for 1.28Mcps TDD (see ref. [12]).

| IE/Group Name                          | Presence | Range | IE type and reference | Semantics description |
|--|----------|-------|-----------------------|-----------------------|
| <i>CHOICE Modulation</i>               |          |       |                       |                       |
| > <i>QPSK</i>                          |          |       |                       |                       |
| >>QPSK TDD DL DPCH TimeSlot Format LCR | M        |       | INTEGER (0..24,...)   |                       |
| > <i>8PSK</i>                          |          |       |                       |                       |
| >>8PSK TDD DL DPCH TimeSlot Format LCR | M        |       | INTEGER (0..24,...)   |                       |

### 9.2.3.9 TDD Physical Channel Offset

The TDD Physical Channel Offset represents the phase information for the allocation of a non DPCH physical channel. (CFN mod Repetition Period = TDD Physical Channel Offset) see ref. [16].

| IE/Group Name               | Presence | Range | IE Type and Reference | Semantics Description |
|-----------------------------|----------|-------|-----------------------|-----------------------|
| TDD Physical Channel Offset |          |       | INTEGER (0..63)       |                       |

### 9.2.3.10 TDD TPC Downlink Step Size

This parameter indicates step size for the DL power adjustment (see ref [22]).

| IE/Group Name              | Presence | Range | IE Type and Reference   | Semantics Description |
|----------------------------|----------|-------|-------------------------|-----------------------|
| TDD TPC Downlink Step Size |          |       | ENUMERATED(1, 2, 3,...) | Unit: dB              |

### 9.2.3.10a TDD TPC Uplink Step Size

This parameter indicates step size for the UL power adjustment (see ref [22]).

| IE/Group Name            | Presence | Range | IE Type and Reference       | Semantics Description |
|--------------------------|----------|-------|-----------------------------|-----------------------|
| TDD TPC Uplink Step Size |          |       | ENUMERATED<br>(1, 2, 3,...) | Unit: dB              |

### 9.2.3.10A TDD UL Code Information

The *TDD UL Code Information* IE provides TDD UL Code information for all DPCHs of one UL Time Slot.

| IE/Group Name                  | Presence | Range               | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|--------------------------------|----------|---------------------|-----------------------|-----------------------|-------------|----------------------|
| <b>TDD UL Code Information</b> |          | 1..<maxno OfDPCHs > |                       |                       | –           |                      |
| >DPCH ID                       | M        |                     | 9.2.3.3               |                       | –           |                      |
| >TDD Channelisation Code       | M        |                     | 9.2.3.8               |                       | –           |                      |

| Range bound         | Explanation                             |
|---------------------|---|
| <i>maxnoOfDPCHs</i> | Maximum number of DPCHs for one CCTrCH. |

### 9.2.3.10B TDD UL Code Information LCR

The *TDD UL Code Information LCR* IE provides information for UL Code to be established for 1.28Mcps TDD.

| IE/Group Name                      | Presence | Range                   | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|------------------------------------|----------|-------------------------|-----------------------|-----------------------|-------------|----------------------|
| <b>TDD UL Code Information LCR</b> |          | 1 .. <maxno OfDPCH LCR> |                       |                       | –           |                      |
| >DPCH ID                           | M        |                         | 9.2.3.5               |                       | –           |                      |
| >TDD Channelisation Code LCR       | M        |                         | 9.2.3.8a              |                       | –           |                      |
| > TDD UL DPCH Time Slot Format LCR | M        |                         | 9.2.3.10C             |                       | –           |                      |

| Range bound           | Explanation  |
|-----------------------|--|
| <i>maxnoOfDPCHLCR</i> | Maximum number of DPCH in one CCTrCH for 1.28Mcps TDD. |

### 9.2.3.10C TDD UL DPCH Time Slot Format LCR

TDD UL DPCH Time Slot Format LCR indicates the time slot formats used in UL DPCH for 1.28Mcps TDD (see ref. [12]).

| IE/Group Name                              | Presence | Range | IE type and reference  | Semantics description |
|--|----------|-------|------------------------|-----------------------|
| CHOICE <i>Modulation</i>                   |          |       |                        |                       |
| > <i>QPSK</i>                              |          |       |                        |                       |
| >>QPSK TDD UL DPCH<br>Time Slot Format LCR | M        |       | INTEGER<br>(0..69,...) |                       |
| > <i>8PSK</i>                              |          |       |                        |                       |
| >>8PSK TDD UL DPCH<br>Time Slot Format LCR | M        |       | INTEGER<br>(0..24,...) |                       |

### 9.2.3.10D 1.28 Mcps TDD uplink physical channel capability

1.28 Mcps TDD uplink physical channel capability IE defines the UE uplink physical channel capability for 1.28 Mcps TDD.

| IE/Group Name                                    | Presence | Range | IE Type and Reference      | Semantics Description |
|--|----------|-------|----------------------------|-----------------------|
| Maximum Number of timeslots per subframe         | M        |       | INTEGER<br>(1..6)          |                       |
| Maximum number of physical channels per timeslot | M        |       | ENUMERATED<br>(1,2,3,4...) |                       |

### 9.2.3.11 TFCI Coding

The TFCI Coding describes how the TFCI bits are coded. By default 1 TFCI bit is coded with 4 bits, 2 TFCI bits are coded with 8 bits, 3-5 TFCI bits are coded with 16 bits and 6-10 TFCI bits are coded with 32 bits.

| IE/Group Name | Presence | Range | IE Type and Reference             | Semantics Description |
|---------------|----------|-------|-----------------------------------|-----------------------|
| TFCI Coding   |          |       | ENUMERATED<br>D(4, 8, 16, 32,...) |                       |

### 9.2.3.12 DL Timeslot ISCP

DL Timeslot ISCP is the measured interference in a downlink timeslot at the UE, see ref. [14].

| IE/Group Name    | Presence | Range | IE Type and Reference | Semantics Description         |
|------------------|----------|-------|-----------------------|-------------------------------|
| DL Timeslot ISCP |          |       | INTEGER<br>(0..91)    | According to mapping in [24]. |

### 9.2.3.12a Time Slot LCR

The Time Slot LCR is the number of the traffic time slot within a 5 ms subframe of LCR TDD.

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description |
|---------------|----------|-------|-----------------------|-----------------------|
| Time Slot LCR |          |       | INTEGER<br>(0..6)     |                       |

### 9.2.3.12A Timing Advance Applied

Defines the need for Timing Advance functions such as Rx Timing Deviation measurement in a particular cell.

| IE/Group Name          | Presence | Range | IE Type and Reference | Semantics Description |
|------------------------|----------|-------|-----------------------|-----------------------|
| Timing Advance Applied |          |       | ENUMERATED(Yes, No)   |                       |

### 9.2.3.13 Transport Format Management

Defines whether the cell transmits the transport format information via broadcast or whether the transport format information is transmitted to the UE using dedicated RRC procedures

| IE/Group Name               | Presence | Range | IE Type and Reference                | Semantics Description |
|-----------------------------|----------|-------|--------------------------------------|-----------------------|
| Transport Format Management |          |       | ENUMERATED(Cell Based, UE Based,...) |                       |

### 9.2.3.13A UL Timeslot ISCP

UL Timeslot ISCP is the measured interference in a uplink timeslot at the DRNS, see ref. [14].

| IE/Group Name    | Presence | Range | IE Type and Reference | Semantics Description         |
|------------------|----------|-------|-----------------------|-------------------------------|
| UL Timeslot ISCP |          |       | INTEGER(0..127)       | According to mapping in [24]. |

### 9.2.3.13B UL PhysCH SF Variation

Indicates whether variation of SF in UL is supported by Radio Link or not.

| IE/Group Name          | Presence | Range | IE Type and Reference  | Semantics Description |
|------------------------|----------|-------|--|-----------------------|
| UL PhysCH SF Variation |          |       | ENUMERATED(SF_Variation_supported, SF_Variation_NOT_supported) |                       |

### 9.2.3.13C UL Timeslot Information

The *UL Timeslot Information* IE provides information on the time slot allocation for a UL DPCH.

| IE/Group Name                  | Presence | Range                        | IE Type and Reference                | Semantics Description | Criticality | Assigned Criticality |
|--------------------------------|----------|------------------------------|--------------------------------------|-----------------------|-------------|----------------------|
| <b>UL Timeslot Information</b> |          | <i>1..&lt;maxno OFTS&gt;</i> |                                      |                       | –           |                      |
| >Time Slot                     | M        |                              | 9.2.1.56                             |                       | –           |                      |
| >Midamble Shift And Burst Type | M        |                              | 9.2.3.4                              |                       | –           |                      |
| >TFCI Presence                 | M        |                              | 9.2.1.55                             |                       | –           |                      |
| >UL Code Information           | M        |                              | TDD UL Code Information<br>9.2.3.10A |                       | –           |                      |

| Range bound      | Explanation                           |
|------------------|---------------------------------------|
| <i>maxnoofTs</i> | Maximum number of Timeslots for a UE. |

### 9.2.3.13D UL Time Slot ISCP Info

The *UL Time Slot ISCP Info* IE gives interference level for each UL time slot within the Radio Link.

| IE/Group Name                 | Presence | Range                           | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|-------------------------------|----------|---------------------------------|-----------------------|-----------------------|-------------|----------------------|
| <b>UL Time Slot ISCP Info</b> |          | 1 ..<br>< <i>maxnoof ULts</i> > |                       |                       | –           |                      |
| >Time Slot                    | M        |                                 | 9.2.1.56              |                       | –           |                      |
| >UL Timeslot ISCP             | M        |                                 | 9.2.3.13A             |                       | –           |                      |

| Range bound        | Explanation   |
|--------------------|---|
| <i>maxnoofULts</i> | Maximum number of uplink time slots per Radio Link. |

### 9.2.3.13E TSTD Indicator

Indicates if TSTD shall be active or not for the DL DPCH.

| IE/Group Name  | Presence | Range | IE Type and Reference        | Semantics Description |
|----------------|----------|-------|------------------------------|-----------------------|
| TSTD Indicator |          |       | ENUMERATED(active, inactive) |                       |

### 9.2.3.13F TSTD Support Indicator

Indicates if UE support TSTD or not for DL DPCH.

| IE/Group Name          | Presence | Range | IE Type and Reference                          | Semantics Description |
|------------------------|----------|-------|--|-----------------------|
| TSTD Support Indicator |          |       | ENUMERATED(TSTD supported, TSTD not supported) |                       |

### 9.2.3.13Fa UE Measurement Hysteresis Time

The UE Measurement Hysteresis Time provides the duration during which a reporting criterion has to be fulfilled for the UE Measurement Reporting procedure to be triggered, see [16].

| IE/Group Name                  | Presence | Range | IE Type and Reference | Semantics Description                        |
|--------------------------------|----------|-------|-----------------------|--|
| UE Measurement Hysteresis Time |          |       | INTEGER(0..15)        | Unit: dB<br>Range: 0..7.5 dB<br>Step: 0.5 dB |

### 9.2.3.13Fb UE Measurement Parameter Modification Allowed

Indicates if the SRNC may modify the UE measurement parameters based on its existing measurement schedule.



| IE/Group Name                                 | Presence | Range | IE Type and Reference                               | Semantics Description |
|---|----------|-------|---|-----------------------|
| UE Measurement Parameter Modification Allowed |          |       | ENUMERATED<br>(Parameter Modification Allowed, ...) |                       |

### 9.2.3.13Fc UE Measurement Report Characteristics

The UE Measurement Report Characteristics, defines how the reporting shall be performed. For definition of the event criteria see [16].

| IE/Group Name                           | Presence | Range | IE Type and Reference  | Semantics Description  |
|---|----------|-------|--|--|
| <i>CHOICE UE Report Characteristics</i> |          |       |  |  |
| > <i>Periodic</i>                       |          |       |  |  |
| >>Amount of Reporting                   | M        |       | ENUMERATED(1, 2, 4, 8, 16, 32, 64, infinity)   |  |
| >>Reporting Interval                    | M        |       | ENUMERATED (250, 500, 1000, 2000, 3000, 4000, 6000, 8000, 12000, 16000, 20000, 24000, 28000, 32000, 64000) | Indicates the interval of periodical report interval in milliseconds |
| > <i>Event 1h</i>                       |          |       |  |  |
| >>UE Measurement Threshold              | M        |       | 9.2.3.13Fd   | The threshold for which the DRNS shall trigger a measurement report. |
| >>UE Measurement Time to Trigger        | M        |       | 9.2.3.13Fg   |  |
| >>Hysteresis                            | M        |       | 9.2.3.13Fa   |  |
| > <i>Event 1i</i>                       |          |       |  |  |
| >>UE Measurement Threshold              | M        |       | 9.2.3.13Fd   | The threshold for which the DRNS shall trigger a measurement report. |
| >>UE Measurement Time to Trigger        | M        |       | 9.2.3.13Fg   |  |
| >>Hysteresis                            | M        |       | 9.2.3.13Fa   |  |
| > <i>Event 6a</i>                       |          |       |  |  |
| >>UE Measurement Threshold              | M        |       | 9.2.3.13Fd   |  |
| >>UE Measurement Time to Trigger        | M        |       | 9.2.3.13Fg   |  |
| > <i>Event 6b</i>                       |          |       |  |  |
| >>UE Measurement Threshold              | M        |       | 9.2.3.13Fd   |  |
| >>UE Measurement Time to Trigger        | M        |       | 9.2.3.13Fg   |  |
| > <i>Event 6c</i>                       |          |       |  |  |
| >>UE Measurement Time to Trigger        | M        |       | 9.2.3.13Fg   |  |
| > <i>Event 6d</i>                       |          |       |  |  |
| >>UE Measurement Time to Trigger        | M        |       | 9.2.3.13Fg   |  |

### 9.2.3.13Fd UE Measurement Threshold

The Measurement Threshold defines which threshold that shall trigger Event 1h, 1i, 6a or 6b, see [16].

| IE/Group Name                          | Presence | Range | IE Type and Reference | Semantics Description |
|--|----------|-------|-----------------------|-----------------------|
| CHOICE <i>UE Measurement Threshold</i> |          |       |                       |                       |
| > <i>Timeslot ISCP</i>                 |          |       |                       |                       |
| >>Timeslot ISCP                        | M        |       | INTEGER (-115..-25)   | In dBm                |
| > <i>UE Tx Power</i>                   |          |       |                       |                       |
| >>UE Transmitted Power                 | M        |       | INTEGER(-50..33)      | In dBm                |

### 9.2.3.13Fe UE Measurement Timeslot Information HCR

The *UE Measurement Time Slot Information* IE provides information for DL timeslots for the UE to measure, see [16].

| IE/Group Name                              | Presence | Range          | IE Type and Reference                 | Semantics Description |
|--|----------|----------------|---------------------------------------|-----------------------|
| <b>UE Measurement Timeslot Information</b> |          | 1..<maxnoOfTS> |                                       |                       |
| >Time Slot                                 | M        |                | 9.2.1.56                              |                       |
| >Burst Type                                | M        |                | ENUMERATED(Type1, Type 2, Type 3,...) |                       |

| Range bound       | Explanation  |
|-------------------|--|
| <i>maxnoOfTSs</i> | Maximum number of Timeslots for a UE for 3.84Mcps TDD. |

### 9.2.3.13Ff UE Measurement Timeslot Information LCR

The *UE Measurement Time Slot Information LCR* IE provides information for DL timeslots for the UE to measure, see [16].

| IE/Group Name                                   | Presence | Range                | IE Type and Reference | Semantics Description |
|---|----------|----------------------|-----------------------|-----------------------|
| <b>UE Measurement Time Slot Information LCR</b> |          | 1 .. <maxnoOfTSLCR > |                       |                       |
| >Time Slot LCR                                  | M        |                      | 9.2.3.12a             |                       |

| Range bound         | Explanation   |
|---------------------|---|
| <i>maxnoOfTSLCR</i> | Maximum number of Timeslots for a UE for 1.28Mcps TDD |

### 9.2.3.13Fg UE Measurement Time to Trigger

The UE time to trigger indicates the period of time between the timing of event detection and the timing of sending Measurement Report, see [16].

| IE/Group Name                  | Presence | Range | IE Type and Reference                                 | Semantics Description |
|--------------------------------|----------|-------|---|-----------------------|
| UE Measurement Time to trigger | M        |       | ENUMERATED(0, 10, 20, 40, 60, 80, 100, 120, 160, 200, | Time in ms.           |

|  |  |  |  |  |
|--|--|--|--|--|
|  |  |  | 240, 320,<br>640, 1280,<br>2560, 5000) |  |
|--|--|--|--|--|

### 9.2.3.13Fh UE Measurement Type

The UE Measurement Type identifies the type of measurement that shall be performed see [16].

| IE/Group Name       | Presence | Range | IE Type and Reference   | Semantics Description |
|---------------------|----------|-------|---|-----------------------|
| UE Measurement Type | M        |       | ENUMERATED(Primary CCPCH RSCP , DL Timeslot ISCP, UE Transmitted Power,...) |                       |

### 9.2.3.13Fi UE Measurement Value

The UE Measurement Value shall be the most recent value for this measurement, for which the reporting criteria were met.

| IE/Group Name                   | Presence | Range             | IE Type and Reference | Semantics Description  |
|---------------------------------|----------|-------------------|-----------------------|--|
| CHOICE UE Measurement Value     | M        |                   |                       |  |
| >UE Transmitted Power           |          |                   |                       |  |
| >>UE Transmitted Power list HCR |          | 0..<maxnoOfTS>    |                       | Mandatory for 3.84Mcps TDD, not applicable to 1.28Mcps TDD or 7.68Mcps TDD |
| >>>Time Slot                    | M        |                   | 9.2.1.56              |  |
| >>>UE Transmitted Power         | M        |                   | INTEGER (0..104)      | According to mapping in [24] Values 0..20 are not used                     |
| >>UE Transmitted Power list LCR |          | 0..<maxnoOfTSLCR> |                       | Mandatory for 1.28Mcps TDD, not applicable to 3.84Mcps TDD or 7.68Mcps TDD |
| >>>Time Slot LCR                | M        |                   | 9.2.3.12a             |  |
| >>>UE Transmitted Power         | M        |                   | INTEGER (0..104)      | According to mapping in [24] Values 0..20 are not used                     |
| >>UE Transmitted Power list 768 |          | 0..<maxnoOfTS>    |                       | Mandatory for 7.68Mcps TDD, not applicable to 1.28Mcps TDD or 3.84Mcps TDD |
| >>>Time Slot                    | M        |                   | 9.2.1.56              |  |
| >>>UE Transmitted Power         | M        |                   | INTEGER (0..104)      | According to mapping in [24] Values 0..20 are not used                     |
| >P-CCPCH RSCP                   |          |                   |                       |  |
| >>Primary CCPCH RSCP            | O        |                   | 9.2.3.5               | According to mapping in [24]   |
| >>Primary CCPCH RSCP Delta      | O        |                   | 9.2.3.5a              | According to mapping in [24]   |
| >DL Timeslot ISCP               |          |                   |                       |  |
| >>Timeslot list HCR             |          | 0..<maxnoOfTS>    |                       | Mandatory for 3.84Mcps TDD, not applicable to 1.28Mcps TDD or 7.68Mcps TDD |
| >>>Time Slot                    | M        |                   | 9.2.1.56              |  |
| >>>Timeslot ISCP                | M        |                   | 9.2.3.12              |  |

|                     |   |                     |           |  |
|---------------------|---|---------------------|-----------|--|
| >>Timeslot list LCR |   | $0..<maxnoOfTSLCR>$ |           | Mandatory for 1.28Mcps TDD, not applicable to 3.84Mcps TDD or 7.68Mcps TDD |
| >>>Time Slot LCR    | M |                     | 9.2.3.12a |  |
| >>>Timeslot ISCP    | M |                     | 9.2.3.12  |  |
| >>Timeslot list 768 |   | $0..<maxnoOfTS>$    |           | Mandatory for 7.68Mcps TDD, not applicable to 1.28Mcps TDD or 3.84Mcps TDD |
| >>>Time Slot        | M |                     | 9.2.1.56  |  |
| >>>Timeslot ISCP    | M |                     | 9.2.3.12  |  |

| Range bound         | Explanation  |
|---------------------|--|
| <i>maxnoOfTS</i>    | Maximum number of Timeslots for a UE for 3.84Mcps TDD or 7.68Mcps TDD. |
| <i>maxnoofTSLCR</i> | Maximum number of Timeslots for a UE for 1.28Mcps TDD.                 |

### 9.2.3.13Fj UE Measurement Value Information

The *UE Measurement Value Information* IE provides information both on whether or not the UE Measurement Value is provided in the message and if provided also the UE Measurement Value itself.

| IE/Group Name                                    | Presence | Range | IE Type and Reference | Semantics Description |
|--|----------|-------|-----------------------|-----------------------|
| CHOICE <i>Measurement Availability Indicator</i> | M        |       |                       |                       |
| > <i>Measurement Available</i>                   |          |       |                       |                       |
| >>UE Measurement Value                           | M        |       | 9.2.3.13Fi            |                       |
| > <i>Measurement not Available</i>               |          |       | NULL                  |                       |

### 9.2.3.13G UL Timeslot Information LCR

The *UL Timeslot Information LCR* IE provides information on the timeslot allocation for an UL DPCH.

| IE/Group Name                      | Presence | Range                   | IE Type and Reference                    | Semantics Description | Criticality | Assigned Criticality |
|------------------------------------|----------|-------------------------|--|-----------------------|-------------|----------------------|
| <b>UL Timeslot Information LCR</b> |          | $1 .. <maxnoofULtsLCR>$ |  |                       | –           |                      |
| >Time Slot LCR                     | M        |                         | 9.2.3.12a                                |                       | –           |                      |
| >Midamble Shift LCR                | M        |                         | 9.2.3.4C                                 |                       | –           |                      |
| >TFCI Presence                     | M        |                         | 9.2.1.57                                 |                       | –           |                      |
| >UL Code Information LCR           | M        |                         | TDD UL Code Information LCR<br>9.2.3.10B |                       |             |                      |
| >PLCCH Information                 | O        |                         | 9.2.3.17                                 |                       | YES         | ignore               |

| Range bound           | Explanation  |
|-----------------------|--|
| <i>maxnoofULtsLCR</i> | Maximum number of Uplink time slots per Radio Link for 1.28Mcps TDD. |

### 9.2.3.13H UL Time Slot ISCP Info LCR

The *UL Time Slot ISCP Info LCR* IE provides information for UL Interference level for each time slot within the Radio Link for 1.28Mcps TDD.

| IE/Group Name                 | Presence | Range                        | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|-------------------------------|----------|------------------------------|-----------------------|-----------------------|-------------|----------------------|
| <b>UL Time Slot ISCP Info</b> |          | 1 ..<br><maxnoofUL<br>tsLCR> |                       |                       | –           |                      |
| >Time Slot LCR                | M        |                              | 9.2.3.12a             |                       | –           |                      |
| >UL Timeslot ISCP             | M        |                              | 9.2.3.26A             |                       | –           |                      |

| Range bound           | Explanation   |
|-----------------------|---|
| <i>maxnoofULtsLCR</i> | Maximum number of Uplink time slots per Radio Link for 1.28Mcps TDD |

### 9.2.3.13I Uplink Synchronisation Frequency

The *UL Synchronisation Frequency* IE specifies the frequency of the adjustment of the uplink transmission timing.

| IE/Group Name                    | Presence | Range | IE Type and Reference | Semantics Description   |
|----------------------------------|----------|-------|-----------------------|-------------------------|
| Uplink synchronisation frequency |          |       | INTEGER (1..8)        | Unit: subframe, step: 1 |

### 9.2.3.13J Uplink Synchronisation Step Size

The *UL Synchronisation Step Size* IE specifies the step size to be used for the adjustment of the uplink transmission timing.

| IE/Group Name                    | Presence | Range | IE Type and Reference | Semantics Description    |
|----------------------------------|----------|-------|-----------------------|--------------------------|
| Uplink synchronisation step size |          |       | INTEGER (1..8)        | Unit: 1/8 chip, step: 1. |

### 9.2.3.13K Uplink Timing Advance Control LCR

The Uplink Timing Advance Control LCR indicates the parameters which are used to support Uplink Synchronisation for the UE in 1.28Mcps TDD.

| IE/Group Name                       | Presence | Range | IE Type and Reference      | Semantics Description  |
|-------------------------------------|----------|-------|----------------------------|--|
| SYNC UL codes bitmap                | M        |       | BITSTRING (8)              | Each bit indicates the availability of a SYNC_UL code.         |
| <b>FPACH info</b>                   |          | 1     |                            |  |
| >Time Slot LCR                      | M        |       | 9.2.3.12a                  |  |
| >TDD Channelisation Code LCR        | M        |       | 9.2.3.8a                   |  |
| >Midamble Shift LCR                 | M        |       | 9.2.3.4C                   |  |
| >WT                                 | M        |       | INTEGER (1..4)             | Maximum number of subframes to wait for transmission of FPACH. |
| PRXupPCHdes                         | M        |       | INTEGER (-120 .. -58, ...) | Desired UpPCH receive power.<br>Unit: dBm<br>Step size: 1      |
| <b>SYNC UL procedure parameters</b> |          | 1     |                            |  |
| >Maximum Sync UL transmissions      | M        |       | ENUMERATED (1,2,4,8,...)   |  |
| >Power Ramp Step                    | M        |       | INTEGER (0..3, ...)        |  |
| Mmax                                | M        |       | INTEGER (1..32)            | Maximum number of synchronisation attempts                     |

#### 9.2.3.14 USCH ID

The USCH ID is the identifier of an uplink shared channel. It is unique among the USCHs simultaneously allocated for the same UE.

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description |
|---------------|----------|-------|-----------------------|-----------------------|
| USCH ID       |          |       | INTEGER (0..255)      |                       |

#### 9.2.3.15 USCH Information

The *USCH Information* IE provides information for USCHs to be established.

| IE/Group Name                      | Presence | Range               | IE Type and Reference | Semantics Description                                | Criticality | Assigned Criticality |
|------------------------------------|----------|---------------------|-----------------------|--|-------------|----------------------|
| <b>USCH Information</b>            |          | 1 to <maxnoofUSCHs> |                       |  | –           |                      |
| >USCH ID                           | M        |                     | 9.2.3.14              |  | –           |                      |
| >CCTrCH ID                         | M        |                     | 9.2.3.2               | UL CCTrCH in which the USCH is mapped                | –           |                      |
| >TrCH Source Statistics Descriptor | M        |                     | 9.2.1.65              |  | –           |                      |
| >Transport Format Set              | M        |                     | 9.2.1.64              | For USCH   | –           |                      |
| >Allocation/Retention Priority     | M        |                     | 9.2.1.1               |  | –           |                      |
| >Scheduling Priority Indicator     | M        |                     | 9.2.1.51A             |  | –           |                      |
| <b>&gt;RB Info</b>                 |          | 1..<maxnoofRB>      |                       | All Radio Bearers using this USCH                    | –           |                      |
| >>RB Identity                      | M        |                     | 9.2.3.5B              |  | –           |                      |
| >Traffic class                     | M        |                     | 9.2.1.58A             |  | YES         | ignore               |
| >Binding ID                        | O        |                     | 9.2.1.3               | Shall be ignored if bearer establishment with ALCAP. | YES         | ignore               |
| >Transport Layer Address           | O        |                     | 9.2.1.62              | Shall be ignored if bearer establishment with ALCAP. | YES         | ignore               |
| >TNL QoS                           | O        |                     | 9.2.1.56A             |  | YES         | ignore               |

| Range bound         | Explanation                                 |
|---------------------|---|
| <i>maxnoofUSCHs</i> | Maximum number of USCHs for one UE.         |
| <i>maxnoofRBs</i>   | Maximum number of Radio Bearers for one UE. |

### 9.2.3.16 Support of PLCCH

The *Support of PLCCH* IE indicates whether PLCCH is supported or not.

| IE/Group Name    | Presence | Range | IE Type and Reference | Semantics Description |
|------------------|----------|-------|-----------------------|-----------------------|
| Support of PLCCH |          |       | ENUMERATED(supported) |                       |

### 9.2.3.17 PLCCH Information

The *PLCCH Information* IE carries a PLCCH assignment for a timeslot of an UL DCH-type CCTrCH.

| IE/Group Name           | Presence | Range | IE Type and Reference | Semantics Description                   |
|-------------------------|----------|-------|-----------------------|---|
| TDD Channelisation Code | M        |       | 9.2.3.8               | Only QPSK modulation is used with PLCCH |
| Time Slot LCR           | M        |       | 9.2.3.12a             |   |
| Midamble Shift LCR      | M        |       | 9.2.3.4C              |   |
| PLCCH Sequence Number   | M        |       | 9.2.3.18              |   |

### 9.2.3.18 PLCCH Sequence Number

This sequence number represents a portion of a PLCCH used to signal TPC / SS bits to a single UE. A value of zero indicates that the PLCCH assignment has been deleted.

| IE/Group Name         | Presence | Range | IE Type and Reference | Semantics Description |
|-----------------------|----------|-------|-----------------------|-----------------------|
| PLCCH Sequence Number |          |       | INTEGER (0..14)       |                       |

### 9.2.3.19 Minimum Spreading Factor 7.68Mcps

Defines the minimum spreading factor the UE has the capability of receiving or transmitting for 7.68Mcps TDD.

| IE/Group Name                | Presence | Range | IE Type and Reference | Semantics Description |
|------------------------------|----------|-------|-----------------------|-----------------------|
| Minimum Spreading Factor 768 |          |       | INTEGER (1..32)       |                       |

### 9.2.3.20 Maximum Number of DL Physical Channels 7.68Mcps

Defines the maximum number of physical channels for 7.68Mcps TDD – per frame that the UE is capable to receive.

| IE/Group Name                              | Presence | Range | IE Type and Reference | Semantics Description |
|--|----------|-------|-----------------------|-----------------------|
| Maximum Number of DL Physical Channels 768 |          |       | INTEGER (1..448)      |                       |

### 9.2.3.21 Maximum Number of DL Physical Channels per Timeslot 7.68Mcps

Defines the maximum number of physical channels per timeslot that the UE is capable to receive for 7.68 Mcps TDD.

| IE/Group Name   | Presence | Range | IE Type and Reference | Semantics Description |
|---|----------|-------|-----------------------|-----------------------|
| Maximum Number of DL Physical Channels per Timeslot 768 |          |       | INTEGER (1..32)       |                       |

### 9.2.3.22 Secondary CCPCH Info 7.68Mcps TDD

The *Secondary CCPCH Info 7.68Mcps TDD* IE provides information on the Secondary CCPCH that carries the logical channel SHCCH for the UE for 7.68Mcps TDD.



| IE/Group Name                                  | Presence | Range                                 | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|--|----------|---------------------------------------|-----------------------|-----------------------|-------------|----------------------|
| TFCs   | M        |                                       | 9.2.1.63              | For the DL.           | –           |                      |
| TFCI Coding                                    | M        |                                       | 9.2.3.11              |                       | –           |                      |
| <b>Secondary CCPCH</b>                         |          | <i>0..&lt;maxno ofSCCPC Hs768&gt;</i> |                       |                       | –           |                      |
| >Time Slot                                     | M        |                                       | 9.2.1.56              |                       | –           |                      |
| >Midamble Shift And Burst Type 7.68Mcps        | M        |                                       | 9.2.3.23              |                       | –           |                      |
| >TFCI Presence                                 | M        |                                       | 9.2.1.55              |                       | –           |                      |
| >Secondary CCPCH TDD Code Information 7.68Mcps | M        |                                       | 9.2.3.24              |                       | –           |                      |
| >TDD Physical Channel Offset                   | M        |                                       | 9.2.3.9               |                       | –           |                      |
| >Repetition Length                             | M        |                                       | 9.2.3.6               |                       | –           |                      |
| >Repetition Period                             | M        |                                       | 9.2.3.7               |                       | –           |                      |
| FACH   |          | 0..maxno ofFACHs                      |                       |                       | –           |                      |
| >TFS   | M        |                                       | 9.2.1.64              | For the DL.           | –           |                      |
| PCH  |          | 0..1                                  |                       |                       | –           |                      |
| >TFS   | M        |                                       | 9.2.1.64              | For the DL.           | –           |                      |

| Range bound             | Explanation  |
|-------------------------|--|
| <i>maxnoofSCCPCs768</i> | Maximum number of Secondary CCPCHs per CCTrCH.         |
| <i>maxnoofFACHs</i>     | Maximum number of FACHs mapped onto a Secondary CCPCH. |

### 9.2.3.23 Midamble Shift And Burst Type 7.68Mcps

This information element indicates burst type and midamble allocation for 7.68Mcps TDD.

Three different midamble allocation schemes exist:

- Default midamble: the midamble is allocated by layer 1 depending on the associated channelisation code (DL and UL);
- Common midamble: the midamble is allocated by layer 1 depending on the number of channelisation codes (possible in DL only);
- UE specific midamble: a UE specific midamble is explicitly assigned (DL and UL).

| IE/Group Name                                | Presence | Range | IE Type and Reference   | Semantics Description |
|--|----------|-------|---|-----------------------|
| CHOICE <i>Burst Type</i>                     |          |       |   |                       |
| > <i>Type 1</i>                              |          |       |   |                       |
| >> Midamble Configuration Burst Type 1 And 3 | M        |       | ENUMERATED(4, 8, 16)  | As defined in [12]    |
| >>Midamble Allocation Mode                   | M        |       | ENUMERATED(Default midamble, Common midamble, UE specific midamble) |                       |
| >>Midamble Shift Long                        | C-UE     |       | INTEGER(0..15)  |                       |
| > <i>Type 2</i>                              |          |       |   |                       |
| >> Midamble Configuration Burst Type 2       | M        |       | ENUMERATED (4, 8)   | As defined in [12]    |
| >>Midamble Allocation Mode                   | M        |       | ENUMERATED(Default midamble, Common midamble, UE specific midamble) |                       |
| >>Midamble Shift Short                       | C-UE     |       | INTEGER (0..7)  |                       |
| > <i>Type 3</i>                              |          |       |   | UL only               |
| >> Midamble Configuration Burst Type 1 And 3 | M        |       | ENUMERATED (4, 8, 16)   | As defined in [12]    |
| >>Midamble Allocation Mode                   | M        |       | ENUMERATED(Default midamble, UE specific midamble)                  |                       |
| >>Midamble Shift Long                        | C-UE     |       | INTEGER(0..15)  |                       |

| Condition | Explanation   |
|-----------|---|
| UE        | The IE shall be present if the <i>Midamble Allocation Mode</i> IE is set to "UE-specific midamble". |

### 9.2.3.24 Secondary CCPCH TDD Code Information 7.68Mcps

The *Secondary CCPCH TDD Code Information 7.68Mcps* IE provides TDD Channelisation Code information for all SCCPCHs of one Time Slot for 7.68Mcps TDD.

| IE/Group Name  | Presence | Range                                 | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|--|----------|---------------------------------------|-----------------------|-----------------------|-------------|----------------------|
| <b>Secondary CCPCH TDD Code Information 7.68Mcps</b> |          | <i>1..&lt;maxno OfSCCPC Hs768&gt;</i> |                       |                       | –           |                      |
| >TDD Channelisation Code 7.68Mcps                    | M        |                                       | 9.2.3.25              |                       | –           |                      |

| Range bound             | Explanation                               |
|-------------------------|---|
| <i>maxnoofSCCPCs768</i> | Maximum number of SCCPCHs for one CCTrCH. |

### 9.2.3.25 TDD Channelisation Code 7.68Mcps

The Channelisation Code Number indicates which Channelisation Code is used for a given Physical Channel. In 7.68Mcps TDD the Channelisation Code is an Orthogonal Variable Spreading Factor code that can have a spreading factor of 1, 2, 4, 8, 16 or 32.

| IE/Group Name           | Presence | Range | IE Type and Reference   | Semantics Description |
|-------------------------|----------|-------|---|-----------------------|
| TDD Channelisation Code |          |       | ENUMERATED((1/1), (2/1), (2/2), (4/1), .. (4/4), (8/1), .. (8/8), (16/1), .. (16/16), (32/1), .. (32,32),...) |                       |

### 9.2.3.26 UL Timeslot Information 7.68Mcps

The *UL Timeslot Information* IE provides information on the time slot allocation for a UL DPCH for 7.68Mcps TDD.

| IE/Group Name                           | Presence | Range                        | IE Type and Reference                     | Semantics Description | Criticality | Assigned Criticality |
|---|----------|------------------------------|---|-----------------------|-------------|----------------------|
| <b>UL Timeslot Information</b>          |          | <i>1..&lt;maxno OFTS&gt;</i> |   |                       | –           |                      |
| >Time Slot                              | M        |                              | 9.2.1.56                                  |                       | –           |                      |
| >Midamble Shift And Burst Type 7.68Mcps | M        |                              | 9.2.3.23                                  |                       | –           |                      |
| >TFCI Presence                          | M        |                              | 9.2.1.55                                  |                       | –           |                      |
| >UL Code Information 7.68Mcps           | M        |                              | TDD UL Code Information 7.68Mcps 9.2.3.27 |                       | –           |                      |

| Range bound       | Explanation                           |
|-------------------|---------------------------------------|
| <i>maxnoofTSS</i> | Maximum number of Timeslots for a UE. |

### 9.2.3.27 TDD UL Code Information 7.68Mcps

The *TDD UL Code Information 7.68Mcps* IE provides TDD UL Code information for all DPCHs of one UL Time Slot for 7.68Mcps TDD.

| IE/Group Name                     | Presence | Range                               | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|-----------------------------------|----------|-------------------------------------|-----------------------|-----------------------|-------------|----------------------|
| <b>TDD UL Code Information</b>    |          | <i>1..&lt;maxno OfDPCHs 768&gt;</i> |                       |                       | –           |                      |
| >DPCH ID                          | M        |                                     | 9.2.3.3               |                       | –           |                      |
| >TDD Channelisation Code 7.68Mcps | M        |                                     | 9.2.3.25              |                       | –           |                      |

| Range bound            | Explanation                             |
|------------------------|---|
| <i>maxnoofDPCHs768</i> | Maximum number of DPCHs for one CCTrCH. |

### 9.2.3.28 DL Timeslot Information 7.68Mcps

The *DL Timeslot Information 7.68Mcps* IE provides information on the time slot allocation for a DL DPCH for 7.68Mcps TDD.

| IE/Group Name                           | Presence | Range                        | IE Type and Reference                     | Semantics Description | Criticality | Assigned Criticality |
|---|----------|------------------------------|---|-----------------------|-------------|----------------------|
| <b>DL Timeslot Information</b>          |          | <i>1..&lt;maxno OfTS&gt;</i> |   |                       | –           |                      |
| >Time Slot                              | M        |                              | 9.2.1.56                                  |                       | –           |                      |
| >Midamble Shift And Burst Type 7.68Mcps | M        |                              | 9.2.3.23                                  |                       | –           |                      |
| >TFCI Presence                          | M        |                              | 9.2.1.55                                  |                       | –           |                      |
| >DL Code Information 7.68Mcps           | M        |                              | TDD DL Code Information 7.68Mcps 9.2.3.29 |                       | –           |                      |

| Range bound       | Explanation                           |
|-------------------|---------------------------------------|
| <i>maxnoofTSs</i> | Maximum number of Timeslots for a UE. |

### 9.2.3.29 TDD DL Code Information 7.68Mcps

The *TDD DL Code Information* IE provides TDD DL Code information for all DPCHs of one DL Time Slot for 7.68Mpc TDD.

| IE/Group Name                     | Presence | Range                               | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|-----------------------------------|----------|-------------------------------------|-----------------------|-----------------------|-------------|----------------------|
| <b>TDD DL Code Information</b>    |          | <i>1..&lt;maxno OfDPCHs 768&gt;</i> |                       |                       | –           |                      |
| >DPCH ID                          | M        |                                     | 9.2.3.3               |                       | –           |                      |
| >TDD Channelisation Code 7.68Mcps | M        |                                     | 9.2.3.25              |                       | –           |                      |

| Range bound            | Explanation                             |
|------------------------|---|
| <i>maxnoofDPCHs768</i> | Maximum number of DPCHs for one CCTrCH. |

### 9.2.3.30 Rx Timing Deviation 7.68Mcps

Measured Rx Timing Deviation as a basis for timing advance, either measured directly from a RACH burst, or calculated from the Rx Timing Deviation measurement on the USCH by adding the current Timing Advance value..

| IE/Group Name       | Presence | Range | IE Type and Reference | Semantics Description |
|---------------------|----------|-------|-----------------------|-----------------------|
| Rx Timing Deviation |          |       | INTEGER (0..1023)     | As specified in [5]   |

### 9.2.3.31 Cell Capability Container 7.68 Mcps TDD

The Cell Capability Container 7.68 McpsTDD indicates which functionalities a cell supports.

| IE/Group Name                 | Presence | Range | IE Type and Reference | Semantics Description   |
|-------------------------------|----------|-------|-----------------------|---|
| Cell Capability Container TDD |          |       | BIT STRING (32)       | Each bit indicates whether a cell supports a particular functionality or not. The value 1 of a bit indicates that the corresponding functionality is supported in a cell and value 0 indicates that the corresponding functionality is not supported in a cell. Each bit is defined as follows.<br>The first bit: Delayed Activation Support Indicator.<br>The second bit: HS-DSCH Support Indicator.<br>The third bit: DSCH Support Indicator.<br>The fourth bit: Flexible MAC-d PDU Size Support Indicator.<br>Note that undefined bits are considered as a spare bit and spare bits shall be set to 0 by the transmitter and shall be ignored by the receiver. |

### 9.2.3.32 Neighbouring TDD Cell Measurement Information 7.68Mcps

This IE provides information on the 7.68Mcps TDD neighbouring cells used for the purpose of Measurements. Since the measurement can be performed on every time slot and midamble shift, the *Time slot* IE and *Midamble shift and burst type* IE shall be included if available.

| IE/Group Name                          | Presence | Range | IE Type and Reference | Semantics Description  |
|--|----------|-------|-----------------------|------------------------|
| UTRAN Cell Identifier                  | M        |       | 9.2.1.71              |                        |
| UARFCN                                 | M        |       | 9.2.1.66              | Corresponds to Nt [15] |
| Cell Parameter ID                      | M        |       | 9.2.1.8               |                        |
| Time slot                              | O        |       | 9.2.1.56              |                        |
| Midamble Shift And Burst Type 7.68Mcps | O        |       | 9.2.3.23              |                        |

### 9.2.3.33 UE Measurement Timeslot Information 7.68Mcps

The *UE Measurement Time Slot Information* IE provides information for DL timeslots for the UE to measure, see [16].

| IE/Group Name                              | Presence | Range          | IE Type and Reference                  | Semantics Description |
|--|----------|----------------|--|-----------------------|
| <b>UE Measurement Timeslot Information</b> |          | 1..<maxnoOfTS> |  |                       |
| >Time Slot                                 | M        |                | 9.2.1.56                               |                       |
| >Burst Type                                | M        |                | ENUMERATED (Type1, Type 2, Type 3,...) |                       |

| Range bound       | Explanation  |
|-------------------|--|
| <i>maxnoOfTSs</i> | Maximum number of Timeslots for a UE for 7.68Mcps TDD. |

### 9.2.3.34 DPCH ID 7.68Mcps

The *DPCH ID 7.68Mcps* identifies unambiguously a DPCH inside a downlink Radio Link for 7.68Mcps TDD.

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description |
|---------------|----------|-------|-----------------------|-----------------------|
| DPCH ID       |          |       | INTEGER<br>(0..479)   |                       |

### 9.2.3.35 Rx Timing Deviation 3.84Mcps Extended

Measured Rx Timing Deviation as a basis for timing advance, either measured directly from a RACH burst, or calculated from the Rx Timing Deviation measurement on the USCH by adding the current Timing Advance value. This is used when the extended timing advance is in use at 3.84 Mcps.

| IE/Group Name       | Presence | Range | IE Type and Reference | Semantics Description |
|---------------------|----------|-------|-----------------------|-----------------------|
| Rx Timing Deviation |          |       | INTEGER<br>(0..511)   | As specified in [5]   |

### 9.2.3.36 E-PUCH Information

The *E-PUCH Information* IE provides parameters to configure the E-PUCH physical channel for 3.84Mcps TDD and 7.68 Mcps TDD.

| IE/Group Name       | Presence | Range | IE Type and Reference        | Semantics Description   |
|---------------------|----------|-------|------------------------------|---|
| Minimum code rate   | M        |       | INTEGER<br>(0..63)           | Unit: -<br>Range: 0.055 ..1<br>Step: 0.015  |
| Maximum code rate   | M        |       | INTEGER<br>(0..63)           | Unit: -<br>Range: 0.055 ..1<br>Step: 0.015  |
| HARQ Info for E-DCH | M        |       | ENUMERATED<br>(rv0, rvtable) | "rv0" indicates that the UE will only use E_DCH RV index 0.<br>"rvtable" indicates that the UE will use an RSN based RV index as specified in [8] |
| $N_{E-UCCH}$        | M        |       | INTEGER<br>(1..12)           | Number of slots that are required to carry TPC and TFCI (consecutively allocated slots beginning with the first).                                 |

### 9.2.3.36a E-PUCH Information LCR

The *E-PUCH Information LCR* IE provides parameters to configure the E-PUCH physical channel for 1.28Mcps TDD.

| IE/Group Name            | Presence | Range | IE Type and Reference     | Semantics Description  | Criticality | Assigned Criticality |
|--------------------------|----------|-------|---------------------------|--|-------------|----------------------|
| Minimum code rate        | M        |       | INTEGER (0..63)           | Unit: -<br>Range: 0.055..1<br>Step: 0.015  | –           |                      |
| Maximum code rate        | M        |       | INTEGER (0..63)           | Unit: -<br>Range: 0.055..1<br>Step: 0.015  | –           |                      |
| HARQ Info for E-DCH      | M        |       | ENUMERATED (rv0, rvtable) | "rv0" indicates that the UE will only use E_DCH RV index 0.<br>"rvtable" indicates that the UE will use an RSN based RV index as specified in [8]  | –           |                      |
| PRXdes_base              | M        |       | INTEGER (-112..-50)       | dBm.<br>Reference Desired RX power level for E-PUCH  | –           |                      |
| E-PUCH TPC Step Size     | M        |       | 9.2.3.10a                 |  | –           |                      |
| N <sub>E-UCCH</sub>      | M        |       | INTEGER (1..8)            | Number of E-UCCH and TPC instances within an E-DCH TTI. Details are described in [12].   | –           |                      |
| E-PUCH Power Control GAP | O        |       | INTEGER (1..255)          | Unit: Number of subframes.<br>Reference to E-PUCH Power Control for 1.28Mcps TDD in [22].<br>If it is not present, UE shall deem it to be infinite in which case closed loop power control shall always be used. | YES         | ignore               |

### 9.2.3.37 E-TFCS Information TDD

Whereas the related E-DCH Transport Block sizes are standardised in [32] this IE gives details on the Reference Betas.

| IE/Group Name                           | Presence | Range                | IE Type and Reference | Semantics Description                    |
|---|----------|----------------------|-----------------------|--|
| <b>Reference Beta Information QPSK</b>  |          | 1..<maxnoofRefbetas> |                       |  |
| >Reference Code Rate                    | M        |                      | INTEGER (0..10)       | Unit: -<br>Range: 0..1<br>Step: 0.1      |
| >Reference Beta                         | M        |                      | INTEGER(-15..16)      | Unit: -<br>Range: -15..+16<br>Step: 1 dB |
| <b>Reference Beta Information 16QAM</b> |          | 1..<maxnoofRefbetas> |                       |  |
| >Reference Code Rate                    | M        |                      | INTEGER (0..10)       | Unit: -<br>Range: 0..1<br>Step: 0.1      |
| >Reference Beta                         | M        |                      | INTEGER(-15..16)      | Unit: -<br>Range: -15..+16<br>Step: 1 dB |

| Range Bound            | Explanation                                 |
|------------------------|---|
| <i>maxnoofRefbetas</i> | Maximum number of signalled reference betas |

### 9.2.3.38 E-DCH MAC-d Flows Information TDD

The *E-DCH MAC-d Flows Information TDD* IE is used for the establishment of E-DCH MAC-d flows for TDD.



| IE/Group Name                                | Presence | Range                                 | IE Type and Reference | Semantics Description  | Criticality | Assigned Criticality |
|--|----------|---------------------------------------|-----------------------|--|-------------|----------------------|
| <b>E-DCH MAC-d Flow Specific Information</b> |          | <i>1..&lt;maxnofEDCHMACdFlows&gt;</i> |                       |  | –           |                      |
| >E-DCH MAC-d Flow ID                         | M        |                                       | 9.2.1.91              |  | –           |                      |
| >Allocation/Retention Priority               | M        |                                       | 9.2.1.1               |  | –           |                      |
| >TNL QoS                                     | O        |                                       | 9.2.1.56A             |  | –           |                      |
| >Binding ID                                  | O        |                                       | 9.2.1.3               | Shall be ignored if bearer establishment with ALCAP.                     | –           |                      |
| >Transport Layer Address                     | O        |                                       | 9.2.1.62              | Shall be ignored if bearer establishment with ALCAP.                     | –           |                      |
| >Payload CRC Presence Indicator              | M        |                                       | 9.2.1.42              |  | –           |                      |
| >Maximum Number Of Retransmissions For E-DCH | M        |                                       | 9.2.1.100             |  | –           |                      |
| >E-DCH HARQ Power Offset TDD                 | M        |                                       | 9.2.3.49              |  | –           |                      |
| >E-DCH MAC-d Flow Multiplexing List          | O        |                                       | 9.2.1.89              |  | –           |                      |
| >E-DCH Grant Type                            | M        |                                       | 9.2.3.43              |  | –           |                      |
| >E-DCH Logical Channel Information           | M        |                                       | 9.2.1.92              |  | –           |                      |
| >E-DCH MAC-d Flow Retransmission Timer       | O        |                                       | 9.2.3.49a             | Mandatory for LCR TDD. Not applicable for 3.84Mcps TDD and 7.68Mcps TDD. | YES         | YES                  |
| >Traffic Class                               | M        |                                       | 9.2.1.58A             |  | YES         | ignore               |

| Range Bound                | Explanation                         |
|----------------------------|-------------------------------------|
| <i>maxnofEDCHMACdFlows</i> | Maximum number of E-DCH MAC-d flows |

### 9.2.3.39 E-DCH Non-scheduled Grant Information TDD

The *E-DCH Non-scheduled Grant Information TDD* IE is used to specify the details of a non-scheduled grant for 3.84Mcps and 7.68Mcps TDD.

| IE/Group Name                         | Presence | Range | IE Type and Reference | Semantics Description |
|---------------------------------------|----------|-------|-----------------------|-----------------------|
| Timeslot Resource Related Information | M        |       | 9.2.3.44              |                       |
| Power Resource Related Information    | M        |       | 9.2.3.45              |                       |
| Repetition Period                     | M        |       | 9.2.3.6               |                       |
| Repetition Length                     | M        |       | 9.2.3.7               |                       |
| TDD E-PUCH Offset                     | M        |       | 9.2.3.46              |                       |
| TDD Channelisation Code               | M        |       | 9.2.3.8               |                       |

### 9.2.3.39a E-DCH Non-scheduled Grant Information LCR TDD

The *E-DCH Non-scheduled Grant Information LCR TDD* IE is used to specify the details of an non-scheduled grant for 1.28Mcps TDD.

| IE/Group Name                             | Presence | Range | IE Type and Reference | Semantics Description  |
|---|----------|-------|-----------------------|--|
| Timeslot Resource Related Information LCR | M        |       | 9.2.3.44a             |  |
| Power Resource Related Information        | M        |       | 9.2.3.45              |  |
| Repetition Period                         | M        |       | 9.2.3.6               |  |
| Repetition Length                         | M        |       | 9.2.3.7               |  |
| Subframe Number                           | M        |       | ENUMERATED (0,1)      | Used to indicate from which subframe of the Radio Frame indicated by <i>TDD E-PUCH Offset</i> IE the physical resources are assigned to the E-DCH Non-scheduled Grant. |
| TDD E-PUCH Offset                         | M        |       | 9.2.3.46              |  |
| TDD Channelisation Code                   | M        |       | 9.2.3.8               |  |

### 9.2.3.40 E-DCH TDD Information

The *E-DCH TDD Information* specifies the details of the maximum bit rate and processing overload level.

| IE/Group Name                          | Presence | Range | IE Type and Reference | Semantics Description |
|--|----------|-------|-----------------------|-----------------------|
| E-DCH TDD Maximum Bitrate              | O        |       | 9.2.3.47              |                       |
| E-DCH Processing Overload Level        | O        |       | 9.2.1.95              |                       |
| E-DCH Power Offset for Scheduling Info | O        |       | 9.2.1.96              |                       |

### 9.2.3.40a E-DCH TDD Information LCR

The *E-DCH TDD Information LCR* IE specifies the details of UE physical layer category, NodeB processing overload level and power offset, Maximum Number of Retransmission and E-DCH Retransmission timer for scheduling info. The *E-AGCH Inactivity Monitor Threshold* IE is used for E-AGCH channel monitoring control for scheduled transmission.

| IE/Group Name  | Presence | Range | IE Type and Reference  | Semantics Description   | Criticality | Assigned Criticality |
|--|----------|-------|--|---|-------------|----------------------|
| E-DCH Physical Layer Category LCR                        | O        |       | 9.2.3.54   | If the <i>Extended E-DCH Physical Layer Category LCR</i> IE is included in the <i>E-DCH TDD Information LCR</i> IE, the <i>E-DCH Physical Layer Category LCR</i> IE shall be ignored. | –           |                      |
| E-DCH Processing Overload Level                          | O        |       | 9.2.1.95   |   | –           |                      |
| E-DCH Power Offset for Scheduling Info                   | O        |       | 9.2.1.96   |   | –           |                      |
| Extended E-DCH Physical Layer Category LCR               | O        |       | 9.2.3.54A  | The <i>Extended E-DCH Physical Layer Category LCR</i> IE shall be used if the <i>E-DCH Physical Layer Category</i> has a value larger than 5.   | YES         | reject               |
| Maximum Number of Retransmission for Scheduling Info LCR | O        |       | 9.2.1.100  |   | YES         | ignore               |
| E-DCH Retransmission timer for Scheduling Info LCR       | O        |       | 9.2.3.49a  |   | YES         | ignore               |
| E-AGCH Inactivity Monitor Threshold                      | O        |       | Enumerated (0, 1, 2, 4, 8, 16, 32, 64, 128, 256, 512, spare5, ..., infinity) | Units of subframes.   | YES         | ignore               |

#### 9.2.3.41 E-DCH TDD Information Response

The *E-DCH TDD Information Response* IE provides information for E-DCH MAC-d flows that have been established or modified. It also provides additional E-DCH information determined within the Node B.

| IE/Group Name   | Presence | Range                                  | IE Type and Reference | Semantics Description |
|---|----------|--|-----------------------|-----------------------|
| <b>E-DCH MAC-d Flow Specific Information Response</b> |          | <i>0..&lt;maxnoofEDCHMACdFlows&gt;</i> |                       |                       |
| >E-DCH MAC-d Flow ID                                  | M        |  | 9.2.1.91              |                       |
| >Binding ID   | O        |  | 9.2.1.3               |                       |
| >Transport Layer Address                              | O        |  | 9.2.1.62              |                       |
| <b>E-AGCH Specific Information Response</b>           |          | <i>0..&lt;maxNoOfEAGCHcodes&gt;</i>    |                       |                       |
| >Time Slot  | M        |  | 9.2.1.56              |                       |
| >Midamble Shift And Burst Type                        | M        |  | 9.2.3.4               |                       |
| >TDD Channelisation Code                              | M        |  | 9.2.3.8               |                       |
| <b>E-HICH Information Response</b>                    |          | <i>0..1</i>                            |                       |                       |
| >Time Slot  | M        |  | 9.2.1.56              |                       |
| >Midamble Shift And Burst Type                        | M        |  | 9.2.3.4               |                       |
| >TDD Channelisation Code                              | M        |  | 9.2.3.8               |                       |
| >E-HICH Time Offset                                   | M        |  | 9.2.3.48              |                       |
| E-DCH Non-scheduled Grant Information TDD             | O        |  | 9.2.3.39              |                       |
| E-RNTI  | O        |  | 9.2.1.94              |                       |

| Range bound                 | Explanation                                  |
|-----------------------------|--|
| <i>maxnoofEDCHMACdFlows</i> | Maximum number of MAC-d flows                |
| <i>maxnoofEAGCHcodes</i>    | Maximum number of E-AGCHs assigned to one UE |

### 9.2.3.41a E-DCH TDD Information Response 1.28Mcps

Only for 1.28Mcps TDD. The *E-DCH TDD Information Response 1.28Mcps* IE provides information for E-DCH MAC-d flows that have been established or modified. It also provides additional E-DCH information determined within the Node B.

| IE/Group Name   | Presence | Range                                  | IE Type and Reference | Semantics Description  |
|---|----------|--|-----------------------|--|
| <b>E-DCH MAC-d Flow Specific Information Response</b> |          | <i>0..&lt;maxnoofEDCHMACdFlows&gt;</i> |                       |  |
| >E-DCH MAC-d Flow ID                                  | M        |  | 9.2.1.91              |  |
| >Binding ID   | O        |  | 9.2.1.3               |  |
| >Transport Layer Address                              | O        |  | 9.2.1.62              |  |
| <b>E-AGCH Specific Information Response</b>           |          | <i>0..&lt;maxNoOfEAGCHcodes&gt;</i>    |                       |  |
| >Time Slot LCR  | M        |  | 9.2.3.12a             |  |
| >Midamble Shift LCR                                   | M        |  | 9.2.3.4C              |  |
| >TDD Channelisation Code                              | M        |  | 9.2.3.8               |  |
| <b>E-HICH Scheduled specific Information Response</b> |          | <i>0..1</i>                            |                       |  |
| > <b>Scheduled</b>                                    |          | <i>0..&lt;maxNoOfEHICHcodes&gt;</i>    |                       |  |
| >>EI  | M        |  | INTEGER (0..3)        | E-HICH indication which is used to indicate UE on which E-HICH the feedback info is carried. |
| >>Time Slot LCR                                       | M        |  | 9.2.3.12a             |  |
| >>Midamble Shift LCR                                  | M        |  | 9.2.3.4C              |  |
| >>TDD Channelisation Code                             | M        |  | 9.2.3.8               |  |
| > <b>Non-Scheduled</b>                                |          | <i>0..1</i>                            |                       |  |
| >>Time Slot LCR                                       | M        |  | 9.2.3.12a             |  |
| >>Midamble Shift LCR                                  | M        |  | 9.2.3.4C              |  |
| >>TDD Channelisation Code                             | M        |  | 9.2.3.8               |  |
| >>Signature Sequence Group Index                      | M        |  | INTEGER (0..19)       |  |
| >E-HICH time offset LCR                               | M        |  | 9.2.3.48a             |  |
| E-DCH Non-scheduled Grant Information LCR TDD         | O        |  | 9.2.3.39a             |  |
| E-RNTI  | O        |  | 9.2.1.94              |  |

| Range bound                 | Explanation                                  |
|-----------------------------|--|
| <i>maxnoofEDCHMACdFlows</i> | Maximum number of MAC-d flows                |
| <i>maxnoofEAGCHcodes</i>    | Maximum number of E-AGCHs assigned to one UE |
| <i>maxnoofEHICHcodes</i>    | Maximum number of E-HICHs assigned to one UE |

### 9.2.3.42 E-DCH TDD Information to Modify

The *E-DCH MAC-d Flows Information TDD* IE is used for the establishment of E-DCH MAC-d flows for TDD.

| IE/Group Name                                | Presence | Range                                    | IE Type and Reference                         | Semantics Description                                | Criticality | Assigned Criticality |
|--|----------|--|---|--|-------------|----------------------|
| <b>E-DCH MAC-d Flow Specific Information</b> |          | <i>1..&lt;maxno ofEDCHMACdFlows &gt;</i> |   |  | –           |                      |
| >E-DCH MAC-d Flow ID                         | M        |  | 9.2.1.91                                      |  | –           |                      |
| >Allocation/Retention Priority               | O        |  | 9.2.1.1                                       |  | –           |                      |
| >Transport Bearer Request Indicator          | M        |  | 9.2.1.61                                      |  | –           |                      |
| >Binding ID                                  | O        |  | 9.2.1.3                                       | Shall be ignored if bearer establishment with ALCAP. | –           |                      |
| >Transport Layer Address                     | O        |  | 9.2.1.62                                      | Shall be ignored if bearer establishment with ALCAP. | –           |                      |
| >TNL QoS                                     | O        |  | 9.2.1.56A                                     |  | –           |                      |
| >Maximum Number Of Retransmissions For E-DCH | O        |  | 9.2.1.100                                     |  | –           |                      |
| >E-DCH HARQ Power Offset TDD                 | O        |  | 9.2.3.49                                      |  | –           |                      |
| >E-DCH MAC-d Flow Multiplexing List          | O        |  | 9.2.1.89                                      |  | –           |                      |
| >E-DCH Grant Type                            | O        |  | 9.2.3.43                                      |  | –           |                      |
| >E-DCH Logical Channel To Add                | O        |  | E-DCH Logical Channel Information<br>9.2.1.92 |  | –           |                      |
| >E-DCH Logical Channel To Modify             | O        |  | 9.2.1.93                                      |  | –           |                      |
| >E-DCH Logical Channel To Delete             |          | <i>0..&lt;maxnooflogicalchannels&gt;</i> |   |  | –           |                      |
| >>Logical Channel ID                         | M        |  | 9.2.1.97                                      |  | –           |                      |
| >E-DCH MAC-d Flow Retransmission Timer       | O        |  | 9.2.3.49a                                     | Applicable for 1.28Mcps TDD only                     | YES         | ignore               |
| >Traffic Class                               | O        |  | 9.2.1.58A                                     |  | YES         | ignore               |
| MAC-e Reset Indicator                        | O        |  | 9.2.1.99                                      |  | –           |                      |
| E-DCH MAC-d PDU Size Format                  | O        |  | 9.2.1.91A                                     |  | YES         | reject               |

| Range Bound                   | Explanation                         |
|-------------------------------|-------------------------------------|
| <i>maxnoofEDCHMACdFlows</i>   | Maximum number of E-DCH MAC-d flows |
| <i>maxnooflogicalchannels</i> | Maximum number of logical channels  |

### 9.2.3.43 E-DCH Grant Type

The *E-DCH Grant Type* identifies whether a MAC-d flow is scheduled or non-scheduled.

| IE/Group Name    | Presence | Range | IE Type and Reference                 | Semantics Description |
|------------------|----------|-------|---------------------------------------|-----------------------|
| E-DCH Grant Type |          |       | ENUMERATED (Scheduled, Non-scheduled) |                       |

### 9.2.3.44 Timeslot Resource Related Information

The *Timeslot Resource Related Information* is a bitmap indicating which of the timeslots configured for E-DCH are allocated for non-scheduled transmissions.

| IE/Group Name                         | Presence | Range | IE Type and Reference | Semantics Description |
|---------------------------------------|----------|-------|-----------------------|-----------------------|
| Timeslot Resource Related Information |          |       | BIT STRING (13)       |                       |

### 9.2.3.44a Timeslot Resource Related Information LCR

The *Timeslot Resource Related Information LCR* IE is a bitmap indicating which of the timeslots configured for E-DCH are allocated for non-scheduled transmissions.

| IE/Group Name                             | Presence | Range | IE Type and Reference | Semantics Description |
|---|----------|-------|-----------------------|-----------------------|
| Timeslot Resource Related Information LCR |          |       | BIT STRING (5)        |                       |

### 9.2.3.45 Power Resource Related Information

The *Power Resource Related Information* specifies the maximum allowed E-PUCH power resource (dB relative to  $P_{e,base}$ ) that the UE may use for non-scheduled transmissions.

| IE/Group Name                      | Presence | Range | IE Type and Reference | Semantics Description |
|------------------------------------|----------|-------|-----------------------|-----------------------|
| Power Resource Related Information |          |       | INTEGER (1..32)       |                       |

### 9.2.3.46 E-PUCH Offset

The *E-PUCH Offset* represents the CFN offset at which a non-scheduled E-DCH grant begins.

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description |
|---------------|----------|-------|-----------------------|-----------------------|
| E-PUCH Offset |          |       | INTEGER (0..255)      |                       |

### 9.2.3.47 E-DCH TDD Maximum Bitrate

The *E-DCH TDD Maximum Bitrate* parameter indicates the Maximum Bitrate for an E-DCH in TDD mode.

| IE/Group Name             | Presence | Range | IE Type and Reference | Semantics Description                                       |
|---------------------------|----------|-------|-----------------------|---|
| E-DCH TDD Maximum Bitrate |          |       | INTEGER (0..9201,...) | Bitrate on transport block level. Unit is kbits per second. |

### 9.2.3.48 E-HICH Time Offset

The E-HICH Time Offset ( aka  $n_{E-HICH}$  [19]) is determined by the Node B.

| IE/Group Name      | Presence | Range | IE Type and Reference | Semantics Description |
|--------------------|----------|-------|-----------------------|-----------------------|
| E-HICH Time Offset |          |       | INTEGER (4..44)       |                       |

## 9.2.3.48a E-HICH Time Offset LCR

The *E-HICH Time Offset LCR* IE (aka  $n_{E-HICH}$  [19]) is determined by the Node B.

| IE/Group Name          | Presence | Range | IE Type and Reference | Semantics Description |
|------------------------|----------|-------|-----------------------|-----------------------|
| E-HICH Time Offset LCR |          |       | INTEGER (4..15)       |                       |

## 9.2.3.49 E-DCH HARQ Power Offset TDD

The *E-DCH HARQ Power Offset TDD* is the power offset measured in dB.

| IE/Group Name               | Presence | Range | IE Type and Reference | Semantics Description |
|-----------------------------|----------|-------|-----------------------|-----------------------|
| E-DCH HARQ Power Offset TDD |          |       | INTEGER (0..6)        |                       |

## 9.2.3.49a E-DCH MAC-d Flow Retransmission Timer

The *E-DCH MAC-d Flow Retransmission Timer* IE is used in the E-DCH retransmission control as defined in ref. [32].

| IE/Group Name                         | Presence | Range | IE Type and Reference   | Semantics Description   |
|---------------------------------------|----------|-------|---|---|
| E-DCH MAC-d Flow Retransmission Timer |          |       | ENUMERATED (10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 65, 70, 75, 80, 85, 90, 95, 100, 110, 120, 140, 160, 200, 240, 280, 320, 400, 480, 560,...) | Unit: ms<br>Node B may use this value to stop the re-transmission of the corresponding MAC-e PDU. |

## 9.2.3.50 E-DCH Non-scheduled Grant Information 7.68Mcps TDD

The *E-DCH Non-scheduled Grant Information 7.68Mcps TDD* IE is used to specify the details of a non-scheduled grant for TDD.

| IE/Group Name                         | Presence | Range | IE Type and Reference | Semantics Description |
|---------------------------------------|----------|-------|-----------------------|-----------------------|
| Timeslot Resource Related Information | M        |       | 9.2.3.44              |                       |
| Power Resource Related Information    | M        |       | 9.2.3.45              |                       |
| Repetition Period                     | M        |       | 9.2.3.6               |                       |
| Repetition Length                     | M        |       | 9.2.3.7               |                       |
| TDD E-PUCH Offset                     | M        |       | 9.2.3.46              |                       |
| TDD Channelisation Code 7.68Mcps      | M        |       | 9.2.3.25              |                       |

## 9.2.3.51 E-DCH TDD Information 7.68Mcps

The *E-DCH TDD Information 7.68Mcps* specifies the details of the maximum bit rate and processing overload level for 7.68Mcps TDD.



| IE/Group Name                          | Presence | Range | IE Type and Reference | Semantics Description |
|--|----------|-------|-----------------------|-----------------------|
| E-DCH TDD Maximum Bitrate 7.68Mcps     | O        |       | 9.2.3.53              |                       |
| E-DCH Processing Overload Level        | O        |       | 9.2.1.95              |                       |
| E-DCH Power Offset for Scheduling Info | O        |       | 9.2.1.96              |                       |

### 9.2.3.52 E-DCH TDD Information Response 7.68Mcps

The *E-DCH TDD Information Response 7.68Mcps* IE provides information for E-DCH MAC-d flows that have been established or modified for 7.68Mcps TDD. It also provides additional E-DCH information determined within the Node B.

| IE/Group Name   | Presence | Range                                  | IE Type and Reference | Semantics Description |
|---|----------|--|-----------------------|-----------------------|
| <b>E-DCH MAC-d Flow Specific Information Response</b> |          | <i>0..&lt;maxnoofEDCHMACdFlows&gt;</i> |                       |                       |
| >E-DCH MAC-d Flow ID                                  | M        |  | 9.2.1.91              |                       |
| >Binding ID   | O        |  | 9.2.1.3               |                       |
| >Transport Layer Address                              | O        |  | 9.2.1.62              |                       |
| <b>E-AGCH Specific Information Response 7.68Mcps</b>  |          | <i>0..&lt;maxNoOfEAGCHcodes&gt;</i>    |                       |                       |
| >Time Slot  | M        |  | 9.2.1.56              |                       |
| >Midamble Shift And Burst Type 7.68Mcps               | M        |  | 9.2.3.23              |                       |
| >TDD Channelisation Code 7.68Mcps                     | M        |  | 9.2.3.25              |                       |
| <b>E-HICH Information Response 7.68Mcps</b>           |          | <i>0..1</i>                            |                       |                       |
| >Time Slot  | M        |  | 9.2.1.56              |                       |
| >Midamble Shift And Burst Type 7.68Mcps               | M        |  | 9.2.3.23              |                       |
| >TDD Channelisation Code 7.68Mcps                     | M        |  | 9.2.3.25              |                       |
| >E-HICH Time Offset                                   | M        |  | 9.2.3.48              |                       |
| E-DCH Non-scheduled Grant Information 7.68Mcps TDD    | O        |  | 9.2.3.50              |                       |
| E-RNTI  | O        |  | 9.2.1.94              |                       |

| Range Bound          | Explanation                                  |
|----------------------|--|
| maxnoofEDCHMACdFlows | Maximum number of E-DCH MAC-d flows          |
| maxnoofEAGCHcodes    | Maximum number of E-AGCHs assigned to one UE |

### 9.2.3.53 E-DCH TDD Maximum Bitrate 7.68Mcps

The *E-DCH TDD Maximum Bitrate 7.68Mcps* parameter indicates the Maximum Bitrate for an E-DCH in 7.68Mcps TDD mode.

| IE/Group Name                      | Presence | Range | IE Type and Reference  | Semantics Description                                       |
|------------------------------------|----------|-------|------------------------|---|
| E-DCH TDD Maximum Bitrate 7.68Mcps |          |       | INTEGER (0..17713,...) | Bitrate on transport block level. Unit is kbits per second. |

### 9.2.3.54 E-DCH Physical Layer Category LCR

Only for 1.28Mcps TDD. The *E-DCH Physical Layer Category LCR* IE parameter indicates the E-DCH physical layer capability of UE in LCR TDD mode.

| IE/Group Name                     | Presence | Range | IE Type and Reference | Semantics Description |
|-----------------------------------|----------|-------|-----------------------|-----------------------|
| E-DCH Physical Layer Category LCR |          |       | INTEGER (1..5)        | As defined in [42]    |

### 9.2.3.54A Extended E-DCH Physical layer Category LCR

Only for 1.28Mcps TDD. The *Extended E-DCH Physical Layer Category LCR* IE parameter indicates the E-DCH physical layer capability of UE in LCR TDD mode.

| IE/Group Name                              | Presence | Range | IE Type and Reference | Semantics Description |
|--|----------|-------|-----------------------|-----------------------|
| Extended E-DCH Physical Layer Category LCR |          |       | INTEGER(6,...)        | As defined in [42]    |

### 9.2.3.55 UpPCH Information LCR

Only for 1.28Mcps TDD.

| IE/Group Name         | Presence | Range                     | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|-----------------------|----------|---------------------------|-----------------------|-----------------------|-------------|----------------------|
| UpPCH Information LCR |          | $1..<maxFrequencyinCell>$ |                       |                       | EACH        | ignore               |
| >UARFCN               | O        |                           | 9.2.1.66              |                       | –           |                      |
| >UpPCH Position LCR   | O        |                           | 9.2.3.56              |                       | –           |                      |

| Range Bound        | Explanation   |
|--------------------|---|
| maxFrequencyinCell | Maximum number of Frequency that can be defined in a Cell |

### 9.2.3.56 UpPCH Position LCR

Only for 1.28Mcps TDD.

| IE/Group Name      | Presence | Range | IE Type and Reference | Semantics Description |
|--------------------|----------|-------|-----------------------|-----------------------|
| UpPCH Position LCR |          |       | INTEGER (1..127)      |                       |

### 9.2.3.57 Common E-DCH MAC-d Flow ID

The *Common E-DCH MAC-d Flow ID* IE is the unique identifier for one MAC-d flow on E-DCH.

| IE/Group Name              | Presence | Range | IE Type and Reference | Semantics Description |
|----------------------------|----------|-------|-----------------------|-----------------------|
| Common E-DCH MAC-d Flow ID |          |       | INTEGER (0..255)      |                       |

### 9.2.3.58 Common E-DCH MAC-d Flow Specific Information LCR

The *Common E-DCH MAC-d Flow Specific Information LCR* IE provides information associated to Common E-DCH MAC-d Flow used for Common E-DCH.

| IE/Group Name   | Presence | Range                                       | IE Type and Reference              | Semantics Description |
|---|----------|---|------------------------------------|-----------------------|
| <b>Common E-DCH MAC-d Flow Specific Information LCR</b> |          | <i>1..&lt;maxnoofEDCHMACdFlowsLCR&gt;</i>   |                                    |                       |
| >Common E-DCH MAC-d Flow ID                             | M        |   | 9.2.3.57                           |                       |
| >Maximum Number Of Retransmissions For E-DCH            | M        |   | 9.2.1.100                          |                       |
| >E-DCH HARQ Power Offset TDD                            | M        |   | 9.2.3.49                           |                       |
| >E-DCH MAC-d Flow Multiplexing List                     | O        |   | 9.2.1.89                           |                       |
| <b>&gt;Common E-DCH Logical Channel information</b>     | M        | <i>1..&lt;maxnooflogicalchannelsLCR&gt;</i> |                                    |                       |
| >>Logical Channel ID                                    | M        |   | 9.2.1.97                           |                       |
| >>Maximum MAC-d PDU Size Extended                       | M        |   | MAC PDU Size Extended<br>9.2.1.34D |                       |

| Range bound                      | Explanation  |
|----------------------------------|--|
| <i>maxnoofEDCHMACdFlowsLCR</i>   | Maximum number of E-DCH MAC-d Flows for 1.28Mcps TDD |
| <i>maxnooflogicalchannelsLCR</i> | Maximum number of logical channels                   |

### 9.2.3.59 MAC-es Maximum Bit Rate LCR

The *MAC-es Maximum Bit Rate LCR* IE indicates the maximum number of bits per second to be delivered over the air interface.

| IE/Group Name               | Presence | Range | IE Type and Reference        | Semantics Description |
|-----------------------------|----------|-------|------------------------------|-----------------------|
| MAC-es Maximum Bit Rate LCR |          |       | INTEGER (0..256,000,000,...) | Unit: bit/s           |

### 9.2.3.60 Idle Interval Information

The *Idle Interval Information* IE indicates the idle interval used for E-UTRAN measurements by a multi-RAT UE in CELL\_DCH state. Ref [64].

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description                              |
|---------------|----------|-------|-----------------------|--|
| K             | M        |       | INTEGER (2..3)        | The actual idle interval period = 2 <sup>K</sup> . |
| Offset        | M        |       | INTEGER (0..7)        | The idle interval position in the period.          |

### 9.2.3.61 Continuous Packet Connectivity DRX Information LCR

The *Continuous Packet Connectivity DRX Information LCR* IE defines the parameters used for Continuous Packet Connectivity DRX operation for 1.28 Mcps TDD (see ref. [21]).

| IE/Group Name                             | Presence | Range | IE Type and Reference   | Semantics Description  |
|---|----------|-------|---|--|
| Enabling Delay                            | M        |       | ENUMERATED (0, 1, 2, 4, 8, 16, 32, 64, 128)                         | Units of radio frames  |
| <b>HS-SCCH DRX Information</b>            |          | 1     |   |  |
| >UE DRX Cycle                             | M        |       | ENUMERATED(1,2, 4,8,16,32,64,...)                                   | Units of subframes   |
| >Inactivity Threshold for UE DRX Cycle    | O        |       | ENUMERATED(1,2, 4,8,16,32,64,...)                                   | Units of subframes   |
| >UE DRX Offset                            | M        |       | INTEGER (0..63)   | Units of subframes. Offset of the UE DRX cycles at the given TTI   |
| <b>E-AGCH DRX Information</b>             |          | 0..1  |   |  |
| <b>CHOICE E-AGCH DRX information type</b> | M        |       |   |  |
| >Same as HS-SCCH                          |          |       | NULL  | Indicate the E-AGCH DRX Cycle and Offset are the same as the HS-SCCH DRX Cycle and Offset, and the E-AGCH Inactivity Monitor Threshold is absent |
| >E-AGCH DRX parameters                    |          |       |   |  |
| >>E-AGCH DRX cycle                        | M        |       | Enumerated (1,2,4,8,16,32,64, ...)                                  | Units of subframes.  |
| >>E-AGCH Inactivity Monitor Threshold     | O        |       | Enumerated (0, 1, 2, 4, 8, 16, 32, 64, 128, 256, 512, infinity,...) | Units of subframes.  |
| >>E-AGCH DRX Offset                       | M        |       | Integer (0.. 63)  | Units of subframes. Offset of the E-AGCH DRX cycles.   |

### 9.2.3.62 Continuous Packet Connectivity DRX Information To Modify LCR

The *Continuous Packet Connectivity DRX Information To Modify LCR* IE is used for modification of Continuous Packet Connectivity DRX information in a Node B Communication Context. The *Continuous Packet Connectivity DRX Information To Modify LCR* IE shall include at least one of the following IE.

| IE/Group Name                            | Presence | Range | IE Type and Reference                       | Semantics Description  |
|--|----------|-------|---|--|
| Enabling Delay                           | O        |       | ENUMERATED (0, 1, 2, 4, 8, 16, 32, 64, 128) | Units of radio frames  |
| <b>CHOICE DRX Information To Modify</b>  | O        |       |   |  |
| >Modify                                  |          |       |   |  |
| <b>&gt;&gt;HS-SCCH DRX Information</b>   |          | 0..1  |   |  |
| >>>UE DRX Cycle                          | M        |       | ENUMERATED(1,2, 4,8,16,32,64,...)           | Units of subframes   |
| >>>Inactivity Threshold for UE DRX Cycle | M        |       | ENUMERATED(1,2, 4,8,16,32,64,...)           | Units of subframes   |
| >>>UE DRX Offset                         | O        |       | INTEGER (0..63)                             | Units of subframes. Offset of the UE DRX cycles at the given TTI |
| <b>&gt;&gt;E-AGCH DRX Information</b>    |          | 0..1  |   |  |
| >>>CHOICE E-AGCH DRX information type    | M        |       |   |  |

|  |   |  |   |  |
|--|---|--|---|--|
| >>>>Same as HS-SCCH                      |   |  | NULL  | Indicate the E-AGCH DRX Cycle and Offset are the same as the HS-SCCH DRX Cycle and Offset, and the E-AGCH Inactivity Monitor Threshold is absent |
| >>>>E-AGCH DRX parameters                |   |  |   |  |
| >>>>>E-AGCH DRX cycle                    | M |  | Enumerated (1,2,4,8,16,32,64,...)                                   | Units of subframes.  |
| >>>>>E-AGCH Inactivity Monitor Threshold | O |  | Enumerated (0, 1, 2, 4, 8, 16, 32, 64, 128, 256, 512, infinity,...) | Units of subframes.  |
| >>>>>E-AGCH DRX Offset                   | M |  | Integer (0.. 63)  | Units of subframes. Offset of the E-AGCH DRX cycles.   |
| >Deactivate                              |   |  | NULL  |  |

### 9.2.3.63 Continuous Packet Connectivity DRX Information Response LCR

DRNS uses the *Continuous Packet Connectivity DRX Information Response LCR* IE to inform the SRNS the parameters used for Continuous Packet Connectivity DRX operation for 1.28 Mcps TDD (see ref. [21]). Continuous Packet Connectivity DRX related parameters shall be configured by SRNS. For the parameters which can be accepted by DRNS, the DRNS shall not included the related IEs in the *Continuous Packet Connectivity DRX Information Response LCR* IE. For the parameters which can be not accepted by DRNS, the DRNS shall included the related IEs in the *Continuous Packet Connectivity DRX Information Response LCR* IE.

| IE/Group Name                             | Presence | Range | IE Type and Reference   | Semantics Description  |
|---|----------|-------|---|--|
| Enabling Delay                            | O        |       | ENUMERATED (0, 1, 2, 4, 8, 16, 32, 64, 128)                         | Units of radio frames  |
| <b>HS-SCCH DRX Information</b>            |          | 0..1  |   |  |
| >UE DRX Cycle                             | O        |       | ENUMERATED(1,2,4,8,16,32,64,...)                                    | Units of subframes   |
| >Inactivity Threshold for UE DRX Cycle    | O        |       | ENUMERATED(1,2,4,8,16,32,64,...)                                    | Units of subframes   |
| >UE DRX Offset                            | O        |       | INTEGER (0..63)   | Units of subframes. Offset of the UE DRX cycles at the given TTI   |
| <b>E-AGCH DRX Information</b>             |          | 0..1  |   |  |
| <b>CHOICE E-AGCH DRX information type</b> | M        |       |   |  |
| >Same as HS-SCCH                          |          |       | NULL  | Indicate the E-AGCH DRX Cycle and Offset are the same as the HS-SCCH DRX Cycle and Offset, and the E-AGCH Inactivity Monitor Threshold is absent |
| >E-AGCH DRX parameters                    |          |       |   |  |
| >>E-AGCH DRX cycle                        | O        |       | Enumerated (1,2,4,8,16,32,64,...)                                   | Units of subframes.  |
| >>E-AGCH Inactivity Monitor Threshold     | O        |       | Enumerated (0, 1, 2, 4, 8, 16, 32, 64, 128, 256, 512, infinity,...) | Units of subframes.  |
| >>E-AGCH DRX Offset                       | O        |       | Integer (0.. 63)  | Units of subframes. Offset of the E-AGCH DRX cycles.   |

## 9.2.3.64 HS-DSCH Semi-Persistent scheduling Information LCR

The *HS-DSCH Semi-Persistent scheduling Information LCR* IE defines the parameters used for HS-DSCH semi-Persistent scheduling for 1.28 Mcps TDD (see ref. [21]).

| IE/Group Name   | Presence | Range                             | IE Type and Reference                     | Semantics Description  |
|---|----------|-----------------------------------|---|--|
| <b>Transport Block Size List</b>                              |          | $1..<maxnoofTBsMapping>$          |   |  |
| >Transport Block Size mapping Index                           | M        |                                   | INTEGER (0..maxnoofTBsMapping-1)          | Corresponds to the <i>Transport-block size information</i> field carried on HS-SCCH (see ref [34]).  |
| >Transport Block Size Index                                   | M        |                                   | INTEGER (1..maxnoofHS-DSCHTBSsLCR)        | Corresponds to the <i>TB index</i> in the related Transport Block Size table (see ref [32]).   |
| <b>Repetition Period list</b>                                 |          | $1..<maxnoofRepetitionPeriodLCR>$ |   |  |
| >Repetition Period Index                                      | M        |                                   | INTEGER (0..maxnoofRepetitionPeriodLCR-1) | Corresponds to the <i>Resource repetition period index</i> field carried on HS-SCCH (see ref [34]).  |
| >Repetition Period  | M        |                                   | ENUMERATED (1, 2, 4, 8, 16, 32, 64,...)   | Units of subframes   |
| >Repetition Length  | O        |                                   | INTEGER (1..63)                           | Absence means Repetition Length equal to 1.  |
| HS-DSCH Semi-Persistent Resource Reservation Indicator        | O        |                                   | ENUMERATED(Reserve)                       | Reserve means the HS-DSCH Semi-Persistent Resource is required to be reserved and be informed via response message.  |
| <b>HS-DSCH Semi-Persistent scheduling operation Indicator</b> |          | 1                                 |   |  |
| <b>&gt;CHOICE configuration</b>                               |          |                                   |   |  |
| >>Logical Channel level                                       |          |                                   | BIT STRING (16)                           | Available when MAC-ehs is configured. Indicates the logical channels for which the HS-DSCH Semi-Persistent operation is intended to be used. Bit 0 is for logical channel 0, Bit 1 is for logical channel 1, ... Value '1' for a bit means that the HS-DSCH Semi-Persistent operation is allowed. Bit 0 is the first/leftmost bit of the bit string. |
| >> Priority Queue level                                       |          |                                   | BIT STRING (8)                            | Indicates the Priority Queues for which the HS-DSCH Semi-Persistent operation is intended to be used. Bit 0 is for priority queue 0, Bit 1 is for priority queue 1, ... Value '1' for a bit means that the HS-DSCH Semi-Persistent operation is allowed. Bit 0 is the first/leftmost bit of the bit string.  |

| Range Bound                       | Explanation  |
|-----------------------------------|--|
| <i>maxnoofHS-DSCHTBSSLCR</i>      | Maximum number of HS-DSCH Transport Block Sizes                  |
| <i>maxnoofRepetitionPeriodLCR</i> | Maximum number of Repetition Period for 1.28Mcps TDD             |
| <i>maxnoofTBSSMapping</i>         | Maximum number of Transport Block Size mapping index on HS-SCCH. |

### 9.2.3.65 HS-DSCH Semi-Persistent scheduling Information to modify LCR

The *HS-PSCH Semi-Persistent scheduling Information to modify LCR* IE is used for the modification of HS-DSCH Semi-Persistent scheduling information for 1.28 Mcps TDD (see ref. [21]).

| IE/Group Name   | Presence | Range  | IE Type and Reference                   | Semantics Description  |
|---|----------|--|---|--|
| <b>Transport Block Size List</b>                              |          | <i>0..&lt;maxnoofTBSSMapping&gt;</i>         |   |  |
| > Transport Block Size mapping Index                          | M        |  | INTEGER (0..maxnoofTBSSMapping-1)       | Corresponds to the <i>Transport-block size information</i> field carried on HS-SCCH (see ref [34]).  |
| >Transport Block Size Index                                   | M        |  | INTEGER (1..maxnoofHS-DSCHTBSSLCR)      | Corresponds to the <i>TB index</i> in the related Transport Block Size table (see ref [32]).   |
| <b>Repetition Period list</b>                                 |          | <i>0..&lt;maxnoofRepetitionPeriodLCR&gt;</i> |   |  |
| >Repetition Period Index                                      | M        |  | INTEGER (0..maxnoofRepetitionPeriodLCR) | Corresponds to the <i>Resource repetition period index</i> field carried on HS-SCCH (see ref [34]).  |
| >Repetition Period  | M        |  | ENUMERATED (1, 2, 4, 8, 16, 32, 64,...) | Units of subframes   |
| >Repetition Length  | O        |  | INTEGER (1..63)                         | Absence means Repetition Length equal to 1.  |
| HS-DSCH Semi-Persistent Resource Reservation Indicator        | O        |  | ENUMERATED(Reserve)                     | Reserve means the Semi-Persistent HS-DSCH Resource is required to be reserved and be informed via response message.  |
| <b>HS-DSCH Semi-Persistent scheduling operation Indicator</b> |          | <i>0..1</i>                                  |   |  |
| <b>&gt;CHOICE configuration</b>                               |          |  |   |  |
| >>Logical Channel level                                       |          |  | BIT STRING (16)                         | Available when MAC-ehs is configured. Indicates the logical channels for which the HS-DSCH Semi-Persistent operation is intended to be used. Bit 0 is for logical channel 0, Bit 1 is for logical channel 1, ... Value '1' for a bit means that the HS-DSCH Semi-Persistent operation is allowed. Bit 0 is the first/leftmost bit of the bit string. |
| >> Priority Queue level                                       |          |  | BIT STRING (8)                          | Indicates the Priority Queues for which the HS-DSCH Semi-Persistent operation is intended to be used. Bit 0 is for priority queue 0, Bit 1 is for priority queue 1, ... Value '1' for a bit means that   |

|  |  |  |  |  |
|--|--|--|--|--|
|  |  |  |  | the HS-DSCH Semi-Persistent operation is allowed. Bit 0 is the first/leftmost bit of the bit string. |
|--|--|--|--|--|

| Range Bound                       | Explanation  |
|-----------------------------------|--|
| <i>maxnoofHS-DSCHTBSsLCR</i>      | Maximum number of HS-DSCH Transport Block Sizes                  |
| <i>maxnoofRepetitionPeriodLCR</i> | Maximum number of Repetition Period for 1.28Mcps TDD             |
| <i>maxnoofTBSsMapping</i>         | Maximum number of Transport Block Size mapping index on HS-SCCH. |

### 9.2.3.66 E-DCH Semi-Persistent scheduling Information LCR

The *E-DCH Semi-Persistent scheduling Information LCR* IE defines the parameters used for E-DCH semi-Persistent scheduling for 1.28 Mcps TDD (see ref. [21]).

| IE/Group Name  | Presence | Range  | IE Type and Reference                     | Semantics Description  |
|--|----------|--|---|--|
| <b>Repetition Period list</b>                        |          | <i>1..&lt;maxnoofRepetitionPeriodLCR&gt;</i> |   |  |
| >Repetition Period Index                             | M        |  | INTEGER (0..maxnoofRepetitionPeriodLCR-1) |  |
| >Repetition Period                                   | M        |  | ENUMERATED (1, 2, 4, 8, 16, 32, 64,...)   | Units of subframes   |
| >Repetition Length                                   | O        |  | INTEGER (1..63)                           | Absence means Repetition Length equal to 1.  |
| E-DCH Semi-Persistent scheduling Indicator           | M        |  | BIT STRING (16)                           | Indicates the logical channels for which the E-DCH Semi-Persistent operation is intended to be used. Bit 0 is for logical channel 0, Bit 1 is for logical channel 1, ... Value '1' for a bit means that the E-DCH Semi-Persistent operation is allowed. Bit 0 is the first/leftmost bit of the bit string. |
| E-DCH Semi-Persistent Resource Reservation Indicator | O        |  | ENUMERATED(Reserve)                       | Reserve means the E-DCH Semi-Persistent Resource is required to be reserved and be informed via response message.  |

| Range Bound                       | Explanation  |
|-----------------------------------|--|
| <i>maxnoofRepetitionPeriodLCR</i> | Maximum number of Repetition Period for 1.28Mcps TDD |

### 9.2.3.67 E-DCH Semi-Persistent scheduling Information to modify LCR

The *E-DCH Semi-Persistent scheduling Information to modify LCR* IE is used for the modification of E-DCH Semi-Persistent scheduling information for 1.28 Mcps TDD (see ref. [21]).

| IE/Group Name                 | Presence | Range  | IE Type and Reference | Semantics Description |
|-------------------------------|----------|--|-----------------------|-----------------------|
| <b>Repetition Period list</b> |          | <i>0..&lt;maxnoofRepetitionPeriodLCR&gt;</i> |                       |                       |



|  |   |  |  |   |
|--|---|--|--|---|
| >Repetition Period Index                                   | M |  | INTEGER (0..<br><i>maxnoofRepetitionP<br/>eriodLCR-1</i> ) |   |
| >Repetition Period   | M |  | ENUMERATED<br>(1, 2, 4, 8, 16, 32,<br>64,...)              | Units of subframes  |
| >Repetition Length   | O |  | INTEGER<br>(1..63))  | Absence means Repetition<br>Length equal to 1.  |
| E-DCH Semi-Persistent<br>scheduling Indicator              | O |  | BIT STRING (16)  | Indicates the logical channels<br>for which the E-DCH Semi-<br>Persistent operation is<br>intended to be used.<br>Bit 0 is for logical channel 0,<br>Bit 1 is for logical channel 1, ...<br>Value '1' for a bit means that<br>the E-DCH Semi-Persistent<br>operation is allowed. Bit 0 is<br>the first/leftmost bit of the bit<br>string. |
| E-DCH Semi-Persistent<br>Resource Reservation<br>Indicator | O |  | ENUMERATED(Res<br>erve)                                    | Reserve means the E-DCH<br>Semi-Persistent Resource is<br>required to be reserved and be<br>informed via response<br>message.   |

| Range Bound                       | Explanation  |
|-----------------------------------|--|
| <i>maxnoofRepetitionPeriodLCR</i> | Maximum number of Repetition Period for 1.28Mcps TDD |

### 9.2.3.68 HS-DSCH Semi-Persistent scheduling Information Response LCR

The *HS-DSCH Semi-Persistent scheduling Information Response LCR* IE provides information for HS-DSCH Semi-Persistent scheduling determined within the Node B (see ref. [21]).

| IE/Group Name   | Presence | Range  | IE Type and Reference                                      | Semantics Description                          |
|---|----------|--|--|--|
| <b>HS-SICH information for HS-DSCH Semi-Persistent Scheduling operation</b> |          | <i>1..&lt;<br/>maxnoofH<br/>S-<br/>SICHforSP<br/>S&gt;</i> |  |  |
| >HS-SICH mapping index  | M        |  | INTEGER (0..<br><i>maxnoofHS-<br/>SICHforSPS-1</i> )       |  |
| >CHIOCE <i>HS-SICH type</i>   |          |  |  |  |
| >> <i>HS-SCCH associated HS-SICH</i>  |          |  |  |  |
| >>>HS-SICH ID   | M        |  | HS SICH ID<br>9.2.3.3ad                                    |  |
| >> <i>Non-HS-SCCH associated HS-SICH</i>                                    |          |  |  |  |
| >>>Time Slot LCR  | M        |  | 9.2.3.12a  |  |
| >>>Midamble shift LCR   | M        |  | 9.2.3.4C   |  |
| >>>TDD Channelisation Code  | M        |  | 9.2.3.8  |  |
| <b>Allcoated HS-PDSCH Semi-persistent resource</b>                          |          | <i>0..1</i>  |  |  |
| >Repetition Period Index  | M        |  | INTEGER (0..<br><i>maxnoofRepetitionP<br/>eriodLCR-1</i> ) |  |
| >Repetition Length for HS-PDSCH Semi-persistent Resouce                     | O        |  | INTEGER<br>(1..63))  | Absence means Repetition<br>Length equal to 1. |
| >HS-PDSCH offset  | M        |  | INTEGER<br>(0..63))  | Units of subframes                             |

|  |   |  |                                     |  |
|--|---|--|-------------------------------------|--|
| >HS-PDSCH Midamble Configuration                           | M |  | Midamble Shift LCR 9.2.3.7A         |  |
| >Timeslot Resource Related Information                     | M |  | BIT STRING(5)                       | Each bit indicates availability of a timeslot, where the bit 0 corresponds to TS2, the bit 1 is TS3, the bit 3 is TS4... bit 5 corresponds to TS6. The value 1 of a bit indicates that the corresponding timeslot is available. Bit 0 is the first/leftmost bit of the bit string. |
| >Start Code  | M |  | TDD Channelisation Code 9.2.3.19    |  |
| >End Code  | M |  | TDD Channelisation Code 9.2.3.19    |  |
| >Transport Block Size Index                                | M |  | INTEGER (0..maxnoofTBSsMapping-1)   |  |
| >Modulation type   | M |  | ENUMERATED (QPSK, 16QAM)            |  |
| >HS-SICH mapping index                                     | M |  | INTEGER (0..maxnoofHS-SICHforSPS-1) |  |
| Buffer Size for HS-DSCH Semi-Persistent scheduling         | O |  | ENUMERATED (800..304000,...)        | Indicats the buffer size that shall be reserved for HS-DSCH semi-persistent scheduling operation.<br><br>800 .. 16000 by step of 800, 17600 .. 32000 by step of 1600, 36000 .. 80000 by step of 4000, 88000 .. 160000 by step of 8000, 176000 .. 304000 by step of 16000           |
| Number of Processes for HS-DSCH Semi-Persistent scheduling | O |  | INTEGER (1..16)                     |  |

| Range Bound                 | Explanation  |
|-----------------------------|--|
| <i>maxnoofHS-SICHforSPS</i> | Maximum number of HS-SICH for HS-DSCH Semi-Persistent scheduling operation |
| <i>maxnoofTBSsMapping</i>   | Maximum number of Transport Block Size mapping index on HS-SCCH.           |

### 9.2.3.69 E-DCH Semi-Persistent scheduling Information Response LCR

The *E-DCH Semi-Persistent scheduling Information Response LCR* IE provides information for E-DCH Semi-Persistent scheduling information determined within the Node B (see ref. [21]).

| IE/Group Name                                   | Presence | Range       | IE Type and Reference                     | Semantics Description                                   |
|---|----------|-------------|---|---|
| <b>Allcoated E-DCH Semi-persistent resource</b> |          | <i>0..1</i> |   |   |
| >Timeslot Resource Related Information LCR      | M        |             | 9.2.3.54a                                 |   |
| >Power Resource Related Information             | M        |             | 9.2.3.55                                  |   |
| >Repetition Period Index                        | M        |             | INTEGER (0..maxnoofRepetitionPeriodLCR-1) |   |
| >Repetition Length                              | M        |             | INTEGER (1..63)                           | Absence means Repetition Length equal to 1.             |
| >Subframe Number                                | M        |             | ENUMERATED (0,1)                          | Used to indicate from which subframe of the Radio Frame |

|                                     |   |      |                 |   |
|-------------------------------------|---|------|-----------------|---|
|                                     |   |      |                 | indicated by TDD E-PUCH Offset IE the physical resources are assigned to the E-DCH Non-scheduled Grant. |
| >TDD E-PUCH Offset                  | M |      | 9.2.3.56        |   |
| >TDD Channelisation Code            | M |      | 9.2.3.19        |   |
| >NE-UCCH                            | M |      | INTEGER (1..8)  | Number of E-UCCH and TPC instances within an E-DCH TTI. Details are described in [19].                  |
| <b>E-DCH SPS E-HICH information</b> |   | 0..1 |                 |   |
| >CHOICE <i>E-HICH configuration</i> | M |      |                 |   |
| >>same as scheduled <i>E-HICH</i>   |   |      |                 |   |
| >>> EI                              |   |      | INTEGER (0..3)  |   |
| >>>explicit                         |   |      |                 |   |
| >>>Time Slot LCR                    | M |      | 9.2.3.12a       |   |
| >>>Midamble Shift LCR               | M |      | 9.2.3.4C        |   |
| >>>TDD Channelisation Code          | M |      | 9.2.3.8         |   |
| >Signature Sequence Group Index     | M |      | INTEGER (0..19) |   |

### 9.2.3.70 HS-DSCH Semi-Persistent scheduling Deactivate Indicator LCR

The *HS-DSCH Semi-Persistent scheduling Deactivate Indicator LCR* IE is used to deactivate HS-DSCH Semi-Persistent scheduling operation for 1.28 Mcps TDD.

| IE/Group Name   | Presence | Range | IE Type and Reference | Semantics Description |
|---|----------|-------|-----------------------|-----------------------|
| HS-DSCH Semi-Persistent scheduling Deactivate Indicator | M        |       | NULL                  |                       |

### 9.2.3.71 E-DCH Semi-Persistent scheduling Deactivate Indicator LCR

The *E-DCH Semi-Persistent scheduling Deactivate Indicator LCR* IE is used to deactivate E-DCH Semi-Persistent scheduling operation for 1.28 Mcps TDD.

| IE/Group Name   | Presence | Range | IE Type and Reference | Semantics Description |
|---|----------|-------|-----------------------|-----------------------|
| E-DCH Semi-Persistent scheduling Deactivate Indicator | M        |       | NULL                  |                       |

### 9.2.3.72 HS-SICH Reference Signal Information

| IE/Group Name              | Presence | Range | IE Type and Reference                         | Semantics Description | Criticality | Assigned Criticality |
|----------------------------|----------|-------|---|-----------------------|-------------|----------------------|
| Midamble Configuration LCR | M        |       | ENUMERATE D (2, 4, 6, 8, 10, 12, 14, 16, ...) | As defined in [19]    |             |                      |
| Midamble Shift             | M        |       | INTEGER (0..15)                               |                       |             |                      |
| Time Slot LCR              | M        |       | 9.2.3.12a                                     |                       |             |                      |

## 9.3 Message and Information Element Abstract Syntax (with ASN.1)

### 9.3.0 General

Subclause 9.3 presents the Abstract Syntax of RNSAP protocol with ASN.1. In case there is contradiction between the ASN.1 definition in this subclause and the tabular format in subclause 9.1 and 9.2, the ASN.1 shall take precedence, except for the definition of conditions for the presence of conditional elements, in which the tabular format shall take precedence.

The ASN.1 definition specifies the structure and content of RNSAP messages. RNSAP messages can contain any IEs specified in the object set definitions for that message without the order or number of occurrence being restricted by ASN.1. However, for this version of the standard, a sending entity shall construct a RNSAP message according to the PDU definitions module and with the following additional rules (Note that in the following IE means an IE in the object set with an explicit id. If one IE needed to appear more than once in one object set, then the different occurrences have different IE ids):

- IEs shall be ordered (in an IE container) in the order they appear in object set definitions.
- Object set definitions specify how many times IEs may appear. An IE shall appear exactly once if the presence field in an object has value "mandatory". An IE may appear at most once if the presence field in an object has value "optional" or "conditional". If in a tabular format there is multiplicity specified for an IE (i.e. an IE list) then in the corresponding ASN.1 definition the list definition is separated into two parts. The first part defines an IE container list in which the list elements reside. The second part defines list elements. The IE container list appears as an IE of its own. For this version of the standard an IE container list may contain only one kind of list elements.

If a RNSAP message that is not constructed as defined above is received, this shall be considered as Abstract Syntax Error, and the message shall be handled as defined for Abstract Syntax Error in subclause 10.3.6.

### 9.3.1 Usage of Private Message Mechanism for Non-standard Use

The private message mechanism for non-standard use may be used:

- for special operator (and/or vendor) specific features considered not to be part of the basic functionality, i.e. the functionality required for a complete and high-quality specification in order to guarantee multivendor inter-operability.
- by vendors for research purposes, e.g. to implement and evaluate new algorithms/features before such features are proposed for standardisation.

The private message mechanism shall not be used for basic functionality. Such functionality shall be standardised.

### 9.3.2 Elementary Procedure Definitions

```
-- *****
--
-- Elementary Procedure definitions
--
-- *****
```

```
RNSAP-PDU-Descriptions {
itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
umts-Access (20) modules (3) rnsap (1) version1 (1) rnsap-PDU-Descriptions (0) }
```

```
DEFINITIONS AUTOMATIC TAGS ::=
```

```
BEGIN
```

```
-- *****
--
-- IE parameter types from other modules.
--
-- *****
```

```
IMPORTS
```

```
    Criticality,
    ProcedureID,
    TransactionID
```

```
FROM RNSAP-CommonDataTypes
```

```
    CommonMeasurementFailureIndication,
    CommonMeasurementInitiationFailure,
    CommonMeasurementInitiationRequest,
    CommonMeasurementInitiationResponse,
    CommonMeasurementReport,
    CommonMeasurementTerminationRequest,
    CommonTransportChannelResourcesFailure,
    CommonTransportChannelResourcesRequest,
    CommonTransportChannelResourcesReleaseRequest,
    CommonTransportChannelResourcesResponseFDD,
    CommonTransportChannelResourcesResponseTDD,
    CompressedModeCommand,
    DedicatedMeasurementFailureIndication,
    DedicatedMeasurementInitiationFailure,
    DedicatedMeasurementInitiationRequest,
    DedicatedMeasurementInitiationResponse,
    DedicatedMeasurementReport,
    DedicatedMeasurementTerminationRequest,
    DirectInformationTransfer,
    DL-PowerControlRequest,
    DL-PowerTimeslotControlRequest,
    DownlinkSignallingTransferRequest,
    ErrorIndication,
    EnhancedRelocationCancel,
    EnhancedRelocationFailure,
    EnhancedRelocationRequest,
    EnhancedRelocationResponse,
    EnhancedRelocationSignallingTransfer,
    EnhancedRelocationRelease,
    InformationExchangeFailureIndication,
    InformationExchangeInitiationFailure,
    InformationExchangeInitiationRequest,
    InformationExchangeInitiationResponse,
    InformationExchangeTerminationRequest,
```

InformationReport,  
IurDeactivateTrace,  
IurInvokeTrace,  
MBMSAttachCommand,  
MBMSDetachCommand,  
MBSFNMCCHInformation,  
PagingRequest,  
PhysicalChannelReconfigurationCommand,  
PhysicalChannelReconfigurationFailure,  
PhysicalChannelReconfigurationRequestFDD,  
PhysicalChannelReconfigurationRequestTDD,  
PrivateMessage,  
RadioLinkActivationCommandFDD,  
RadioLinkActivationCommandTDD,  
RadioLinkAdditionFailureFDD,  
RadioLinkAdditionFailureTDD,  
RadioLinkAdditionRequestFDD,  
RadioLinkAdditionRequestTDD,  
RadioLinkAdditionResponseFDD,  
RadioLinkAdditionResponseTDD,  
RadioLinkCongestionIndication,  
RadioLinkDeletionRequest,  
RadioLinkDeletionResponse,  
RadioLinkFailureIndication,  
RadioLinkParameterUpdateIndicationFDD,  
RadioLinkParameterUpdateIndicationTDD,  
RadioLinkPreemptionRequiredIndication,  
RadioLinkReconfigurationCancel,  
RadioLinkReconfigurationCommit,  
RadioLinkReconfigurationFailure,  
RadioLinkReconfigurationPrepareFDD,  
RadioLinkReconfigurationPrepareTDD,  
RadioLinkReconfigurationReadyFDD,  
RadioLinkReconfigurationReadyTDD,  
RadioLinkReconfigurationRequestFDD,  
RadioLinkReconfigurationRequestTDD,  
RadioLinkReconfigurationResponseFDD,  
RadioLinkReconfigurationResponseTDD,  
RadioLinkRestoreIndication,  
RadioLinkSetupFailureFDD,  
RadioLinkSetupFailureTDD,  
RadioLinkSetupRequestFDD,  
RadioLinkSetupRequestTDD,  
RadioLinkSetupResponseFDD,  
RadioLinkSetupResponseTDD,  
RelocationCommit,  
ResetRequest,  
ResetResponse,  
UEMeasurementFailureIndication,  
UEMeasurementInitiationFailure,  
UEMeasurementInitiationRequest,  
UEMeasurementInitiationResponse,  
UEMeasurementReport,  
UEMeasurementTerminationRequest,

UplinkSignallingTransferIndicationFDD,  
UplinkSignallingTransferIndicationTDD,  
GERANUplinkSignallingTransferIndication  
FROM RNSAP-PDU-Contents

id-commonMeasurementFailure,  
id-commonMeasurementInitiation,  
id-commonMeasurementReporting,  
id-commonMeasurementTermination,  
id-commonTransportChannelResourcesInitialisation,  
id-commonTransportChannelResourcesRelease,  
id-compressedModeCommand,  
id-downlinkPowerControl,  
id-downlinkSignallingTransfer,  
id-downlinkPowerTimeslotControl,  
id-enhancedRelocation,  
id-enhancedRelocationCancel,  
id-enhancedRelocationSignallingTransfer,  
id-enhancedRelocationRelease,  
id-errorIndication,  
id-informationExchangeFailure,  
id-informationExchangeInitiation,  
id-informationReporting,  
id-informationExchangeTermination,  
id-iurDeactivateTrace,  
id-iurInvokeTrace,  
id-dedicatedMeasurementFailure,  
id-dedicatedMeasurementInitiation,  
id-dedicatedMeasurementReporting,  
id-dedicatedMeasurementTermination,  
id-directInformationTransfer,  
id-mBMSAttach,  
id-mBMSDetach,  
id-mBSFNMCCHInformation,  
id-paging,  
id-physicalChannelReconfiguration,  
id-privateMessage,  
id-radioLinkActivation,  
id-radioLinkAddition,  
id-radioLinkCongestion,  
id-radioLinkDeletion,  
id-radioLinkFailure,  
id-radioLinkParameterUpdate,  
id-radioLinkPreemption,  
id-radioLinkRestoration,  
id-radioLinkSetup,  
id-relocationCommit,  
id-reset,  
id-synchronisedRadioLinkReconfigurationCancellation,  
id-synchronisedRadioLinkReconfigurationCommit,  
id-synchronisedRadioLinkReconfigurationPreparation,  
id-uEMeasurementFailure,  
id-uEMeasurementInitiation,  
id-uEMeasurementReporting,

```

    id-uEMeasurementTermination,
id-unSynchronisedRadioLinkReconfiguration,
    id-uplinkSignallingTransfer,
    id-gERANuplinkSignallingTransfer
FROM RNSAP-Constants;

-- *****
--
-- Interface Elementary Procedure Class
--
-- *****

RNSAP-ELEMENTARY-PROCEDURE ::= CLASS {
    &InitiatingMessage          ,
    &SuccessfulOutcome          OPTIONAL,
    &UnsuccessfulOutcome        OPTIONAL,
    &Outcome                    OPTIONAL,
    &procedureID                ProcedureID    UNIQUE,
    &criticality                Criticality    DEFAULT ignore
}
WITH SYNTAX {
    INITIATING MESSAGE          &InitiatingMessage
    [SUCCESSFUL OUTCOME        &SuccessfulOutcome]
    [UNSUCCESSFUL OUTCOME      &UnsuccessfulOutcome]
    [OUTCOME                   &Outcome]
    PROCEDURE ID               &procedureID
    [CRITICALITY               &criticality]
}

-- *****
--
-- Interface PDU Definition
--
-- *****

RNSAP-PDU ::= CHOICE {
    initiatingMessage    InitiatingMessage,
    successfulOutcome    SuccessfulOutcome,
    unsuccessfulOutcome  UnsuccessfulOutcome,
    outcome              Outcome,
    ...
}

InitiatingMessage ::= SEQUENCE {
    procedureID RNSAP-ELEMENTARY-PROCEDURE.&procedureID    ({RNSAP-ELEMENTARY-PROCEDURES}),
    criticality RNSAP-ELEMENTARY-PROCEDURE.&criticality      ({RNSAP-ELEMENTARY-PROCEDURES}{@procedureID}),
    transactionID TransactionID,
    value       RNSAP-ELEMENTARY-PROCEDURE.&InitiatingMessage  ({RNSAP-ELEMENTARY-PROCEDURES}{@procedureID})
}

SuccessfulOutcome ::= SEQUENCE {
    procedureID RNSAP-ELEMENTARY-PROCEDURE.&procedureID    ({RNSAP-ELEMENTARY-PROCEDURES}),
    criticality RNSAP-ELEMENTARY-PROCEDURE.&criticality      ({RNSAP-ELEMENTARY-PROCEDURES}{@procedureID}),
    transactionID TransactionID,
}

```



```

    value          RNSAP-ELEMENTARY-PROCEDURE.&SuccessfulOutcome   ({RNSAP-ELEMENTARY-PROCEDURES}{@procedureID})
  }
  UnsuccessfulOutcome ::= SEQUENCE {
    procedureID RNSAP-ELEMENTARY-PROCEDURE.&procedureID   ({RNSAP-ELEMENTARY-PROCEDURES}),
    criticality RNSAP-ELEMENTARY-PROCEDURE.&criticality   ({RNSAP-ELEMENTARY-PROCEDURES}{@procedureID}),
    transactionID TransactionID,
    value          RNSAP-ELEMENTARY-PROCEDURE.&UnsuccessfulOutcome ({RNSAP-ELEMENTARY-PROCEDURES}{@procedureID})
  }
  Outcome ::= SEQUENCE {
    procedureID RNSAP-ELEMENTARY-PROCEDURE.&procedureID   ({RNSAP-ELEMENTARY-PROCEDURES}),
    criticality RNSAP-ELEMENTARY-PROCEDURE.&criticality   ({RNSAP-ELEMENTARY-PROCEDURES}{@procedureID}),
    transactionID TransactionID,
    value          RNSAP-ELEMENTARY-PROCEDURE.&Outcome     ({RNSAP-ELEMENTARY-PROCEDURES}{@procedureID})
  }

-- *****
--
-- Interface Elementary Procedure List
--
-- *****

RNSAP-ELEMENTARY-PROCEDURES RNSAP-ELEMENTARY-PROCEDURE ::= {
  RNSAP-ELEMENTARY-PROCEDURES-CLASS-1 |
  RNSAP-ELEMENTARY-PROCEDURES-CLASS-2 |
  RNSAP-ELEMENTARY-PROCEDURES-CLASS-3 |
  ...
}

RNSAP-ELEMENTARY-PROCEDURES-CLASS-1 RNSAP-ELEMENTARY-PROCEDURE ::= {
  radioLinkSetupFDD |
  radioLinkSetupTDD |
  radioLinkAdditionFDD |
  radioLinkAdditionTDD |
  radioLinkDeletion |
  synchronisedRadioLinkReconfigurationPreparationFDD |
  synchronisedRadioLinkReconfigurationPreparationTDD |
  unSynchronisedRadioLinkReconfigurationFDD |
  unSynchronisedRadioLinkReconfigurationTDD |
  physicalChannelReconfigurationFDD |
  physicalChannelReconfigurationTDD |
  dedicatedMeasurementInitiation |
  commonTransportChannelResourcesInitialisationFDD |
  commonTransportChannelResourcesInitialisationTDD |
  ... |
  commonMeasurementInitiation |
  informationExchangeInitiation |
  reset |
  uEMeasurementInitiation |
  enhancedRelocation
}

RNSAP-ELEMENTARY-PROCEDURES-CLASS-2 RNSAP-ELEMENTARY-PROCEDURE ::= {

```

```

uplinkSignallingTransferFDD
uplinkSignallingTransferTDD
downlinkSignallingTransfer
relocationCommit
paging
synchronisedRadioLinkReconfigurationCommit
synchronisedRadioLinkReconfigurationCancellation
radioLinkFailure
radioLinkPreemption
radioLinkRestoration
dedicatedMeasurementReporting
dedicatedMeasurementTermination
dedicatedMeasurementFailure
downlinkPowerControlFDD
downlinkPowerTimeslotControl
compressedModeCommandFDD
commonTransportChannelResourcesRelease
errorIndication
privateMessage
...
radioLinkCongestion
commonMeasurementFailure
commonMeasurementReporting
commonMeasurementTermination
informationExchangeFailure
informationExchangeTermination
informationReporting
radioLinkActivationFDD
radioLinkActivationTDD
gERANuplinkSignallingTransfer
radioLinkParameterUpdateFDD
radioLinkParameterUpdateTDD
uEMeasurementReporting
uEMeasurementTermination
uEMeasurementFailure
iurInvokeTrace
iurDeactivateTrace
mBMSAttach
mBMSDetach
directInformationTransfer
enhancedRelocationCancel
enhancedRelocationSignallingTransfer
enhancedRelocationRelease
mBSFNMCCHInformation
}

RNSAP-ELEMENTARY-PROCEDURES-CLASS-3 RNSAP-ELEMENTARY-PROCEDURE ::= {
    ...
}

-- *****

```

```
--
-- Interface Elementary Procedures
--
-- *****

radioLinkSetupFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE  RadioLinkSetupRequestFDD
    SUCCESSFUL OUTCOME  RadioLinkSetupResponseFDD
    UNSUCCESSFUL OUTCOME RadioLinkSetupFailureFDD
    PROCEDURE ID        { procedureCode id-radioLinkSetup, ddMode fdd }
    CRITICALITY         reject
}

radioLinkSetupTDD RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE  RadioLinkSetupRequestTDD
    SUCCESSFUL OUTCOME  RadioLinkSetupResponseTDD
    UNSUCCESSFUL OUTCOME RadioLinkSetupFailureTDD
    PROCEDURE ID        { procedureCode id-radioLinkSetup, ddMode tdd }
    CRITICALITY         reject
}

radioLinkAdditionFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE  RadioLinkAdditionRequestFDD
    SUCCESSFUL OUTCOME  RadioLinkAdditionResponseFDD
    UNSUCCESSFUL OUTCOME RadioLinkAdditionFailureFDD
    PROCEDURE ID        { procedureCode id-radioLinkAddition , ddMode fdd }
    CRITICALITY         reject
}

radioLinkAdditionTDD RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE  RadioLinkAdditionRequestTDD
    SUCCESSFUL OUTCOME  RadioLinkAdditionResponseTDD
    UNSUCCESSFUL OUTCOME RadioLinkAdditionFailureTDD
    PROCEDURE ID        { procedureCode id-radioLinkAddition , ddMode tdd }
    CRITICALITY         reject
}

radioLinkDeletion RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE  RadioLinkDeletionRequest
    SUCCESSFUL OUTCOME  RadioLinkDeletionResponse
    PROCEDURE ID        { procedureCode id-radioLinkDeletion, ddMode common }
    CRITICALITY         reject
}

synchronisedRadioLinkReconfigurationPreparationFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE  RadioLinkReconfigurationPrepareFDD
    SUCCESSFUL OUTCOME  RadioLinkReconfigurationReadyFDD
    UNSUCCESSFUL OUTCOME RadioLinkReconfigurationFailure
    PROCEDURE ID        { procedureCode id-synchronisedRadioLinkReconfigurationPreparation, ddMode fdd }
    CRITICALITY         reject
}

synchronisedRadioLinkReconfigurationPreparationTDD RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE  RadioLinkReconfigurationPrepareTDD
```

```

    SUCCESSFUL OUTCOME RadioLinkReconfigurationReadyTDD
    UNSUCCESSFUL OUTCOME RadioLinkReconfigurationFailure
    PROCEDURE ID { procedureCode id-synchronisedRadioLinkReconfigurationPreparation, ddMode tdd }
    CRITICALITY reject
}

unSynchronisedRadioLinkReconfigurationFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE RadioLinkReconfigurationRequestFDD
    SUCCESSFUL OUTCOME RadioLinkReconfigurationResponseFDD
    UNSUCCESSFUL OUTCOME RadioLinkReconfigurationFailure
    PROCEDURE ID { procedureCode id-unSynchronisedRadioLinkReconfiguration, ddMode fdd }
    CRITICALITY reject
}

unSynchronisedRadioLinkReconfigurationTDD RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE RadioLinkReconfigurationRequestTDD
    SUCCESSFUL OUTCOME RadioLinkReconfigurationResponseTDD
    UNSUCCESSFUL OUTCOME RadioLinkReconfigurationFailure
    PROCEDURE ID { procedureCode id-unSynchronisedRadioLinkReconfiguration, ddMode tdd }
    CRITICALITY reject
}

physicalChannelReconfigurationFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE PhysicalChannelReconfigurationRequestFDD
    SUCCESSFUL OUTCOME PhysicalChannelReconfigurationCommand
    UNSUCCESSFUL OUTCOME PhysicalChannelReconfigurationFailure
    PROCEDURE ID { procedureCode id-physicalChannelReconfiguration, ddMode fdd }
    CRITICALITY reject
}

physicalChannelReconfigurationTDD RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE PhysicalChannelReconfigurationRequestTDD
    SUCCESSFUL OUTCOME PhysicalChannelReconfigurationCommand
    UNSUCCESSFUL OUTCOME PhysicalChannelReconfigurationFailure
    PROCEDURE ID { procedureCode id-physicalChannelReconfiguration, ddMode tdd }
    CRITICALITY reject
}

dedicatedMeasurementInitiation RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE DedicatedMeasurementInitiationRequest
    SUCCESSFUL OUTCOME DedicatedMeasurementInitiationResponse
    UNSUCCESSFUL OUTCOME DedicatedMeasurementInitiationFailure
    PROCEDURE ID { procedureCode id-dedicatedMeasurementInitiation, ddMode common }
    CRITICALITY reject
}

commonTransportChannelResourcesInitialisationFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE CommonTransportChannelResourcesRequest
    SUCCESSFUL OUTCOME CommonTransportChannelResourcesResponseFDD
    UNSUCCESSFUL OUTCOME CommonTransportChannelResourcesFailure
    PROCEDURE ID { procedureCode id-commonTransportChannelResourcesInitialisation, ddMode fdd }
    CRITICALITY reject
}

```

```
commonTransportChannelResourcesInitialisationTDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  CommonTransportChannelResourcesRequest
  SUCCESSFUL OUTCOME  CommonTransportChannelResourcesResponseTDD
  UNSUCCESSFUL OUTCOME  CommonTransportChannelResourcesFailure
  PROCEDURE ID        { procedureCode id-commonTransportChannelResourcesInitialisation, ddMode tdd }
  CRITICALITY         reject
}

uplinkSignallingTransferFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  UplinkSignallingTransferIndicationFDD
  PROCEDURE ID        { procedureCode id-uplinkSignallingTransfer, ddMode fdd }
  CRITICALITY         ignore
}

uplinkSignallingTransferTDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  UplinkSignallingTransferIndicationTDD
  PROCEDURE ID        { procedureCode id-uplinkSignallingTransfer, ddMode tdd }
  CRITICALITY         ignore
}

downlinkSignallingTransfer RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  DownlinkSignallingTransferRequest
  PROCEDURE ID        { procedureCode id-downlinkSignallingTransfer, ddMode common }
  CRITICALITY         ignore
}

relocationCommit RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  RelocationCommit
  PROCEDURE ID        { procedureCode id-relocationCommit, ddMode common }
  CRITICALITY         ignore
}

paging RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  PagingRequest
  PROCEDURE ID        { procedureCode id-paging, ddMode common }
  CRITICALITY         ignore
}

synchronisedRadioLinkReconfigurationCommit RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  RadioLinkReconfigurationCommit
  PROCEDURE ID        { procedureCode id-synchronisedRadioLinkReconfigurationCommit, ddMode common }
  CRITICALITY         ignore
}

synchronisedRadioLinkReconfigurationCancellation RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  RadioLinkReconfigurationCancel
  PROCEDURE ID        { procedureCode id-synchronisedRadioLinkReconfigurationCancellation, ddMode common }
  CRITICALITY         ignore
}

radioLinkFailure RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  RadioLinkFailureIndication
  PROCEDURE ID        { procedureCode id-radioLinkFailure, ddMode common }
  CRITICALITY         ignore
}
```

```
}  
  
radioLinkPreemption RNSAP-ELEMENTARY-PROCEDURE ::= {  
  INITIATING MESSAGE  RadioLinkPreemptionRequiredIndication  
  PROCEDURE ID        { procedureCode id-radioLinkPreemption, ddMode common }  
  CRITICALITY         ignore  
}  
  
radioLinkRestoration RNSAP-ELEMENTARY-PROCEDURE ::= {  
  INITIATING MESSAGE  RadioLinkRestoreIndication  
  PROCEDURE ID        { procedureCode id-radioLinkRestoration, ddMode common }  
  CRITICALITY         ignore  
}  
  
dedicatedMeasurementReporting RNSAP-ELEMENTARY-PROCEDURE ::= {  
  INITIATING MESSAGE  DedicatedMeasurementReport  
  PROCEDURE ID        { procedureCode id-dedicatedMeasurementReporting, ddMode common }  
  CRITICALITY         ignore  
}  
  
dedicatedMeasurementTermination RNSAP-ELEMENTARY-PROCEDURE ::= {  
  INITIATING MESSAGE  DedicatedMeasurementTerminationRequest  
  PROCEDURE ID        { procedureCode id-dedicatedMeasurementTermination, ddMode common }  
  CRITICALITY         ignore  
}  
  
dedicatedMeasurementFailure RNSAP-ELEMENTARY-PROCEDURE ::= {  
  INITIATING MESSAGE  DedicatedMeasurementFailureIndication  
  PROCEDURE ID        { procedureCode id-dedicatedMeasurementFailure, ddMode common }  
  CRITICALITY         ignore  
}  
  
radioLinkCongestion RNSAP-ELEMENTARY-PROCEDURE ::= {  
  INITIATING MESSAGE  RadioLinkCongestionIndication  
  PROCEDURE ID        { procedureCode id-radioLinkCongestion, ddMode common }  
  CRITICALITY         ignore  
}  
  
downlinkPowerControlFDD RNSAP-ELEMENTARY-PROCEDURE ::= {  
  INITIATING MESSAGE  DL-PowerControlRequest  
  PROCEDURE ID        { procedureCode id-downlinkPowerControl, ddMode fdd }  
  CRITICALITY         ignore  
}  
  
downlinkPowerTimeslotControl RNSAP-ELEMENTARY-PROCEDURE ::= {  
  INITIATING MESSAGE  DL-PowerTimeslotControlRequest  
  PROCEDURE ID        { procedureCode id-downlinkPowerTimeslotControl, ddMode tdd }  
  CRITICALITY         ignore  
}  
  
compressedModeCommandFDD RNSAP-ELEMENTARY-PROCEDURE ::= {  
  INITIATING MESSAGE  CompressedModeCommand  
  PROCEDURE ID        { procedureCode id-compressedModeCommand, ddMode fdd }  
  CRITICALITY         ignore  
}
```

```
}  
  
commonTransportChannelResourcesRelease RNSAP-ELEMENTARY-PROCEDURE ::= {  
  INITIATING MESSAGE  CommonTransportChannelResourcesReleaseRequest  
  PROCEDURE ID        { procedureCode id-commonTransportChannelResourcesRelease, ddMode common }  
  CRITICALITY         ignore  
}  
  
errorIndication RNSAP-ELEMENTARY-PROCEDURE ::= {  
  INITIATING MESSAGE  ErrorIndication  
  PROCEDURE ID        { procedureCode id-errorIndication, ddMode common }  
  CRITICALITY         ignore  
}  
  
commonMeasurementInitiation RNSAP-ELEMENTARY-PROCEDURE ::= {  
  INITIATING MESSAGE  CommonMeasurementInitiationRequest  
  SUCCESSFUL OUTCOME  CommonMeasurementInitiationResponse  
  UNSUCCESSFUL OUTCOME CommonMeasurementInitiationFailure  
  PROCEDURE ID        { procedureCode id-commonMeasurementInitiation, ddMode common }  
  CRITICALITY         reject  
}  
  
commonMeasurementReporting RNSAP-ELEMENTARY-PROCEDURE ::= {  
  INITIATING MESSAGE  CommonMeasurementReport  
  PROCEDURE ID        { procedureCode id-commonMeasurementReporting, ddMode common }  
  CRITICALITY         ignore  
}  
  
commonMeasurementTermination RNSAP-ELEMENTARY-PROCEDURE ::= {  
  INITIATING MESSAGE  CommonMeasurementTerminationRequest  
  PROCEDURE ID        { procedureCode id-commonMeasurementTermination, ddMode common }  
  CRITICALITY         ignore  
}  
  
commonMeasurementFailure RNSAP-ELEMENTARY-PROCEDURE ::= {  
  INITIATING MESSAGE  CommonMeasurementFailureIndication  
  PROCEDURE ID        { procedureCode id-commonMeasurementFailure, ddMode common }  
  CRITICALITY         ignore  
}  
  
informationExchangeInitiation RNSAP-ELEMENTARY-PROCEDURE ::= {  
  INITIATING MESSAGE  InformationExchangeInitiationRequest  
  SUCCESSFUL OUTCOME  InformationExchangeInitiationResponse  
  UNSUCCESSFUL OUTCOME InformationExchangeInitiationFailure  
  PROCEDURE ID        { procedureCode id-informationExchangeInitiation, ddMode common }  
  CRITICALITY         reject  
}  
  
informationReporting RNSAP-ELEMENTARY-PROCEDURE ::= {  
  INITIATING MESSAGE  InformationReport  
  PROCEDURE ID        { procedureCode id-informationReporting, ddMode common }  
  CRITICALITY         ignore  
}
```

```
informationExchangeTermination RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE      InformationExchangeTerminationRequest
  PROCEDURE ID            { procedureCode id-informationExchangeTermination, ddMode common }
  CRITICALITY             ignore
}

informationExchangeFailure RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE      InformationExchangeFailureIndication
  PROCEDURE ID            { procedureCode id-informationExchangeFailure, ddMode common }
  CRITICALITY             ignore
}

privateMessage RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE      PrivateMessage
  PROCEDURE ID            { procedureCode id-privateMessage, ddMode common }
  CRITICALITY             ignore
}

reset RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE      ResetRequest
  SUCCESSFUL OUTCOME      ResetResponse
  PROCEDURE ID            { procedureCode id-reset, ddMode common }
  CRITICALITY             reject
}

radioLinkActivationFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE      RadioLinkActivationCommandFDD
  PROCEDURE ID            { procedureCode id-radioLinkActivation, ddMode fdd }
  CRITICALITY             ignore
}

radioLinkActivationTDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE      RadioLinkActivationCommandTDD
  PROCEDURE ID            { procedureCode id-radioLinkActivation, ddMode tdd }
  CRITICALITY             ignore
}

gERANuplinkSignallingTransfer RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE      GERANuplinkSignallingTransferIndication
  PROCEDURE ID            { procedureCode id-gERANuplinkSignallingTransfer, ddMode common }
  CRITICALITY             ignore
}

radioLinkParameterUpdateFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE      RadioLinkParameterUpdateIndicationFDD
  PROCEDURE ID            { procedureCode id-radioLinkParameterUpdate, ddMode fdd }
  CRITICALITY             ignore
}

radioLinkParameterUpdateTDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE      RadioLinkParameterUpdateIndicationTDD
  PROCEDURE ID            { procedureCode id-radioLinkParameterUpdate, ddMode tdd }
  CRITICALITY             ignore
}
```



```
}  
  
uEMeasurementInitiation RNSAP-ELEMENTARY-PROCEDURE ::= {  
    INITIATING MESSAGE  UEMeasurementInitiationRequest  
    SUCCESSFUL OUTCOME  UEMeasurementInitiationResponse  
    UNSUCCESSFUL OUTCOME UEMeasurementInitiationFailure  
    PROCEDURE ID        { procedureCode id-uEMeasurementInitiation, ddMode tdd }  
    CRITICALITY         reject  
}  
  
uEMeasurementReporting RNSAP-ELEMENTARY-PROCEDURE ::= {  
    INITIATING MESSAGE  UEMeasurementReport  
    PROCEDURE ID        { procedureCode id-uEMeasurementReporting, ddMode tdd }  
    CRITICALITY         ignore  
}  
  
uEMeasurementTermination RNSAP-ELEMENTARY-PROCEDURE ::= {  
    INITIATING MESSAGE  UEMeasurementTerminationRequest  
    PROCEDURE ID        { procedureCode id-uEMeasurementTermination, ddMode tdd }  
    CRITICALITY         ignore  
}  
  
uEMeasurementFailure RNSAP-ELEMENTARY-PROCEDURE ::= {  
    INITIATING MESSAGE  UEMeasurementFailureIndication  
    PROCEDURE ID        { procedureCode id-uEMeasurementFailure, ddMode tdd }  
    CRITICALITY         ignore  
}  
  
iurInvokeTrace RNSAP-ELEMENTARY-PROCEDURE ::= {  
    INITIATING MESSAGE  IurInvokeTrace  
    PROCEDURE ID        { procedureCode id-iurInvokeTrace, ddMode common }  
    CRITICALITY         ignore  
}  
  
iurDeactivateTrace RNSAP-ELEMENTARY-PROCEDURE ::= {  
    INITIATING MESSAGE  IurDeactivateTrace  
    PROCEDURE ID        { procedureCode id-iurDeactivateTrace, ddMode common }  
    CRITICALITY         ignore  
}  
  
mBMSAttach RNSAP-ELEMENTARY-PROCEDURE ::= {  
    INITIATING MESSAGE  MBMSAttachCommand  
    PROCEDURE ID        { procedureCode id-mBMSAttach, ddMode common }  
    CRITICALITY         ignore  
}  
  
mBMSDetach RNSAP-ELEMENTARY-PROCEDURE ::= {  
    INITIATING MESSAGE  MBMSDetachCommand  
    PROCEDURE ID        { procedureCode id-mBMSDetach, ddMode common }  
    CRITICALITY         ignore  
}  
  
directInformationTransfer RNSAP-ELEMENTARY-PROCEDURE ::= {  
    INITIATING MESSAGE  DirectInformationTransfer
```

```

    PROCEDURE ID          { procedureCode id-directInformationTransfer, ddMode common }
    CRITICALITY           ignore
}

enhancedRelocation RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE   EnhancedRelocationRequest
    SUCCESSFUL OUTCOME   EnhancedRelocationResponse
    UNSUCCESSFUL OUTCOME EnhancedRelocationFailure
    PROCEDURE ID         { procedureCode id-enhancedRelocation, ddMode common }
    CRITICALITY          reject
}

enhancedRelocationCancel RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE   EnhancedRelocationCancel
    PROCEDURE ID         { procedureCode id-enhancedRelocationCancel, ddMode common }
    CRITICALITY          ignore
}

enhancedRelocationSignallingTransfer RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE   EnhancedRelocationSignallingTransfer
    PROCEDURE ID         { procedureCode id-enhancedRelocationSignallingTransfer, ddMode common }
    CRITICALITY          ignore
}

enhancedRelocationRelease RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE   EnhancedRelocationRelease
    PROCEDURE ID         { procedureCode id-enhancedRelocationRelease, ddMode common }
    CRITICALITY          ignore
}

mBSFNMCCCHInformation RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE   MBSFNMCCCHInformation
    PROCEDURE ID         { procedureCode id-mBSFNMCCCHInformation, ddMode common }
    CRITICALITY          reject
}

END

```

### 9.3.3 PDU Definitions

```

-- *****
--
-- PDU definitions for RNSAP.
--
-- *****

RNSAP-PDU-Contents {
    itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
    umts-Access (20) modules (3) rnsap (1) version1 (1) rnsap-PDU-Contents (1) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

```

```
-- *****  
--  
-- IE parameter types from other modules.  
--  
-- *****
```

## IMPORTS

```
Active-Pattern-Sequence-Information,  
Active-MBMS-Bearer-Service-ListFDD,  
Active-MBMS-Bearer-Service-ListFDD-PFL,  
Active-MBMS-Bearer-Service-ListTDD,  
Active-MBMS-Bearer-Service-ListTDD-PFL,  
AllocationRetentionPriority,  
AllowedQueuingTime,  
Allowed-Rate-Information,  
AlphaValue,  
AlternativeFormatReportingIndicator,  
AntennaColocationIndicator,  
BLER,  
SCTD-Indicator,  
BindingID,  
C-ID,  
C-RNTI,  
CCTrCH-ID,  
CFN,  
CGI,  
ClosedLoopModel-SupportIndicator,  
Closedlooptimingadjustmentmode,  
CN-CS-DomainIdentifier,  
CN-PS-DomainIdentifier,  
CNDomainType,  
Cause,  
CellCapabilityContainer-FDD,  
CellCapabilityContainerExtension-FDD,  
CellCapabilityContainer-TDD,  
CellCapabilityContainer-TDD-LCR,  
CellCapabilityContainer-TDD768,  
CellParameterID,  
CellPortionID,  
ChipOffset,  
CommonMeasurementAccuracy,  
CommonMeasurementType,  
CommonMeasurementValue,  
CommonMeasurementValueInformation,  
CommonTransportChannelResourcesInitialisationNotRequired,  
Common-EDCH-MAC-d-Flow-Specific-InformationFDD,  
Common-EDCH-Support-Indicator,  
CongestionCause,  
Continuous-Packet-Connectivity-DTX-DRX-Information,  
Continuous-Packet-Connectivity-HS-SCCH-Less-Information,  
Continuous-Packet-Connectivity-HS-SCCH-Less-Information-Response,  
CPC-Information,  
CoverageIndicator,
```

CriticalityDiagnostics,  
D-RNTI,  
D-RNTI-ReleaseIndication,  
DCH-FDD-Information,  
DCH-ID,  
DCH-Indicator-For-E-DCH-HSDPA-Operation,  
DPCH-ID768,  
DCH-InformationResponse,  
DCH-TDD-Information,  
DL-DPCH-SlotFormat,  
DL-TimeslotISCP,  
DL-Power,  
DL-PowerBalancing-Information,  
DL-PowerBalancing-ActivationIndicator,  
DL-PowerBalancing-UpdatedIndicator,  
DL-ReferencePowerInformation,  
DL-ScramblingCode,  
DL-Timeslot-Information,  
DL-Timeslot-Information768,  
DL-TimeslotLCR-Information,  
DL-TimeSlot-ISCP-Info,  
DL-TimeSlot-ISCP-LCR-Information,  
DPC-Mode,  
DPC-Mode-Change-SupportIndicator,  
DPCH-ID,  
DL-DPCH-TimingAdjustment,  
DRXCycleLengthCoefficient,  
DedicatedMeasurementType,  
DedicatedMeasurementValue,  
DedicatedMeasurementValueInformation,  
DelayedActivation,  
DelayedActivationUpdate,  
DiversityControlField,  
DiversityMode,  
DSCH-FlowControlInformation,  
DSCH-FlowControlItem,  
DSCH-TDD-Information,  
DSCH-ID,  
DSCH-RNTI,  
EDCH-FDD-Information,  
EDCH-FDD-InformationResponse,  
EDCH-FDD-Information-To-Modify,  
EDCH-FDD-DL-ControlChannelInformation,  
EDCH-DDI-Value,  
EDCH-MACdFlow-ID,  
EDCH-MACdFlow-Specific-InfoList,  
EDCH-MACdFlows-To-Delete,  
EDCH-MACdFlows-Information,  
EDCH-RL-Indication,  
EDCH-Serving-RL,  
E-DCH-Serving-cell-change-informationResponse,  
EDPCH-Information-FDD,  
EDPCH-Information-RLReconfPrepare-FDD,  
EDPCH-Information-RLReconfRequest-FDD,

E-DCH-FDD-Update-Information,  
E-DPCCH-PO,  
E-RGCH-2-IndexStepThreshold,  
E-RGCH-3-IndexStepThreshold,  
E-RNTI,  
E-TFCS-Information,  
E-TTI,  
Enhanced-FACH-Support-Indicator,  
Enhanced-FACH-Information-ResponseFDD,  
Enhanced-PCH-Capability,  
ExtendedPropagationDelay,  
Extended-RNC-ID,  
SchedulingPriorityIndicator,  
Enhanced-PrimaryCPICH-EcNo,  
F-DPCH-SlotFormat,  
F-DPCH-SlotFormatSupportRequest,  
FACH-FlowControlInformation,  
Fast-Reconfiguration-Mode,  
Fast-Reconfiguration-Permission,  
FDD-DCHs-to-Modify,  
FDD-DL-ChannelisationCodeNumber,  
FDD-DL-CodeInformation,  
FDD-TPC-DownlinkStepSize,  
FirstRLS-Indicator,  
FNReportingIndicator,  
FrameHandlingPriority,  
FrameOffset,  
GA-AccessPointPosition,  
GA-Cell,  
GA-CellAdditionalShapes,  
HARQ-Info-for-E-DCH,  
HCS-Prio,  
HSDSCH-Configured-Indicator,  
HSDSCH-FDD-Information,  
HSDSCH-FDD-Information-Response,  
HSDSCH-FDD-Update-Information,  
HSDSCH-TDD-Update-Information,  
HSDSCH-Information-to-Modify,  
HSDSCH-Information-to-Modify-Unsynchronised,  
HSDSCH-MACdFlow-ID,  
HSDSCH-MACdFlows-Information,  
HSDSCH-MACdFlows-to-Delete,  
HSDSCH-Physical-Layer-Category,  
HSDSCH-RNTI,  
HS-DSCH-serving-cell-change-information,  
HS-DSCH-serving-cell-change-informationResponse,  
HSDSCH-TDD-Information,  
HSDSCH-TDD-Information-Response,  
HS-SICH-ID,  
IMSI,  
InformationExchangeID,  
InformationReportCharacteristics,  
InformationType,  
Initial-DL-DPCH-TimingAdjustment-Allowed,

InnerLoopDLPCStatus,  
Inter-Frequency-Cell-List,  
L3-Information,  
LimitedPowerIncrease,  
MaximumAllowedULTxPower,  
MaxNrDLPhysicalchannels,  
MaxNrDLPhysicalchannelsTS,  
MaxNrDLPhysicalchannels768,  
MaxNrDLPhysicalchannelsTS768,  
MaxNrOfUL-DPCHs,  
MaxNrTimeslots,  
MaxNrULPhysicalchannels,  
MACes-Guaranteed-Bitrate,  
MaxNr-Retransmissions-EDCH,  
Max-Set-E-DPCHs,  
Max-UE-DTX-Cycle,  
MeasurementFilterCoefficient,  
MeasurementID,  
MeasurementRecoveryBehavior,  
MeasurementRecoveryReportingIndicator,  
MeasurementRecoverySupportIndicator,  
MBMS-Bearer-Service-List,  
MBSFN-Cluster-Identity,  
MCCH-Configuration-Info,  
MCCH-Message-List,  
MBSFN-Scheduling-Transmission-Time-Interval-Info-List,  
MidambleAllocationMode,  
MidambleShiftAndBurstType,  
MidambleShiftAndBurstType768,  
MidambleShiftLCR,  
MinimumSpreadingFactor,  
MinimumSpreadingFactor768,  
MinUL-ChannelisationCodeLength,  
Multiple-PLMN-List,  
MultiplexingPosition,  
NeighbouringFDDCellMeasurementInformation,  
NeighbouringTDDCellMeasurementInformation,  
NeighbouringTDDCellMeasurementInformation768,  
Neighbouring-GSM-CellInformation,  
Neighbouring-UMTS-CellInformation,  
NeighbouringTDDCellMeasurementInformationLCR,  
Neighbouring-E-UTRA-CellInformation,  
NrOfDLchannelisationcodes,  
PagingCause,  
PagingRecordType,  
PartialReportingIndicator,  
PayloadCRC-PresenceIndicator,  
PCCPCH-Power,  
PC-Preamble,  
Permanent-NAS-UE-Identity,  
Phase-Reference-Update-Indicator,  
PowerAdjustmentType,  
PowerOffset,  
PrimaryCCPCH-RSCP,

PrimaryCPICH-EcNo,  
PrimaryCPICH-Power,  
Primary-CPICH-Usage-For-Channel-Estimation,  
PrimaryScramblingCode,  
PropagationDelay,  
ProvidedInformation,  
PunctureLimit,  
QE-Selector,  
RANAP-EnhancedRelocationInformationRequest,  
RANAP-EnhancedRelocationInformationResponse,  
RANAP-RelocationInformation,  
RB-Info,  
Released-CN-Domain,  
RL-ID,  
RL-Set-ID,  
RL-Specific-EDCH-Information,  
RNC-ID,  
RepetitionLength,  
RepetitionPeriod,  
ReportCharacteristics,  
Received-total-wide-band-power,  
RequestedDataValue,  
RequestedDataValueInformation,  
RL-Specific-DCH-Info,  
RxTimingDeviationForTA,  
RxTimingDeviationForTA768,  
S-RNTI,  
S-RNTI-Group,  
SCH-TimeSlot,  
SAI,  
SFN,  
Secondary-CCPCH-Info-TDD,  
Secondary-CCPCH-Info-TDD768,  
Secondary-CCPCH-System-Information-MBMS,  
Secondary-CPICH-Information,  
Secondary-CPICH-Information-Change,  
Secondary-LCR-CCPCH-Info-TDD,  
Secondary-Serving-Cell-List,  
SNA-Information,  
SpecialBurstScheduling,  
SSDT-SupportIndicator,  
STTD-SupportIndicator,  
AdjustmentPeriod,  
ScaledAdjustmentRatio,  
MaxAdjustmentStep,  
SRB-Delay,  
Support-8PSK,  
SyncCase,  
SynchronisationConfiguration,  
SixtyfourQAM-DL-SupportIndicator,  
TDD-ChannelisationCode,  
TDD-ChannelisationCode768,  
TDD-DCHs-to-Modify,  
TDD-DL-Code-Information,

TDD-DPCHOffset,  
TDD-PhysicalChannelOffset,  
TDD-TPC-DownlinkStepSize,  
TDD-ChannelisationCodeLCR,  
TDD-DL-Code-LCR-Information,  
TDD-DL-Code-Information768,  
TDD-UL-Code-Information,  
TDD-UL-Code-LCR-Information,  
TDD-UL-Code-Information768,  
TFCI-Coding,  
TFCI-Presence,  
TFCI-SignallingMode,  
TimeSlot,  
TimeSlotLCR,  
TimingAdvanceApplied,  
TMGI,  
TnlQos,  
ToAWE,  
ToAWS,  
TraceDepth,  
TraceRecordingSessionReference,  
TraceReference,  
TrafficClass,  
TransmitDiversityIndicator,  
TransportBearerID,  
TransportBearerRequestIndicator,  
TFCS,  
Transmission-Gap-Pattern-Sequence-Information,  
TransportFormatManagement,  
TransportFormatSet,  
TransportLayerAddress,  
TrCH-SrcStatisticsDescr,  
TSTD-Indicator,  
TSTD-Support-Indicator,  
UARFCN,  
UC-ID,  
UEIdentity,  
UEMeasurementType,  
UEMeasurementTimeslotInfoHCR,  
UEMeasurementTimeslotInfoLCR,  
UEMeasurementTimeslotInfo768,  
UEMeasurementReportCharacteristics,  
UEMeasurementParameterModAllow,  
UEMeasurementValueInformation,  
UE-State,  
UL-DPCCH-SlotFormat,  
UL-DPDCHIndicatorEDCH,  
UL-SIR,  
UL-FP-Mode,  
UL-PhysCH-SF-Variation,  
UL-ScramblingCode,  
UL-Timeslot-Information,  
UL-Timeslot-Information768,  
UL-TimeslotLCR-Information,



UL-TimeSlot-ISCP-Info,  
UL-TimeSlot-ISCP-LCR-Info,  
URA-ID,  
URA-Information,  
USCH-ID,  
USCH-Information,  
UL-Synchronisation-Parameters-LCR,  
TDD-DL-DPCH-TimeSlotFormat-LCR,  
TDD-UL-DPCH-TimeSlotFormat-LCR,  
MACHs-ResetIndicator,  
UL-TimingAdvanceCtrl-LCR,  
TDD-TPC-UplinkStepSize-LCR,  
PrimaryCCPCH-RSCP-Delta,  
SynchronisationIndicator,  
Support-PLCCH,  
PLCCHinformation,  
RxTimingDeviationForTAext,  
E-DCH-Information,  
E-DCH-Information-Reconfig,  
E-DCH-Information-Response,  
E-DCH-768-Information,  
E-DCH-768-Information-Reconfig,  
E-DCH-768-Information-Response,  
E-DCH-LCR-Information,  
E-DCH-LCR-Information-Reconfig,  
E-DCH-LCR-Information-Response,  
ControlGAP,  
IdleIntervalInformation,  
NeedforIdleInterval,  
HS-SICH-ID-Extension,  
TSN-Length,  
UPPCHPositionLCR,  
Common-EDCH-MAC-d-Flow-Specific-InformationLCR,  
Enhanced-FACH-Information-ResponseLCR,  
HSDSCH-PreconfigurationSetup,  
HSDSCH-PreconfigurationInfo,  
NoOfTargetCellHS-SCCH-Order,  
EnhancedHSServingCC-Abort,  
GANSS-Time-ID,  
HS-DSCH-FDD-Secondary-Serving-Update-Information,  
HS-DSCH-Secondary-Serving-Remove,  
HS-DSCH-FDD-Secondary-Serving-Information-To-Modify-Unsynchronised,  
HS-DSCH-Secondary-Serving-Information-To-Modify,  
HS-DSCH-Secondary-Serving-Cell-Change-Information-Response,  
HS-DSCH-FDD-Secondary-Serving-Information-Response,  
HS-DSCH-FDD-Secondary-Serving-Information,  
MinimumReducedE-DPDCH-GainFactor,  
ContinuousPacketConnectivity-DRX-InformationLCR,  
ContinuousPacketConnectivity-DRX-Information-ResponseLCR,  
CPC-InformationLCR,  
E-DCH-Semi-PersistentScheduling-Information-LCR,  
HS-DSCH-Semi-PersistentScheduling-Information-LCR,  
HS-DSCH-Semi-PersistentScheduling-Information-ResponseLCR,  
E-DCH-Semi-PersistentScheduling-Information-ResponseLCR,

RNTI-Allocation-Indicator

FROM RNSAP-IEs

PrivateIE-Container {},  
ProtocolExtensionContainer {},  
ProtocolIE-ContainerList {},  
ProtocolIE-ContainerPair {},  
ProtocolIE-ContainerPairList {},  
ProtocolIE-Container {},  
ProtocolIE-Single-Container {},  
RNSAP-PRIVATE-IES,  
RNSAP-PROTOCOL-EXTENSION,  
RNSAP-PROTOCOL-IES,  
RNSAP-PROTOCOL-IES-PAIR

FROM RNSAP-Containers

maxCellsMeas,  
maxNoOfDSCHs,  
maxNoOfUSCHs,  
maxNrOfCCTrCHs,  
maxNrOfDCHs,  
maxNrOfTS,  
maxNrOfDPCHs,  
maxNrOfDPCHs768,  
maxNrOfDPCHsPerRL-1,  
maxNrOfDPCHs768PerRL-1,  
maxNrOfInterfaces,  
maxNrOfRLs,  
maxNrOfRLSets,  
maxNrOfRLSets-1,  
maxNrOfRLs-1,  
maxNrOfRLs-2,  
maxNrOfULTs,  
maxNrOfDLTs,  
maxResetContext,  
maxResetContextGroup,  
maxNoOfDSCHsLCR,  
maxNoOfUSCHsLCR,  
maxNrOfCCTrCHsLCR,  
maxNrOfTsLCR,  
maxNrOfDLTsLCR,  
maxNrOfULTsLCR,  
maxNrOfDPCHsLCR,  
maxNrOfDPCHsLCRPerRL-1,  
maxNrOfLCRTDDNeighboursPerRNC,  
maxNrOfMeasNCell,  
maxNrOfMACdFlows,  
maxNrOfMACdPDUSize,  
maxNrOfMCCHMessages,  
maxNrOfMBMSL3,  
maxNrOfEDCHMACdFlows,  
maxNrOfHSSICHs,  
maxNrOfHSSICHs-1,  
maxNrOfActiveMBMSServices,

maxNrOfMBMSServices,  
maxNrOfSigSeqERGHICH-1,  
maxNrOfCells,  
maxNrOfHSDSCH-1,  
  
id-Active-MBMS-Bearer-ServiceFDD,  
id-Active-MBMS-Bearer-ServiceFDD-PFL,  
id-Active-MBMS-Bearer-ServiceTDD,  
id-Active-MBMS-Bearer-ServiceTDD-PFL,  
id-Active-Pattern-Sequence-Information,  
id-AdjustmentRatio,  
id-AllowedQueuingTime,  
id-AlternativeFormatReportingIndicator,  
id-AntennaColocationIndicator,  
id-BindingID,  
id-C-ID,  
id-C-RNTI,  
id-CFN,  
id-CFNReportingIndicator,  
id-CN-CS-DomainIdentifier,  
id-CN-PS-DomainIdentifier,  
id-Cause,  
id-CauseLevel-RL-AdditionFailureFDD,  
id-CauseLevel-RL-AdditionFailureTDD,  
id-CauseLevel-RL-ReconfFailure,  
id-CauseLevel-RL-SetupFailureFDD,  
id-CauseLevel-RL-SetupFailureTDD,  
id-CCTrCH-InformationItem-RL-FailureInd,  
id-CCTrCH-InformationItem-RL-RestoreInd,  
id-CellCapabilityContainer-FDD,  
id-CellCapabilityContainerExtension-FDD,  
id-CellCapabilityContainer-TDD,  
id-CellCapabilityContainer-TDD-LCR,  
id-CellPortionID,  
id-ChipOffset,  
id-ClosedLoopModel-SupportIndicator,  
id-CNOriginatedPage-PagingRqst,  
id-CommonMeasurementAccuracy,  
id-CommonMeasurementObjectType-CM-Rprt,  
id-CommonMeasurementObjectType-CM-Rqst,  
id-CommonMeasurementObjectType-CM-Rsp,  
id-CommonMeasurementType,  
id-CommonTransportChannelResourcesInitialisationNotRequired,  
id-Common-EDCH-MAC-d-Flow-Specific-InformationFDD,  
id-Common-EDCH-Support-Indicator,  
id-CongestionCause,  
id-Continuous-Packet-Connectivity-DTX-DRX-Information,  
id-Continuous-Packet-Connectivity-HS-SCCH-Less-Information,  
id-Continuous-Packet-Connectivity-HS-SCCH-Less-Information-Response,  
id-CPC-Information,  
id-CoverageIndicator,  
id-CriticalityDiagnostics,  
id-D-RNTI,  
id-D-RNTI-ReleaseIndication,

id-DCHs-to-Add-FDD,  
id-DCHs-to-Add-TDD,  
id-DCH-DeleteList-RL-ReconfPrepFDD,  
id-DCH-DeleteList-RL-ReconfPrepTDD,  
id-DCH-DeleteList-RL-ReconfRqstFDD,  
id-DCH-DeleteList-RL-ReconfRqstTDD,  
id-DCH-FDD-Information,  
id-DCH-TDD-Information,  
id-DCH-Indicator-For-E-DCH-HSDPA-Operation,  
id-FDD-DCHs-to-Modify,  
id-TDD-DCHs-to-Modify,  
id-DCH-InformationResponse,  
id-DCH-Rate-InformationItem-RL-CongestInd,  
id-DL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD,  
id-DL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD,  
id-DL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD,  
id-DL-CCTrCH-InformationListIE-RL-ReconfReadyTDD,  
id-DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD,  
id-DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD,  
id-DL-CCTrCH-InformationItem-RL-SetupRqstTDD,  
id-DL-CCTrCH-InformationListIE-PhyChReconfRqstTDD,  
id-DL-CCTrCH-InformationListIE-RL-AdditionRspTDD,  
id-DL-CCTrCH-InformationListIE-RL-SetupRspTDD,  
id-DL-CCTrCH-InformationAddList-RL-ReconfPrepTDD,  
id-DL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD,  
id-DL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD,  
id-DL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD,  
id-DL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD,  
id-DL-CCTrCH-InformationList-RL-SetupRqstTDD,  
id-FDD-DL-CodeInformation,  
id-DL-DPCH-Information-RL-ReconfPrepFDD,  
id-DL-DPCH-Information-RL-SetupRqstFDD,  
id-DL-DPCH-Information-RL-ReconfRqstFDD,  
id-DL-DPCH-InformationItem-PhyChReconfRqstTDD,  
id-DL-DPCH-InformationItem-RL-AdditionRspTDD,  
id-DL-DPCH-InformationItem-RL-SetupRspTDD,  
id-DL-DPCH-InformationAddListIE-RL-ReconfReadyTDD,  
id-DL-DPCH-InformationDeleteListIE-RL-ReconfReadyTDD,  
id-DL-DPCH-InformationModifyListIE-RL-ReconfReadyTDD,  
id-DL-DPCH-TimingAdjustment,  
id-DL-DPCH-Power-Information-RL-ReconfPrepFDD,  
id-DL-Physical-Channel-Information-RL-SetupRqstTDD,  
id-DL-PowerBalancing-Information,  
id-DL-PowerBalancing-ActivationIndicator,  
id-DL-PowerBalancing-UpdatedIndicator,  
id-DL-ReferencePowerInformation,  
id-DLReferencePower,  
id-DLReferencePowerList-DL-PC-Rqst,  
id-DL-ReferencePowerInformation-DL-PC-Rqst,  
id-DRXCycleLengthCoefficient,  
id-DedicatedMeasurementObjectType-DM-Fail,  
id-DedicatedMeasurementObjectType-DM-Fail-Ind,  
id-DedicatedMeasurementObjectType-DM-Rprt,  
id-DedicatedMeasurementObjectType-DM-Rqst,

id-DedicatedMeasurementObjectType-DM-Rsp,  
id-DedicatedMeasurementType,  
id-DelayedActivation,  
id-DelayedActivationList-RL-ActivationCmdFDD,  
id-DelayedActivationList-RL-ActivationCmdTDD,  
id-DelayedActivationInformation-RL-ActivationCmdFDD,  
id-DelayedActivationInformation-RL-ActivationCmdTDD,  
id-DPC-Mode,  
id-DPC-Mode-Change-SupportIndicator,  
id-DSCHs-to-Add-TDD,  
id-DSCH-DeleteList-RL-ReconfPrepTDD,  
id-DSCH-InformationListIE-RL-AdditionRspTDD,  
id-DSCH-InformationListIEs-RL-SetupRspTDD,  
id-DSCH-TDD-Information,  
id-DSCH-ModifyList-RL-ReconfPrepTDD,  
id-DSCH-RNTI,  
id-DSCHToBeAddedOrModifiedList-RL-ReconfReadyTDD,  
id-EDPCH-Information,  
id-EDCH-RL-Indication,  
id-EDCH-FDD-Information,  
id-Serving-EDCHRL-Id,  
id-EDCH-FDD-DL-ControlChannelInformation,  
id-EDCH-FDD-InformationResponse,  
id-E-DCH-FDD-Update-Information,  
id-EDCH-MACdFlows-To-Add,  
id-EDCH-FDD-Information-To-Modify,  
id-EDCH-MACdFlows-To-Delete,  
id-EDPCH-Information-RLReconfRequest-FDD,  
id-EDPCH-Information-RLAdditionReq-FDD,  
id-EDCH-MacFlowSpecificInformationList-RL-PreemptRequiredInd,  
id-EDCH-MacFlowSpecificInformationItem-RL-PreemptRequiredInd,  
id-EDCH-MacFlowSpecificInformationList-RL-CongestInd,  
id-EDCH-MacFlowSpecificInformationItem-RL-CongestInd,  
id-Enhanced-FACH-Support-Indicator,  
id-Enhanced-FACH-Information-ResponseFDD,  
id-Enhanced-PCH-Capability,  
id-ExtendedPropagationDelay,  
id-Extended-SRNC-ID,  
id-Extended-RNC-ID,  
id-Serving-cell-change-CFN,  
id-E-DCH-Serving-cell-change-informationResponse,  
id-E-RNTI-For-FACH,  
id-H-RNTI-For-FACH,  
id-RNTI-Allocation-Indicator,  
id-Enhanced-PrimaryCPICH-EcNo,  
id-E-RNTI,  
id-F-DPCH-SlotFormat,  
id-F-DPCH-SlotFormatSupportRequest,  
id-FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspFDD,  
id-FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspTDD,  
id-Fast-Reconfiguration-Mode,  
id-Fast-Reconfiguration-Permission,  
id-FrameOffset,  
id-F-DPCH-Information-RL-ReconfPrepFDD,

id-F-DPCH-Information-RL-SetupRqstFDD,  
id-GA-Cell,  
id-GA-CellAdditionalShapes,  
id-GSM-Cell-InfEx-Rqst,  
id-HCS-Prio,  
id-HSDSCH-Configured-Indicator,  
id-HSDSCH-FDD-Information,  
id-HSDSCH-FDD-Information-Response,  
id-HSDSCH-FDD-Update-Information,  
id-HSDSCH-TDD-Update-Information,  
id-HSDSCH-Information-to-Modify,  
id-HSDSCH-Information-to-Modify-Unsynchronised,  
id-HSDSCH-MACdFlows-to-Add,  
id-HSDSCH-MACdFlows-to-Delete,  
id-HSDSCHMacdFlowSpecificInformationList-RL-PreemptRequiredInd,  
id-HSDSCHMacdFlowSpecificInformationItem-RL-PreemptRequiredInd,  
id-HSDSCH-Physical-Layer-Category,  
id-HSDSCH-RNTI,  
id-HS-DSCH-serving-cell-change-information,  
id-HS-DSCH-serving-cell-change-informationResponse,  
id-HSDSCH-TDD-Information,  
id-HSDSCH-TDD-Information-Response,  
id-HSPDSCH-RL-ID,  
id-HSPDSCH-Timeslot-InformationList-PhyChReconfRqstTDD,  
id-HSPDSCH-Timeslot-InformationListLCR-PhyChReconfRqstTDD,  
id-HSSICH-Info-DM-Rprt,  
id-HSSICH-Info-DM-Rqst,  
id-HSSICH-Info-DM,  
id-IMSI,  
id-InformationExchangeID,  
id-InformationExchangeObjectType-InfEx-Rprt,  
id-InformationExchangeObjectType-InfEx-Rqst,  
id-InformationExchangeObjectType-InfEx-Rsp,  
id-InformationReportCharacteristics,  
id-InformationType,  
id-Initial-DL-DPCH-TimingAdjustment,  
id-Initial-DL-DPCH-TimingAdjustment-Allowed,  
id-InnerLoopDLPCStatus,  
id-InterfacesToTraceItem,  
id-Inter-Frequency-Cell-List,  
id-L3-Information,  
id-AdjustmentPeriod,  
id-ListOfInterfacesToTrace,  
id-MaxAdjustmentStep,  
id-Max-UE-DTX-Cycle,  
id-MBMS-Bearer-Service-List,  
id-MBMS-Bearer-Service-List-InfEx-Rsp,  
id-MBMS-Bearer-Service-in-MBMS-Cell-InfEx-Rqst,  
id-MBMS-Bearer-Service-in-MBMS-Cell-InfEx-Rsp,  
id-MBMS-Bearer-Service-in-MBMS-Cell-InfEx-Rprt,  
id-MBMS-Cell-InfEx-Rqst,  
id-MBMS-Cell-InfEx-Rsp,  
id-MBMS-Cell-InfEx-Rprt,  
id-MBSFN-Cluster-Identity,

id-MBSFN-Scheduling-Transmission-Time-Interval-Info-List,  
id-MCCH-Configuration-Info,  
id-MCCH-Message-List,  
id-MeasurementFilterCoefficient,  
id-MeasurementID,  
id-MeasurementRecoveryBehavior,  
id-MeasurementRecoveryReportingIndicator,  
id-MeasurementRecoverySupportIndicator,  
id-Multiple-PLMN-List,  
id-Multiple-RL-InformationResponse-RL-ReconfReadyTDD,  
id-NACC-Related-Data,  
id-Neighbouring-E-UTRA-CellInformation,  
id-Old-URA-ID,  
id-PagingArea-PagingRqst,  
id-PartialReportingIndicator,  
id-PDSCH-RL-ID,  
id-Permanent-NAS-UE-Identity,  
id-Phase-Reference-Update-Indicator,  
id-FACH-FlowControlInformation,  
id-PLCCH-Information-PhyChReconfRqstTDD,  
id-PowerAdjustmentType,  
id-PrimCCPCH-RSCP-DL-PC-RqstTDD,  
id-Primary-CPICH-Usage-For-Channel-Estimation,  
id-PropagationDelay,  
id-ProvidedInformation,  
id-RANAP-EnhancedRelocationInformationRequest,  
id-RANAP-EnhancedRelocationInformationResponse,  
id-RANAP-RelocationInformation,  
id-ResetIndicator,  
id-Released-CN-Domain,  
id-EDCH-RLSet-Id,  
id-RL-Information-PhyChReconfRqstFDD,  
id-RL-Information-PhyChReconfRqstTDD,  
id-RL-Information-RL-AdditionRqstFDD,  
id-RL-Information-RL-AdditionRqstTDD,  
id-RL-Information-RL-DeletionRqst,  
id-RL-Information-RL-FailureInd,  
id-RL-Information-RL-ReconfPrepFDD,  
id-RL-Information-RL-ReconfPrepTDD,  
id-RL-Information-RL-RestoreInd,  
id-RL-Information-RL-SetupRqstFDD,  
id-RL-Information-RL-SetupRqstTDD,  
id-RL-InformationItem-RL-CongestInd,  
id-RL-InformationItem-DM-Rprt,  
id-RL-InformationItem-DM-Rqst,  
id-RL-InformationItem-DM-Rsp,  
id-RL-InformationItem-RL-PreemptRequiredInd,  
id-RL-InformationItem-RL-SetupRqstFDD,  
id-RL-InformationList-RL-CongestInd,  
id-RL-InformationList-RL-AdditionRqstFDD,  
id-RL-InformationList-RL-DeletionRqst,  
id-RL-InformationList-RL-PreemptRequiredInd,  
id-RL-InformationList-RL-ReconfPrepFDD,  
id-RL-InformationResponse-RL-AdditionRspTDD,

id-RL-InformationResponse-RL-ReconfReadyTDD,  
id-RL-InformationResponse-RL-ReconfRspTDD,  
id-RL-InformationResponse-RL-SetupRspTDD,  
id-RL-InformationResponseItem-RL-AdditionRspFDD,  
id-RL-InformationResponseItem-RL-ReconfReadyFDD,  
id-RL-InformationResponseItem-RL-ReconfRspFDD,  
id-RL-InformationResponseItem-RL-SetupRspFDD,  
id-RL-InformationResponseList-RL-AdditionRspFDD,  
id-RL-InformationResponseList-RL-ReconfReadyFDD,  
id-RL-InformationResponseList-RL-ReconfRspFDD,  
id-RL-InformationResponseList-RL-SetupRspFDD,  
id-RL-ParameterUpdateIndicationFDD-RL-Information-Item,  
id-RL-ParameterUpdateIndicationFDD-RL-InformationList,  
id-RL-ReconfigurationFailure-RL-ReconfFail,  
id-RL-ReconfigurationRequestFDD-RL-InformationList,  
id-RL-ReconfigurationRequestFDD-RL-Information-IEs,  
id-RL-ReconfigurationRequestTDD-RL-Information,  
id-RL-ReconfigurationResponseTDD-RL-Information,  
id-RL-Specific-DCH-Info,  
id-RL-Specific-EDCH-Information,  
id-RL-Set-InformationItem-DM-Rprt,  
id-RL-Set-InformationItem-DM-Rqst,  
id-RL-Set-InformationItem-DM-Rsp,  
id-RL-Set-Information-RL-FailureInd,  
id-RL-Set-Information-RL-RestoreInd,  
id-RL-Set-Successful-InformationItem-DM-Fail,  
id-RL-Set-Unsuccessful-InformationItem-DM-Fail,  
id-RL-Set-Unsuccessful-InformationItem-DM-Fail-Ind,  
id-RL-Successful-InformationItem-DM-Fail,  
id-RL-Unsuccessful-InformationItem-DM-Fail,  
id-RL-Unsuccessful-InformationItem-DM-Fail-Ind,  
id-ReportCharacteristics,  
id-Reporting-Object-RL-FailureInd,  
id-Reporting-Object-RL-RestoreInd,  
id-RNC-ID,  
id-RxTimingDeviationForTA,  
id-S-RNTI,  
id-SAI,  
id-Secondary-CPICH-Information,  
id-Secondary-CPICH-Information-Change,  
id-Secondary-Serving-Cell-List,  
id-SixtyfourQAM-DL-SupportIndicator,  
id-SFN,  
id-SFNReportingIndicator,  
id-SNA-Information,  
id-SRNC-ID,  
id-STD-SupportIndicator,  
id-SuccessfulRL-InformationResponse-RL-AdditionFailureFDD,  
id-SuccessfulRL-InformationResponse-RL-SetupFailureFDD,  
id-TDD-maxNrDLPhysicalchannels,  
id-TDD-Support-8PSK,  
id-TDD-Support-PLCCH,  
id-timeSlot-ISCP,  
id-TimeSlot-RL-SetupRspTDD,



id-TnIQos,  
id-TraceDepth,  
id-TraceRecordingSessionReference,  
id-TraceReference,  
id-TransportBearerID,  
id-TransportBearerRequestIndicator,  
id-TransportLayerAddress,  
id-UC-ID,  
id-ContextInfoItem-Reset,  
id-ContextGroupInfoItem-Reset,  
id-Transmission-Gap-Pattern-Sequence-Information,  
id-UEIdentity,  
id-UEMeasurementType,  
id-UEMeasurementTimeslotInfoHCR,  
id-UEMeasurementTimeslotInfoLCR,  
id-UEMeasurementReportCharacteristics,  
id-UEMeasurementParameterModAllow,  
id-UEMeasurementValueInformation,  
id-UE-State,  
id-UL-CCTrCH-AddInformation-RL-ReconfPrepTDD,  
id-UL-CCTrCH-DeleteInformation-RL-ReconfPrepTDD,  
id-UL-CCTrCH-ModifyInformation-RL-ReconfPrepTDD,  
id-UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD,  
id-UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD,  
id-UL-CCTrCH-InformationAddList-RL-ReconfPrepTDD,  
id-UL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD,  
id-UL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD,  
id-UL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD,  
id-UL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD,  
id-UL-CCTrCH-InformationItem-RL-SetupRqstTDD,  
id-UL-CCTrCH-InformationList-RL-SetupRqstTDD,  
id-UL-CCTrCH-InformationListIE-PhyChReconfRqstTDD,  
id-UL-CCTrCH-InformationListIE-RL-AdditionRspTDD,  
id-UL-CCTrCH-InformationListIE-RL-ReconfReadyTDD,  
id-UL-CCTrCH-InformationListIE-RL-SetupRspTDD,  
id-UL-DPCH-Information-RL-ReconfPrepFDD,  
id-UL-DPCH-Information-RL-ReconfRqstFDD,  
id-UL-DPCH-Information-RL-SetupRqstFDD,  
id-UL-DPDCHIndicatorEDCH,  
id-UL-DPCH-InformationItem-PhyChReconfRqstTDD,  
id-UL-DPCH-InformationItem-RL-AdditionRspTDD,  
id-UL-DPCH-InformationItem-RL-SetupRspTDD,  
id-UL-DPCH-InformationAddListIE-RL-ReconfReadyTDD,  
id-UL-DPCH-InformationDeleteListIE-RL-ReconfReadyTDD,  
id-UL-DPCH-InformationModifyListIE-RL-ReconfReadyTDD,  
id-UL-Physical-Channel-Information-RL-SetupRqstTDD,  
id-UL-SIRTarget,  
id-URA-ID,  
id-URA-Information,  
id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD,  
id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureTDD,  
id-UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD,  
id-UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD,  
id-USCHs-to-Add,

id-USCH-DeleteList-RL-ReconfPrepTDD,  
id-USCH-InformationListIE-RL-AdditionRspTDD,  
id-USCH-InformationListIEs-RL-SetupRspTDD,  
id-USCH-Information,  
id-USCH-ModifyList-RL-ReconfPrepTDD,  
id-USCHToBeAddedOrModifiedList-RL-ReconfReadyTDD,  
id-DL-Timeslot-ISCPC-LCR-Information-RL-SetupRqstTDD,  
id-RL-LCR-InformationResponse-RL-SetupRspTDD,  
id-UL-CCTrCH-LCR-InformationListIE-RL-SetupRspTDD,  
id-UL-DPCH-LCR-InformationItem-RL-SetupRspTDD,  
id-DL-CCTrCH-LCR-InformationListIE-RL-SetupRspTDD,  
id-DL-DPCH-LCR-InformationItem-RL-SetupRspTDD,  
id-DSCH-LCR-InformationListIEs-RL-SetupRspTDD,  
id-USCH-LCR-InformationListIEs-RL-SetupRspTDD,  
id-DL-Timeslot-ISCPC-LCR-Information-RL-AdditionRqstTDD,  
id-RL-LCR-InformationResponse-RL-AdditionRspTDD,  
id-UL-CCTrCH-LCR-InformationListIE-RL-AdditionRspTDD,  
id-UL-DPCH-LCR-InformationItem-RL-AdditionRspTDD,  
id-DL-CCTrCH-LCR-InformationListIE-RL-AdditionRspTDD,  
id-DL-DPCH-LCR-InformationItem-RL-AdditionRspTDD,  
id-DSCH-LCR-InformationListIEs-RL-AdditionRspTDD,  
id-USCH-LCR-InformationListIEs-RL-AdditionRspTDD,  
id-UL-DPCH-LCR-InformationAddListIE-RL-ReconfReadyTDD,  
id-UL-Timeslot-LCR-InformationModifyList-RL-ReconfReadyTDD,  
id-DL-DPCH-LCR-InformationAddListIE-RL-ReconfReadyTDD,  
id-DL-Timeslot-LCR-InformationModifyList-RL-ReconfReadyTDD,  
id-UL-Timeslot-LCR-InformationList-PhyChReconfRqstTDD,  
id-DL-Timeslot-LCR-InformationList-PhyChReconfRqstTDD,  
id-timeSlot-ISCPC-LCR-List-DL-PC-Rqst-TDD,  
id-TSTD-Support-Indicator-RL-SetupRqstTDD,  
id-PrimaryCCPCH-RSCP-RL-ReconfPrepTDD,  
id-DL-Timeslot-ISCPC-Info-RL-ReconfPrepTDD,  
id-DL-Timeslot-ISCPC-LCR-Information-RL-ReconfPrepTDD,  
id-neighbouringTDDCellMeasurementInformationLCR,  
id-UL-SIR-Target-CCTrCH-InformationItem-RL-SetupRspTDD,  
id-UL-SIR-Target-CCTrCH-LCR-InformationItem-RL-SetupRspTDD,  
id-TrafficClass,  
id-UL-Synchronisation-Parameters-LCR,  
id-TDD-DL-DPCH-TimeSlotFormatModifyItem-LCR-RL-ReconfReadyTDD,  
id-TDD-UL-DPCH-TimeSlotFormatModifyItem-LCR-RL-ReconfReadyTDD,  
id-MACHs-ResetIndicator,  
id-UL-TimingAdvanceCtrl-LCR,  
id-CCTrCH-Maximum-DL-Power-RL-SetupRspTDD,  
id-CCTrCH-Minimum-DL-Power-RL-SetupRspTDD,  
id-CCTrCH-Maximum-DL-Power-RL-AdditionRspTDD,  
id-CCTrCH-Minimum-DL-Power-RL-AdditionRspTDD,  
id-CCTrCH-Maximum-DL-Power-RL-ReconfReadyTDD,  
id-CCTrCH-Minimum-DL-Power-RL-ReconfReadyTDD,  
id-Maximum-DL-Power-TimeSlotLCR-InformationModifyItem-RL-ReconfReadyTDD,  
id-Minimum-DL-Power-TimeSlotLCR-InformationModifyItem-RL-ReconfReadyTDD,  
id-DL-CCTrCH-InformationList-RL-ReconfRspTDD,  
id-DL-DPCH-InformationModifyItem-LCR-RL-ReconfRspTDD,  
id-TDD-TPC-UplinkStepSize-LCR-RL-SetupRqstTDD,  
id-UL-CCTrCH-InformationList-RL-AdditionRqstTDD,

id-UL-CCTrCH-InformationItem-RL-AdditionRqstTDD,  
id-DL-CCTrCH-InformationList-RL-AdditionRqstTDD,  
id-DL-CCTrCH-InformationItem-RL-AdditionRqstTDD,  
id-TDD-TPC-UplinkStepSize-InformationAdd-LCR-RL-ReconfPrepTDD,  
id-TDD-TPC-UplinkStepSize-InformationModify-LCR-RL-ReconfPrepTDD,  
id-TDD-TPC-DownlinkStepSize-InformationAdd-RL-ReconfPrepTDD,  
id-TDD-TPC-DownlinkStepSize-InformationModify-RL-ReconfPrepTDD,  
id-PrimaryCCPCH-RSCP-Delta,  
id-multiple-DedicatedMeasurementValueList-TDD-DM-Rsp,  
id-multiple-DedicatedMeasurementValueList-LCR-TDD-DM-Rsp,  
id-SynchronisationIndicator,  
id-secondary-LCR-CCPCH-Info-TDD,  
id-multiple-HSSICHMeasurementValueList-TDD-DM-Rsp,  
id-CellCapabilityContainer-TDD768,  
id-neighbouringTDDCellMeasurementInformation768,  
id-RL-InformationResponse-RL-SetupRspTDD768,  
id-UL-CCTrCH-InformationListIE-RL-SetupRspTDD768,  
id-DL-CCTrCH-InformationListIE-RL-SetupRspTDD768,  
id-UL-DPCH-InformationItem-RL-SetupRspTDD768,  
id-DL-DPCH-InformationItem-RL-SetupRspTDD768,  
id-TDD768-minimumSpreadingFactor-UL,  
id-TDD768-minimumSpreadingFactor-DL,  
id-TDD768-maxNrDLPhysicalchannels,  
id-TDD768-maxNrDLPhysicalchannelsTS,  
id-RL-InformationResponse-RL-AdditionRspTDD768,  
id-UL-CCTrCH-InformationListIE-RL-AdditionRspTDD768,  
id-DL-CCTrCH-InformationListIE-RL-AdditionRspTDD768,  
id-UL-DPCH-InformationItem-RL-AdditionRspTDD768,  
id-DL-DPCH-InformationItem-RL-AdditionRspTDD768,  
id-UL-DPCH-InformationAddListIE-RL-ReconfReadyTDD768,  
id-UL-Timeslot-InformationModifyList-RL-ReconfReadyTDD768,  
id-DL-DPCH-InformationAddListIE-RL-ReconfReadyTDD768,  
id-DL-Timeslot-InformationModifyList-RL-ReconfReadyTDD768,  
id-secondary-CCPCH-Info-RL-ReconfReadyTDD768,  
id-HSPDSCH-Timeslot-InformationList-PhyChReconfRqstTDD768,  
id-UL-Timeslot-InformationList-PhyChReconfRqstTDD768,  
id-DL-Timeslot-InformationList-PhyChReconfRqstTDD768,  
id-multiple-DedicatedMeasurementValueList-TDD768-DM-Rsp,  
id-UEMeasurementTimeslotInfo768,  
id-DL-DPCH-InformationDeleteList768-RL-ReconfReadyTDD,  
id-DPCH-ID768-DM-Rsp,  
id-DPCH-ID768-DM-Rqst,  
id-DPCH-ID768-DM-Rprt,  
id-RxTimingDeviationForTAext,  
id-RxTimingDeviationForTA768,  
id-E-DCH-Information,  
id-E-DCH-Information-Reconfig,  
id-E-DCH-Serving-RL-ID,  
id-E-DCH-Information-Response,  
id-E-DCH-768-Information,  
id-E-DCH-768-Information-Reconfig,  
id-E-DCH-768-Information-Response,  
id-E-DCH-LCR-Information,  
id-E-DCH-LCR-Information-Reconfig,

```

id-E-DCH-LCR-Information-Response,
id-PowerControlGAP,
id-IdleIntervalInformation,
id-NeedforIdleInterval,
id-IdleIntervalConfigurationIndicator,
id-UARFCNforNt,
id-HS-SICH-ID-Extension,
id-HSSICH-Info-DM-Rqst-Extension,
id-UPPCHPositionLCR,
id-Common-EDCH-MAC-d-Flow-Specific-InformationLCR,
id-Enhanced-FACH-Information-ResponseLCR,
id-HSDSCH-PreconfigurationSetup,
id-HSDSCH-PreconfigurationInfo,
id-NoOfTargetCellHS-SCCH-Order,
id-EnhancedHSServingCC-Abort,
id-GANSS-Time-ID,
id-Additional-HS-Cell-Information-RL-Setup,
id-Additional-HS-Cell-Information-Response,
id-Additional-HS-Cell-Information-RL-Addition,
id-Additional-HS-Cell-Change-Information-Response,
id-Additional-HS-Cell-Information-RL-Reconf-Prep,
id-Additional-HS-Cell-Information-RL-Reconf-Req,
id-Additional-HS-Cell-RL-Reconf-Response,
id-Additional-HS-Cell-Information-RL-Param-Upd,
id-MinimumReducedE-DPDCH-GainFactor,
id-ContinuousPacketConnectivity-DRX-InformationLCR,
id-ContinuousPacketConnectivity-DRX-Information-ResponseLCR,
id-CPC-InformationLCR,
id-E-DCH-Semi-PersistentScheduling-Information-LCR,
id-HS-DSCH-Semi-PersistentScheduling-Information-LCR,
id-HS-DSCH-Semi-PersistentScheduling-Information-ResponseLCR,
id-E-DCH-Semi-PersistentScheduling-Information-ResponseLCR

```

```
FROM RNSAP-Constants;
```

```

-- *****
--
-- RADIO LINK SETUP REQUEST FDD
--
-- *****

```

```

RadioLinkSetupRequestFDD ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{RadioLinkSetupRequestFDD-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{RadioLinkSetupRequestFDD-Extensions}}
    ...
}

```

```

RadioLinkSetupRequestFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-SRNC-ID          CRITICALITY reject TYPE RNC-ID          PRESENCE mandatory } |
    { ID id-S-RNTI          CRITICALITY reject TYPE S-RNTI          PRESENCE mandatory } |
    { ID id-D-RNTI          CRITICALITY reject TYPE D-RNTI          PRESENCE optional   } |
}

```

```

{ ID id-AllowedQueuingTime          CRITICALITY reject  TYPE AllowedQueuingTime          PRESENCE optional } |
{ ID id-UL-DPCH-Information-RL-SetupRqstFDD CRITICALITY reject  TYPE UL-DPCH-Information-RL-SetupRqstFDD PRESENCE mandatory } |
{ ID id-DL-DPCH-Information-RL-SetupRqstFDD CRITICALITY reject  TYPE DL-DPCH-Information-RL-SetupRqstFDD PRESENCE optional } |
{ ID id-DCH-FDD-Information          CRITICALITY reject  TYPE DCH-FDD-Information          PRESENCE mandatory } |
{ ID id-RL-Information-RL-SetupRqstFDD CRITICALITY notify  TYPE RL-InformationList-RL-SetupRqstFDD PRESENCE mandatory } |
{ ID id-Transmission-Gap-Pattern-Sequence-Information CRITICALITY reject  TYPE Transmission-Gap-Pattern-Sequence-Information PRESENCE optional } |
{ ID id-Active-Pattern-Sequence-Information CRITICALITY reject  TYPE Active-Pattern-Sequence-Information PRESENCE optional },
...
}

UL-DPCH-Information-RL-SetupRqstFDD ::= SEQUENCE {
  ul-ScramblingCode          UL-ScramblingCode,
  minUL-ChannelisationCodeLength  MinUL-ChannelisationCodeLength,
  maxNrOfUL-DPCHs           MaxNrOfUL-DPCHs          OPTIONAL
  -- This IE shall be present if minUL-ChannelisationCodeLength equals to 4 -- ,
  ul-PunctureLimit          PunctureLimit,
  ul-TFCS                   TFCS,
  ul-DPCCH-SlotFormat       UL-DPCCH-SlotFormat,
  ul-SIRTarget              UL-SIR          OPTIONAL,
  diversityMode             DiversityMode,
  not-Used-sSDT-CellIdLength  NULL          OPTIONAL,
  not-Used-s-FieldLength    NULL          OPTIONAL,
  iE-Extensions             ProtocolExtensionContainer { {UL-DPCH-Information-RL-SetupRqstFDD-ExtIEs} } OPTIONAL,
  ...
}

UL-DPCH-Information-RL-SetupRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-DPC-Mode          CRITICALITY reject      EXTENSION DPC-Mode          PRESENCE optional } |
  { ID id-UL-DPDCHIndicatorEDCH CRITICALITY reject      EXTENSION UL-DPDCHIndicatorEDCH PRESENCE optional },
  ...
}

DL-DPCH-Information-RL-SetupRqstFDD ::= SEQUENCE {
  tFCS                      TFCS,
  dl-DPCH-SlotFormat        DL-DPCH-SlotFormat,
  nrOfDLchannelisationcodes  NrOfDLchannelisationcodes,
  tFCI-SignallingMode       TFCI-SignallingMode,
  tFCI-Presence              TFCI-Presence          OPTIONAL
  -- This IE shall be present if DL DPCH Slot Format IE is equal to any of the values from 12 to 16 -- ,
  multiplexingPosition       MultiplexingPosition,
  powerOffsetInformation     PowerOffsetInformation-RL-SetupRqstFDD,
  fdd-dl-TPC-DownlinkStepSize  FDD-TPC-DownlinkStepSize,
  limitedPowerIncrease       LimitedPowerIncrease,
  innerLoopDLPCStatus        InnerLoopDLPCStatus,
  iE-Extensions             ProtocolExtensionContainer { {DL-DPCH-Information-RL-SetupRqstFDD-ExtIEs} } OPTIONAL,
  ...
}

DL-DPCH-Information-RL-SetupRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

PowerOffsetInformation-RL-SetupRqstFDD ::= SEQUENCE {

```

```

    po1-ForTFCCI-Bits          PowerOffset,
    po2-ForTPC-Bits            PowerOffset,
    po3-ForPilotBits          PowerOffset,
    iE-Extensions              ProtocolExtensionContainer { { PowerOffsetInformation-RL-SetupRqstFDD-ExtIEs } } OPTIONAL,
    ...
}

PowerOffsetInformation-RL-SetupRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-InformationList-RL-SetupRqstFDD ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container { {RL-InformationItemIEs-RL-SetupRqstFDD} }

RL-InformationItemIEs-RL-SetupRqstFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationItem-RL-SetupRqstFDD CRITICALITY notify TYPE RL-InformationItem-RL-SetupRqstFDD PRESENCE mandatory }
}

RL-InformationItem-RL-SetupRqstFDD ::= SEQUENCE {
    rL-ID                      RL-ID,
    c-ID                       C-ID,
    firstRLS-indicator         FirstRLS-Indicator,
    frameOffset                FrameOffset,
    chipOffset                  ChipOffset,
    propagationDelay           PropagationDelay OPTIONAL,
    diversityControlField      DiversityControlField OPTIONAL
    -- This IE shall be present if the RL is not the first one in the RL-InformationList-RL-SetupRqstFDD --,
    dl-InitialTX-Power         DL-Power OPTIONAL,
    primaryCPICH-EcNo          PrimaryCPICH-EcNo OPTIONAL,
    not-Used-sSDT-CellID       NULL OPTIONAL,
    transmitDiversityIndicator TransmitDiversityIndicator OPTIONAL,
    -- This IE shall be present unless Diversity Mode IE in UL DPCH Information group is "none"
    iE-Extensions              ProtocolExtensionContainer { {RL-InformationItem-RL-SetupRqstFDD-ExtIEs} } OPTIONAL,
    ...
}

RL-InformationItem-RL-SetupRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-Enhanced-PrimaryCPICH-EcNo CRITICALITY ignore EXTENSION Enhanced-PrimaryCPICH-EcNo PRESENCE optional }|
    { ID id-RL-Specific-DCH-Info CRITICALITY ignore EXTENSION RL-Specific-DCH-Info PRESENCE optional }|
    { ID id-DelayedActivation CRITICALITY reject EXTENSION DelayedActivation PRESENCE optional }|
    { ID id-CellPortionID CRITICALITY ignore EXTENSION CellPortionID PRESENCE optional }|
    { ID id-RL-Specific-EDCH-Information CRITICALITY reject EXTENSION RL-Specific-EDCH-Information PRESENCE optional }|
    { ID id-EDCH-RL-Indication CRITICALITY reject EXTENSION EDCH-RL-Indication PRESENCE optional }|
    { ID id-ExtendedPropagationDelay CRITICALITY ignore EXTENSION ExtendedPropagationDelay PRESENCE optional }|
    { ID id-SynchronisationIndicator CRITICALITY reject EXTENSION SynchronisationIndicator PRESENCE optional }|
    { ID id-HSDSCH-PreconfigurationSetup CRITICALITY ignore EXTENSION HSDSCH-PreconfigurationSetup PRESENCE optional},
    ...
}

RadioLinkSetupRequestFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-Permanent-NAS-UE-Identity CRITICALITY ignore EXTENSION Permanent-NAS-UE-Identity PRESENCE optional }|
}
    { ID id-DL-PowerBalancing-Information CRITICALITY ignore EXTENSION DL-PowerBalancing-Information PRESENCE optional}|

```

```

    { ID id-HSDSCH-FDD-Information          CRITICALITY reject  EXTENSION HSDSCH-FDD-Information          PRESENCE optional
  }|
    { ID id-HSPDSCH-RL-ID                  CRITICALITY reject  EXTENSION RL-ID                            PRESENCE
conditional }|
  -- This IE shall be present if HS-DSCH Information IE is present.
  { ID id-MBMS-Bearer-Service-List        CRITICALITY notify  EXTENSION MBMS-Bearer-Service-List        PRESENCE
optional }|
  { ID id-EDPCH-Information                CRITICALITY reject  EXTENSION EDPCH-Information-FDD           PRESENCE
optional }|
  { ID id-EDCH-FDD-Information            CRITICALITY reject  EXTENSION EDCH-FDD-Information            PRESENCE
conditional }|
  -- This IE is present if E-DPCH Information IE is present.
  { ID id-Serving-EDCHRL-Id               CRITICALITY reject  EXTENSION EDCH-Serving-RL                PRESENCE
optional }|
  -- This IE is present if E-DCHInformation IE is present.
  { ID id-F-DPCH-Information-RL-SetupRqstFDD CRITICALITY reject  EXTENSION F-DPCH-Information-RL-SetupRqstFDD PRESENCE optional
  }|
  { ID id-Initial-DL-DPCH-TimingAdjustment-Allowed CRITICALITY ignore  EXTENSION Initial-DL-DPCH-TimingAdjustment-Allowed PRESENCE optional
  }|
  { ID id-DCH-Indicator-For-E-DCH-HSDPA-Operation CRITICALITY reject  EXTENSION DCH-Indicator-For-E-DCH-HSDPA-Operation PRESENCE optional
  }|
  { ID id-Serving-cell-change-CFN         CRITICALITY reject  EXTENSION CFN                            PRESENCE optional
  }|
  { ID id-Continuous-Packet-Connectivity-DTX-DRX-Information CRITICALITY reject  EXTENSION Continuous-Packet-Connectivity-DTX-DRX- PRESENCE
optional }|
  { ID id-Continuous-Packet-Connectivity-HS-SCCH-Less-Information CRITICALITY reject  EXTENSION Continuous-Packet-Connectivity-HS-SCCH-Less- PRESENCE optional
Information }|
  { ID id-Extended-SRNC-ID                CRITICALITY reject  EXTENSION Extended-RNC-ID                PRESENCE optional
  }|
  { ID id-Additional-HS-Cell-Information-RL-Setup CRITICALITY reject  EXTENSION Additional-HS-Cell-Information-RL-Setup-List PRESENCE
optional },
  ...
}

Additional-HS-Cell-Information-RL-Setup-List ::= SEQUENCE (SIZE (1..maxNrOfHSDSCH-1)) OF Additional-HS-Cell-Information-RL-Setup-ItemIEs

Additional-HS-Cell-Information-RL-Setup-ItemIEs ::=SEQUENCE{
  hSPDSCH-RL-ID          RL-ID,
  c-ID                   C-ID,
  hS-DSCH-FDD-Secondary-Serving-Information HS-DSCH-FDD-Secondary-Serving-Information,
  iE-Extensions          ProtocolExtensionContainer { { Additional-HS-Cell-Information-RL-Setup-ItemIEs-ExtIEs} } OPTIONAL,
  ...
}

Additional-HS-Cell-Information-RL-Setup-ItemIEs-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

F-DPCH-Information-RL-SetupRqstFDD ::= SEQUENCE {

```

```

powerOffsetInformation          PowerOffsetInformation-F-DPCH-RL-SetupRqstFDD,
fdd-dl-TPC-DownlinkStepSize    FDD-TPC-DownlinkStepSize,
limitedPowerIncrease            LimitedPowerIncrease,
innerLoopDLPCStatus            InnerLoopDLPCStatus,
iE-Extensions                  ProtocolExtensionContainer { { F-DPCH-Information-RL-SetupRqstFDD-ExtIEs } }      OPTIONAL,
...
}

F-DPCH-Information-RL-SetupRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-F-DPCH-SlotFormatSupportRequest CRITICALITY reject EXTENSION F-DPCH-SlotFormatSupportRequest PRESENCE optional } |
  { ID id-F-DPCH-SlotFormat CRITICALITY ignore EXTENSION F-DPCH-SlotFormat PRESENCE optional },
  ...
}

PowerOffsetInformation-F-DPCH-RL-SetupRqstFDD ::= SEQUENCE {
  po2-ForTPC-Bits PowerOffset,
  --This IE shall be ignored by DRNS
  iE-Extensions ProtocolExtensionContainer { { PowerOffsetInformation-F-DPCH-RL-SetupRqstFDD-ExtIEs } }      OPTIONAL,
  ...
}

PowerOffsetInformation-F-DPCH-RL-SetupRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- RADIO LINK SETUP REQUEST TDD
--
-- *****

RadioLinkSetupRequestTDD ::= SEQUENCE {
  protocolIEs ProtocolIE-Container {{RadioLinkSetupRequestTDD-IEs}},
  protocolExtensions ProtocolExtensionContainer {{RadioLinkSetupRequestTDD-Extensions}}      OPTIONAL,
  ...
}

RadioLinkSetupRequestTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-SRNC-ID CRITICALITY reject TYPE RNC-ID PRESENCE mandatory } |
  { ID id-S-RNTI CRITICALITY reject TYPE S-RNTI PRESENCE mandatory } |
  { ID id-D-RNTI CRITICALITY reject TYPE D-RNTI PRESENCE optional } |
  { ID id-UL-Physical-Channel-Information-RL-SetupRqstTDD CRITICALITY reject TYPE UL-Physical-Channel-Information-RL-SetupRqstTDD PRESENCE mand
  { ID id-DL-Physical-Channel-Information-RL-SetupRqstTDD CRITICALITY reject TYPE DL-Physical-Channel-Information-RL-SetupRqstTDD PRESENCE mand
  { ID id-AllowedQueuingTime CRITICALITY reject TYPE AllowedQueuingTime PRESENCE optional } |
  { ID id-UL-CCTrCH-InformationList-RL-SetupRqstTDD CRITICALITY notify TYPE UL-CCTrCH-InformationList-RL-SetupRqstTDD PRESENCE optional
} |
  { ID id-DL-CCTrCH-InformationList-RL-SetupRqstTDD CRITICALITY notify TYPE DL-CCTrCH-InformationList-RL-SetupRqstTDD PRESENCE optional
} |
  { ID id-DCH-TDD-Information CRITICALITY reject TYPE DCH-TDD-Information PRESENCE optional } |
  { ID id-DSCH-TDD-Information CRITICALITY reject TYPE DSCH-TDD-Information PRESENCE optional } |
  { ID id-USCH-Information CRITICALITY reject TYPE USCH-Information PRESENCE optional } |
  { ID id-RL-Information-RL-SetupRqstTDD CRITICALITY reject TYPE RL-Information-RL-SetupRqstTDD PRESENCE mandatory
},
  ...
}

```



```

}

UL-Physical-Channel-Information-RL-SetupRqstTDD ::= SEQUENCE {
    maxNrTimeslots-UL           MaxNrTimeslots,
    minimumSpreadingFactor-UL   MinimumSpreadingFactor,
    maxNrULPhysicalchannels     MaxNrULPhysicalchannels,
    iE-Extensions               ProtocolExtensionContainer { {UL-Physical-Channel-InformationItem-RL-SetupRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

UL-Physical-Channel-InformationItem-RL-SetupRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-TDD-Support-8PSK          CRITICALITY ignore          EXTENSION Support-8PSK          PRESENCE optional } |
    -- Applicable to 1.28Mcps TDD only
    { ID id-TDD768-minimumSpreadingFactor-UL   CRITICALITY ignore          EXTENSION MinimumSpreadingFactor768   PRESENCE optional },
    ...
}

DL-Physical-Channel-Information-RL-SetupRqstTDD ::= SEQUENCE {
    maxNrTimeslots-DL           MaxNrTimeslots,
    minimumSpreadingFactor-DL   MinimumSpreadingFactor,
    maxNrDLPhysicalchannels     MaxNrDLPhysicalchannels,
    iE-Extensions               ProtocolExtensionContainer { {DL-Physical-Channel-InformationItem-RL-SetupRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

DL-Physical-Channel-InformationItem-RL-SetupRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-TDD-maxNrDLPhysicalchannels     CRITICALITY ignore          EXTENSION MaxNrDLPhysicalchannelsTS   PRESENCE optional } |
    { ID id-TDD-Support-8PSK                CRITICALITY ignore          EXTENSION Support-8PSK                PRESENCE optional } |
    -- Applicable to 1.28Mcps TDD only
    { ID id-TDD-Support-PLCCH                CRITICALITY ignore          EXTENSION Support-PLCCH                PRESENCE optional } |
    { ID id-TDD768-minimumSpreadingFactor-DL CRITICALITY ignore          EXTENSION MinimumSpreadingFactor768   PRESENCE optional } |
    { ID id-TDD768-maxNrDLPhysicalchannels   CRITICALITY ignore          EXTENSION MaxNrDLPhysicalchannels768   PRESENCE optional } |
    { ID id-TDD768-maxNrDLPhysicalchannelsTS CRITICALITY ignore          EXTENSION MaxNrDLPhysicalchannelsTS768 PRESENCE optional },
    ...
}

UL-CCTrCH-InformationList-RL-SetupRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container { {UL-CCTrCH-InformationItemIEs-RL-SetupRqstTDD} }

UL-CCTrCH-InformationItemIEs-RL-SetupRqstTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-UL-CCTrCH-InformationItem-RL-SetupRqstTDD CRITICALITY notify TYPE UL-CCTrCH-InformationItem-RL-SetupRqstTDD PRESENCE mandatory }
}

UL-CCTrCH-InformationItem-RL-SetupRqstTDD ::= SEQUENCE {
    cCTrCH-ID           CCTrCH-ID,
    ul-TFCS              TFCS,
    tFCI-Coding          TFCI-Coding,
    ul-PunctureLimit     PunctureLimit,
    iE-Extensions        ProtocolExtensionContainer { {UL-CCTrCH-InformationItem-RL-SetupRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

UL-CCTrCH-InformationItem-RL-SetupRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-TDD-TPC-UplinkStepSize-LCR-RL-SetupRqstTDD CRITICALITY reject EXTENSION TDD-TPC-UplinkStepSize-LCR PRESENCE optional },

```

```

-- Mandatory for 1.28Mcps TDD, not applicable to 3.84Mcps TDD or 7.68Mcps TDD
...
}

DL-CCTrCH-InformationList-RL-SetupRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container { {DL-CCTrCH-
InformationItemIEs-RL-SetupRqstTDD} }

DL-CCTrCH-InformationItemIEs-RL-SetupRqstTDD RNSAP-PROTOCOL-IES ::= {
  { ID id-DL-CCTrCH-InformationItem-RL-SetupRqstTDD CRITICALITY notify TYPE DL-CCTrCH-InformationItem-RL-SetupRqstTDD PRESENCE mandatory }
}

DL-CCTrCH-InformationItem-RL-SetupRqstTDD ::= SEQUENCE {
  cCTrCH-ID CCTrCH-ID,
  dl-TFCS TFCS,
  tFCI-Coding TFCI-Coding,
  dl-PunctureLimit PunctureLimit,
  tdd-TPC-DownlinkStepSize TDD-TPC-DownlinkStepSize,
  cCTrCH-TPCList CCTrCH-TPCList-RL-SetupRqstTDD OPTIONAL,
  iE-Extensions ProtocolExtensionContainer { {DL-CCTrCH-InformationItem-RL-SetupRqstTDD-ExtIEs} } OPTIONAL,
  ...
}

DL-CCTrCH-InformationItem-RL-SetupRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

CCTrCH-TPCList-RL-SetupRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF CCTrCH-TPCItem-RL-SetupRqstTDD

CCTrCH-TPCItem-RL-SetupRqstTDD ::= SEQUENCE {
  cCTrCH-ID CCTrCH-ID,
  iE-Extensions ProtocolExtensionContainer { { CCTrCH-TPCItem-RL-SetupRqstTDD-ExtIEs} } OPTIONAL,
  ...
}

CCTrCH-TPCItem-RL-SetupRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

RL-Information-RL-SetupRqstTDD ::= SEQUENCE {
  rL-ID RL-ID,
  c-ID C-ID,
  frameOffset FrameOffset,
  specialBurstScheduling SpecialBurstScheduling,
  primaryCCPCH-RSCP PrimaryCCPCH-RSCP OPTIONAL,
  dL-TimeSlot-ISCP DL-TimeSlot-ISCP-Info OPTIONAL,
  --for 3.84Mcps TDD and 7.68Mcps TDD only
  iE-Extensions ProtocolExtensionContainer { {RL-Information-RL-SetupRqstTDD-ExtIEs} } OPTIONAL,
  ...
}

RL-Information-RL-SetupRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-DL-TimeSlot-ISCP-LCR-Information-RL-SetupRqstTDD CRITICALITY reject EXTENSION DL-TimeSlot-ISCP-LCR-Information PRESENCE
optional }|
}

```

```

    { ID id-TSTD-Support-Indicator-RL-SetupRqstTDD          CRITICALITY ignore      EXTENSION  TSTD-Support-Indicator          PRESENCE
optional    }|
--for 1.28Mcps TDD only
    { ID id-RL-Specific-DCH-Info      CRITICALITY ignore      EXTENSION  RL-Specific-DCH-Info      PRESENCE  optional }|
    { ID id-DelayedActivation          CRITICALITY reject      EXTENSION  DelayedActivation         PRESENCE  optional }|
    { ID id-UL-Synchronisation-Parameters-LCR      CRITICALITY reject      EXTENSION  UL-Synchronisation-Parameters-LCR      PRESENCE
optional    }| -- Mandatory for 1.28Mcps TDD, Not Applicable to 3.84Mcps TDD or 7.68Mcps TDD
    { ID id-PrimaryCCPCH-RSCP-Delta    CRITICALITY ignore      EXTENSION  PrimaryCCPCH-RSCP-Delta    PRESENCE  optional }|
    { ID id-IdleIntervalConfigurationIndicator      CRITICALITY ignore      EXTENSION  NULL                        PRESENCE  optional },
    ...
}

RadioLinkSetupRequestTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-Permanent-NAS-UE-Identity      CRITICALITY ignore      EXTENSION  Permanent-NAS-UE-Identity      PRESENCE  optional }|
    { ID id-HSDSCH-TDD-Information          CRITICALITY reject      EXTENSION  HSDSCH-TDD-Information          PRESENCE  optional }|
    { ID id-HSPDSCH-RL-ID                  CRITICALITY reject      EXTENSION  RL-ID                            PRESENCE  conditional
    }|
-- This IE shall be present if HS-DSCH Information IE is present.
    { ID id-PDSCH-RL-ID                    CRITICALITY ignore      EXTENSION  RL-ID                            PRESENCE  optional }|
    { ID id-MBMS-Bearer-Service-List       CRITICALITY notify      EXTENSION  MBMS-Bearer-Service-List       PRESENCE  optional }|
    { ID id-E-DCH-Information              CRITICALITY reject      EXTENSION  E-DCH-Information              PRESENCE  optional }|
    { ID id-E-DCH-Serving-RL-ID           CRITICALITY reject      EXTENSION  RL-ID                            PRESENCE  optional }|
    { ID id-E-DCH-768-Information          CRITICALITY reject      EXTENSION  E-DCH-768-Information          PRESENCE  optional }|
    { ID id-E-DCH-LCR-Information          CRITICALITY reject      EXTENSION  E-DCH-LCR-Information          PRESENCE  optional }|
    { ID id-Extended-SRNC-ID              CRITICALITY reject      EXTENSION  Extended-RNC-ID                PRESENCE  optional }|
    { ID id-ContinuousPacketConnectivity-DRX-InformationLCR      CRITICALITY reject      EXTENSION  ContinuousPacketConnectivity-DRX-InformationLCR
    PRESENCE optional }|
    { ID id-HS-DSCH-Semi-PersistentScheduling-Information-LCR      CRITICALITY reject      EXTENSION  HS-DSCH-Semi-PersistentScheduling-Information-LCR
    PRESENCE optional }|
    { ID id-E-DCH-Semi-PersistentScheduling-Information-LCR      CRITICALITY reject      EXTENSION  E-DCH-Semi-PersistentScheduling-Information-LCR
    PRESENCE optional }|
    { ID id-RNTI-Allocation-Indicator      CRITICALITY ignore      EXTENSION  RNTI-Allocation-Indicator      PRESENCE  optional },
    ...
}

-- *****
--
-- RADIO LINK SETUP RESPONSE FDD
--
-- *****

RadioLinkSetupResponseFDD ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{RadioLinkSetupResponseFDD-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{RadioLinkSetupResponseFDD-Extensions}}
    ...
}

RadioLinkSetupResponseFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-D-RNTI          CRITICALITY ignore      TYPE  D-RNTI          PRESENCE  optional }
    |
    { ID id-CN-PS-DomainIdentifier      CRITICALITY ignore      TYPE  CN-PS-DomainIdentifier      PRESENCE  optional }
    |
    { ID id-CN-CS-DomainIdentifier      CRITICALITY ignore      TYPE  CN-CS-DomainIdentifier      PRESENCE  optional }
    |

```

```

    { ID id-RL-InformationResponseList-RL-SetupRspFDD  CRITICALITY ignore  TYPE RL-InformationResponseList-RL-SetupRspFDD  PRESENCE mandatory  }
  |
    { ID id-UL-SIRTarget  CRITICALITY ignore  TYPE UL-SIR  PRESENCE optional  }
  |
    { ID id-CriticalityDiagnostics  CRITICALITY ignore  TYPE CriticalityDiagnostics  PRESENCE optional  },
  ...
}

RL-InformationResponseList-RL-SetupRspFDD ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container { {RL-
InformationResponseItemIEs-RL-SetupRspFDD} }

RL-InformationResponseItemIEs-RL-SetupRspFDD RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-InformationResponseItem-RL-SetupRspFDD  CRITICALITY ignore  TYPE RL-InformationResponseItem-RL-SetupRspFDD  PRESENCE mandatory  }
}

RL-InformationResponseItem-RL-SetupRspFDD ::= SEQUENCE {
  rL-ID  RL-ID,
  rL-Set-ID  RL-Set-ID,
  uRA-Information  URA-Information  OPTIONAL,
  sAI  SAI,
  gA-Cell  GA-Cell  OPTIONAL,
  gA-AccessPointPosition  GA-AccessPointPosition  OPTIONAL,
  received-total-wide-band-power  Received-total-wide-band-power,
  not-Used-secondary-CCPCH-Info  NULL  OPTIONAL,
  dl-CodeInformation  FDD-DL-CodeInformation,
  diversityIndication  DiversityIndication-RL-SetupRspFDD,
  sSDT-SupportIndicator  SSDT-SupportIndicator,
  maxUL-SIR  UL-SIR,
  minUL-SIR  UL-SIR,
  closedlooptimingadjustmentmode  Closedlooptimingadjustmentmode  OPTIONAL,
  maximumAllowedULTxPower  MaximumAllowedULTxPower,
  maximumDLTxPower  DL-Power,
  minimumDLTxPower  DL-Power,
  primaryScramblingCode  PrimaryScramblingCode  OPTIONAL,
  uL-UARFCN  UARFCN  OPTIONAL,
  dL-UARFCN  UARFCN  OPTIONAL,
  primaryCPICH-Power  PrimaryCPICH-Power,
  not-Used-dSCHInformationResponse  NULL  OPTIONAL,
  neighbouring-UMTS-CellInformation  Neighbouring-UMTS-CellInformation  OPTIONAL,
  neighbouring-GSM-CellInformation  Neighbouring-GSM-CellInformation  OPTIONAL,
  pC-Preamble  PC-Preamble,
  sRB-Delay  SRB-Delay,
  iE-Extensions  ProtocolExtensionContainer { {RL-InformationResponseItem-RL-SetupRspFDD-ExtIEs} }  OPTIONAL,
  ...
}

RL-InformationResponseItem-RL-SetupRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-GA-CellAdditionalShapes  CRITICALITY ignore  EXTENSION GA-CellAdditionalShapes  PRESENCE optional
  }|
  { ID id-DL-PowerBalancing-ActivationIndicator  CRITICALITY ignore  EXTENSION DL-PowerBalancing-ActivationIndicator  PRESENCE optional
  }|
  { ID id-HCS-Prio  CRITICALITY ignore  EXTENSION HCS-Prio  PRESENCE optional
  }|
}

```

```

    { ID id-Primary-CPICH-Usage-For-Channel-Estimation CRITICALITY ignore EXTENSION Primary-CPICH-Usage-For-Channel-Estimation PRESENCE
optional }|
    { ID id-Secondary-CPICH-Information CRITICALITY ignore EXTENSION Secondary-CPICH-Information PRESENCE
optional }|
    { ID id-Active-MBMS-Bearer-ServiceFDD-PFL CRITICALITY ignore EXTENSION Active-MBMS-Bearer-Service-ListFDD-PFL PRESENCE
optional }|
    { ID id-EDCH-RLSet-Id CRITICALITY ignore EXTENSION RL-Set-ID PRESENCE
optional }|
    { ID id-EDCH-FDD-DL-ControlChannelInformation CRITICALITY ignore EXTENSION EDCH-FDD-DL-ControlChannelInformation PRESENCE
optional }|
    { ID id-Initial-DL-DPCH-TimingAdjustment CRITICALITY ignore EXTENSION DL-DPCH-TimingAdjustment PRESENCE optional
}|
    { ID id-F-DPCH-SlotFormat CRITICALITY ignore EXTENSION F-DPCH-SlotFormat PRESENCE optional
}|
    { ID id-FrameOffset CRITICALITY ignore EXTENSION FrameOffset PRESENCE optional
}|
    { ID id-ChipOffset CRITICALITY ignore EXTENSION ChipOffset PRESENCE optional
}|
    { ID id-Neighbouring-E-UTRA-CellInformation CRITICALITY ignore EXTENSION Neighbouring-E-UTRA-CellInformation PRESENCE optional
}|
    { ID id-HSDSCH-PreconfigurationInfo CRITICALITY ignore EXTENSION HSDSCH-PreconfigurationInfo PRESENCE optional
},
    ...
}

DiversityIndication-RL-SetupRspFDD ::= CHOICE {
    combining Combining-RL-SetupRspFDD,
    nonCombiningOrFirstRL NonCombiningOrFirstRL-RL-SetupRspFDD
}

Combining-RL-SetupRspFDD ::= SEQUENCE {
    rL-ID RL-ID,
    iE-Extensions ProtocolExtensionContainer { { CombiningItem-RL-SetupRspFDD-ExtIEs } } OPTIONAL,
    ...
}

CombiningItem-RL-SetupRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-DCH-InformationResponse CRITICALITY ignore EXTENSION DCH-InformationResponse PRESENCE optional }|
    { ID id-EDCH-FDD-InformationResponse CRITICALITY ignore EXTENSION EDCH-FDD-InformationResponse PRESENCE optional },
    ...
}

NonCombiningOrFirstRL-RL-SetupRspFDD ::= SEQUENCE {
    dCH-InformationResponse DCH-InformationResponse,
    iE-Extensions ProtocolExtensionContainer { { NonCombiningOrFirstRLItem-RL-SetupRspFDD-ExtIEs } } OPTIONAL,
    ...
}

NonCombiningOrFirstRLItem-RL-SetupRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    {ID id-EDCH-FDD-InformationResponse CRITICALITY ignore EXTENSION EDCH-FDD-InformationResponse PRESENCE optional},
    ...
}

RadioLinkSetupResponseFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {

```

```

    { ID id-HSDSCH-RNTI                CRITICALITY ignore      EXTENSION HSDSCH-RNTI                PRESENCE optional }|
    { ID id-HSDSCH-FDD-Information-Response CRITICALITY ignore      EXTENSION HSDSCH-FDD-Information-Response PRESENCE optional }|
    { ID id-Continuous-Packet-Connectivity-HS-SCCH-Less-Information-Response CRITICALITY ignore      EXTENSION Continuous-Packet-Connectivity-
HS-SCCH-Less-Information-Response PRESENCE optional }|
    { ID id-SixtyfourQAM-DL-SupportIndicator CRITICALITY ignore      EXTENSION SixtyfourQAM-DL-SupportIndicator PRESENCE optional }|
    { ID id-Additional-HS-Cell-Information-Response CRITICALITY ignore      EXTENSION Additional-HS-Cell-Information-Response-List PRESENCE
optional },
    ...
}

```

```

Additional-HS-Cell-Information-Response-List ::= SEQUENCE (SIZE (1..maxNrOfHSDSCH-1)) OF Additional-HS-Cell-Information-Response-ItemIEs

```

```

Additional-HS-Cell-Information-Response-ItemIEs ::=SEQUENCE{
    hSPDSCH-RL-ID                RL-ID,
    hSDSCH-RNTI                  HSDSCH-RNTI,
    HS-DSCH-FDD-Secondary-Serving-Information-Response HS-DSCH-FDD-Secondary-Serving-Information-Response,
    sixtyfourQAM-DL-SupportIndicator SixtyfourQAM-DL-SupportIndicator OPTIONAL,
    iE-Extensions                ProtocolExtensionContainer { { Additional-HS-Cell-Information-Response-ItemIEs-ExtIEs } } OPTIONAL,
    ...
}

```

```

Additional-HS-Cell-Information-Response-ItemIEs-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {

```

```

    ...
}

```

```

-- *****
--
-- RADIO LINK SETUP RESPONSE TDD
--
-- *****

```

```

RadioLinkSetupResponseTDD ::= SEQUENCE {
    protocolIEs                ProtocolIE-Container    {{RadioLinkSetupResponseTDD-IEs}},
    protocolExtensions          ProtocolExtensionContainer {{RadioLinkSetupResponseTDD-Extensions}}          OPTIONAL,
    ...
}

```

```

RadioLinkSetupResponseTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-D-RNTI                CRITICALITY ignore      TYPE D-RNTI                PRESENCE optional } |
    { ID id-CN-PS-DomainIdentifier CRITICALITY ignore      TYPE CN-PS-DomainIdentifier PRESENCE optional } |
    { ID id-CN-CS-DomainIdentifier CRITICALITY ignore      TYPE CN-CS-DomainIdentifier PRESENCE optional } |
    { ID id-RL-InformationResponse-RL-SetupRspTDD CRITICALITY ignore      TYPE RL-InformationResponse-RL-SetupRspTDD PRESENCE optional } |
    --Mandatory for 3.84Mcps TDD only
    { ID id-UL-SIRTarget           CRITICALITY ignore      TYPE UL-SIR                PRESENCE mandatory } |
    { ID id-CriticalityDiagnostics CRITICALITY ignore      TYPE CriticalityDiagnostics PRESENCE optional },
    ...
}

```

```

RL-InformationResponse-RL-SetupRspTDD ::= SEQUENCE {
    rL-ID                RL-ID,
    uRA-Information       URA-Information    OPTIONAL,
    sAI                  SAI,

```

```

gA-Cell                GA-Cell        OPTIONAL,
gA-AccessPointPosition GA-AccessPointPosition OPTIONAL,
ul-TimeSlot-ISCP-Info  UL-TimeSlot-ISCP-Info,
maxUL-SIR              UL-SIR,
minUL-SIR              UL-SIR,
maximumAllowedULTxPower MaximumAllowedULTxPower,
maximumDLTxPower      DL-Power,
minimumDLTxPower      DL-Power,
uARFCNforNt           UARFCN            OPTIONAL,
cellParameterID       CellParameterID   OPTIONAL,
syncCase              SyncCase          OPTIONAL,
sCH-TimeSlot          SCH-TimeSlot     OPTIONAL,
-- This IE shall be present if Sync Case IE is equal to "Case2". --
sCTD-Indicator        SCTD-Indicator  OPTIONAL,
pCCPCH-Power          PCCPCH-Power,
timingAdvanceApplied   TimingAdvanceApplied,
alphaValue            AlphaValue,
ul-PhysCH-SF-Variation UL-PhysCH-SF-Variation,
synchronisationConfiguration SynchronisationConfiguration,
secondary-CCPCH-Info-TDD Secondary-CCPCH-Info-TDD OPTIONAL,
ul-CCTrCHInformation  UL-CCTrCHInformationList-RL-SetupRspTDD OPTIONAL,
dl-CCTrCHInformation  DL-CCTrCHInformationList-RL-SetupRspTDD OPTIONAL,
dCH-InformationResponse DCH-InformationResponseList-RL-SetupRspTDD OPTIONAL,
dsch-InformationResponse DSCH-InformationResponse-RL-SetupRspTDD OPTIONAL,
usch-InformationResponse USCH-InformationResponse-RL-SetupRspTDD OPTIONAL,
neighbouring-UMTS-CellInformation Neighbouring-UMTS-CellInformation OPTIONAL,
neighbouring-GSM-CellInformation Neighbouring-GSM-CellInformation OPTIONAL,
IE-Extensions        ProtocolExtensionContainer { {RL-InformationResponse-RL-SetupRspTDD-ExtIEs} } OPTIONAL,
...
}

RL-InformationResponse-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-GA-CellAdditionalShapes          CRITICALITY ignore EXTENSION GA-CellAdditionalShapes          PRESENCE optional }|
  { ID id-HCS-Prio                         CRITICALITY ignore EXTENSION HCS-Prio                         PRESENCE optional }|
  { ID id-TimeSlot-RL-SetupRspTDD          CRITICALITY ignore EXTENSION TimeSlot                         PRESENCE conditional }|
  -- This IE shall be present if Sync Case IE is Case1. --
  { ID id-Neighbouring-E-UTRA-CellInformation CRITICALITY ignore EXTENSION Neighbouring-E-UTRA-CellInformation PRESENCE optional },
  ...
}

UL-CCTrCHInformationList-RL-SetupRspTDD ::= ProtocolIE-Single-Container {{UL-CCTrCHInformationListIEs-RL-SetupRspTDD}}

UL-CCTrCHInformationListIEs-RL-SetupRspTDD RNSAP-PROTOCOL-IES ::= {
  { ID id-UL-CCTrCH-InformationListIE-RL-SetupRspTDD CRITICALITY ignore TYPE UL-CCTrCHInformationListIE-RL-SetupRspTDD PRESENCE mandatory }
}

UL-CCTrCHInformationListIE-RL-SetupRspTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF UL-CCTrCHInformationItem-RL-SetupRspTDD

UL-CCTrCHInformationItem-RL-SetupRspTDD ::= SEQUENCE {
  cCTrCH-ID          CCTrCH-ID,
  ul-DPCH-Information UL-DPCH-InformationList-RL-SetupRspTDD OPTIONAL,
  IE-Extensions      ProtocolExtensionContainer { {UL-CCTrCHInformationItem-RL-SetupRspTDD-ExtIEs} } OPTIONAL,
  ...
}

```

```

UL-CCTrCHInformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-UL-SIR-Target-CCTrCH-InformationItem-RL-SetupRspTDD      CRITICALITY ignore      EXTENSION UL-SIR      PRESENCE optional},
    ...
}

UL-DPCH-InformationList-RL-SetupRspTDD ::= ProtocolIE-Single-Container { {UL-DPCH-InformationListIEs-RL-SetupRspTDD} }

UL-DPCH-InformationListIEs-RL-SetupRspTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-UL-DPCH-InformationItem-RL-SetupRspTDD      CRITICALITY ignore      TYPE UL-DPCH-InformationItem-RL-SetupRspTDD      PRESENCE mandatory}
}

UL-DPCH-InformationItem-RL-SetupRspTDD ::= SEQUENCE {
    repetitionPeriod          RepetitionPeriod,
    repetitionLength          RepetitionLength,
    tDD-DPCHOffset            TDD-DPCHOffset,
    uL-Timeslot-Information    UL-Timeslot-Information,
    iE-Extensions              ProtocolExtensionContainer { {UL-DPCH-InformationItem-RL-SetupRspTDD-ExtIEs} } OPTIONAL,
    ...
}

UL-DPCH-InformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CCTrCHInformationList-RL-SetupRspTDD ::= ProtocolIE-Single-Container {{DL-CCTrCHInformationListIEs-RL-SetupRspTDD}}

DL-CCTrCHInformationListIEs-RL-SetupRspTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-CCTrCH-InformationListIE-RL-SetupRspTDD      CRITICALITY ignore      TYPE DL-CCTrCHInformationListIE-RL-SetupRspTDD      PRESENCE mandatory }
}

DL-CCTrCHInformationListIE-RL-SetupRspTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF DL-CCTrCHInformationItem-RL-SetupRspTDD

DL-CCTrCHInformationItem-RL-SetupRspTDD ::= SEQUENCE {
    cCTrCH-ID                CCTrCH-ID,
    dl-DPCH-Information        DL-DPCH-InformationList-RL-SetupRspTDD      OPTIONAL,
    iE-Extensions              ProtocolExtensionContainer { {DL-CCTrCHInformationItem-RL-SetupRspTDD-ExtIEs} } OPTIONAL,
    ...
}

DL-CCTrCHInformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-CCTrCH-Maximum-DL-Power-RL-SetupRspTDD      CRITICALITY ignore      EXTENSION DL-Power      PRESENCE optional } | -- this is a DCH type CCTrCH power
    { ID id-CCTrCH-Minimum-DL-Power-RL-SetupRspTDD      CRITICALITY ignore      EXTENSION DL-Power      PRESENCE optional }, -- this is a DCH type CCTrCH power
    ...
}

DL-DPCH-InformationList-RL-SetupRspTDD ::= ProtocolIE-Single-Container { {DL-DPCH-InformationListIEs-RL-SetupRspTDD} }

DL-DPCH-InformationListIEs-RL-SetupRspTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-DPCH-InformationItem-RL-SetupRspTDD      CRITICALITY ignore      TYPE DL-DPCH-InformationItem-RL-SetupRspTDD      PRESENCE mandatory}
}

DL-DPCH-InformationItem-RL-SetupRspTDD ::= SEQUENCE {

```



```

    repetitionPeriod          RepetitionPeriod,
    repetitionLength          RepetitionLength,
    tDD-DPCHOffset           TDD-DPCHOffset,
    dL-Timeslot-Information   DL-Timeslot-Information,
    iE-Extensions            ProtocolExtensionContainer { {DL-DPCH-InformationItem-RL-SetupRspTDD-ExtIEs} } OPTIONAL,
    ...
}

DL-DPCH-InformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-InformationResponseList-RL-SetupRspTDD ::= ProtocolIE-Single-Container {{DCH-InformationResponseListIEs-RL-SetupRspTDD}}

DCH-InformationResponseListIEs-RL-SetupRspTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DCH-InformationResponse    CRITICALITY ignore    TYPE DCH-InformationResponse    PRESENCE mandatory }
}

DSCH-InformationResponse-RL-SetupRspTDD ::= ProtocolIE-Single-Container {{DSCH-InformationList-RL-SetupRspTDD}}

DSCH-InformationList-RL-SetupRspTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DSCH-InformationListIEs-RL-SetupRspTDD    CRITICALITY ignore    TYPE DSCH-InformationListIEs-RL-SetupRspTDD    PRESENCE mandatory }
}

DSCH-InformationListIEs-RL-SetupRspTDD ::= SEQUENCE (SIZE(0..maxNoOfDSCHs)) OF DSCHInformationItem-RL-SetupRspTDD

DSCHInformationItem-RL-SetupRspTDD ::= SEQUENCE {
    dsch-ID                DSCH-ID,
    dsch-FlowControlInformation    DSCH-FlowControlInformation,
    bindingID              BindingID    OPTIONAL,
    transportLayerAddress   TransportLayerAddress    OPTIONAL,
    transportFormatManagement    TransportFormatManagement,
    iE-Extensions          ProtocolExtensionContainer { {DSCHInformationItem-RL-SetupRspTDD-ExtIEs} } OPTIONAL,
    ...
}

DSCHInformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

USCH-InformationResponse-RL-SetupRspTDD ::= ProtocolIE-Single-Container {{USCH-InformationList-RL-SetupRspTDD}}

USCH-InformationList-RL-SetupRspTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-USCH-InformationListIEs-RL-SetupRspTDD    CRITICALITY ignore    TYPE USCH-InformationListIEs-RL-SetupRspTDD    PRESENCE mandatory }
}

USCH-InformationListIEs-RL-SetupRspTDD ::= SEQUENCE (SIZE(0..maxNoOfUSCHs)) OF USCHInformationItem-RL-SetupRspTDD

USCHInformationItem-RL-SetupRspTDD ::= SEQUENCE {
    usch-ID                USCH-ID,
    bindingID              BindingID    OPTIONAL,
    transportLayerAddress   TransportLayerAddress    OPTIONAL,
    transportFormatManagement    TransportFormatManagement,
    iE-Extensions          ProtocolExtensionContainer { {USCHInformationItem-RL-SetupRspTDD-ExtIEs} } OPTIONAL,

```

```

    ...
}

USCHInformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RadioLinkSetupResponseTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-RL-LCR-InformationResponse-RL-SetupRspTDD    CRITICALITY ignore EXTENSION    RL-LCR-InformationResponse-RL-SetupRspTDD    PRESENCE optional }|
    --Mandatory for 1.28Mcps TDD only
    { ID id-HSDSCH-RNTI                                CRITICALITY ignore EXTENSION HSDSCH-RNTI                                PRESENCE optional }|
    { ID id-HSDSCH-TDD-Information-Response            CRITICALITY ignore EXTENSION HSDSCH-TDD-Information-Response            PRESENCE optional }|
}
    { ID id-DSCH-RNTI                                  CRITICALITY ignore EXTENSION DSCH-RNTI                                  PRESENCE optional }|
    { ID id-Active-MBMS-Bearer-ServiceTDD-PFL          CRITICALITY ignore EXTENSION Active-MBMS-Bearer-Service-ListTDD-PFL          PRESENCE optional }|
    { ID id-RL-InformationResponse-RL-SetupRspTDD768  CRITICALITY ignore EXTENSION RL-InformationResponse-RL-SetupRspTDD768      PRESENCE optional }|
}
    { ID id-E-DCH-Information-Response                CRITICALITY ignore EXTENSION E-DCH-Information-Response                PRESENCE optional }|
    }|
    { ID id-E-DCH-768-Information-Response            CRITICALITY ignore EXTENSION E-DCH-768-Information-Response            PRESENCE optional }|
    }|
    { ID id-E-DCH-LCR-Information-Response            CRITICALITY ignore EXTENSION E-DCH-LCR-Information-Response            PRESENCE optional }|
    }|
    { ID id-ContinuousPacketConnectivity-DRX-Information-ResponseLCR CRITICALITY ignore EXTENSION ContinuousPacketConnectivity-DRX-Information-ResponseLCR PRESENCE optional }|
}
    { ID id-HS-DSCH-Semi-PersistentScheduling-Information-ResponseLCR CRITICALITY ignore EXTENSION HS-DSCH-Semi-PersistentScheduling-Information-ResponseLCR PRESENCE optional }|
}
    { ID id-E-DCH-Semi-PersistentScheduling-Information-ResponseLCR CRITICALITY ignore EXTENSION E-DCH-Semi-PersistentScheduling-Information-ResponseLCR PRESENCE optional }|
}
    { ID id-E-RNTI-For-FACH                            CRITICALITY ignore EXTENSION E-RNTI                            PRESENCE optional }|
    { ID id-H-RNTI-For-FACH                            CRITICALITY ignore EXTENSION HSDSCH-RNTI                            PRESENCE optional },
    ...
}

RL-LCR-InformationResponse-RL-SetupRspTDD ::= SEQUENCE {
    rL-ID                RL-ID,
    uRA-Information       URA-Information,
    sAI                   SAI,
    gA-Cell               GA-Cell    OPTIONAL,
    gA-AccessPointPosition GA-AccessPointPosition OPTIONAL,
    ul-TimeSlot-ISCP-LCR-Info UL-TimeSlot-ISCP-LCR-Info,
    maxUL-SIR             UL-SIR,
    minUL-SIR             UL-SIR,
    maximumAllowedULTxPower MaximumAllowedULTxPower,
    maximumDLTxPower     DL-Power,
    minimumDLTxPower     DL-Power,
    uARFCNforNt           UARFCN    OPTIONAL,
    cellParameterID      CellParameterID    OPTIONAL,
    sCTD-Indicator        SCTD-Indicator    OPTIONAL,
    pCCPCH-Power         PCCPCH-Power,
    alphaValue           AlphaValue,
    ul-PhysCH-SF-Variation UL-PhysCH-SF-Variation,
    synchronisationConfiguration SynchronisationConfiguration,

```

```

secondary-LCR-CCPCH-Info-TDD          Secondary-LCR-CCPCH-Info-TDD          OPTIONAL,
ul-LCR-CCTrCHInformation                UL-LCR-CCTrCHInformationList-RL-SetupRspTDD  OPTIONAL,
dl-LCR-CCTrCHInformation                DL-LCR-CCTrCHInformationList-RL-SetupRspTDD  OPTIONAL,
dCH-InformationResponse                 DCH-InformationResponseList-RL-SetupRspTDD  OPTIONAL,
dsch-LCR-InformationResponse            DSCH-LCR-InformationResponse-RL-SetupRspTDD  OPTIONAL,
usch-LCR-InformationResponse            USCH-LCR-InformationResponse-RL-SetupRspTDD  OPTIONAL,
neighbouring-UMTS-CellInformation       Neighbouring-UMTS-CellInformation          OPTIONAL,
neighbouring-GSM-CellInformation        Neighbouring-GSM-CellInformation          OPTIONAL,
iE-Extensions                           ProtocolExtensionContainer { { RL-LCR-InformationResponseList-RL-SetupRspTDD-ExtIEs } }  OPTIONAL,
...
}

RL-LCR-InformationResponseList-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-GA-CellAdditionalShapes          CRITICALITY ignore EXTENSION GA-CellAdditionalShapes          PRESENCE optional }|
  { ID id-HCS-Prio                         CRITICALITY ignore EXTENSION HCS-Prio                         PRESENCE optional }|
  { ID id-UL-TimingAdvanceCtrl-LCR        CRITICALITY ignore EXTENSION UL-TimingAdvanceCtrl-LCR        PRESENCE optional }|
  --Mandatory for 1.28Mcps TDD only
  { ID id-PowerControlGAP                  CRITICALITY ignore EXTENSION ControlGAP                  PRESENCE optional }|
  -- Applicable to 1.28Mcps TDD only
  { ID id-SixtyfourQAM-DL-SupportIndicator CRITICALITY ignore EXTENSION SixtyfourQAM-DL-SupportIndicator PRESENCE optional }|
  -- Applicable to 1.28Mcps TDD only
  { ID id-Neighbouring-E-UTRA-CellInformation CRITICALITY ignore EXTENSION Neighbouring-E-UTRA-CellInformation PRESENCE optional }|
  { ID id-IdleIntervalInformation         CRITICALITY ignore EXTENSION IdleIntervalInformation         PRESENCE optional },
  ...
}

UL-LCR-CCTrCHInformationList-RL-SetupRspTDD ::= ProtocolIE-Single-Container {{UL-LCR-CCTrCHInformationListIEs-RL-SetupRspTDD}}

UL-LCR-CCTrCHInformationListIEs-RL-SetupRspTDD RNSAP-PROTOCOL-IES ::= {
  { ID id-UL-CCTrCH-LCR-InformationListIE-RL-SetupRspTDD CRITICALITY ignore TYPE UL-LCR-CCTrCHInformationListIE-RL-SetupRspTDD PRESENCE
mandatory }
}

UL-LCR-CCTrCHInformationListIE-RL-SetupRspTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHsLCR)) OF UL-LCR-CCTrCHInformationItem-RL-SetupRspTDD

UL-LCR-CCTrCHInformationItem-RL-SetupRspTDD ::= SEQUENCE {
  cCCTrCH-ID          CCTrCH-ID,
  ul-DPCH-LCR-Information UL-DPCH-LCR-InformationList-RL-SetupRspTDD OPTIONAL,
  iE-Extensions       ProtocolExtensionContainer { {UL-LCR-CCTrCHInformationItem-RL-SetupRspTDD-ExtIEs} } OPTIONAL,
  ...
}

UL-LCR-CCTrCHInformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  {ID id-UL-SIR-Target-CCTrCH-LCR-InformationItem-RL-SetupRspTDD CRITICALITY ignore EXTENSION UL-SIR PRESENCE optional},
  ...
}

UL-DPCH-LCR-InformationList-RL-SetupRspTDD ::= ProtocolIE-Single-Container { {UL-DPCH-LCR-InformationListIEs-RL-SetupRspTDD} }

UL-DPCH-LCR-InformationListIEs-RL-SetupRspTDD RNSAP-PROTOCOL-IES ::= {
  { ID id-UL-DPCH-LCR-InformationItem-RL-SetupRspTDD CRITICALITY ignore TYPE UL-DPCH-LCR-InformationItem-RL-SetupRspTDD PRESENCE mandatory
}
}

```

```

UL-DPCH-LCR-InformationItem-RL-SetupRspTDD ::= SEQUENCE {
    repetitionPeriod      RepetitionPeriod,
    repetitionLength      RepetitionLength,
    tDD-DPCHOffset        TDD-DPCHOffset,
    uL-TimeslotLCR-Information  UL-TimeslotLCR-Information,
    iE-Extensions         ProtocolExtensionContainer { {UL-DPCH-LCR-InformationItem-RL-SetupRspTDD-ExtIEs} } OPTIONAL,
    ...
}

UL-DPCH-LCR-InformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-LCR-CCTrCHInformationList-RL-SetupRspTDD ::= ProtocolIE-Single-Container {{DL-LCR-CCTrCHInformationListIEs-RL-SetupRspTDD}}

DL-LCR-CCTrCHInformationListIEs-RL-SetupRspTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-CCTrCH-LCR-InformationListIE-RL-SetupRspTDD    CRITICALITY ignore TYPE DL-CCTrCH-LCR-InformationListIE-RL-SetupRspTDD    PRESENCE
mandatory }
}

DL-CCTrCH-LCR-InformationListIE-RL-SetupRspTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHsLCR)) OF DL-CCTrCH-LCR-InformationItem-RL-SetupRspTDD

DL-CCTrCH-LCR-InformationItem-RL-SetupRspTDD ::= SEQUENCE {
    cCTrCH-ID            CCTrCH-ID,
    dl-DPCH-LCR-Information  DL-DPCH-LCR-InformationList-RL-SetupRspTDD    OPTIONAL,
    iE-Extensions         ProtocolExtensionContainer { {DL-CCTrCH-LCR-InformationItem-RL-SetupRspTDD-ExtIEs} } OPTIONAL,
    ...
}

DL-CCTrCH-LCR-InformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-LCR-InformationList-RL-SetupRspTDD ::= ProtocolIE-Single-Container { {DL-DPCH-LCR-InformationListIEs-RL-SetupRspTDD} }

DL-DPCH-LCR-InformationListIEs-RL-SetupRspTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-DPCH-LCR-InformationItem-RL-SetupRspTDD    CRITICALITY ignore TYPE DL-DPCH-LCR-InformationItem-RL-SetupRspTDD    PRESENCE mandatory
}
}

DL-DPCH-LCR-InformationItem-RL-SetupRspTDD ::= SEQUENCE {
    repetitionPeriod      RepetitionPeriod,
    repetitionLength      RepetitionLength,
    tDD-DPCHOffset        TDD-DPCHOffset,
    dL-TimeslotLCR-Information  DL-TimeslotLCR-Information,
    tSTD-Indicator        TSTD-Indicator,
    iE-Extensions         ProtocolExtensionContainer { {DL-DPCH-LCR-InformationItem-RL-SetupRspTDD-ExtIEs} } OPTIONAL,
    ...
}

DL-DPCH-LCR-InformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DSCH-LCR-InformationResponse-RL-SetupRspTDD ::= ProtocolIE-Single-Container {{DSCH-LCR-InformationList-RL-SetupRspTDD}}

```

```

DSCH-LCR-InformationList-RL-SetupRspTDD RNSAP-PROTOCOL-IES ::= {
  { ID id-DSCH-LCR-InformationListIEs-RL-SetupRspTDD      CRITICALITY ignore  TYPE DSCH-LCR-InformationListIEs-RL-SetupRspTDD PRESENCE mandatory
  }
}

```

```

DSCH-LCR-InformationListIEs-RL-SetupRspTDD ::= SEQUENCE (SIZE(0..maxNoOfDSCHsLCR)) OF DSCH-LCR-InformationItem-RL-SetupRspTDD

```

```

DSCH-LCR-InformationItem-RL-SetupRspTDD ::= SEQUENCE {
  dsch-ID                DSCH-ID,
  dsch-FlowControlInformation DSCH-FlowControlInformation,
  bindingID              BindingID OPTIONAL,
  transportLayerAddress  TransportLayerAddress OPTIONAL,
  transportFormatManagement TransportFormatManagement,
  iE-Extensions          ProtocolExtensionContainer { {DSCH-LCR-InformationItem-RL-SetupRspTDD-ExtIEs} } OPTIONAL,
  ...
}

```

```

DSCH-LCR-InformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

```

```

USCH-LCR-InformationResponse-RL-SetupRspTDD ::= ProtocolIE-Single-Container {{USCH-LCR-InformationList-RL-SetupRspTDD}}

```

```

USCH-LCR-InformationList-RL-SetupRspTDD RNSAP-PROTOCOL-IES ::= {
  { ID id-USCH-LCR-InformationListIEs-RL-SetupRspTDD      CRITICALITY ignore  TYPE USCH-LCR-InformationListIEs-RL-SetupRspTDD PRESENCE mandatory
  }
}

```

```

USCH-LCR-InformationListIEs-RL-SetupRspTDD ::= SEQUENCE (SIZE(0..maxNoOfUSCHsLCR)) OF USCH-LCR-InformationItem-RL-SetupRspTDD

```

```

USCH-LCR-InformationItem-RL-SetupRspTDD ::= SEQUENCE {
  usch-ID                USCH-ID,
  bindingID              BindingID OPTIONAL,
  transportLayerAddress  TransportLayerAddress OPTIONAL,
  transportFormatManagement TransportFormatManagement,
  iE-Extensions          ProtocolExtensionContainer { {USCH-LCR-InformationItem-RL-SetupRspTDD-ExtIEs} } OPTIONAL,
  ...
}

```

```

USCH-LCR-InformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

```

```

RL-InformationResponse-RL-SetupRspTDD768 ::= SEQUENCE {
  rL-ID                RL-ID,
  uRA-Information      URA-Information OPTIONAL,
  sAI                  SAI,
  gA-Cell              GA-Cell OPTIONAL,
  gA-AccessPointPosition GA-AccessPointPosition OPTIONAL,
  ul-TimeSlot-ISCP-Info UL-TimeSlot-ISCP-Info,
  maxUL-SIR            UL-SIR,
  minUL-SIR            UL-SIR,
  maximumAllowedULTxPower MaximumAllowedULTxPower,
}

```

```

maximumDLTxPower          DL-Power,
minimumDLTxPower          DL-Power,
uARFCNforNt                UARFCN          OPTIONAL,
cellParameterID           CellParameterID  OPTIONAL,
syncCase                   SyncCase       OPTIONAL,
sCH-TimeSlot              SCH-TimeSlot    OPTIONAL,
-- This IE shall be present if Sync Case IE is equal to "Case2". --
sCTD-Indicator            SCTD-Indicator  OPTIONAL,
pCCPCH-Power              PCCPCH-Power,
timingAdvanceApplied       TimingAdvanceApplied,
alphaValue                 AlphaValue,
ul-PhysCH-SF-Variation    UL-PhysCH-SF-Variation,
synchronisationConfiguration SynchronisationConfiguration,
secondary-CCPCH-Info-TDD768 Secondary-CCPCH-Info-TDD768  OPTIONAL,
ul-CCTrCHInformation768    UL-CCTrCHInformationList-RL-SetupRspTDD768  OPTIONAL,
dl-CCTrCHInformation768    DL-CCTrCHInformationList-RL-SetupRspTDD768  OPTIONAL,
dCH-InformationResponse   DCH-InformationResponseList-RL-SetupRspTDD  OPTIONAL,
dsch-InformationResponse   DSCH-InformationResponse-RL-SetupRspTDD  OPTIONAL,
usch-InformationResponse   USCH-InformationResponse-RL-SetupRspTDD  OPTIONAL,
neighbouring-UMTS-CellInformation Neighbouring-UMTS-CellInformation  OPTIONAL,
neighbouring-GSM-CellInformation Neighbouring-GSM-CellInformation  OPTIONAL,
gA-CellAdditionalShapes    GA-CellAdditionalShapes  OPTIONAL,
hCS-Prio                   HCS-Prio          OPTIONAL,
timeSlot-RL-SetupRspTDD    TimeSlot          OPTIONAL,
-- This IE shall be present if Sync Case IE is Case1. --

iE-Extensions              ProtocolExtensionContainer { {RL-InformationResponse-RL-SetupRspTDD768-ExtIEs} } OPTIONAL,
...
}

RL-InformationResponse-RL-SetupRspTDD768-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-Neighbouring-E-UTRA-CellInformation          CRITICALITY ignore  EXTENSION Neighbouring-E-UTRA-CellInformation          PRESENCE optional
},
  ...
}

UL-CCTrCHInformationList-RL-SetupRspTDD768 ::= ProtocolIE-Single-Container {{UL-CCTrCHInformationListIEs-RL-SetupRspTDD768}}

UL-CCTrCHInformationListIEs-RL-SetupRspTDD768 RNSAP-PROTOCOL-IES ::= {
  { ID id-UL-CCTrCH-InformationListIE-RL-SetupRspTDD768  CRITICALITY ignore  TYPE UL-CCTrCHInformationListIE-RL-SetupRspTDD768  PRESENCE
mandatory }
}

UL-CCTrCHInformationListIE-RL-SetupRspTDD768 ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF UL-CCTrCHInformationItem-RL-SetupRspTDD768

UL-CCTrCHInformationItem-RL-SetupRspTDD768 ::= SEQUENCE {
  cCTrCH-ID          CCTrCH-ID,
  ul-DPCH-Information768  UL-DPCH-InformationList-RL-SetupRspTDD768  OPTIONAL,
  uL-SIR-Target-CCTrCH-InformationItem-RL-SetupRspTDD768  UL-SIR  OPTIONAL,
  iE-Extensions       ProtocolExtensionContainer { {UL-CCTrCHInformationItem-RL-SetupRspTDD768-ExtIEs} } OPTIONAL,
  ...
}

UL-CCTrCHInformationItem-RL-SetupRspTDD768-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {

```

```

}
...
}
UL-DPCH-InformationList-RL-SetupRspTDD768 ::= ProtocolIE-Single-Container { {UL-DPCH-InformationListIEs-RL-SetupRspTDD768} }

UL-DPCH-InformationListIEs-RL-SetupRspTDD768 RNSAP-PROTOCOL-IES ::= {
  { ID id-UL-DPCH-InformationItem-RL-SetupRspTDD768          CRITICALITY ignore  TYPE UL-DPCH-InformationItem-RL-SetupRspTDD768  PRESENCE mandatory
  }
}

UL-DPCH-InformationItem-RL-SetupRspTDD768 ::= SEQUENCE {
  repetitionPeriod      RepetitionPeriod,
  repetitionLength      RepetitionLength,
  tDD-DPCHOffset        TDD-DPCHOffset,
  uL-Timeslot-Information768      UL-Timeslot-Information768,
  iE-Extensions          ProtocolExtensionContainer { {UL-DPCH-InformationItem-RL-SetupRspTDD768-ExtIEs} } OPTIONAL,
  ...
}

UL-DPCH-InformationItem-RL-SetupRspTDD768-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

DL-CCTrCHInformationList-RL-SetupRspTDD768 ::= ProtocolIE-Single-Container {{DL-CCTrCHInformationListIEs-RL-SetupRspTDD768}}

DL-CCTrCHInformationListIEs-RL-SetupRspTDD768 RNSAP-PROTOCOL-IES ::= {
  { ID id-DL-CCTrCH-InformationListIE-RL-SetupRspTDD768      CRITICALITY ignore  TYPE DL-CCTrCHInformationListIE-RL-SetupRspTDD768  PRESENCE
  mandatory }
}

DL-CCTrCHInformationListIE-RL-SetupRspTDD768 ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF DL-CCTrCHInformationItem-RL-SetupRspTDD768

DL-CCTrCHInformationItem-RL-SetupRspTDD768 ::= SEQUENCE {
  cCTrCH-ID              CCTrCH-ID,
  dl-DPCH-Information768      DL-DPCH-InformationList-RL-SetupRspTDD768      OPTIONAL,
  cCTrCH-Maximum-DL-Power      DL-Power      OPTIONAL, -- this is a DCH type CCTrCH power
  cCTrCH-Minimum-DL-Power      DL-Power      OPTIONAL, -- this is a DCH type CCTrCH power
  iE-Extensions              ProtocolExtensionContainer { {DL-CCTrCHInformationItem-RL-SetupRspTDD768-ExtIEs} } OPTIONAL,
  ...
}

DL-CCTrCHInformationItem-RL-SetupRspTDD768-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

DL-DPCH-InformationList-RL-SetupRspTDD768 ::= ProtocolIE-Single-Container { {DL-DPCH-InformationListIEs-RL-SetupRspTDD768} }

DL-DPCH-InformationListIEs-RL-SetupRspTDD768 RNSAP-PROTOCOL-IES ::= {
  { ID id-DL-DPCH-InformationItem-RL-SetupRspTDD768          CRITICALITY ignore  TYPE DL-DPCH-InformationItem-RL-SetupRspTDD768  PRESENCE mandatory
  }
}

DL-DPCH-InformationItem-RL-SetupRspTDD768 ::= SEQUENCE {
  repetitionPeriod      RepetitionPeriod,

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    repetitionLength          RepetitionLength,
    tDD-DPCHOffset           TDD-DPCHOffset,
    dL-Timeslot-Information768 DL-Timeslot-Information768,
    iE-Extensions            ProtocolExtensionContainer { {DL-DPCH-InformationItem-RL-SetupRspTDD768-ExtIEs} } OPTIONAL,
    ...
}

DL-DPCH-InformationItem-RL-SetupRspTDD768-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK SETUP FAILURE FDD
--
-- *****

RadioLinkSetupFailureFDD ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{RadioLinkSetupFailureFDD-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{RadioLinkSetupFailureFDD-Extensions}}          OPTIONAL,
    ...
}

RadioLinkSetupFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-D-RNTI          CRITICALITY ignore TYPE D-RNTI          PRESENCE optional } |
    { ID id-CN-PS-DomainIdentifier CRITICALITY ignore TYPE CN-PS-DomainIdentifier PRESENCE optional } |
    { ID id-CN-CS-DomainIdentifier CRITICALITY ignore TYPE CN-CS-DomainIdentifier PRESENCE optional } |
    { ID id-CauseLevel-RL-SetupFailureFDD CRITICALITY ignore TYPE CauseLevel-RL-SetupFailureFDD PRESENCE mandatory } |
    { ID id-UL-SIRTarget     CRITICALITY ignore TYPE UL-SIR          PRESENCE optional } |
    { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
    ...
}

CauseLevel-RL-SetupFailureFDD ::= CHOICE {
    generalCause          GeneralCauseList-RL-SetupFailureFDD,
    rLSpecificCause      RLSpecificCauseList-RL-SetupFailureFDD,
    ...
}

GeneralCauseList-RL-SetupFailureFDD ::= SEQUENCE {
    cause                Cause,
    iE-Extensions        ProtocolExtensionContainer { { GeneralCauseItem-RL-SetupFailureFDD-ExtIEs} } OPTIONAL,
    ...
}

GeneralCauseItem-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RLSpecificCauseList-RL-SetupFailureFDD ::= SEQUENCE {
    unsuccessful-RL-InformationRespList-RL-SetupFailureFDD UnsuccessfulRL-InformationResponseList-RL-SetupFailureFDD,
    successful-RL-InformationRespList-RL-SetupFailureFDD   SuccessfulRL-InformationResponseList-RL-SetupFailureFDD OPTIONAL,
    iE-Extensions        ProtocolExtensionContainer { { RLSpecificCauseItem-RL-SetupFailureFDD-ExtIEs} } OPTIONAL,
    ...
}

```



```

}

RLSpecificCauseItem-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-HSDSCH-RNTI          CRITICALITY ignore      EXTENSION HSDSCH-RNTI          PRESENCE optional }|
  { ID id-HSDSCH-FDD-Information-Response  CRITICALITY ignore      EXTENSION HSDSCH-FDD-Information-Response  PRESENCE optional }|
  { ID id-Continuous-Packet-Connectivity-HS-SCCH-Less-Information-Response  CRITICALITY ignore      EXTENSION Continuous-Packet-Connectivity-
HS-SCCH-Less-Information-Response  PRESENCE optional }|
  { ID id-SixtyfourQAM-DL-SupportIndicator  CRITICALITY ignore      EXTENSION SixtyfourQAM-DL-SupportIndicator  PRESENCE optional }|
  { ID id-Additional-HS-Cell-Information-Response  CRITICALITY ignore      EXTENSION Additional-HS-Cell-Information-Response-List  PRESENCE
optional },
  ...
}

UnsuccessfulRL-InformationResponseList-RL-SetupFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container { {UnsuccessfulRL-
InformationResponse-RL-SetupFailureFDD-IEs} }

UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD          CRITICALITY ignore      TYPE UnsuccessfulRL-InformationResponse-RL-
SetupFailureFDD          PRESENCE mandatory }
}

UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD ::= SEQUENCE {
  rL-ID          RL-ID,
  cause          Cause,
  iE-Extensions          ProtocolExtensionContainer { {UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD-ExtIEs} } OPTIONAL,
  ...
}

UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-Max-UE-DTX-Cycle          CRITICALITY ignore      EXTENSION Max-UE-DTX-Cycle          PRESENCE conditional },
  -- This IE shall be present if the Cause IE is set to "Continuous Packet Connectivity UE DTX Cycle not Available".
  ...
}

SuccessfulRL-InformationResponseList-RL-SetupFailureFDD ::= SEQUENCE (SIZE (0..maxNrOfRLs-1)) OF ProtocolIE-Single-Container { {SuccessfulRL-
InformationResponse-RL-SetupFailureFDD-IEs} }

SuccessfulRL-InformationResponse-RL-SetupFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-SuccessfulRL-InformationResponse-RL-SetupFailureFDD          CRITICALITY ignore      TYPE SuccessfulRL-InformationResponse-RL-SetupFailureFDD
PRESENCE mandatory }
}

SuccessfulRL-InformationResponse-RL-SetupFailureFDD ::= SEQUENCE {
  rL-ID          RL-ID,
  rL-Set-ID          RL-Set-ID,
  uRA-Information          URA-Information          OPTIONAL,
  sAI          SAI,
  gA-Cell          GA-Cell          OPTIONAL,
  gA-AccessPointPosition          GA-AccessPointPosition          OPTIONAL,
  received-total-wide-band-power          Received-total-wide-band-power,
  not-Used-secondary-CCPCH-Info          NULL          OPTIONAL,
  dl-CodeInformation          FDD-DL-CodeInformation,
  diversityIndication          DiversityIndication-RL-SetupFailureFDD,
  sSDT-SupportIndicator          SSdT-SupportIndicator,

```

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maxUL-SIR                UL-SIR,
minUL-SIR                UL-SIR,
closedloopTimingadjustmentmode  ClosedloopTimingadjustmentmode  OPTIONAL,
maximumAllowedULTxPower  MaximumAllowedULTxPower,
maximumDLTxPower        DL-Power,
minimumDLTxPower        DL-Power,
primaryCPICH-Power      PrimaryCPICH-Power,
primaryScramblingCode   PrimaryScramblingCode           OPTIONAL,
uL-UARFCN               UARFCN                          OPTIONAL,
dL-UARFCN               UARFCN                          OPTIONAL,
not-Used-dSCH-InformationResponse-RL-SetupFailureFDD  NULL                          OPTIONAL,
neighbouring-UMTS-CellInformation  Neighbouring-UMTS-CellInformation  OPTIONAL,
neighbouring-GSM-CellInformation  Neighbouring-GSM-CellInformation  OPTIONAL,
pC-Preamble             PC-Preamble,
sRB-Delay              SRB-Delay,
iE-Extensions          ProtocolExtensionContainer { {SuccessfulRL-InformationResponse-RL-SetupFailureFDD-ExtIEs} } OPTIONAL,
...
}

SuccessfulRL-InformationResponse-RL-SetupFailureFDD-ExtIEs  RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-GA-CellAdditionalShapes                CRITICALITY ignore  EXTENSION GA-CellAdditionalShapes                PRESENCE optional
} |
  { ID id-DL-PowerBalancing-ActivationIndicator  CRITICALITY ignore  EXTENSION DL-PowerBalancing-ActivationIndicator  PRESENCE optional
} |
  { ID id-HCS-Prio                              CRITICALITY ignore  EXTENSION HCS-Prio                              PRESENCE optional
} |
  { ID id-Primary-CPICH-Usage-For-Channel-Estimation  CRITICALITY ignore  EXTENSION Primary-CPICH-Usage-For-Channel-Estimation  PRESENCE
optional } |
  { ID id-Secondary-CPICH-Information            CRITICALITY ignore  EXTENSION Secondary-CPICH-Information            PRESENCE
optional } |
  { ID id-Active-MBMS-Bearer-ServiceFDD-PFL     CRITICALITY ignore  EXTENSION Active-MBMS-Bearer-Service-ListFDD-PFL     PRESENCE
optional } |
  { ID id-EDCH-RLSet-ID                         CRITICALITY ignore  EXTENSION RL-Set-ID                             PRESENCE
optional } |
  { ID id-EDCH-FDD-DL-ControlChannelInformation  CRITICALITY ignore  EXTENSION EDCH-FDD-DL-ControlChannelInformation  PRESENCE
optional } |
  { ID id-Initial-DL-DPCH-TimingAdjustment      CRITICALITY ignore  EXTENSION DL-DPCH-TimingAdjustment              PRESENCE optional
} |
  { ID id-Neighbouring-E-UTRA-CellInformation    CRITICALITY ignore  EXTENSION Neighbouring-E-UTRA-CellInformation    PRESENCE optional
} |
  { ID id-HSDSCH-PreconfigurationInfo           CRITICALITY ignore  EXTENSION HSDSCH-PreconfigurationInfo           PRESENCE
optional } |
  { ID id-F-DPCH-SlotFormat                     CRITICALITY ignore  EXTENSION F-DPCH-SlotFormat                     PRESENCE optional
},
  ...
}

DiversityIndication-RL-SetupFailureFDD ::= CHOICE {
  combining                Combining-RL-SetupFailureFDD,
  nonCombiningOrFirstRL   NonCombiningOrFirstRL-RL-SetupFailureFDD
}

Combining-RL-SetupFailureFDD ::= SEQUENCE {
  rL-ID                    RL-ID,

```

```

    iE-Extensions          ProtocolExtensionContainer { { CombiningItem-RL-SetupFailureFDD-ExtIEs } } OPTIONAL,
    ...
}

CombiningItem-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-DCH-InformationResponse          CRITICALITY ignore  EXTENSION DCH-InformationResponse          PRESENCE optional }|
  { ID id-EDCH-FDD-InformationResponse     CRITICALITY ignore  EXTENSION EDCH-FDD-InformationResponse     PRESENCE optional },
  ...
}

NonCombiningOrFirstRL-RL-SetupFailureFDD ::= SEQUENCE {
  dCH-InformationResponse          DCH-InformationResponse,
  iE-Extensions                    ProtocolExtensionContainer { { NonCombiningOrFirstRLItem-RL-SetupFailureFDD-ExtIEs } } OPTIONAL,
  ...
}

NonCombiningOrFirstRLItem-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-EDCH-FDD-InformationResponse     CRITICALITY ignore  EXTENSION EDCH-FDD-InformationResponse     PRESENCE optional },
  ...
}

RadioLinkSetupFailureFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- RADIO LINK SETUP FAILURE TDD
--
-- *****

RadioLinkSetupFailureTDD ::= SEQUENCE {
  protocolIEs                    ProtocolIE-Container    {{RadioLinkSetupFailureTDD-IEs}},
  protocolExtensions              ProtocolExtensionContainer {{RadioLinkSetupFailureTDD-Extensions}}
  ...
}

RadioLinkSetupFailureTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-CauseLevel-RL-SetupFailureTDD    CRITICALITY ignore  TYPE CauseLevel-RL-SetupFailureTDD    PRESENCE mandatory }|
  { ID id-CriticalityDiagnostics          CRITICALITY ignore  TYPE CriticalityDiagnostics          PRESENCE optional },
  ...
}

CauseLevel-RL-SetupFailureTDD ::= CHOICE {
  generalCause                    GeneralCauseList-RL-SetupFailureTDD,
  rLSpecificCause                RLSpecificCauseList-RL-SetupFailureTDD,
  ...
}

GeneralCauseList-RL-SetupFailureTDD ::= SEQUENCE {
  cause                            Cause,
  iE-Extensions                    ProtocolExtensionContainer { { GeneralCauseItem-RL-SetupFailureTDD-ExtIEs } } OPTIONAL,
  ...
}

```

```

GeneralCauseItem-RL-SetupFailureTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

RLSpecificCauseList-RL-SetupFailureTDD ::= SEQUENCE {
  unsuccessful-RL-InformationRespItem-RL-SetupFailureTDD Unsuccessful-RL-InformationRespItem-RL-SetupFailureTDD,
  iE-Extensions ProtocolExtensionContainer { { RLSpecificCauseItem-RL-SetupFailureTDD-ExtIEs } }
  OPTIONAL,
  ...
}

RLSpecificCauseItem-RL-SetupFailureTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-SixtyfourQAM-DL-SupportIndicator CRITICALITY ignore EXTENSION SixtyfourQAM-DL-SupportIndicator PRESENCE optional },
  ...
}

Unsuccessful-RL-InformationRespItem-RL-SetupFailureTDD ::= ProtocolIE-Single-Container { {Unsuccessful-RL-InformationRespItemIE-RL-SetupFailureTDD}
}

Unsuccessful-RL-InformationRespItemIE-RL-SetupFailureTDD RNSAP-PROTOCOL-IES ::= {
  { ID id-UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD CRITICALITY ignore TYPE UnsuccessfulRL-InformationResponse-RL-
  SetupFailureTDD PRESENCE mandatory }
}

UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD ::= SEQUENCE {
  rL-ID RL-ID,
  cause Cause,
  iE-Extensions ProtocolExtensionContainer { {UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD-ExtIEs} } OPTIONAL,
  ...
}

UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

RadioLinkSetupFailureTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- RADIO LINK ADDITION REQUEST FDD
--
-- *****

RadioLinkAdditionRequestFDD ::= SEQUENCE {
  protocolIEs ProtocolIE-Container {{RadioLinkAdditionRequestFDD-IEs}},
  protocolExtensions ProtocolExtensionContainer {{RadioLinkAdditionRequestFDD-Extensions}} OPTIONAL,
  ...
}

RadioLinkAdditionRequestFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-UL-SIRTarget CRITICALITY reject TYPE UL-SIR PRESENCE mandatory } |

```

```

    { ID id-RL-InformationList-RL-AdditionRqstFDD CRITICALITY notify TYPE RL-InformationList-RL-AdditionRqstFDD PRESENCE mandatory }|
    { ID id-Active-Pattern-Sequence-Information CRITICALITY reject TYPE Active-Pattern-Sequence-Information PRESENCE optional },
    ...
}

RL-InformationList-RL-AdditionRqstFDD ::= SEQUENCE (SIZE (1..maxNrOfRLs-1)) OF ProtocolIE-Single-Container { {RL-Information-RL-AdditionRqstFDD-IEs} }

RL-Information-RL-AdditionRqstFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-Information-RL-AdditionRqstFDD CRITICALITY notify TYPE RL-Information-RL-AdditionRqstFDD PRESENCE mandatory }
}

RL-Information-RL-AdditionRqstFDD ::= SEQUENCE {
  rL-ID RL-ID,
  c-ID C-ID,
  frameOffset FrameOffset,
  chipOffset ChipOffset,
  diversityControlField DiversityControlField,
  primaryCPICH-EcNo PrimaryCPICH-EcNo OPTIONAL,
  not-Used-sSDT-CellID NULL OPTIONAL,
  transmitDiversityIndicator TransmitDiversityIndicator OPTIONAL,
  IE-Extensions ProtocolExtensionContainer { {RL-Information-RL-AdditionRqstFDD-ExtIEs} } OPTIONAL,
  ...
}

RL-Information-RL-AdditionRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-DLReferencePower CRITICALITY ignore EXTENSION DL-Power PRESENCE optional }|
  { ID id-Enhanced-PrimaryCPICH-EcNo CRITICALITY ignore EXTENSION Enhanced-PrimaryCPICH-EcNo PRESENCE optional }|
  { ID id-RL-Specific-DCH-Info CRITICALITY ignore EXTENSION RL-Specific-DCH-Info PRESENCE optional }|
  { ID id-DelayedActivation CRITICALITY reject EXTENSION DelayedActivation PRESENCE optional }|
  { ID id-RL-Specific-EDCH-Information CRITICALITY reject EXTENSION RL-Specific-EDCH-Information PRESENCE optional }|
  { ID id-EDCH-RL-Indication CRITICALITY reject EXTENSION EDCH-RL-Indication PRESENCE optional }|
  { ID id-SynchronisationIndicator CRITICALITY ignore EXTENSION SynchronisationIndicator PRESENCE optional }|
  { ID id-HSDSCH-PreconfigurationSetup CRITICALITY ignore EXTENSION HSDSCH-PreconfigurationSetup PRESENCE optional },
  ...
}

RadioLinkAdditionRequestFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-DPC-Mode CRITICALITY reject EXTENSION DPC-Mode PRESENCE optional }|
  { ID id-Permanent-NAS-UE-Identity CRITICALITY ignore EXTENSION Permanent-NAS-UE-Identity PRESENCE optional }|
  optional { ID id-Serving-EDCHRL-Id CRITICALITY reject EXTENSION EDCH-Serving-RL PRESENCE optional }|
  { ID id-Initial-DL-DPCH-TimingAdjustment-Allowed CRITICALITY ignore EXTENSION Initial-DL-DPCH-TimingAdjustment-Allowed PRESENCE optional }|
  { ID id-HS-DSCH-serving-cell-change-information CRITICALITY reject EXTENSION HS-DSCH-serving-cell-change-information PRESENCE optional }|
  { ID id-Serving-cell-change-CFN CRITICALITY reject EXTENSION CFN PRESENCE optional }|
  optional { ID id-EDPCH-Information CRITICALITY reject EXTENSION EDPCH-Information-RLAdditionReq-FDD PRESENCE optional }|
  optional { ID id-EDCH-FDD-Information CRITICALITY reject EXTENSION EDCH-FDD-Information PRESENCE optional }|
}

```

```

    { ID id-Additional-HS-Cell-Information-RL-Addition CRITICALITY reject EXTENSION Additional-HS-Cell-Information-RL-Addition-List PRESENCE
optional },
    -- This IE shall be present if E-DPCH Information is present
    ...
}

```

```
Additional-HS-Cell-Information-RL-Addition-List ::= SEQUENCE (SIZE (1..maxNrOfHSDSCH-1)) OF Additional-HS-Cell-Information-RL-Addition-ItemIEs
```

```

Additional-HS-Cell-Information-RL-Addition-ItemIEs ::=SEQUENCE{
    hSPDSCH-RL-ID RL-ID,
    c-ID C-ID,
    hS-DSCH-FDD-Secondary-Serving-Information HS-DSCH-FDD-Secondary-Serving-Information,
    iE-Extensions ProtocolExtensionContainer { { Additional-HS-Cell-Information-RL-Addition-ItemIEs-ExtIEs} } OPTIONAL,
    ...
}

```

```

Additional-HS-Cell-Information-RL-Addition-ItemIEs-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

EDPCH-Information-RLAdditionReq-FDD ::= SEQUENCE {
    maxSet-E-DPDCHs Max-Set-E-DPDCHs,
    ul-PunctureLimit PunctureLimit,
    e-TFCS-Information E-TFCS-Information,
    e-TTI E-TTI,
    e-DPCCH-PO E-DPCCH-PO,
    e-RGCH-2-IndexStepThreshold E-RGCH-2-IndexStepThreshold,
    e-RGCH-3-IndexStepThreshold E-RGCH-3-IndexStepThreshold,
    hARQ-Info-for-E-DCH HARQ-Info-for-E-DCH,
    iE-Extensions ProtocolExtensionContainer { { EDPCH-Information-RLAdditionReq-FDD-ExtIEs} } OPTIONAL,
    ...
}

```

```

EDPCH-Information-RLAdditionReq-FDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
{ ID id-HSDSCH-Configured-Indicator CRITICALITY reject EXTENSION HSDSCH-Configured-Indicator PRESENCE mandatory}|
-- This shall be present for EDPCH configuration with HSDCH
{ ID id-MinimumReducedE-DPDCH-GainFactor CRITICALITY ignore EXTENSION MinimumReducedE-DPDCH-GainFactor PRESENCE optional },
    ...
}

```

```

-- *****
--
-- RADIO LINK ADDITION REQUEST TDD
--
-- *****

```

```

RadioLinkAdditionRequestTDD ::= SEQUENCE {
    protocolIEs ProtocolIE-Container {{RadioLinkAdditionRequestTDD-IEs}},
    protocolExtensions ProtocolExtensionContainer {{RadioLinkAdditionRequestTDD-Extensions}}
    ...
}

```

```

RadioLinkAdditionRequestTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-Information-RL-AdditionRqstTDD    CRITICALITY reject    TYPE RL-Information-RL-AdditionRqstTDD    PRESENCE mandatory  },
  ...
}

RL-Information-RL-AdditionRqstTDD ::= SEQUENCE {
  rL-ID                RL-ID,
  c-ID                 C-ID,
  frameOffset          FrameOffset,
  diversityControlField DiversityControlField,
  primaryCCPCH-RSCP    PrimaryCCPCH-RSCP    OPTIONAL,
  dL-TimeSlot-ISCP-Info DL-TimeSlot-ISCP-Info    OPTIONAL,
  --for 3.84Mcps TDD only
  iE-Extensions        ProtocolExtensionContainer { {RL-Information-RL-AdditionRqstTDD-ExtIEs} } OPTIONAL,
  ...
}

RL-Information-RL-AdditionRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-DL-TimeSlot-ISCP-LCR-Information-RL-AdditionRqstTDD    CRITICALITY reject          EXTENSION DL-TimeSlot-ISCP-LCR-Information    PRESENCE optional }|
  --for 1.28Mcps TDD only
  { ID id-RL-Specific-DCH-Info                CRITICALITY ignore          EXTENSION RL-Specific-DCH-Info                PRESENCE optional }|
  { ID id-DelayedActivation                    CRITICALITY reject          EXTENSION DelayedActivation                    PRESENCE optional }|
  { ID id-UL-Synchronisation-Parameters-LCR    CRITICALITY reject          EXTENSION UL-Synchronisation-Parameters-LCR    PRESENCE optional }|
  -- Mandatory for 1.28Mcps TDD, Not Applicable to 3.84Mcps TDD or 7.68Mcps TDD
  { ID id-PrimaryCCPCH-RSCP-Delta              CRITICALITY ignore          EXTENSION PrimaryCCPCH-RSCP-Delta              PRESENCE optional }|
  { ID id-IdleIntervalConfigurationIndicator    CRITICALITY ignore          EXTENSION NULL                                  PRESENCE optional }|
  ...
}

RadioLinkAdditionRequestTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-Permanent-NAS-UE-Identity            CRITICALITY ignore          EXTENSION Permanent-NAS-UE-Identity            PRESENCE optional }|
  { ID id-UL-CCTrCH-InformationList-RL-AdditionRqstTDD    CRITICALITY notify          EXTENSION UL-CCTrCH-InformationList-RL-AdditionRqstTDD    PRESENCE optional }|
  { ID id-DL-CCTrCH-InformationList-RL-AdditionRqstTDD    CRITICALITY notify          EXTENSION DL-CCTrCH-InformationList-RL-AdditionRqstTDD    PRESENCE optional }|
  { ID id-HSDSCH-TDD-Information                CRITICALITY reject          EXTENSION HSDSCH-TDD-Information                PRESENCE optional }|
  { ID id-HSPDSCH-RL-ID                        CRITICALITY reject          EXTENSION RL-ID                                PRESENCE optional }|
  { ID id-E-DCH-Information                    CRITICALITY reject          EXTENSION E-DCH-Information                    PRESENCE optional }|
  { ID id-E-DCH-Serving-RL-ID                 CRITICALITY reject          EXTENSION RL-ID                                PRESENCE optional }|
  { ID id-E-DCH-768-Information                CRITICALITY reject          EXTENSION E-DCH-768-Information                PRESENCE optional }|
  { ID id-E-DCH-LCR-Information                CRITICALITY reject          EXTENSION E-DCH-LCR-Information                PRESENCE optional }|
  { ID id-ContinuousPacketConnectivity-DRX-InformationLCR    CRITICALITY reject          EXTENSION ContinuousPacketConnectivity-DRX-InformationLCR    PRESENCE optional }|
  { ID id-HS-DSCH-Semi-PersistentScheduling-Information-LCR    CRITICALITY reject          EXTENSION HS-DSCH-Semi-PersistentScheduling-Information-LCR    PRESENCE optional }|
  { ID id-E-DCH-Semi-PersistentScheduling-Information-LCR    CRITICALITY reject          EXTENSION E-DCH-Semi-PersistentScheduling-Information-LCR    PRESENCE optional },
  ...
}

UL-CCTrCH-InformationList-RL-AdditionRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container { {UL-CCTrCH-InformationItemIEs-RL-AdditionRqstTDD} }

```

```

UL-CCTrCH-InformationItemIEs-RL-AdditionRqstTDD RNSAP-PROTOCOL-IES ::= {
  { ID id-UL-CCTrCH-InformationItem-RL-AdditionRqstTDD    CRITICALITY notify TYPE UL-CCTrCH-InformationItem-RL-AdditionRqstTDD PRESENCE
optional},
  ...
}

UL-CCTrCH-InformationItem-RL-AdditionRqstTDD ::= SEQUENCE {
  cCTrCH-ID                CCTrCH-ID,
  uplinkStepSizeLCR        TDD-TPC-UplinkStepSize-LCR    OPTIONAL,
  -- Applicable to 1.28Mcps TDD only
  iE-Extensions            ProtocolExtensionContainer { {UL-CCTrCH-InformationItem-RL-AdditionRqstTDD-ExtIEs} } OPTIONAL,
  ...
}

UL-CCTrCH-InformationItem-RL-AdditionRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

DL-CCTrCH-InformationList-RL-AdditionRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container { {DL-CCTrCH-
InformationItemIEs-RL-AdditionRqstTDD} }

DL-CCTrCH-InformationItemIEs-RL-AdditionRqstTDD RNSAP-PROTOCOL-IES ::= {
  { ID id-DL-CCTrCH-InformationItem-RL-AdditionRqstTDD    CRITICALITY notify TYPE DL-CCTrCH-InformationItem-RL-AdditionRqstTDD PRESENCE
optional},
  ...
}

DL-CCTrCH-InformationItem-RL-AdditionRqstTDD ::= SEQUENCE {
  cCTrCH-ID                CCTrCH-ID,
  downlinkStepSize         TDD-TPC-DownlinkStepSize    OPTIONAL,
  iE-Extensions            ProtocolExtensionContainer { {DL-CCTrCH-InformationItem-RL-AdditionRqstTDD-ExtIEs} } OPTIONAL,
  ...
}

DL-CCTrCH-InformationItem-RL-AdditionRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- RADIO LINK ADDITION RESPONSE FDD
--
-- *****

RadioLinkAdditionResponseFDD ::= SEQUENCE {
  protocolIEs                ProtocolIE-Container        {{RadioLinkAdditionResponseFDD-IEs}},
  protocolExtensions         ProtocolExtensionContainer  {{RadioLinkAdditionResponseFDD-Extensions}}          OPTIONAL,
  ...
}

RadioLinkAdditionResponseFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-InformationResponseList-RL-AdditionRspFDD    CRITICALITY ignore TYPE RL-InformationResponseList-RL-AdditionRspFDD PRESENCE
mandatory } |
  { ID id-CriticalityDiagnostics                          CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },

```



```

}
...
}

RL-InformationResponseList-RL-AdditionRspFDD ::= SEQUENCE (SIZE (1..maxNrOfRLs-1)) OF ProtocolIE-Single-Container { {RL-
InformationResponseItemIEs-RL-AdditionRspFDD} }

RL-InformationResponseItemIEs-RL-AdditionRspFDD RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-InformationResponseItem-RL-AdditionRspFDD          CRITICALITY ignore  TYPE RL-InformationResponseItem-RL-AdditionRspFDD  PRESENCE
mandatory }
}

RL-InformationResponseItem-RL-AdditionRspFDD ::= SEQUENCE {
  rL-ID                    RL-ID,
  rL-Set-ID                RL-Set-ID,
  uRA-Information          URA-Information    OPTIONAL,
  sAI                      SAI,
  gA-Cell                  GA-Cell          OPTIONAL,
  gA-AccessPointPosition  GA-AccessPointPosition  OPTIONAL,
  received-total-wide-band-power Received-total-wide-band-power,
  not-Used-secondary-CCPCH-Info NULL          OPTIONAL,
  dl-CodeInformation       DL-CodeInformationList-RL-AdditionRspFDD,
  diversityIndication      DiversityIndication-RL-AdditionRspFDD,

  sSDT-SupportIndicator    SSdT-SupportIndicator,
  minUL-SIR                UL-SIR,
  maxUL-SIR                UL-SIR,
  closedloopTimingAdjustmentmode ClosedloopTimingAdjustmentmode  OPTIONAL,
  maximumAllowedULTxPower  MaximumAllowedULTxPower,
  maximumDLTxPower         DL-Power,
  minimumDLTxPower         DL-Power,
  neighbouring-UMTS-CellInformation Neighbouring-UMTS-CellInformation  OPTIONAL,
  neighbouring-GSM-CellInformation Neighbouring-GSM-CellInformation  OPTIONAL,
  pC-Preamble              PC-Preamble,
  sRB-Delay                SRB-Delay,
  primaryCPICH-Power       PrimaryCPICH-Power,
  iE-Extensions            ProtocolExtensionContainer { {RL-InformationResponseItem-RL-AdditionRspFDD-ExtIEs} } OPTIONAL,
  ...
}

RL-InformationResponseItem-RL-AdditionRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-GA-CellAdditionalShapes          CRITICALITY ignore  EXTENSION GA-CellAdditionalShapes          PRESENCE optional } |
  { ID id-DL-PowerBalancing-ActivationIndicator CRITICALITY ignore  EXTENSION DL-PowerBalancing-ActivationIndicator PRESENCE optional } |
  { ID id-HCS-Prio                        CRITICALITY ignore  EXTENSION HCS-Prio                        PRESENCE optional } |
  { ID id-Active-MBMS-Bearer-ServiceFDD-PFL EXTENSION ignore  EXTENSION Active-MBMS-Bearer-Service-ListFDD-PFL PRESENCE optional } |
  { ID id-EDCH-RLSet-Id                   CRITICALITY ignore  EXTENSION RL-Set-ID                       PRESENCE optional } |
  { ID id-EDCH-FDD-DL-ControlChannelInformation CRITICALITY ignore  EXTENSION EDCH-FDD-DL-ControlChannelInformation PRESENCE optional } |
  { ID id-Initial-DL-DPCH-TimingAdjustment CRITICALITY ignore  EXTENSION DL-DPCH-TimingAdjustment       PRESENCE optional } |
  { ID id-F-DPCH-SlotFormat                CRITICALITY ignore  EXTENSION F-DPCH-SlotFormat              PRESENCE optional } |
  { ID id-Neighbouring-E-UTRA-CellInformation CRITICALITY ignore  EXTENSION Neighbouring-E-UTRA-CellInformation PRESENCE optional } |
  { ID id-HSDSCH-PreconfigurationInfo      CRITICALITY ignore  EXTENSION HSDSCH-PreconfigurationInfo    PRESENCE optional } |
  ...
}

DL-CodeInformationList-RL-AdditionRspFDD ::= ProtocolIE-Single-Container {{ DL-CodeInformationListIEs-RL-AdditionRspFDD }}

```

```

DL-CodeInformationListIEs-RL-AdditionRspFDD RNSAP-PROTOCOL-IES ::= {
  { ID id-FDD-DL-CodeInformation    CRITICALITY ignore TYPE FDD-DL-CodeInformation    PRESENCE mandatory }
}

DiversityIndication-RL-AdditionRspFDD ::= CHOICE {
  combining                Combining-RL-AdditionRspFDD,
  nonCombining            NonCombining-RL-AdditionRspFDD
}

Combining-RL-AdditionRspFDD ::= SEQUENCE {
  rL-ID                    RL-ID,
  iE-Extensions            ProtocolExtensionContainer { { CombiningItem-RL-AdditionRspFDD-ExtIEs} } OPTIONAL,
  ...
}

CombiningItem-RL-AdditionRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-DCH-InformationResponse    CRITICALITY ignore EXTENSION DCH-InformationResponse    PRESENCE optional }|
  { ID id-EDCH-FDD-InformationResponse    CRITICALITY ignore EXTENSION EDCH-FDD-InformationResponse    PRESENCE optional },
  ...
}

NonCombining-RL-AdditionRspFDD ::= SEQUENCE {
  dCH-InformationResponse    DCH-InformationResponse,
  iE-Extensions            ProtocolExtensionContainer { { NonCombiningItem-RL-AdditionRspFDD-ExtIEs} } OPTIONAL,
  ...
}

NonCombiningItem-RL-AdditionRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-EDCH-FDD-InformationResponse    CRITICALITY ignore EXTENSION EDCH-FDD-InformationResponse    PRESENCE optional },
  ...
}

RadioLinkAdditionResponseFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-HS-DSCH-serving-cell-change-informationResponse    CRITICALITY ignore EXTENSION HS-DSCH-serving-cell-change-informationResponse    PRESENCE optional }|
  { ID id-E-DCH-Serving-cell-change-informationResponse    CRITICALITY ignore EXTENSION E-DCH-Serving-cell-change-informationResponse    PRESENCE optional }|
  { ID id-MACHs-ResetIndicator    CRITICALITY ignore EXTENSION MACHs-ResetIndicator    PRESENCE optional }|
  { ID id-Additional-HS-Cell-Change-Information-Response    CRITICALITY ignore EXTENSION Additional-HS-Cell-Change-Information-Response-List    PRESENCE optional },
  ...
}

Additional-HS-Cell-Change-Information-Response-List ::= SEQUENCE (SIZE (1..maxNrOfHSDSCH-1)) OF Additional-HS-Cell-Change-Information-Response-ItemIEs

Additional-HS-Cell-Change-Information-Response-ItemIEs ::=SEQUENCE{
  hSPDSCH-RL-ID                    RL-ID,
  hSDSCH-RNTI                    HSDSCH-RNTI,
  hS-DSCH-Secondary-Serving-Cell-Change-Information-Response    HS-DSCH-Secondary-Serving-Cell-Change-Information-Response,
}

```

```

    iE-Extensions          ProtocolExtensionContainer { { Additional-HS-Cell-Change-Information-Response-ItemIEs-ExtIEs } } OPTIONAL,
  }
}

Additional-HS-Cell-Change-Information-Response-ItemIEs-ExtIEs  RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- RADIO LINK ADDITION RESPONSE TDD
--
-- *****

RadioLinkAdditionResponseTDD ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container    {{RadioLinkAdditionResponseTDD-IEs}},
  protocolExtensions   ProtocolExtensionContainer {{RadioLinkAdditionResponseTDD-Extensions}}          OPTIONAL,
  ...
}

RadioLinkAdditionResponseTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-InformationResponse-RL-AdditionRspTDD          CRITICALITY ignore TYPE RL-InformationResponse-RL-AdditionRspTDD PRESENCE optional }
  |
  --Mandatory for 3.84Mcps TDD only
  { ID id-CriticalityDiagnostics          CRITICALITY ignore TYPE CriticalityDiagnostics          PRESENCE optional },
  ...
}

RL-InformationResponse-RL-AdditionRspTDD ::= SEQUENCE {
  rL-ID                RL-ID,
  uRA-Information      URA-Information          OPTIONAL,
  sAI                  SAI,
  gA-Cell              GA-Cell          OPTIONAL,
  gA-AccessPointPosition GA-AccessPointPosition  OPTIONAL,
  ul-TimeSlot-ISCP-Info UL-TimeSlot-ISCP-Info,
  minUL-SIR            UL-SIR,
  maxUL-SIR            UL-SIR,
  maximumAllowedULTxPower MaximumAllowedULTxPower,
  maximumDLTxPower    DL-Power,
  minimumDLTxPower    DL-Power,
  pCCPCH-Power        PCCPCH-Power,
  timingAdvanceApplied TimingAdvanceApplied,
  alphaValue          AlphaValue,
  ul-PhysCH-SF-Variation UL-PhysCH-SF-Variation,
  synchronisationConfiguration SynchronisationConfiguration,
  secondary-CCPCH-Info-TDD Secondary-CCPCH-Info-TDD          OPTIONAL,
  ul-CCTrCHInformation UL-CCTrCHInformationList-RL-AdditionRspTDD  OPTIONAL,
  dl-CCTrCHInformation DL-CCTrCHInformationList-RL-AdditionRspTDD  OPTIONAL,
  dCH-Information      DCH-Information-RL-AdditionRspTDD  OPTIONAL,
  dSCH-InformationResponse DSCH-InformationResponse-RL-AdditionRspTDD  OPTIONAL,
  uSCH-InformationResponse USCH-InformationResponse-RL-AdditionRspTDD  OPTIONAL,
  neighbouring-UMTS-CellInformation Neighbouring-UMTS-CellInformation  OPTIONAL,
  neighbouring-GSM-CellInformation Neighbouring-GSM-CellInformation  OPTIONAL,
  iE-Extensions        ProtocolExtensionContainer { {RL-InformationResponse-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
}

```

```

}
...
}
RL-InformationResponse-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-GA-CellAdditionalShapes          CRITICALITY ignore EXTENSION GA-CellAdditionalShapes          PRESENCE optional } |
  { ID id-HCS-Prio                         CRITICALITY ignore EXTENSION HCS-Prio                         PRESENCE optional } |
  { ID id-Neighbouring-E-UTRA-CellInformation CRITICALITY ignore EXTENSION Neighbouring-E-UTRA-CellInformation PRESENCE optional },
  ...
}
UL-CCTrCHInformationList-RL-AdditionRspTDD ::= ProtocolIE-Single-Container {{UL-CCTrCHInformationListIEs-RL-AdditionRspTDD}}
UL-CCTrCHInformationListIEs-RL-AdditionRspTDD RNSAP-PROTOCOL-IES ::= {
  { ID id-UL-CCTrCH-InformationListIE-RL-AdditionRspTDD CRITICALITY ignore TYPE UL-CCTrCHInformationListIE-RL-AdditionRspTDD PRESENCE
mandatory }
}
UL-CCTrCHInformationListIE-RL-AdditionRspTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF UL-CCTrCHInformationItem-RL-AdditionRspTDD
UL-CCTrCHInformationItem-RL-AdditionRspTDD ::= SEQUENCE {
  cTrCH-ID          CCTrCH-ID,
  ul-DPCH-Information UL-DPCH-InformationList-RL-AdditionRspTDD OPTIONAL,
  iE-Extensions     ProtocolExtensionContainer { {UL-CCTrCHInformationItem-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
  ...
}
UL-CCTrCHInformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}
UL-DPCH-InformationList-RL-AdditionRspTDD ::= ProtocolIE-Single-Container { {UL-DPCH-InformationListIEs-RL-AdditionRspTDD} }
UL-DPCH-InformationListIEs-RL-AdditionRspTDD RNSAP-PROTOCOL-IES ::= {
  { ID id-UL-DPCH-InformationItem-RL-AdditionRspTDD CRITICALITY ignore TYPE UL-DPCH-InformationItem-RL-AdditionRspTDD PRESENCE mandatory
}
}
UL-DPCH-InformationItem-RL-AdditionRspTDD ::= SEQUENCE {
  repetitionPeriod      RepetitionPeriod,
  repetitionLength      RepetitionLength,
  tDD-DPCHOffset        TDD-DPCHOffset,
  uL-Timeslot-Information UL-Timeslot-Information,
  iE-Extensions         ProtocolExtensionContainer { {UL-DPCH-InformationItem-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
  ...
}
UL-DPCH-InformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}
DL-CCTrCHInformationList-RL-AdditionRspTDD ::= ProtocolIE-Single-Container {{DL-CCTrCHInformationListIEs-RL-AdditionRspTDD}}
DL-CCTrCHInformationListIEs-RL-AdditionRspTDD RNSAP-PROTOCOL-IES ::= {

```

```

    { ID id-DL-CCTrCH-InformationListIE-RL-AdditionRspTDD    CRITICALITY ignore    TYPE DL-CCTrCHInformationListIE-RL-AdditionRspTDD    PRESENCE
mandatory }
}

DL-CCTrCHInformationListIE-RL-AdditionRspTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF DL-CCTrCHInformationItem-RL-AdditionRspTDD

DL-CCTrCHInformationItem-RL-AdditionRspTDD ::= SEQUENCE {
    cCTrCH-ID                CCTrCH-ID,
    dl-DPCH-Information      DL-DPCH-InformationList-RL-AdditionRspTDD    OPTIONAL,
    iE-Extensions            ProtocolExtensionContainer { {DL-CCTrCHInformationItem-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
    ...
}

DL-CCTrCHInformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-CCTrCH-Maximum-DL-Power-RL-AdditionRspTDD        CRITICALITY ignore        EXTENSION DL-Power        PRESENCE optional} | -- this is a DCH
type CCTrCH power
    { ID id-CCTrCH-Minimum-DL-Power-RL-AdditionRspTDD        CRITICALITY ignore        EXTENSION DL-Power        PRESENCE optional}, -- this is a DCH
type CCTrCH power
    ...
}

DL-DPCH-InformationList-RL-AdditionRspTDD ::= ProtocolIE-Single-Container { {DL-DPCH-InformationListIEs-RL-AdditionRspTDD} }

DL-DPCH-InformationListIEs-RL-AdditionRspTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-DPCH-InformationItem-RL-AdditionRspTDD        CRITICALITY ignore        TYPE DL-DPCH-InformationItem-RL-AdditionRspTDD    PRESENCE mandatory
}
}

DL-DPCH-InformationItem-RL-AdditionRspTDD ::= SEQUENCE {
    repetitionPeriod        RepetitionPeriod,
    repetitionLength        RepetitionLength,
    tDD-DPCHOffset          TDD-DPCHOffset,
    dL-Timeslot-Information  DL-Timeslot-Information,
    iE-Extensions            ProtocolExtensionContainer { {DL-DPCH-InformationItem-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
    ...
}

DL-DPCH-InformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-Information-RL-AdditionRspTDD ::= SEQUENCE {
    diversityIndication      DiversityIndication-RL-AdditionRspTDD,

    iE-Extensions            ProtocolExtensionContainer { { DCH-Information-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
    ...
}

DCH-Information-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DiversityIndication-RL-AdditionRspTDD ::= CHOICE {
    combining                Combining-RL-AdditionRspTDD,

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```

    nonCombining      NonCombining-RL-AdditionRspTDD
  }

Combining-RL-AdditionRspTDD ::= SEQUENCE {
  rL-ID              RL-ID,
  iE-Extensions      ProtocolExtensionContainer { { CombiningItem-RL-AdditionRspTDD-ExtIEs } } OPTIONAL,
  ...
}

CombiningItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-DCH-InformationResponse      CRITICALITY ignore  EXTENSION DCH-InformationResponse      PRESENCE optional },
  ...
}

NonCombining-RL-AdditionRspTDD ::= SEQUENCE {
  dCH-InformationResponse      DCH-InformationResponse,
  iE-Extensions                ProtocolExtensionContainer { { NonCombiningItem-RL-AdditionRspTDD-ExtIEs } } OPTIONAL,
  ...
}

NonCombiningItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

DSCH-InformationResponse-RL-AdditionRspTDD ::= ProtocolIE-Single-Container {{DSCH-InformationListIEs-RL-AdditionRspTDD}}

DSCH-InformationListIEs-RL-AdditionRspTDD RNSAP-PROTOCOL-IES ::= {
  { ID id-DSCH-InformationListIE-RL-AdditionRspTDD      CRITICALITY ignore  TYPE DSCH-InformationListIE-RL-AdditionRspTDD      PRESENCE mandatory }
}

DSCH-InformationListIE-RL-AdditionRspTDD ::= SEQUENCE (SIZE(0..maxNoOfDSCHs)) OF DSCHInformationItem-RL-AdditionRspTDD

DSCHInformationItem-RL-AdditionRspTDD ::= SEQUENCE {
  dsch-ID              DSCH-ID,
  transportFormatManagement      TransportFormatManagement,
  dsch-FlowControlInformation      DSCH-FlowControlInformation,
  diversityIndication      DiversityIndication-RL-AdditionRspTDD2 OPTIONAL,
  -- diversityIndication present, if CHOICE = nonCombining
  iE-Extensions          ProtocolExtensionContainer { {DSCHInformationItem-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
  ...
}

DSCHInformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

DiversityIndication-RL-AdditionRspTDD2 ::= SEQUENCE {
  bindingID              BindingID OPTIONAL,
  transportLayerAddress      TransportLayerAddress OPTIONAL,
  iE-Extensions          ProtocolExtensionContainer { {DiversityIndication-RL-AdditionRspTDD2-ExtIEs} } OPTIONAL,
  ...
}

DiversityIndication-RL-AdditionRspTDD2-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

```

```

}

USCH-InformationResponse-RL-AdditionRspTDD ::= ProtocolIE-Single-Container {{USCH-InformationListIEs-RL-AdditionRspTDD}}

USCH-InformationListIEs-RL-AdditionRspTDD RNSAP-PROTOCOL-IES ::= {
  { ID id-USCH-InformationListIE-RL-AdditionRspTDD    CRITICALITY ignore  TYPE USCH-InformationListIE-RL-AdditionRspTDD    PRESENCE mandatory }
}

USCH-InformationListIE-RL-AdditionRspTDD ::= SEQUENCE (SIZE(0..maxNoOfUSCHs)) OF USCHInformationItem-RL-AdditionRspTDD

USCHInformationItem-RL-AdditionRspTDD ::= SEQUENCE {
  uSCH-ID                USCH-ID,
  transportFormatManagement TransportFormatManagement,
  diversityIndication    DiversityIndication-RL-AdditionRspTDD2 OPTIONAL,
  -- diversityIndication present, if CHOICE = nonCombining
  iE-Extensions          ProtocolExtensionContainer { {USCHInformationItem-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
  ...
}

USCHInformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

RadioLinkAdditionResponseTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-RL-LCR-InformationResponse-RL-AdditionRspTDD    CRITICALITY ignore    EXTENSION    RL-LCR-InformationResponse-RL-AdditionRspTDD
  PRESENCE optional  }|
  --Mandatory for 1.28Mcps TDD only
  { ID id-Active-MBMS-Bearer-ServiceTDD-PFL              CRITICALITY ignore    EXTENSION Active-MBMS-Bearer-Service-ListTDD-PFL
  PRESENCE optional}|
  { ID id-HSDSCH-TDD-Information-Response                CRITICALITY ignore    EXTENSION HSDSCH-TDD-Information-Response
  PRESENCE optional  }|
  { ID id-DSCH-RNTI                                      CRITICALITY ignore    EXTENSION DSCH-RNTI
  PRESENCE optional  }|
  { ID id-RL-InformationResponse-RL-AdditionRspTDD768   CRITICALITY ignore    EXTENSION RL-InformationResponse-RL-AdditionRspTDD768
  PRESENCE optional}|
  { ID id-E-DCH-Information-Response                    CRITICALITY ignore    EXTENSION E-DCH-Information-Response
  PRESENCE optional  }|
  { ID id-E-DCH-768-Information-Response                CRITICALITY ignore    EXTENSION E-DCH-768-Information-Response
  PRESENCE optional  }|
  { ID id-E-DCH-LCR-Information-Response                CRITICALITY ignore    EXTENSION E-DCH-LCR-Information-Response
  PRESENCE optional  }|
  { ID id-ContinuousPacketConnectivity-DRX-Information-ResponseLCR
  PRESENCE optional  }|
  { ID id-HS-DSCH-Semi-PersistentScheduling-Information-ResponseLCR
  PRESENCE optional  }|
  { ID id-E-DCH-Semi-PersistentScheduling-Information-ResponseLCR
  PRESENCE optional  }|
  { ID id-E-DCH-Semi-PersistentScheduling-Information-ResponseLCR
  PRESENCE optional  }|
  ...
}

RL-LCR-InformationResponse-RL-AdditionRspTDD ::= SEQUENCE {
  rL-ID                RL-ID,
  uRA-Information      URA-Information,
  sAI                  SAI,

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gA-Cell                GA-Cell        OPTIONAL,
gA-AccessPointPosition GA-AccessPointPosition OPTIONAL,
ul-TimeSlot-ISCPC-LCR-Info  UL-TimeSlot-ISCPC-LCR-Info,
maxUL-SIR              UL-SIR,
minUL-SIR              UL-SIR,
pCCPCH-Power          PCCPCH-Power,
maximumAllowedULTxPower  MaximumAllowedULTxPower,
maximumDLTxPower      DL-Power,
minimumDLTxPower      DL-Power,
alphaValue            AlphaValue,
ul-PhysCH-SF-Variation  UL-PhysCH-SF-Variation,
synchronisationConfiguration SynchronisationConfiguration,
secondary-LCR-CCPCH-Info-TDD Secondary-LCR-CCPCH-Info-TDD OPTIONAL,
ul-CCTrCH-LCR-InformationList-RL-AdditionRspTDD UL-CCTrCH-LCR-InformationList-RL-AdditionRspTDD OPTIONAL,
dl-CCTrCH-LCR-InformationList-RL-AdditionRspTDD DL-CCTrCH-LCR-InformationList-RL-AdditionRspTDD OPTIONAL,
dCH-InformationResponseList-RL-AdditionRspTDD DCH-InformationResponseList-RL-AdditionRspTDD OPTIONAL,
dsch-LCR-InformationResponseList-RL-AdditionRspTDD DSCH-LCR-InformationResponseList-RL-AdditionRspTDD OPTIONAL,
usch-LCR-InformationResponseList-RL-AdditionRspTDD USCH-LCR-InformationResponseList-RL-AdditionRspTDD OPTIONAL,
neighbouring-UMTS-CellInformationList-RL-AdditionRspTDD Neighbouring-UMTS-CellInformationList-RL-AdditionRspTDD OPTIONAL,
neighbouring-GSM-CellInformationList-RL-AdditionRspTDD Neighbouring-GSM-CellInformationList-RL-AdditionRspTDD OPTIONAL,
iE-Extensions         ProtocolExtensionContainer { { RL-LCR-InformationResponseList-RL-AdditionRspTDD-ExtIEs } }
OPTIONAL,
...
}

RL-LCR-InformationResponseList-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-GA-CellAdditionalShapes CRITICALITY ignore EXTENSION GA-CellAdditionalShapes PRESENCE optional } |
  { ID id-HCS-Prio CRITICALITY ignore EXTENSION HCS-Prio PRESENCE optional } |
  { ID id-UL-TimingAdvanceCtrl-LCR CRITICALITY ignore EXTENSION UL-TimingAdvanceCtrl-LCR PRESENCE optional } |
  --Mandatory for 1.28Mcps TDD only
  { ID id-PowerControlGAP CRITICALITY ignore EXTENSION ControlGAP PRESENCE optional } |
  -- Applicable to 1.28Mcps TDD only
  { ID id-UARFCNforNt CRITICALITY ignore EXTENSION UARFCN PRESENCE optional } |
  -- Applicable to 1.28Mcps TDD only
  { ID id-Neighbouring-E-UTRA-CellInformation CRITICALITY ignore EXTENSION Neighbouring-E-UTRA-CellInformation PRESENCE optional } |
  { ID id-IdleIntervalInformation CRITICALITY ignore EXTENSION IdleIntervalInformation PRESENCE optional },
  ...
}

UL-CCTrCH-LCR-InformationList-RL-AdditionRspTDD ::= ProtocolIE-Single-Container { {UL-CCTrCH-LCR-InformationListIEs-RL-AdditionRspTDD } }

UL-CCTrCH-LCR-InformationListIEs-RL-AdditionRspTDD RNSAP-PROTOCOL-IES ::= {
  { ID id-UL-CCTrCH-LCR-InformationListIE-RL-AdditionRspTDD CRITICALITY ignore TYPE UL-CCTrCH-LCR-InformationListIE-RL-AdditionRspTDD PRESENCE mandatory }
}

UL-CCTrCH-LCR-InformationListIE-RL-AdditionRspTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHsLCR)) OF UL-CCTrCH-LCR-InformationItem-RL-AdditionRspTDD

UL-CCTrCH-LCR-InformationItem-RL-AdditionRspTDD ::= SEQUENCE {
  cCTrCH-ID          CCTrCH-ID,
  ul-DPCH-LCR-InformationList-RL-AdditionRspTDD UL-DPCH-LCR-InformationList-RL-AdditionRspTDD OPTIONAL,
  iE-Extensions     ProtocolExtensionContainer { {UL-CCTrCH-LCR-InformationItem-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
  ...
}

```



```

UL-CCTrCH-LCR-InformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-DPCH-LCR-InformationList-RL-AdditionRspTDD ::= ProtocolIE-Single-Container { {UL-DPCH-LCR-InformationListIEs-RL-AdditionRspTDD} }

UL-DPCH-LCR-InformationListIEs-RL-AdditionRspTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-UL-DPCH-LCR-InformationItem-RL-AdditionRspTDD      CRITICALITY ignore  TYPE UL-DPCH-LCR-InformationItem-RL-AdditionRspTDD  PRESENCE
    mandatory }
}

UL-DPCH-LCR-InformationItem-RL-AdditionRspTDD ::= SEQUENCE {
    repetitionPeriod          RepetitionPeriod,
    repetitionLength          RepetitionLength,
    tDD-DPCHOffset            TDD-DPCHOffset,
    uL-TimeslotLCR-Information UL-TimeslotLCR-Information,
    iE-Extensions             ProtocolExtensionContainer { {UL-DPCH-LCR-InformationItem-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
    ...
}

UL-DPCH-LCR-InformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CCTrCH-LCR-InformationList-RL-AdditionRspTDD ::= ProtocolIE-Single-Container {{DL-CCTrCH-LCR-InformationListIEs-RL-AdditionRspTDD}}

DL-CCTrCH-LCR-InformationListIEs-RL-AdditionRspTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-CCTrCH-LCR-InformationListIE-RL-AdditionRspTDD  CRITICALITY ignore  TYPE DL-CCTrCH-LCR-InformationListIE-RL-AdditionRspTDD
    PRESENCE mandatory }
}

DL-CCTrCH-LCR-InformationListIE-RL-AdditionRspTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHsLCR)) OF DL-CCTrCH-LCR-InformationItem-RL-AdditionRspTDD

DL-CCTrCH-LCR-InformationItem-RL-AdditionRspTDD ::= SEQUENCE {
    cCTrCH-ID                CCTrCH-ID,
    dl-DPCH-LCR-Information  DL-DPCH-LCR-InformationList-RL-AdditionRspTDD      OPTIONAL,
    iE-Extensions            ProtocolExtensionContainer { {DL-CCTrCH-LCR-InformationItem-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
    ...
}

DL-CCTrCH-LCR-InformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-LCR-InformationList-RL-AdditionRspTDD ::= ProtocolIE-Single-Container { {DL-DPCH-LCR-InformationListIEs-RL-AdditionRspTDD} }

DL-DPCH-LCR-InformationListIEs-RL-AdditionRspTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-DPCH-LCR-InformationItem-RL-AdditionRspTDD      CRITICALITY ignore  TYPE DL-DPCH-LCR-InformationItem-RL-AdditionRspTDD  PRESENCE
    mandatory }
}

DL-DPCH-LCR-InformationItem-RL-AdditionRspTDD ::= SEQUENCE {
    repetitionPeriod          RepetitionPeriod,

```

```

    repetitionLength          RepetitionLength,
    tDD-DPCHOffset           TDD-DPCHOffset,
    dL-TimeslotLCR-Information DL-TimeslotLCR-Information,
    tSTD-Indicator           TSTD-Indicator,
    iE-Extensions            ProtocolExtensionContainer { {DL-DPCH-LCR-InformationItem-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
    ...
}

DL-DPCH-LCR-InformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-InformationResponseList-RL-AdditionRspTDD ::= ProtocolIE-Single-Container {{DCH-InformationResponseListIEs-RL-AdditionRspTDD}}

DCH-InformationResponseListIEs-RL-AdditionRspTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DCH-InformationResponse    CRITICALITY ignore    TYPE DCH-InformationResponse    PRESENCE mandatory }
}

DSCH-LCR-InformationResponse-RL-AdditionRspTDD ::= ProtocolIE-Single-Container {{DSCH-LCR-InformationList-RL-AdditionRspTDD}}

DSCH-LCR-InformationList-RL-AdditionRspTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DSCH-LCR-InformationListIEs-RL-AdditionRspTDD    CRITICALITY ignore    TYPE DSCH-LCR-InformationListIEs-RL-AdditionRspTDD    PRESENCE
    mandatory }
}

DSCH-LCR-InformationListIEs-RL-AdditionRspTDD ::= SEQUENCE (SIZE(0..maxNoOfDSCHsLCR)) OF DSCH-LCR-InformationItem-RL-AdditionRspTDD

DSCH-LCR-InformationItem-RL-AdditionRspTDD ::= SEQUENCE {
    dsch-ID                DSCH-ID,
    dSCH-FlowControlInformation    DSCH-FlowControlInformation,
    bindingID              BindingID    OPTIONAL,
    transportLayerAddress    TransportLayerAddress    OPTIONAL,
    transportFormatManagement    TransportFormatManagement,
    iE-Extensions            ProtocolExtensionContainer { {DSCH-LCR-InformationItem-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
    ...
}

DSCH-LCR-InformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

USCH-LCR-InformationResponse-RL-AdditionRspTDD ::= ProtocolIE-Single-Container {{USCH-LCR-InformationList-RL-AdditionRspTDD}}

USCH-LCR-InformationList-RL-AdditionRspTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-USCH-LCR-InformationListIEs-RL-AdditionRspTDD    CRITICALITY ignore    TYPE USCH-LCR-InformationListIEs-RL-AdditionRspTDD    PRESENCE
    mandatory }
}

USCH-LCR-InformationListIEs-RL-AdditionRspTDD ::= SEQUENCE (SIZE(0..maxNoOfUSCHsLCR)) OF USCH-LCR-InformationItem-RL-AdditionRspTDD

USCH-LCR-InformationItem-RL-AdditionRspTDD ::= SEQUENCE {
    usch-ID                USCH-ID,
    transportFormatManagement    TransportFormatManagement,
    diversityIndication        DiversityIndication-RL-AdditionRspTDD2    OPTIONAL,

```

```

    iE-Extensions          ProtocolExtensionContainer { {USCH-LCR-InformationItem-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
  ...
}

USCH-LCR-InformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

RL-InformationResponse-RL-AdditionRspTDD768 ::= SEQUENCE {
  rL-ID                    RL-ID,
  uRA-Information          URA-Information    OPTIONAL,
  sAI                      SAI,
  gA-Cell                  GA-Cell          OPTIONAL,
  gA-AccessPointPosition  GA-AccessPointPosition  OPTIONAL,
  ul-TimeSlot-ISCP-Info   UL-TimeSlot-ISCP-Info,
  minUL-SIR                UL-SIR,
  maxUL-SIR                UL-SIR,
  maximumAllowedULTxPower MaximumAllowedULTxPower,
  maximumDLTxPower        DL-Power,
  minimumDLTxPower        DL-Power,
  pCCPCH-Power            PCCPCH-Power,
  timingAdvanceApplied    TimingAdvanceApplied,
  alphaValue               AlphaValue,
  ul-PhysCH-SF-Variation  UL-PhysCH-SF-Variation,
  synchronisationConfiguration SynchronisationConfiguration,
  secondary-CCPCH-Info-TDD768 Secondary-CCPCH-Info-TDD768          OPTIONAL,
  ul-CCTrCHInformation768 UL-CCTrCHInformationList-RL-AdditionRspTDD768          OPTIONAL,
  dl-CCTrCHInformation768 DL-CCTrCHInformationList-RL-AdditionRspTDD768          OPTIONAL,
  dCH-Information         DCH-Information-RL-AdditionRspTDD          OPTIONAL,
  dSCH-InformationResponse DSCH-InformationResponse-RL-AdditionRspTDD          OPTIONAL,
  uSCH-InformationResponse USCH-InformationResponse-RL-AdditionRspTDD          OPTIONAL,
  neighbouring-UMTS-CellInformation Neighbouring-UMTS-CellInformation  OPTIONAL,
  neighbouring-GSM-CellInformation Neighbouring-GSM-CellInformation  OPTIONAL,
  gA-CellAdditionalShapes  GA-CellAdditionalShapes          OPTIONAL,
  hCS-Prio                 HCS-Prio                         OPTIONAL,
  iE-Extensions           ProtocolExtensionContainer { {RL-InformationResponse-RL-AdditionRspTDD768-ExtIEs} } OPTIONAL,
  ...
}

RL-InformationResponse-RL-AdditionRspTDD768-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-Neighbouring-E-UTRA-CellInformation    CRITICALITY ignore  EXTENSION Neighbouring-E-UTRA-CellInformation    PRESENCE optional },
  ...
}

UL-CCTrCHInformationList-RL-AdditionRspTDD768 ::= ProtocolIE-Single-Container {{UL-CCTrCHInformationListIEs-RL-AdditionRspTDD768}}

UL-CCTrCHInformationListIEs-RL-AdditionRspTDD768 RNSAP-PROTOCOL-IES ::= {
  { ID id-UL-CCTrCH-InformationListIE-RL-AdditionRspTDD768  CRITICALITY ignore  TYPE UL-CCTrCHInformationListIE-RL-AdditionRspTDD768  PRESENCE
  mandatory }
}

UL-CCTrCHInformationListIE-RL-AdditionRspTDD768 ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF UL-CCTrCHInformationItem-RL-AdditionRspTDD768

UL-CCTrCHInformationItem-RL-AdditionRspTDD768 ::= SEQUENCE {

```

```

    cCtRCH-ID          CCTrCH-ID,
    ul-DPCH-Information768  UL-DPCH-InformationList-RL-AdditionRspTDD768  OPTIONAL,
    iE-Extensions       ProtocolExtensionContainer { {UL-CCTrCHInformationItem-RL-AdditionRspTDD768-ExtIEs} } OPTIONAL,
    ...
}

UL-CCTrCHInformationItem-RL-AdditionRspTDD768-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-DPCH-InformationList-RL-AdditionRspTDD768 ::= ProtocolIE-Single-Container { {UL-DPCH-InformationListIEs-RL-AdditionRspTDD768} }

UL-DPCH-InformationListIEs-RL-AdditionRspTDD768 RNSAP-PROTOCOL-IES ::= {
    { ID id-UL-DPCH-InformationItem-RL-AdditionRspTDD  CRITICALITY ignore  TYPE UL-DPCH-InformationItem-RL-AdditionRspTDD768  PRESENCE
    mandatory }
}

UL-DPCH-InformationItem-RL-AdditionRspTDD768 ::= SEQUENCE {
    repetitionPeriod      RepetitionPeriod,
    repetitionLength      RepetitionLength,
    tDD-DPCHOffset        TDD-DPCHOffset,
    uL-Timeslot-Information768  UL-Timeslot-Information768,
    iE-Extensions         ProtocolExtensionContainer { {UL-DPCH-InformationItem-RL-AdditionRspTDD768-ExtIEs} } OPTIONAL,
    ...
}

UL-DPCH-InformationItem-RL-AdditionRspTDD768-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CCTrCHInformationList-RL-AdditionRspTDD768 ::= ProtocolIE-Single-Container {{DL-CCTrCHInformationListIEs-RL-AdditionRspTDD768}}

DL-CCTrCHInformationListIEs-RL-AdditionRspTDD768 RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-CCTrCH-InformationListIE-RL-AdditionRspTDD768  CRITICALITY ignore  TYPE DL-CCTrCHInformationListIE-RL-AdditionRspTDD768  PRESENCE
    mandatory }
}

DL-CCTrCHInformationListIE-RL-AdditionRspTDD768 ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF DL-CCTrCHInformationItem-RL-AdditionRspTDD768

DL-CCTrCHInformationItem-RL-AdditionRspTDD768 ::= SEQUENCE {
    cCtRCH-ID          CCTrCH-ID,
    dl-DPCH-Information768  DL-DPCH-InformationList-RL-AdditionRspTDD768  OPTIONAL,
    cCtRCH-Maximum-DL-Power  DL-Power  OPTIONAL, -- this is a DCH type CCTrCH power
    cCtRCH-Minimum-DL-Power  DL-Power  OPTIONAL, -- this is a DCH type CCTrCH power
    iE-Extensions         ProtocolExtensionContainer { {DL-CCTrCHInformationItem-RL-AdditionRspTDD768-ExtIEs} } OPTIONAL,
    ...
}

DL-CCTrCHInformationItem-RL-AdditionRspTDD768-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-InformationList-RL-AdditionRspTDD768 ::= ProtocolIE-Single-Container { {DL-DPCH-InformationListIEs-RL-AdditionRspTDD768} }

```

```
DL-DPCH-InformationListIEs-RL-AdditionRspTDD768 RNSAP-PROTOCOL-IES ::= {
  { ID id-DL-DPCH-InformationItem-RL-AdditionRspTDD768          CRITICALITY ignore  TYPE DL-DPCH-InformationItem-RL-AdditionRspTDD768  PRESENCE
  mandatory }
}
```

```
DL-DPCH-InformationItem-RL-AdditionRspTDD768 ::= SEQUENCE {
  repetitionPeriod          RepetitionPeriod,
  repetitionLength          RepetitionLength,
  tDD-DPCHOffset           TDD-DPCHOffset,
  dL-Timeslot-Information768 DL-Timeslot-Information768,
  iE-Extensions            ProtocolExtensionContainer { {DL-DPCH-InformationItem-RL-AdditionRspTDD768-ExtIEs} } OPTIONAL,
  ...
}
```

```
DL-DPCH-InformationItem-RL-AdditionRspTDD768-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}
```

```
-- *****
--
-- RADIO LINK ADDITION FAILURE FDD
--
-- *****
```

```
RadioLinkAdditionFailureFDD ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container    {{RadioLinkAdditionFailureFDD-IEs}},
  protocolExtensions  ProtocolExtensionContainer {{RadioLinkAdditionFailureFDD-Extensions}}          OPTIONAL,
  ...
}
```

```
RadioLinkAdditionFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-CauseLevel-RL-AdditionFailureFDD          CRITICALITY ignore          TYPE CauseLevel-RL-AdditionFailureFDD
  PRESENCE mandatory }|
  { ID id-CriticalityDiagnostics          CRITICALITY ignore TYPE CriticalityDiagnostics          PRESENCE optional },
  ...
}
```

```
CauseLevel-RL-AdditionFailureFDD ::= CHOICE {
  generalCause          GeneralCauseList-RL-AdditionFailureFDD,
  rLspecificCause       RLspecificCauseList-RL-AdditionFailureFDD,
  ...
}
```

```
GeneralCauseList-RL-AdditionFailureFDD ::= SEQUENCE {
  cause          Cause,
  iE-Extensions ProtocolExtensionContainer { { GeneralCauseItem-RL-AdditionFailureFDD-ExtIEs} }          OPTIONAL,
  ...
}
```

```
GeneralCauseItem-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}
```

```
RLspecificCauseList-RL-AdditionFailureFDD ::= SEQUENCE {
```

```

    unsuccessful-RL-InformationRespList-RL-AdditionFailureFDD      UnsuccessfulRL-InformationResponseList-RL-AdditionFailureFDD,
    successful-RL-InformationRespList-RL-AdditionFailureFDD      SuccessfulRL-InformationResponseList-RL-AdditionFailureFDD OPTIONAL,
    iE-Extensions                                               ProtocolExtensionContainer { { RLSpecificCauseItem-RL-AdditionFailureFDD-ExtIEs} } OPTIONAL,
    ...
}

RLSpecificCauseItem-RL-AdditionFailureFDD-ExtIEs  RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

UnsuccessfulRL-InformationResponseList-RL-AdditionFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfRLs-1)) OF ProtocolIE-Single-Container {
{UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD-IEs} }

UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD      CRITICALITY ignore   TYPE UnsuccessfulRL-InformationResponse-RL-
AdditionFailureFDD      PRESENCE mandatory }
}

UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD ::= SEQUENCE {
    rL-ID                    RL-ID,
    cause                    Cause,
    iE-Extensions           ProtocolExtensionContainer { {UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD-ExtIEs} } OPTIONAL,
    ...
}

UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

SuccessfulRL-InformationResponseList-RL-AdditionFailureFDD ::= SEQUENCE (SIZE (0..maxNrOfRLs-2)) OF ProtocolIE-Single-Container { {SuccessfulRL-
InformationResponse-RL-AdditionFailureFDD-IEs} }

SuccessfulRL-InformationResponse-RL-AdditionFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-SuccessfulRL-InformationResponse-RL-AdditionFailureFDD      CRITICALITY ignore   TYPE SuccessfulRL-InformationResponse-RL-
AdditionFailureFDD      PRESENCE mandatory }
}

SuccessfulRL-InformationResponse-RL-AdditionFailureFDD ::= SEQUENCE {
    rL-ID                    RL-ID,
    rL-Set-ID                RL-Set-ID,
    uRA-Information          URA-Information      OPTIONAL,
    sAI                      SAI,
    gA-Cell                  GA-Cell      OPTIONAL,
    gA-AccessPointPosition   GA-AccessPointPosition      OPTIONAL,
    received-total-wide-band-power Received-total-wide-band-power,
    not-Used-secondary-CCPCH-Info NULL      OPTIONAL,
    dl-CodeInformation        DL-CodeInformationList-RL-AdditionFailureFDD,
    diversityIndication       DiversityIndication-RL-AdditionFailureFDD,
    -- This IE represents both the Diversity Indication IE and the choice based on the diversity indication as described in
    -- the tabular message format in subclause 9.1.
    sSDT-SupportIndicator     SSdT-SupportIndicator,
    minUL-SIR                 UL-SIR,
    maxUL-SIR                 UL-SIR,
    closedloopTimingadjustmentmode ClosedloopTimingadjustmentmode OPTIONAL,
}

```

```

maximumAllowedULTxPower      MaximumAllowedULTxPower,
maximumDLTxPower             DL-Power,
minimumDLTxPower             DL-Power,
neighbouring-UMTS-CellInformation  Neighbouring-UMTS-CellInformation OPTIONAL,
neighbouring-GSM-CellInformation  Neighbouring-GSM-CellInformation OPTIONAL,
primaryCPICH-Power           PrimaryCPICH-Power,
pC-Preamble                  PC-Preamble,
sRB-Delay                    SRB-Delay,
iE-Extensions                ProtocolExtensionContainer { {SuccessfulRL-InformationResponse-RL-AdditionFailureFDD-ExtIEs} } OPTIONAL,
...
}

SuccessfulRL-InformationResponse-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-GA-CellAdditionalShapes      CRITICALITY ignore EXTENSION GA-CellAdditionalShapes      PRESENCE optional }|
  { ID id-DL-PowerBalancing-ActivationIndicator  CRITICALITY ignore EXTENSION DL-PowerBalancing-ActivationIndicator  PRESENCE optional }|
  { ID id-HCS-Prio                       CRITICALITY ignore EXTENSION HCS-Prio                       PRESENCE optional }|
  { ID id-Active-MBMS-Bearer-ServiceFDD-PFL    CRITICALITY ignore EXTENSION Active-MBMS-Bearer-Service-ListFDD-PFL    PRESENCE optional }|
  { ID id-EDCH-RLSet-Id                  CRITICALITY ignore EXTENSION RL-Set-ID                  PRESENCE optional }|
  { ID id-EDCH-FDD-DL-ControlChannelInformation  CRITICALITY ignore EXTENSION EDCH-FDD-DL-ControlChannelInformation  PRESENCE optional }|
  { ID id-Initial-DL-DPCH-TimingAdjustment      CRITICALITY ignore EXTENSION DL-DPCH-TimingAdjustment      PRESENCE optional }|
  { ID id-Neighbouring-E-UTRA-CellInformation    CRITICALITY ignore EXTENSION Neighbouring-E-UTRA-CellInformation    PRESENCE optional }|
  { ID id-HSDSCH-PreconfigurationInfo          CRITICALITY ignore EXTENSION HSDSCH-PreconfigurationInfo          PRESENCE optional }|
  { ID id-F-DPCH-SlotFormat                 CRITICALITY ignore EXTENSION F-DPCH-SlotFormat                 PRESENCE optional },
  ...
}

DL-CodeInformationList-RL-AdditionFailureFDD ::= ProtocolIE-Single-Container { { DL-CodeInformationListIEs-RL-AdditionFailureFDD } }

DL-CodeInformationListIEs-RL-AdditionFailureFDD RNSAP-PROTOCOL-IES ::= {
  { ID id-FDD-DL-CodeInformation  CRITICALITY ignore TYPE FDD-DL-CodeInformation  PRESENCE mandatory }
}

DiversityIndication-RL-AdditionFailureFDD ::= CHOICE {
  combining          Combining-RL-AdditionFailureFDD,
  nonCombining      NonCombining-RL-AdditionFailureFDD
}

Combining-RL-AdditionFailureFDD ::= SEQUENCE {
  rL-ID              RL-ID,
  iE-Extensions      ProtocolExtensionContainer { { CombiningItem-RL-AdditionFailureFDD-ExtIEs} } OPTIONAL,
  ...
}

CombiningItem-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-DCH-InformationResponse      CRITICALITY ignore EXTENSION DCH-InformationResponse      PRESENCE optional }|
  { ID id-EDCH-FDD-InformationResponse  CRITICALITY ignore EXTENSION EDCH-FDD-InformationResponse  PRESENCE optional },
  ...
}

NonCombining-RL-AdditionFailureFDD ::= SEQUENCE {
  dCH-InformationResponse      DCH-InformationResponse,
  iE-Extensions                ProtocolExtensionContainer { { NonCombiningItem-RL-AdditionFailureFDD-ExtIEs} } OPTIONAL,
  ...
}

```

```

NonCombiningItem-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-EDCH-FDD-InformationResponse    CRITICALITY ignore  EXTENSION EDCH-FDD-InformationResponse    PRESENCE optional },
  ...
}

RadioLinkAdditionFailureFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-HS-DSCH-serving-cell-change-informationResponse CRITICALITY ignore  EXTENSION HS-DSCH-serving-cell-change-informationResponse
  PRESENCE optional}|
  { ID id-E-DCH-Serving-cell-change-informationResponse  CRITICALITY ignore  EXTENSION E-DCH-Serving-cell-change-informationResponse
  PRESENCE optional}|
  { ID id-Additional-HS-Cell-Change-Information-Response CRITICALITY ignore  EXTENSION Additional-HS-Cell-Change-Information-Response-List
  PRESENCE optional}|
  { ID id-MACHs-ResetIndicator                CRITICALITY ignore  EXTENSION MACHs-ResetIndicator
  PRESENCE optional},
  ...
}

-- *****
--
-- RADIO LINK ADDITION FAILURE TDD
--
-- *****

RadioLinkAdditionFailureTDD ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container    {{RadioLinkAdditionFailureTDD-IEs}},
  protocolExtensions   ProtocolExtensionContainer {{RadioLinkAdditionFailureTDD-Extensions}}          OPTIONAL,
  ...
}

RadioLinkAdditionFailureTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-CauseLevel-RL-AdditionFailureTDD    CRITICALITY ignore  TYPE CauseLevel-RL-AdditionFailureTDD PRESENCE mandatory }|
  { ID id-CriticalityDiagnostics              CRITICALITY ignore  TYPE CriticalityDiagnostics          PRESENCE optional },
  ...
}

CauseLevel-RL-AdditionFailureTDD ::= CHOICE {
  generalCause          GeneralCauseList-RL-AdditionFailureTDD,
  rLSpecificCause       RLSpecificCauseList-RL-AdditionFailureTDD,
  ...
}

GeneralCauseList-RL-AdditionFailureTDD ::= SEQUENCE {
  cause                  Cause,
  iE-Extensions          ProtocolExtensionContainer { { GeneralCauseItem-RL-AdditionFailureTDD-ExtIEs} }  OPTIONAL,
  ...
}

GeneralCauseItem-RL-AdditionFailureTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

RLSpecificCauseList-RL-AdditionFailureTDD ::= SEQUENCE {
  unsuccessful-RL-InformationRespItem-RL-AdditionFailureTDD  Unsuccessful-RL-InformationRespItem-RL-AdditionFailureTDD,

```



```

    iE-Extensions
      OPTIONAL,
    ...
  }
}

RLSpecificCauseItem-RL-AdditionFailureTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

Unsuccessful-RL-InformationRespItem-RL-AdditionFailureTDD ::= ProtocolIE-Single-Container { {Unsuccessful-RL-InformationRespItemIE-RL-AdditionFailureTDD} }

Unsuccessful-RL-InformationRespItemIE-RL-AdditionFailureTDD RNSAP-PROTOCOL-IES ::= {
  { ID id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureTDD CRITICALITY ignore TYPE UnsuccessfulRL-InformationResponse-RL-AdditionFailureTDD PRESENCE mandatory}
}

UnsuccessfulRL-InformationResponse-RL-AdditionFailureTDD ::= SEQUENCE {
  rL-ID RL-ID,
  cause Cause,
  iE-Extensions ProtocolExtensionContainer { {UnsuccessfulRL-InformationResponse-RL-AdditionFailureTDD-ExtIEs} } OPTIONAL,
  ...
}

UnsuccessfulRL-InformationResponse-RL-AdditionFailureTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

RadioLinkAdditionFailureTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- RADIO LINK DELETION REQUEST
--
-- *****

RadioLinkDeletionRequest ::= SEQUENCE {
  protocolIEs ProtocolIE-Container {{RadioLinkDeletionRequest-IEs}},
  protocolExtensions ProtocolExtensionContainer {{RadioLinkDeletionRequest-Extensions}} OPTIONAL,
  ...
}

RadioLinkDeletionRequest-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-InformationList-RL-DeletionRqst CRITICALITY notify TYPE RL-InformationList-RL-DeletionRqst PRESENCE mandatory },
  ...
}

RL-InformationList-RL-DeletionRqst ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container { {RL-Information-RL-DeletionRqst-IEs} }

RL-Information-RL-DeletionRqst-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-Information-RL-DeletionRqst CRITICALITY notify TYPE RL-Information-RL-DeletionRqst PRESENCE mandatory }
}

```

```

}
RL-Information-RL-DeletionRqst ::= SEQUENCE {
    rL-ID                RL-ID,
    iE-Extensions        ProtocolExtensionContainer { {RL-Information-RL-DeletionRqst-ExtIEs} } OPTIONAL,
    ...
}
RL-Information-RL-DeletionRqst-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
RadioLinkDeletionRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
-- *****
--
-- RADIO LINK DELETION RESPONSE
--
-- *****

RadioLinkDeletionResponse ::= SEQUENCE {
    protocolIEs                ProtocolIE-Container    {{RadioLinkDeletionResponse-IEs}},
    protocolExtensions          ProtocolExtensionContainer {{RadioLinkDeletionResponse-Extensions}}
    ...
}
RadioLinkDeletionResponse-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-CriticalityDiagnostics          CRITICALITY ignore TYPE CriticalityDiagnostics          PRESENCE optional },
    ...
}
RadioLinkDeletionResponse-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
-- *****
--
-- RADIO LINK RECONFIGURATION PREPARE FDD
--
-- *****

RadioLinkReconfigurationPrepareFDD ::= SEQUENCE {
    protocolIEs                ProtocolIE-Container    {{RadioLinkReconfigurationPrepareFDD-IEs}},
    protocolExtensions          ProtocolExtensionContainer {{RadioLinkReconfigurationPrepareFDD-Extensions}}
    ...
}
RadioLinkReconfigurationPrepareFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-AllowedQueuingTime              CRITICALITY reject TYPE AllowedQueuingTime              PRESENCE optional } |
    { ID id-UL-DPCH-Information-RL-ReconfPrepFDD          CRITICALITY reject TYPE UL-DPCH-Information-RL-ReconfPrepFDD          PRESENCE optional }
}

```

```

    { ID id-DL-DPCH-Information-RL-ReconfPrepFDD          CRITICALITY reject  TYPE DL-DPCH-Information-RL-ReconfPrepFDD          PRESENCE optional }
  |
  { ID id-FDD-DCHs-to-Modify          CRITICALITY reject  TYPE FDD-DCHs-to-Modify          PRESENCE optional } |
  { ID id-DCHs-to-Add-FDD             CRITICALITY reject  TYPE DCH-FDD-Information          PRESENCE optional } |
  { ID id-DCH-DeleteList-RL-ReconfPrepFDD  CRITICALITY reject  TYPE DCH-DeleteList-RL-ReconfPrepFDD  PRESENCE optional } |
  { ID id-RL-InformationList-RL-ReconfPrepFDD CRITICALITY reject  TYPE RL-InformationList-RL-ReconfPrepFDD PRESENCE optional } |
  { ID id-Transmission-Gap-Pattern-Sequence-Information CRITICALITY reject  TYPE Transmission-Gap-Pattern-Sequence-Information PRESENCE optional },
  ...
}

UL-DPCH-Information-RL-ReconfPrepFDD ::= SEQUENCE {
  ul-ScramblingCode          UL-ScramblingCode          OPTIONAL,
  ul-SIRTarget              UL-SIR                      OPTIONAL,
  minUL-ChannelisationCodeLength  MinUL-ChannelisationCodeLength  OPTIONAL,
  maxNrOfUL-DPCHs          MaxNrOfUL-DPCHs          OPTIONAL
  -- This IE shall be present if minUL-ChannelisationCodeLength equals to 4 --,
  ul-PunctureLimit         PunctureLimit           OPTIONAL,
  tFCS                     TFCS                     OPTIONAL,
  ul-DPCCH-SlotFormat      UL-DPCCH-SlotFormat      OPTIONAL,
  diversityMode            DiversityMode            OPTIONAL,
  not-Used-sSDT-CellIDLength  NULL                    OPTIONAL,
  not-Used-s-FieldLength    NULL                    OPTIONAL,
  iE-Extensions            ProtocolExtensionContainer { {UL-DPCH-Information-RL-ReconfPrepFDD-ExtIEs} } OPTIONAL,
  ...
}

UL-DPCH-Information-RL-ReconfPrepFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-UL-DPCHIndicatorEDCH  CRITICALITY reject      EXTENSION UL-DPCHIndicatorEDCH PRESENCE optional },
  ...
}

DL-DPCH-Information-RL-ReconfPrepFDD ::= SEQUENCE {
  tFCS                     TFCS                     OPTIONAL,
  dl-DPCH-SlotFormat      DL-DPCH-SlotFormat      OPTIONAL,
  nrOfDLchannelisationcodes  NrOfDLchannelisationcodes  OPTIONAL,
  tFCI-SignallingMode      TFCI-SignallingMode      OPTIONAL,
  tFCI-Presence            TFCI-Presence            OPTIONAL
  -- This IE shall be present if DL DPCH Slot Format IE is from 12 to 16 --,
  multiplexingPosition     MultiplexingPosition     OPTIONAL,
  limitedPowerIncrease     LimitedPowerIncrease     OPTIONAL,
  iE-Extensions            ProtocolExtensionContainer { {DL-DPCH-Information-RL-ReconfPrepFDD-ExtIEs} } OPTIONAL,
  ...
}

DL-DPCH-Information-RL-ReconfPrepFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-DL-DPCH-Power-Information-RL-ReconfPrepFDD  CRITICALITY reject  EXTENSION DL-DPCH-Power-Information-RL-ReconfPrepFDD  PRESENCE optional },
  ...
}

DL-DPCH-Power-Information-RL-ReconfPrepFDD ::= SEQUENCE {
  powerOffsetInformation  PowerOffsetInformation-RL-ReconfPrepFDD,
  fdd-TPC-DownlinkStepSize  FDD-TPC-DownlinkStepSize,

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    innerLoopDLPCStatus          InnerLoopDLPCStatus,
    iE-Extensions                 ProtocolExtensionContainer { { DL-DPCH-Power-Information-RL-ReconfPrepFDD-ExtIEs } } OPTIONAL,
    ...
}

DL-DPCH-Power-Information-RL-ReconfPrepFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

PowerOffsetInformation-RL-ReconfPrepFDD ::= SEQUENCE {
    p01-ForTFCI-Bits             PowerOffset,
    p02-ForTPC-Bits              PowerOffset,
    p03-ForPilotBits            PowerOffset,
    iE-Extensions                 ProtocolExtensionContainer { { PowerOffsetInformation-RL-ReconfPrepFDD-ExtIEs } } OPTIONAL,
    ...
}

PowerOffsetInformation-RL-ReconfPrepFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-DeleteList-RL-ReconfPrepFDD      ::= SEQUENCE (SIZE (0..maxNrOfDCHs)) OF DCH-DeleteItem-RL-ReconfPrepFDD

DCH-DeleteItem-RL-ReconfPrepFDD ::= SEQUENCE {
    dCH-ID                       DCH-ID,
    iE-Extensions                 ProtocolExtensionContainer { {DCH-DeleteItem-RL-ReconfPrepFDD-ExtIEs} } OPTIONAL,
    ...
}

DCH-DeleteItem-RL-ReconfPrepFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-InformationList-RL-ReconfPrepFDD  ::= SEQUENCE (SIZE (0..maxNrOfRLs)) OF ProtocolIE-Single-Container { {RL-Information-RL-ReconfPrepFDD-IEs} }

RL-Information-RL-ReconfPrepFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-Information-RL-ReconfPrepFDD      CRITICALITY reject  TYPE RL-Information-RL-ReconfPrepFDD      PRESENCE mandatory }
}

RL-Information-RL-ReconfPrepFDD ::= SEQUENCE {
    rL-ID                       RL-ID,
    not-Used-sSDT-Indication     NULL          OPTIONAL,
    not-Used-sSDT-CellIdentity   NULL          OPTIONAL,
    transmitDiversityIndicator   TransmitDiversityIndicator  OPTIONAL,
    -- This IE shall be present if Diversity Mode IE is present in UL DPCH Information IE and is not equal to "none"
    iE-Extensions                 ProtocolExtensionContainer { {RL-Information-RL-ReconfPrepFDD-ExtIEs} } OPTIONAL,
    ...
}

RL-Information-RL-ReconfPrepFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-DLReferencePower          CRITICALITY ignore  EXTENSION DL-Power          PRESENCE optional }|
    { ID id-RL-Specific-DCH-Info      CRITICALITY ignore  EXTENSION RL-Specific-DCH-Info PRESENCE optional }|
    { ID id-DL-DPCH-TimingAdjustment  CRITICALITY reject  EXTENSION DL-DPCH-TimingAdjustment PRESENCE optional }|
}

```

```

    { ID id-Phase-Reference-Update-Indicator    CRITICALITY ignore  EXTENSION Phase-Reference-Update-Indicator  PRESENCE optional }|
    { ID id-RL-Specific-EDCH-Information        CRITICALITY reject   EXTENSION RL-Specific-EDCH-Information      PRESENCE optional }|
    { ID id-EDCH-RL-Indication                 CRITICALITY reject   EXTENSION EDCH-RL-Indication                PRESENCE optional },
    ...
}

RadioLinkReconfigurationPrepareFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-HSDSCH-FDD-Information             CRITICALITY reject   EXTENSION HSDSCH-FDD-Information           PRESENCE optional }|
    { ID id-HSDSCH-Information-to-Modify       CRITICALITY reject   EXTENSION HSDSCH-Information-to-Modify     PRESENCE optional }|
    { ID id-HSDSCH-MACdFlows-to-Add            CRITICALITY reject   EXTENSION HSDSCH-MACdFlows-Information     PRESENCE optional }|
    { ID id-HSDSCH-MACdFlows-to-Delete         CRITICALITY reject   EXTENSION HSDSCH-MACdFlows-to-Delete       PRESENCE optional }|
    { ID id-HSPDSCH-RL-ID                     CRITICALITY reject   EXTENSION RL-ID                           PRESENCE optional }|
    { ID id-EDPCH-Information                 CRITICALITY reject   EXTENSION EDPCH-Information-RLReconfPrepareFDD
    PRESENCE optional }|
    { ID id-EDCH-FDD-Information              CRITICALITY reject   EXTENSION EDCH-FDD-Information             PRESENCE optional }|
    { ID id-EDCH-FDD-Information-To-Modify     CRITICALITY reject   EXTENSION EDCH-FDD-Information-To-Modify   PRESENCE optional }|
    { ID id-EDCH-MACdFlows-To-Add             CRITICALITY reject   EXTENSION EDCH-MACdFlows-Information       PRESENCE optional }|
    { ID id-EDCH-MACdFlows-To-Delete          CRITICALITY reject   EXTENSION EDCH-MACdFlows-To-Delete         PRESENCE optional }|
    { ID id-Serving-EDCHRL-Id                 CRITICALITY reject   EXTENSION EDCH-Serving-RL                 PRESENCE optional }|
    { ID id-F-DPCH-Information-RL-ReconfPrepFDD
    CRITICALITY reject   EXTENSION F-DPCH-Information-RL-ReconfPrepFDD
    PRESENCE optional }|
    { ID id-Fast-Reconfiguration-Mode         CRITICALITY ignore   EXTENSION Fast-Reconfiguration-Mode       PRESENCE optional }|
    { ID id-CPC-Information                   CRITICALITY reject   EXTENSION CPC-Information                  PRESENCE optional }|
    { ID id-Additional-HS-Cell-Information-RL-Reconf-Prep
    CRITICALITY reject   EXTENSION Additional-HS-Cell-Information-RL-Reconf-Prep
    PRESENCE optional },
    ...
}

Additional-HS-Cell-Information-RL-Reconf-Prep ::= SEQUENCE (SIZE (1..maxNrOfHSDSCH-1)) OF Additional-HS-Cell-Information-RL-Reconf-Prep-ItemIEs

Additional-HS-Cell-Information-RL-Reconf-Prep-ItemIEs ::=SEQUENCE{
    hSPDSCH-RL-ID                RL-ID,
    c-ID                          C-ID                            OPTIONAL,
    hS-DSCH-FDD-Secondary-Serving-Information
    HS-DSCH-FDD-Secondary-Serving-Information        OPTIONAL,
    hS-DSCH-Secondary-Serving-Information-To-Modify
    HS-DSCH-Secondary-Serving-Information-To-Modify  OPTIONAL,
    hS-HS-DSCH-Secondary-Serving-Remove
    HS-DSCH-Secondary-Serving-Remove                OPTIONAL,
    iE-Extensions                 ProtocolExtensionContainer { { Additional-HS-Cell-Information-RL-Reconf-Prep-ItemIEs-ExtIEs} } OPTIONAL,
    ...
}

Additional-HS-Cell-Information-RL-Reconf-Prep-ItemIEs-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

F-DPCH-Information-RL-ReconfPrepFDD ::= SEQUENCE {
    powerOffsetInformation        PowerOffsetInformation-F-DPCH-RL-ReconfPrepFDD,
    fdd-dl-TPC-DownlinkStepSize  FDD-TPC-DownlinkStepSize,
    limitedPowerIncrease          LimitedPowerIncrease,
    innerLoopDLPCStatus           InnerLoopDLPCStatus,
    iE-Extensions                 ProtocolExtensionContainer { { F-DPCH-Information-RL-ReconfPrepFDD-ExtIEs} }
    OPTIONAL,
    ...
}

F-DPCH-Information-RL-ReconfPrepFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-F-DPCH-SlotFormatSupportRequest    CRITICALITY reject   EXTENSION F-DPCH-SlotFormatSupportRequest    PRESENCE optional }|

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    { ID id-F-DPCH-SlotFormat          CRITICALITY ignore EXTENSION F-DPCH-SlotFormat      PRESENCE optional},
    ...
}

PowerOffsetInformation-F-DPCH-RL-ReconfPrepFDD ::= SEQUENCE {
    po2-ForTPC-Bits          PowerOffset,
    --This IE shall be ignored by DRNS
    iE-Extensions           ProtocolExtensionContainer { { PowerOffsetInformation-F-DPCH-RL-ReconfPrepFDD-ExtIEs} }    OPTIONAL,
    ...
}

PowerOffsetInformation-F-DPCH-RL-ReconfPrepFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK RECONFIGURATION PREPARE TDD
--
-- *****

RadioLinkReconfigurationPrepareTDD ::= SEQUENCE {
    protocolIEs              ProtocolIE-Container    {{RadioLinkReconfigurationPrepareTDD-IEs}},
    protocolExtensions       ProtocolExtensionContainer {{RadioLinkReconfigurationPrepareTDD-Extensions}}    OPTIONAL,
    ...
}

RadioLinkReconfigurationPrepareTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-AllowedQueuingTime          CRITICALITY reject TYPE AllowedQueuingTime          PRESENCE optional } |
    { ID id-UL-CCTrCH-InformationAddList-RL-ReconfPrepTDD CRITICALITY notify TYPE UL-CCTrCH-InformationAddList-RL-ReconfPrepTDD PRESENCE optional } |
    { ID id-UL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD CRITICALITY notify TYPE UL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD PRESENCE optional } |
    { ID id-UL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD CRITICALITY notify TYPE UL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD PRESENCE optional } |
    { ID id-DL-CCTrCH-InformationAddList-RL-ReconfPrepTDD CRITICALITY notify TYPE DL-CCTrCH-InformationAddList-RL-ReconfPrepTDD PRESENCE optional } |
    { ID id-DL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD CRITICALITY notify TYPE DL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD PRESENCE optional } |
    { ID id-DL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD CRITICALITY notify TYPE DL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD PRESENCE optional } |
    { ID id-TDD-DCHs-to-Modify          CRITICALITY reject TYPE TDD-DCHs-to-Modify          PRESENCE optional } |
    { ID id-DCHs-to-Add-TDD              CRITICALITY reject TYPE DCH-TDD-Information          PRESENCE optional } |
    { ID id-DCH-DeleteList-RL-ReconfPrepTDD CRITICALITY reject TYPE DCH-DeleteList-RL-ReconfPrepTDD PRESENCE optional } |
    { ID id-DSCH-ModifyList-RL-ReconfPrepTDD CRITICALITY reject TYPE DSCH-ModifyList-RL-ReconfPrepTDD PRESENCE optional } |
    { ID id-DSCHs-to-Add-TDD            CRITICALITY reject TYPE DSCH-TDD-Information          PRESENCE optional } |
    { ID id-DSCH-DeleteList-RL-ReconfPrepTDD CRITICALITY reject TYPE DSCH-DeleteList-RL-ReconfPrepTDD PRESENCE optional } |
    { ID id-USCH-ModifyList-RL-ReconfPrepTDD CRITICALITY reject TYPE USCH-ModifyList-RL-ReconfPrepTDD PRESENCE optional } |
    { ID id-USCHs-to-Add                CRITICALITY reject TYPE USCH-Information          PRESENCE optional } |
    { ID id-USCH-DeleteList-RL-ReconfPrepTDD CRITICALITY reject TYPE USCH-DeleteList-RL-ReconfPrepTDD PRESENCE optional },
    ...
}

```

```

UL-CCTrCH-InformationAddList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (0..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container { {UL-CCTrCH-
AddInformation-RL-ReconfPrepTDD-IEs} }

UL-CCTrCH-AddInformation-RL-ReconfPrepTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-UL-CCTrCH-AddInformation-RL-ReconfPrepTDD CRITICALITY notify TYPE UL-CCTrCH-AddInformation-RL-ReconfPrepTDD PRESENCE mandatory }
}

UL-CCTrCH-AddInformation-RL-ReconfPrepTDD ::= SEQUENCE {
  cCTrCH-ID CCTrCH-ID,
  tFCS TFCS,
  tFCI-Coding TFCI-Coding,
  punctureLimit PunctureLimit,
  iE-Extensions ProtocolExtensionContainer { {UL-CCTrCH-AddInformation-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
  ...
}

UL-CCTrCH-AddInformation-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-UL-SIRTarget CRITICALITY reject EXTENSION UL-SIR PRESENCE optional}|
  -- This IE shall be mandatory for 1.28Mcps TDD, not applicable for 3.84Mcps TDD or 7.68Mcps TDD.
  { ID id-TDD-TPC-UplinkStepSize-InformationAdd-LCR-RL-ReconfPrepTDD CRITICALITY reject EXTENSION TDD-TPC-UplinkStepSize-LCR PRESENCE optional
  },
  -- Mandatory for 1.28Mcps TDD, not applicable to 3.84Mcps TDD or 7.68Mcps TDD
  ...
}

UL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (0..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container { {UL-CCTrCH-
ModifyInformation-RL-ReconfPrepTDD-IEs} }

UL-CCTrCH-ModifyInformation-RL-ReconfPrepTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-UL-CCTrCH-ModifyInformation-RL-ReconfPrepTDD CRITICALITY notify TYPE UL-CCTrCH-ModifyInformation-RL-ReconfPrepTDD PRESENCE
  mandatory }
}

UL-CCTrCH-ModifyInformation-RL-ReconfPrepTDD ::= SEQUENCE {
  cCTrCH-ID CCTrCH-ID,
  tFCS TFCS OPTIONAL,
  tFCI-Coding TFCI-Coding OPTIONAL,
  punctureLimit PunctureLimit OPTIONAL,
  iE-Extensions ProtocolExtensionContainer { {UL-CCTrCH-ModifyInformation-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
  ...
}

UL-CCTrCH-ModifyInformation-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-UL-SIRTarget CRITICALITY reject EXTENSION UL-SIR PRESENCE optional}|
  -- This IE shall be applicable for 1.28Mcps TDD only.
  { ID id-TDD-TPC-UplinkStepSize-InformationModify-LCR-RL-ReconfPrepTDD CRITICALITY reject EXTENSION TDD-TPC-UplinkStepSize-LCR PRESENCE
  optional },
  -- Applicable to 1.28Mcps TDD only
  ...
}

UL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (0..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container { {UL-CCTrCH-
DeleteInformation-RL-ReconfPrepTDD-IEs} }

```

```

UL-CCTrCH-DeleteInformation-RL-ReconfPrepTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-UL-CCTrCH-DeleteInformation-RL-ReconfPrepTDD   CRITICALITY notify   TYPE UL-CCTrCH-DeleteInformation-RL-ReconfPrepTDD   PRESENCE
  mandatory   }
}

UL-CCTrCH-DeleteInformation-RL-ReconfPrepTDD ::= SEQUENCE {
  cCTrCH-ID           CCTrCH-ID,
  iE-Extensions       ProtocolExtensionContainer { {UL-CCTrCH-DeleteInformation-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
  ...
}

UL-CCTrCH-DeleteInformation-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

DL-CCTrCH-InformationAddList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (0..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container { {DL-CCTrCH-
AddInformation-RL-ReconfPrepTDD-IEs} }

DL-CCTrCH-AddInformation-RL-ReconfPrepTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-DL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD   CRITICALITY notify   TYPE DL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD PRESENCE
  mandatory   }
}

DL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD ::= SEQUENCE {
  cCTrCH-ID           CCTrCH-ID,
  tFCS                TFCS,
  tFCI-Coding         TFCI-Coding,
  punctureLimit       PunctureLimit,
  cCTrCH-TPCList      CCTrCH-TPCAddList-RL-ReconfPrepTDD OPTIONAL,
  iE-Extensions       ProtocolExtensionContainer { {DL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
  ...
}

DL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-TDD-TPC-DownlinkStepSize-InformationAdd-RL-ReconfPrepTDD   CRITICALITY reject   EXTENSION   TDD-TPC-DownlinkStepSize   PRESENCE optional
  },
  ...
}

CCTrCH-TPCAddList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF CCTrCH-TPCAddItem-RL-ReconfPrepTDD

CCTrCH-TPCAddItem-RL-ReconfPrepTDD ::= SEQUENCE {
  cCTrCH-ID           CCTrCH-ID,
  iE-Extensions       ProtocolExtensionContainer { { CCTrCH-TPCAddItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
  ...
}

CCTrCH-TPCAddItem-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

DL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (0..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container { {DL-CCTrCH-
ModifyInformation-RL-ReconfPrepTDD-IEs} }

```



```

DL-CCTrCH-ModifyInformation-RL-ReconfPrepTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-DL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD    CRITICALITY notify   TYPE DL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD  PRESENCE
  mandatory }
}

DL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
  cCTrCH-ID          CCTrCH-ID,
  tFCS                TFCS          OPTIONAL,
  tFCI-Coding         TFCI-Coding   OPTIONAL,
  punctureLimit       PunctureLimit OPTIONAL,
  cCTrCH-TPCList      CCTrCH-TPCModifyList-RL-ReconfPrepTDD  OPTIONAL,
  iE-Extensions       ProtocolExtensionContainer { {DL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
  ...
}

DL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-TDD-TPC-DownlinkStepSize-InformationModify-RL-ReconfPrepTDD  CRITICALITY reject   EXTENSION TDD-TPC-DownlinkStepSize  PRESENCE
  optional},
  ...
}

CCTrCH-TPCModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF CCTrCH-TPCModifyItem-RL-ReconfPrepTDD

CCTrCH-TPCModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
  cCTrCH-ID          CCTrCH-ID,
  iE-Extensions       ProtocolExtensionContainer { { CCTrCH-TPCModifyItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
  ...
}

CCTrCH-TPCModifyItem-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

DL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (0..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container { {DL-CCTrCH-
DeleteInformation-RL-ReconfPrepTDD-IEs} }

DL-CCTrCH-DeleteInformation-RL-ReconfPrepTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-DL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD    CRITICALITY notify   TYPE DL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD  PRESENCE
  mandatory }
}

DL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD ::= SEQUENCE {
  cCTrCH-ID          CCTrCH-ID,
  iE-Extensions       ProtocolExtensionContainer { {DL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
  ...
}

DL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

DCH-DeleteList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (0..maxNrOfDCHs)) OF DCH-DeleteItem-RL-ReconfPrepTDD

DCH-DeleteItem-RL-ReconfPrepTDD ::= SEQUENCE {

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    dCH-ID                DCH-ID,
    iE-Extensions         ProtocolExtensionContainer { {DCH-DeleteItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
    ...
}

DCH-DeleteItem-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DSCH-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE(0..maxNoOfDSCHs)) OF DSCH-ModifyItem-RL-ReconfPrepTDD

DSCH-ModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    dSCH-ID                DSCH-ID,
    dl-ccTrCHID           CTrCH-ID                OPTIONAL,
    trChSourceStatisticsDescriptor TrCH-SrcStatisticsDescr OPTIONAL,
    transportFormatSet     TransportFormatSet     OPTIONAL,
    allocationRetentionPriority AllocationRetentionPriority OPTIONAL,
    schedulingPriorityIndicator SchedulingPriorityIndicator OPTIONAL,
    bLER                   BLER                OPTIONAL,
    transportBearerRequestIndicator TransportBearerRequestIndicator,
    iE-Extensions         ProtocolExtensionContainer { {DSCH-ModifyItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
    ...
}

DSCH-ModifyItem-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-TrafficClass          CRITICALITY ignore EXTENSION TrafficClass          PRESENCE optional }|
    { ID id-BindingID             CRITICALITY ignore EXTENSION BindingID             PRESENCE optional }|
    -- Shall be ignored if bearer establishment with ALCAP.
    { ID id-TransportLayerAddress CRITICALITY ignore EXTENSION TransportLayerAddress PRESENCE optional }|
    -- Shall be ignored if bearer establishment with ALCAP.
    { ID id-TnlQos                CRITICALITY ignore EXTENSION TnlQos                PRESENCE optional },
    ...
}

DSCH-DeleteList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE(0..maxNoOfDSCHs)) OF DSCH-DeleteItem-RL-ReconfPrepTDD

DSCH-DeleteItem-RL-ReconfPrepTDD ::= SEQUENCE {
    dSCH-ID                DSCH-ID,
    iE-Extensions         ProtocolExtensionContainer { {DSCH-DeleteItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
    ...
}

DSCH-DeleteItem-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

USCH-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE(0..maxNoOfUSCHs)) OF USCH-ModifyItem-RL-ReconfPrepTDD

USCH-ModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    uSCH-ID                USCH-ID,
    ul-ccTrCHID           CTrCH-ID                OPTIONAL,
    trChSourceStatisticsDescriptor TrCH-SrcStatisticsDescr OPTIONAL,
    transportFormatSet     TransportFormatSet     OPTIONAL,

```

```

allocationRetentionPriority      AllocationRetentionPriority      OPTIONAL,
schedulingPriorityIndicator      SchedulingPriorityIndicator      OPTIONAL,
bLER                             BLER                             OPTIONAL,
transportBearerRequestIndicator  TransportBearerRequestIndicator,
rb-Info                          RB-Info                          OPTIONAL,
iE-Extensions                    ProtocolExtensionContainer { {USCH-ModifyItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
...
}

USCH-ModifyItem-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-TrafficClass          CRITICALITY ignore  EXTENSION TrafficClass          PRESENCE optional }|
  { ID id-BindingID            CRITICALITY ignore  EXTENSION BindingID            PRESENCE optional }|
  -- Shall be ignored if bearer establishment with ALCAP.
  { ID id-TransportLayerAddress CRITICALITY ignore  EXTENSION TransportLayerAddress PRESENCE optional }|
  -- Shall be ignored if bearer establishment with ALCAP.
  { ID id-TnlQos               CRITICALITY ignore  EXTENSION TnlQos               PRESENCE optional },
  ...
}

USCH-DeleteList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE(0..maxNoOfUSCHs)) OF USCH-DeleteItem-RL-ReconfPrepTDD

USCH-DeleteItem-RL-ReconfPrepTDD ::= SEQUENCE {
  uSCH-ID                       USCH-ID,
  iE-Extensions                 ProtocolExtensionContainer { {USCH-DeleteItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
  ...
}

USCH-DeleteItem-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

RadioLinkReconfigurationPrepareTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-PrimaryCCPCH-RSCP-RL-ReconfPrepTDD          CRITICALITY ignore  EXTENSION PrimaryCCPCH-RSCP PRESENCE optional }|
  { ID id-DL-TimeSlot-ISCP-Info-RL-ReconfPrepTDD      CRITICALITY ignore  EXTENSION DL-TimeSlot-ISCP-Info PRESENCE optional }|
  { ID id-DL-TimeSlot-ISCP-LCR-Information-RL-ReconfPrepTDD CRITICALITY ignore  EXTENSION DL-TimeSlot-ISCP-LCR-Information PRESENCE optional }|
  { ID id-HSDSCH-TDD-Information                      CRITICALITY reject  EXTENSION HSDSCH-TDD-Information PRESENCE optional }|
  { ID id-HSDSCH-Information-to-Modify                CRITICALITY reject  EXTENSION HSDSCH-Information-to-Modify PRESENCE optional }|
  { ID id-HSDSCH-MACdFlows-to-Add                    CRITICALITY reject  EXTENSION HSDSCH-MACdFlows-Information PRESENCE optional }|
  { ID id-HSDSCH-MACdFlows-to-Delete                 CRITICALITY reject  EXTENSION HSDSCH-MACdFlows-to-Delete PRESENCE optional }|
  { ID id-HSPDSCH-RL-ID                              CRITICALITY reject  EXTENSION RL-ID PRESENCE optional }|
  { ID id-PDSCH-RL-ID                                CRITICALITY ignore  EXTENSION RL-ID PRESENCE optional }|
  { ID id-UL-Synchronisation-Parameters-LCR          CRITICALITY ignore  EXTENSION UL-Synchronisation-Parameters-LCR PRESENCE optional }|
  -- Mandatory for 1.28Mcps TDD, Not Applicable to 3.84Mcps TDD or 7.68Mcps TDD
  { ID id-RL-Information-RL-ReconfPrepTDD           CRITICALITY ignore  EXTENSION RL-Information-RL-ReconfPrepTDD PRESENCE optional }|
  { ID id-PrimaryCCPCH-RSCP-Delta                   CRITICALITY ignore  EXTENSION PrimaryCCPCH-RSCP-Delta PRESENCE optional }|
  { ID id-E-DCH-Information-Reconfig                 CRITICALITY reject  EXTENSION E-DCH-Information-Reconfig PRESENCE optional }|
  { ID id-E-DCH-Serving-RL-ID                       CRITICALITY reject  EXTENSION RL-ID PRESENCE optional }|
  { ID id-E-DCH-768-Information-Reconfig             CRITICALITY reject  EXTENSION E-DCH-768-Information-Reconfig PRESENCE optional }|
  { ID id-E-DCH-LCR-Information-Reconfig             CRITICALITY reject  EXTENSION E-DCH-LCR-Information-Reconfig PRESENCE optional }|
  { ID id-NeedforIdleInterval                       CRITICALITY ignore  EXTENSION NeedforIdleInterval PRESENCE optional }|
  { ID id-CPC-InformationLCR                        CRITICALITY reject  EXTENSION CPC-InformationLCR PRESENCE optional }|
  { ID id-RNTI-Allocation-Indicator                 CRITICALITY ignore  EXTENSION RNTI-Allocation-Indicator PRESENCE optional },
}

```

```

}
...
}

RL-Information-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF RL-InformationIE-RL-ReconfPrepTDD

RL-InformationIE-RL-ReconfPrepTDD ::= SEQUENCE {
    rL-ID                               RL-ID,
    rL-Specific-DCH-Info                 RL-Specific-DCH-Info           OPTIONAL,
    iE-Extensions                         ProtocolExtensionContainer { { RL-InformationIE-RL-ReconfPrepTDD-ExtIEs } } OPTIONAL,
    ...
}

RL-InformationIE-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK RECONFIGURATION READY FDD
--
-- *****

RadioLinkReconfigurationReadyFDD ::= SEQUENCE {
    protocolIEs                         ProtocolIE-Container      {{RadioLinkReconfigurationReadyFDD-IEs}},
    protocolExtensions                 ProtocolExtensionContainer {{RadioLinkReconfigurationReadyFDD-Extensions}} OPTIONAL,
    ...
}

RadioLinkReconfigurationReadyFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationResponseList-RL-ReconfReadyFDD   CRITICALITY ignore TYPE RL-InformationResponseList-RL-ReconfReadyFDD   PRESENCE optional } |
    { ID id-CriticalityDiagnostics                         CRITICALITY ignore TYPE CriticalityDiagnostics           PRESENCE optional },
    ...
}

RL-InformationResponseList-RL-ReconfReadyFDD ::= SEQUENCE (SIZE (0..maxNrOfRLs)) OF ProtocolIE-Single-Container { {RL-InformationResponse-RL-ReconfReadyFDD-IEs} }

RL-InformationResponse-RL-ReconfReadyFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationResponseItem-RL-ReconfReadyFDD   CRITICALITY ignore TYPE RL-InformationResponseItem-RL-ReconfReadyFDD   PRESENCE mandatory }
}

RL-InformationResponseItem-RL-ReconfReadyFDD ::= SEQUENCE {
    rL-ID                               RL-ID,
    max-UL-SIR                           UL-SIR                               OPTIONAL,
    min-UL-SIR                            UL-SIR                               OPTIONAL,
    maximumDLTxPower                      DL-Power                             OPTIONAL,
    minimumDLTxPower                      DL-Power                             OPTIONAL,
    not-Used-secondary-CCPCH-Info         NULL                                  OPTIONAL,
    dl-CodeInformationList                 DL-CodeInformationList-RL-ReconfReadyFDD OPTIONAL,
    dCHInformationResponse                 DCH-InformationResponseList-RL-ReconfReadyFDD OPTIONAL,
    not-Used-dSCHsToBeAddedOrModified     NULL                                  OPTIONAL,
}

```

```

    iE-Extensions          ProtocolExtensionContainer { {RL-InformationResponseItem-RL-ReconfReadyFDD-ExtIEs} } OPTIONAL,
    ...
}

RL-InformationResponseItem-RL-ReconfReadyFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-DL-PowerBalancing-UpdatedIndicator          CRITICALITY ignore EXTENSION DL-PowerBalancing-UpdatedIndicator          PRESENCE optional }|
  { ID id-Primary-CPICH-Usage-For-Channel-Estimation CRITICALITY ignore EXTENSION Primary-CPICH-Usage-For-Channel-Estimation PRESENCE optional }|
  { ID id-Secondary-CPICH-Information-Change          CRITICALITY ignore EXTENSION Secondary-CPICH-Information-Change          PRESENCE optional }|
  { ID id-EDCH-FDD-InformationResponse                CRITICALITY ignore EXTENSION EDCH-FDD-InformationResponse                PRESENCE optional }|
  { ID id-EDCH-RLSet-Id                              CRITICALITY ignore EXTENSION RL-Set-ID                              PRESENCE optional }|
  { ID id-EDCH-FDD-DL-ControlChannelInformation       CRITICALITY ignore EXTENSION EDCH-FDD-DL-ControlChannelInformation       PRESENCE optional }|
  { ID id-F-DPCH-SlotFormat                          CRITICALITY ignore EXTENSION F-DPCH-SlotFormat                          PRESENCE optional }
},
...
}

DL-CodeInformationList-RL-ReconfReadyFDD ::= ProtocolIE-Single-Container { { DL-CodeInformationListIEs-RL-ReconfReadyFDD } }

DL-CodeInformationListIEs-RL-ReconfReadyFDD RNSAP-PROTOCOL-IES ::= {
  { ID id-FDD-DL-CodeInformation          CRITICALITY ignore TYPE FDD-DL-CodeInformation          PRESENCE mandatory }
}

DCH-InformationResponseList-RL-ReconfReadyFDD ::= ProtocolIE-Single-Container { { DCH-InformationResponseListIEs-RL-ReconfReadyFDD } }

DCH-InformationResponseListIEs-RL-ReconfReadyFDD RNSAP-PROTOCOL-IES ::= {
  { ID id-DCH-InformationResponse          CRITICALITY ignore TYPE DCH-InformationResponse          PRESENCE mandatory }
}

RadioLinkReconfigurationReadyFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-HSDSCH-RNTI          CRITICALITY ignore EXTENSION HSDSCH-RNTI          PRESENCE optional }|
  { ID id-HSDSCH-FDD-Information-Response          CRITICALITY ignore EXTENSION HSDSCH-FDD-Information-Response          PRESENCE optional }|
  { ID id-MACHs-ResetIndicator          CRITICALITY ignore EXTENSION MACHs-ResetIndicator          PRESENCE optional }|
  { ID id-Fast-Reconfiguration-Permission          CRITICALITY ignore EXTENSION Fast-Reconfiguration-Permission          PRESENCE optional }|
  { ID id-Continuous-Packet-Connectivity-HS-SCCH-Less-Information-Response          CRITICALITY ignore EXTENSION Continuous-Packet-Connectivity-
HS-SCCH-Less-Information-Response          PRESENCE optional }|
  { ID id-Additional-HS-Cell-RL-Reconf-Response          CRITICALITY ignore EXTENSION Additional-HS-Cell-RL-Reconf-Response          PRESENCE optional },
  ...
}

Additional-HS-Cell-RL-Reconf-Response ::= SEQUENCE (SIZE (1..maxNrOfHSDSCH-1)) OF Additional-HS-Cell-RL-Reconf-Response-ItemIEs

Additional-HS-Cell-RL-Reconf-Response-ItemIEs ::=SEQUENCE{
  hSPDSCH-RL-ID          RL-ID,
  hSDSCH-RNTI          HSDSCH-RNTI,
  hS-DSCH-FDD-Secondary-Serving-Information-Response          HS-DSCH-FDD-Secondary-Serving-Information-Response,
  iE-Extensions          ProtocolExtensionContainer { { Additional-HS-Cell-RL-Reconf-Response-ItemIEs-ExtIEs } } OPTIONAL,
  ...
}

```

```

}
Additional-HS-Cell-RL-Reconf-Response-ItemIEs-ExtIEs  RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}
-- *****
--
-- RADIO LINK RECONFIGURATION READY TDD
--
-- *****

RadioLinkReconfigurationReadyTDD ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container    {{RadioLinkReconfigurationReadyTDD-IEs}},
  protocolExtensions  ProtocolExtensionContainer {{RadioLinkReconfigurationReadyTDD-Extensions}}      OPTIONAL,
  ...
}

RadioLinkReconfigurationReadyTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-InformationResponse-RL-ReconfReadyTDD
    CRITICALITY ignore TYPE RL-InformationResponse-RL-ReconfReadyTDD PRESENCE optional } |
  --This RL-InformationResponse-RL-ReconfReadyTDD is for the first RL repetition in the list.
  --Repetitions 2 and on are defined in Multiple-RL-InformationResponse-RL-ReconfReadyTDD.
  { ID id-CriticalityDiagnostics
    CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
  ...
}

RL-InformationResponse-RL-ReconfReadyTDD ::= SEQUENCE {
  rL-ID                RL-ID,
  max-UL-SIR           UL-SIR          OPTIONAL,
  min-UL-SIR           UL-SIR          OPTIONAL,
  maximumDLTxPower    DL-Power        OPTIONAL,
  minimumDLTxPower    DL-Power        OPTIONAL,
  secondary-CCPCH-Info-TDD Secondary-CCPCH-Info-TDD OPTIONAL,
  ul-CCTrCH-Information UL-CCTrCH-InformationList-RL-ReconfReadyTDD OPTIONAL,
  dl-CCTrCH-Information DL-CCTrCH-InformationList-RL-ReconfReadyTDD OPTIONAL,
  dCHInformationResponse DCH-InformationResponseList-RL-ReconfReadyTDD OPTIONAL,
  dSCHsToBeAddedOrModified DSCHToBeAddedOrModified-RL-ReconfReadyTDD OPTIONAL,
  uSCHsToBeAddedOrModified USCHToBeAddedOrModified-RL-ReconfReadyTDD OPTIONAL,
  iE-Extensions       ProtocolExtensionContainer { {RL-InformationResponse-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
  ...
}

RL-InformationResponse-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-UL-TimingAdvanceCtrl-LCR
    CRITICALITY ignore EXTENSION UL-TimingAdvanceCtrl-LCR PRESENCE optional } |
  --For 1.28Mcps TDD only
  { ID id-secondary-LCR-CCPCH-Info-TDD
    CRITICALITY ignore EXTENSION Secondary-LCR-CCPCH-Info-TDD PRESENCE optional } |
  --For 1.28Mcps TDD only
  { ID id-secondary-CCPCH-Info-RL-ReconfReadyTDD768
    CRITICALITY ignore EXTENSION Secondary-CCPCH-Info-TDD768 PRESENCE optional } |
  { ID id-UARFCNforNt
    CRITICALITY ignore EXTENSION UARFCN PRESENCE optional },
  -- Applicable to 1.28Mcps TDD only
  ...
}

```

```

UL-CCTrCH-InformationList-RL-ReconfReadyTDD ::= ProtocolIE-Single-Container {{UL-CCTrCHInformationListIEs-RL-ReconfReadyTDD}}

UL-CCTrCHInformationListIEs-RL-ReconfReadyTDD RNSAP-PROTOCOL-IES ::= {
  { ID id-UL-CCTrCH-InformationListIE-RL-ReconfReadyTDD CRITICALITY ignore TYPE UL-CCTrCHInformationListIE-RL-ReconfReadyTDD PRESENCE
  mandatory }
}

UL-CCTrCHInformationListIE-RL-ReconfReadyTDD ::= SEQUENCE (SIZE (0..maxNrOfCCTrCHs)) OF UL-CCTrCH-InformationItem-RL-ReconfReadyTDD

UL-CCTrCH-InformationItem-RL-ReconfReadyTDD ::= SEQUENCE {
  cCTrCH-ID CCTrCH-ID,
  ul-DPCH-AddInformation UL-DPCH-InformationAddList-RL-ReconfReadyTDD OPTIONAL,
  --For 3.84Mcps TDD only
  ul-DPCH-ModifyInformation UL-DPCH-InformationModifyList-RL-ReconfReadyTDD OPTIONAL,
  ul-DPCH-DeleteInformation UL-DPCH-InformationDeleteList-RL-ReconfReadyTDD OPTIONAL,
  iE-Extensions ProtocolExtensionContainer { {UL-CCTrCH-InformationItem-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
  ...
}

UL-CCTrCH-InformationItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-UL-DPCH-LCR-InformationAddListIE-RL-ReconfReadyTDD CRITICALITY ignore EXTENSION UL-DPCH-LCR-InformationAddList-RL-
  ReconfReadyTDD PRESENCE optional }
  --For 1.28Mcps TDD only
  { ID id-UL-DPCH-InformationAddListIE-RL-ReconfReadyTDD768 CRITICALITY ignore EXTENSION UL-DPCH-InformationAddList-RL-
  ReconfReadyTDD768 PRESENCE optional },
  --For 7.68Mcps TDD only
  ...
}

UL-DPCH-LCR-InformationAddList-RL-ReconfReadyTDD ::= SEQUENCE {
  repetitionPeriod RepetitionPeriod,
  repetitionLength RepetitionLength,
  tDD-DPCHOffset TDD-DPCHOffset,
  uL-TimeslotLCR-Info UL-TimeslotLCR-Information,
  iE-Extensions ProtocolExtensionContainer { {UL-DPCH-LCR-InformationAddItem-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
  ...
}

UL-DPCH-LCR-InformationAddItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

UL-DPCH-InformationAddList-RL-ReconfReadyTDD ::= ProtocolIE-Single-Container {{UL-DPCH-InformationAddListIEs-RL-ReconfReadyTDD}}

UL-DPCH-InformationAddListIEs-RL-ReconfReadyTDD RNSAP-PROTOCOL-IES ::= {
  { ID id-UL-DPCH-InformationAddListIE-RL-ReconfReadyTDD CRITICALITY ignore TYPE UL-DPCH-InformationAddListIE-RL-ReconfReadyTDD PRESENCE
  optional }
}

UL-DPCH-InformationAddListIE-RL-ReconfReadyTDD ::= SEQUENCE {
  repetitionPeriod RepetitionPeriod,
  repetitionLength RepetitionLength,
  tDD-DPCHOffset TDD-DPCHOffset,
  rxTimingDeviationForTA RxTimingDeviationForTA OPTIONAL,

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    uL-Timeslot-Information      UL-Timeslot-Information,
    iE-Extensions                ProtocolExtensionContainer { {UL-DPCH-InformationAddItem-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
    ...
}

UL-DPCH-InformationAddItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-RxTimingDeviationForTAext          CRITICALITY ignore          EXTENSION RxTimingDeviationForTAext          PRESENCE optional },
  ...
}

UL-DPCH-InformationAddList-RL-ReconfReadyTDD768 ::= SEQUENCE {
  repetitionPeriod              RepetitionPeriod,
  repetitionLength              RepetitionLength,
  tDD-DPCHOffset                TDD-DPCHOffset,
  rxTimingDeviationForTA768     RxTimingDeviationForTA768          OPTIONAL,
  uL-Timeslot-Information768     UL-Timeslot-Information768,
  iE-Extensions                ProtocolExtensionContainer { {UL-DPCH-InformationAddItem-RL-ReconfReadyTDD768-ExtIEs} } OPTIONAL,
  ...
}

UL-DPCH-InformationAddItem-RL-ReconfReadyTDD768-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

UL-DPCH-InformationModifyList-RL-ReconfReadyTDD ::= ProtocolIE-Single-Container {{UL-DPCH-InformationModifyListIEs-RL-ReconfReadyTDD}}

UL-DPCH-InformationModifyListIEs-RL-ReconfReadyTDD RNSAP-PROTOCOL-IES ::= {
  { ID id-UL-DPCH-InformationModifyListIE-RL-ReconfReadyTDD  CRITICALITY ignore  TYPE UL-DPCH-InformationModifyListIE-RL-ReconfReadyTDD
  PRESENCE mandatory }
}

UL-DPCH-InformationModifyListIE-RL-ReconfReadyTDD ::= SEQUENCE {
  repetitionPeriod              RepetitionPeriod          OPTIONAL,
  repetitionLength              RepetitionLength          OPTIONAL,
  tDD-DPCHOffset                TDD-DPCHOffset          OPTIONAL,
  uL-Timeslot-InformationModifyList-RL-ReconfReadyTDD        UL-Timeslot-InformationModifyList-RL-ReconfReadyTDD        OPTIONAL,
  --For 3.84Mcps TDD only
  iE-Extensions                ProtocolExtensionContainer { {UL-DPCH-InformationModifyItem-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
  ...
}

UL-DPCH-InformationModifyItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-UL-Timeslot-LCR-InformationModifyList-RL-ReconfReadyTDD  CRITICALITY ignore  EXTENSION UL-TimeslotLCR-InformationModifyList-RL-
  ReconfReadyTDD          PRESENCE optional }|
  --For 1.28Mcps TDD only
  { ID id-UL-Timeslot-InformationModifyList-RL-ReconfReadyTDD768  CRITICALITY ignore  EXTENSION UL-Timeslot-InformationModifyList-RL-
  ReconfReadyTDD768          PRESENCE optional },
  --For 7.68Mcps TDD only
  ...
}

UL-TimeslotLCR-InformationModifyList-RL-ReconfReadyTDD ::= SEQUENCE ( SIZE (1..maxNrOfTsLCR)) OF UL-TimeslotLCR-InformationModifyItem-RL-
ReconfReadyTDD

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UL-TimeslotLCR-InformationModifyItem-RL-ReconfReadyTDD ::= SEQUENCE {
    timeSlotLCR                TimeSlotLCR,
    midambleShiftLCR           MidambleShiftLCR           OPTIONAL,
    tFCI-Presence              TFCI-Presence              OPTIONAL,
    tDD-uL-Code-LCR-Information TDD-UL-Code-LCR-InformationModifyList-RL-ReconfReadyTDD OPTIONAL,
    iE-Extensions              ProtocolExtensionContainer { {UL-TimeslotLCR-InformationModifyItem-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
    ...
}

TDD-UL-Code-LCR-InformationModifyList-RL-ReconfReadyTDD ::= SEQUENCE ( SIZE (1..maxNrOfDPCHsLCR)) OF TDD-UL-Code-LCR-InformationModifyItem-RL-ReconfReadyTDD

TDD-UL-Code-LCR-InformationModifyItem-RL-ReconfReadyTDD ::= SEQUENCE {
    dPCH-ID                    DPCH-ID,
    tDD-ChannelisationCodeLCR  TDD-ChannelisationCodeLCR          OPTIONAL,
    iE-Extensions              ProtocolExtensionContainer { {TDD-UL-Code-LCR-InformationModifyItem-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
    ...
}

TDD-UL-Code-LCR-InformationModifyItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-TDD-UL-DPCH-TimeSlotFormatModifyItem-LCR-RL-ReconfReadyTDD  CRITICALITY  reject  EXTENSION TDD-UL-DPCH-TimeSlotFormat-LCR
    PRESENCE optional},
    ...
}

UL-TimeslotLCR-InformationModifyItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-Timeslot-InformationModifyList-RL-ReconfReadyTDD ::= SEQUENCE ( SIZE (1..maxNrOfTS)) OF UL-Timeslot-InformationModifyItem-RL-ReconfReadyTDD

UL-Timeslot-InformationModifyItem-RL-ReconfReadyTDD ::= SEQUENCE {
    timeSlot                TimeSlot,
    midambleShiftAndBurstType MidambleShiftAndBurstType          OPTIONAL,
    tFCI-Presence           TFCI-Presence              OPTIONAL,
    uL-Code-Information     TDD-UL-Code-InformationModifyList-RL-ReconfReadyTDD          OPTIONAL,
    iE-Extensions           ProtocolExtensionContainer { {UL-Timeslot-InformationModifyItem-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
    ...
}

UL-Timeslot-InformationModifyItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

TDD-UL-Code-InformationModifyList-RL-ReconfReadyTDD ::= SEQUENCE ( SIZE (1..maxNrOfDPCHs)) OF TDD-UL-Code-InformationModifyItem-RL-ReconfReadyTDD

TDD-UL-Code-InformationModifyItem-RL-ReconfReadyTDD ::= SEQUENCE {
    dPCH-ID                    DPCH-ID,
    tDD-ChannelisationCode     TDD-ChannelisationCode          OPTIONAL,
    iE-Extensions              ProtocolExtensionContainer { {TDD-UL-Code-InformationModifyItem-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
    ...
}

TDD-UL-Code-InformationModifyItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {

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}
...
}
UL-Timeslot-InformationModifyList-RL-ReconfReadyTDD768 ::= SEQUENCE ( SIZE (1..maxNrOfTS)) OF UL-Timeslot-InformationModifyItem-RL-ReconfReadyTDD768
UL-Timeslot-InformationModifyItem-RL-ReconfReadyTDD768 ::= SEQUENCE {
    timeSlot                TimeSlot,
    midambleShiftAndBurstType768 MidambleShiftAndBurstType768 OPTIONAL,
    tFCI-Presence            TFCI-Presence OPTIONAL,
    uL-Code-Information768    TDD-UL-Code-InformationModifyList-RL-ReconfReadyTDD768 OPTIONAL,
    iE-Extensions            ProtocolExtensionContainer { {UL-Timeslot-InformationModifyItem-RL-ReconfReadyTDD768-ExtIEs} } OPTIONAL,
    ...
}
UL-Timeslot-InformationModifyItem-RL-ReconfReadyTDD768-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
TDD-UL-Code-InformationModifyList-RL-ReconfReadyTDD768 ::= SEQUENCE ( SIZE (1..maxNrOfDPCHs768)) OF TDD-UL-Code-InformationModifyItem-RL-ReconfReadyTDD768
TDD-UL-Code-InformationModifyItem-RL-ReconfReadyTDD768 ::= SEQUENCE {
    dPCH-ID                DPCH-ID,
    tDD-ChannelisationCode768 TDD-ChannelisationCode768 OPTIONAL,
    iE-Extensions            ProtocolExtensionContainer { {TDD-UL-Code-InformationModifyItem-RL-ReconfReadyTDD768-ExtIEs} } OPTIONAL,
    ...
}
TDD-UL-Code-InformationModifyItem-RL-ReconfReadyTDD768-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
UL-DPCH-InformationDeleteList-RL-ReconfReadyTDD ::= ProtocolIE-Single-Container {{UL-DPCH-InformationDeleteListIEs-RL-ReconfReadyTDD}}
UL-DPCH-InformationDeleteListIEs-RL-ReconfReadyTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-UL-DPCH-InformationDeleteListIE-RL-ReconfReadyTDD CRITICALITY ignore TYPE UL-DPCH-InformationDeleteListIE-RL-ReconfReadyTDD
    PRESENCE mandatory }
}
UL-DPCH-InformationDeleteListIE-RL-ReconfReadyTDD ::= SEQUENCE (SIZE (0..maxNrOfDPCHs)) OF UL-DPCH-InformationDeleteItem-RL-ReconfReadyTDD
UL-DPCH-InformationDeleteItem-RL-ReconfReadyTDD ::= SEQUENCE {
    dPCH-ID                DPCH-ID,
    iE-Extensions            ProtocolExtensionContainer { {UL-DPCH-InformationDeleteList-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
    ...
}
UL-DPCH-InformationDeleteList-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
DL-CCTrCH-InformationList-RL-ReconfReadyTDD ::= ProtocolIE-Single-Container {{DL-CCTrCHInformationListIEs-RL-ReconfReadyTDD}}

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DL-CCTrCHInformationListIEs-RL-ReconfReadyTDD RNSAP-PROTOCOL-IES ::= {
  { ID id-DL-CCTrCH-InformationListIE-RL-ReconfReadyTDD  CRITICALITY ignore  TYPE DL-CCTrCHInformationListIE-RL-ReconfReadyTDD  PRESENCE
mandatory }
}

DL-CCTrCHInformationListIE-RL-ReconfReadyTDD ::= SEQUENCE (SIZE (0..maxNrOfCCTrCHs)) OF DL-CCTrCH-InformationItem-RL-ReconfReadyTDD

DL-CCTrCH-InformationItem-RL-ReconfReadyTDD ::= SEQUENCE {
  cCTrCH-ID                CCTrCH-ID,
  dl-DPCH-AddInformation    DL-DPCH-InformationAddList-RL-ReconfReadyTDD          OPTIONAL,
  --For 3.84Mcps TDD only
  dl-DPCH-ModifyInformation DL-DPCH-InformationModifyList-RL-ReconfReadyTDD      OPTIONAL,
  dl-DPCH-DeleteInformation DL-DPCH-InformationDeleteList-RL-ReconfReadyTDD      OPTIONAL,
  iE-Extensions            ProtocolExtensionContainer { {DL-CCTrCH-InformationItem-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
  ...
}

DL-CCTrCH-InformationItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-DL-DPCH-LCR-InformationAddListIE-RL-ReconfReadyTDD  CRITICALITY ignore  EXTENSION  DL-DPCH-LCR-InformationAddList-RL-
ReconfReadyTDD  PRESENCE optional}|
  --For 1.28Mcps TDD only
  { ID id-CCTrCH-Maximum-DL-Power-RL-ReconfReadyTDD          CRITICALITY ignore  EXTENSION DL-Power  PRESENCE optional
}|
  -- Applicable to 3.84Mcps TDD and 7.68Mcps TDD only, this is a DCH type CCTrCH power
  { ID id-CCTrCH-Minimum-DL-Power-RL-ReconfReadyTDD          CRITICALITY ignore  EXTENSION DL-Power  PRESENCE optional
}|
  -- Applicable to 3.84Mcps TDD and 7.68Mcps TDD only, this is a DCH type CCTrCH power
  { ID id-DL-DPCH-InformationAddListIE-RL-ReconfReadyTDD768  CRITICALITY ignore  EXTENSION DL-DPCH-InformationAddList-RL-
ReconfReadyTDD768  PRESENCE optional}|
  --For 7.68Mcps TDD only
  { ID id-DL-DPCH-InformationDeleteList768-RL-ReconfReadyTDD  CRITICALITY ignore  EXTENSION DL-DPCH-InformationDeleteList768-RL-
ReconfReadyTDD  PRESENCE optional},
  ...
}

DL-DPCH-LCR-InformationAddList-RL-ReconfReadyTDD ::= SEQUENCE {
  repetitionPeriod          RepetitionPeriod,
  repetitionLength          RepetitionLength,
  tDD-DPCHOffset           TDD-DPCHOffset,
  dL-TimeslotLCR-Info       DL-TimeslotLCR-Information,
  iE-Extensions            ProtocolExtensionContainer { {DL-DPCH-LCR-InformationAddItem-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
  ...
}

DL-DPCH-LCR-InformationAddItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

DL-DPCH-InformationAddList-RL-ReconfReadyTDD ::= ProtocolIE-Single-Container {{DL-DPCH-InformationAddListIEs-RL-ReconfReadyTDD}}

DL-DPCH-InformationAddListIEs-RL-ReconfReadyTDD RNSAP-PROTOCOL-IES ::= {
  { ID id-DL-DPCH-InformationAddListIE-RL-ReconfReadyTDD  CRITICALITY ignore  TYPE DL-DPCH-InformationAddListIE-RL-ReconfReadyTDD  PRESENCE
mandatory }
}

```

```

DL-DPCH-InformationAddListIE-RL-ReconfReadyTDD ::= SEQUENCE {
    repetitionPeriod          RepetitionPeriod,
    repetitionLength          RepetitionLength,
    tDD-DPCHOffset            TDD-DPCHOffset,
    dL-Timeslot-Information    DL-Timeslot-Information,
    iE-Extensions              ProtocolExtensionContainer { {DL-DPCH-InformationAddItem-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
    ...
}

DL-DPCH-InformationAddItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-InformationAddList-RL-ReconfReadyTDD768 ::= SEQUENCE {
    repetitionPeriod          RepetitionPeriod,
    repetitionLength          RepetitionLength,
    tDD-DPCHOffset            TDD-DPCHOffset,
    dL-Timeslot-Information768 DL-Timeslot-Information768,
    iE-Extensions              ProtocolExtensionContainer { {DL-DPCH-InformationAddItem-RL-ReconfReadyTDD768-ExtIEs} } OPTIONAL,
    ...
}

DL-DPCH-InformationAddItem-RL-ReconfReadyTDD768-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-InformationModifyList-RL-ReconfReadyTDD ::= ProtocolIE-Single-Container {{DL-DPCH-InformationModifyListIEs-RL-ReconfReadyTDD}}

DL-DPCH-InformationModifyListIEs-RL-ReconfReadyTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-DPCH-InformationModifyListIE-RL-ReconfReadyTDD    CRITICALITY ignore    TYPE DL-DPCH-InformationModifyListIE-RL-ReconfReadyTDD
    PRESENCE mandatory }
}

DL-DPCH-InformationModifyListIE-RL-ReconfReadyTDD ::= SEQUENCE {
    repetitionPeriod          RepetitionPeriod          OPTIONAL,
    repetitionLength          RepetitionLength          OPTIONAL,
    tDD-DPCHOffset            TDD-DPCHOffset            OPTIONAL,
    dL-Timeslot-InformationModifyList-RL-ReconfReadyTDD        DL-Timeslot-InformationModifyList-RL-ReconfReadyTDD        OPTIONAL,
    --For 3.84Mcps TDD only
    iE-Extensions              ProtocolExtensionContainer { {DL-DPCH-InformationModifyItem-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
    ...
}

DL-DPCH-InformationModifyItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-DL-Timeslot-LCR-InformationModifyList-RL-ReconfReadyTDD    CRITICALITY ignore    EXTENSION DL-TimeslotLCR-InformationModifyList-RL-
    ReconfReadyTDD    PRESENCE optional }
    --For 1.28Mcps TDD only
    { ID id-DL-Timeslot-InformationModifyList-RL-ReconfReadyTDD768    CRITICALITY ignore    EXTENSION DL-Timeslot-InformationModifyList-RL-
    ReconfReadyTDD768    PRESENCE optional },
    --For 7.68Mcps TDD only
    ...
}

```

DL-TimeslotLCR-InformationModifyList-RL-ReconfReadyTDD ::= SEQUENCE ( SIZE (1..maxNrOfTsLCR)) OF DL-TimeslotLCR-InformationModifyItem-RL-ReconfReadyTDD

```
DL-TimeslotLCR-InformationModifyItem-RL-ReconfReadyTDD ::= SEQUENCE {
    timeSlotLCR                TimeSlotLCR,
    midambleShiftLCR           MidambleShiftLCR           OPTIONAL,
    tFCI-Presence              TFCI-Presence              OPTIONAL,
    tDD-dL-Code-LCR-Information TDD-DL-Code-LCR-InformationModifyList-RL-ReconfReadyTDD OPTIONAL,
    iE-Extensions              ProtocolExtensionContainer { {DL-TimeslotLCR-InformationModifyItem-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
    ...
}
```

TDD-DL-Code-LCR-InformationModifyList-RL-ReconfReadyTDD ::= SEQUENCE ( SIZE (1..maxNrOfDPCHsLCR)) OF TDD-DL-Code-LCR-InformationModifyItem-RL-ReconfReadyTDD

```
TDD-DL-Code-LCR-InformationModifyItem-RL-ReconfReadyTDD ::= SEQUENCE {
    dPCH-ID                    DPCH-ID,
    tDD-ChannelisationCodeLCR  TDD-ChannelisationCodeLCR   OPTIONAL,
    iE-Extensions              ProtocolExtensionContainer { {TDD-DL-Code-LCR-InformationModifyItem-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
    ...
}
```

```
TDD-DL-Code-LCR-InformationModifyItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-TDD-DL-DPCH-TimeSlotFormatModifyItem-LCR-RL-ReconfReadyTDD    CRITICALITY reject      EXTENSION TDD-DL-DPCH-TimeSlotFormat-LCR
    PRESENCE optional},
    ...
}
```

```
DL-TimeslotLCR-InformationModifyItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-Maximum-DL-Power-TimeSlotLCR-InformationModifyItem-RL-ReconfReadyTDD CRITICALITY ignore EXTENSION DL-Power PRESENCE optional } |
    { ID id-Minimum-DL-Power-TimeSlotLCR-InformationModifyItem-RL-ReconfReadyTDD CRITICALITY ignore EXTENSION DL-Power PRESENCE optional },
    ...
}
```

DL-Timeslot-InformationModifyList-RL-ReconfReadyTDD ::= SEQUENCE ( SIZE (1..maxNrOfTs)) OF DL-Timeslot-InformationModifyItem-RL-ReconfReadyTDD

```
DL-Timeslot-InformationModifyItem-RL-ReconfReadyTDD ::= SEQUENCE {
    timeSlot                TimeSlot,
    midambleShiftAndBurstType MidambleShiftAndBurstType           OPTIONAL,
    tFCI-Presence           TFCI-Presence           OPTIONAL,
    dL-Code-Information     TDD-DL-Code-InformationModifyList-RL-ReconfReadyTDD OPTIONAL,
    iE-Extensions           ProtocolExtensionContainer { {DL-Timeslot-InformationModifyItem-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
    ...
}
```

```
DL-Timeslot-InformationModifyItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

TDD-DL-Code-InformationModifyList-RL-ReconfReadyTDD ::= SEQUENCE ( SIZE (1..maxNrOfDPCHs)) OF TDD-DL-Code-InformationModifyItem-RL-ReconfReadyTDD

```
TDD-DL-Code-InformationModifyItem-RL-ReconfReadyTDD ::= SEQUENCE {
    dPCH-ID                    DPCH-ID,
    tDD-ChannelisationCode     TDD-ChannelisationCode   OPTIONAL,
```

```

    iE-Extensions          ProtocolExtensionContainer { {TDD-DL-Code-InformationModifyItem-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
    ...
}

TDD-DL-Code-InformationModifyItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-TDD-DL-DPCH-TimeSlotFormatModifyItem-LCR-RL-ReconfReadyTDD  CRITICALITY  reject  EXTENSION TDD-DL-DPCH-TimeSlotFormat-LCR
  PRESENCE optional},
  -- This IE shall not be used
  ...
}

DL-TimeSlot-InformationModifyList-RL-ReconfReadyTDD768 ::= SEQUENCE ( SIZE (1..maxNrOfTS)) OF DL-TimeSlot-InformationModifyItem-RL-ReconfReadyTDD768

DL-TimeSlot-InformationModifyItem-RL-ReconfReadyTDD768 ::= SEQUENCE {
  timeSlot                TimeSlot,
  midambleShiftAndBurstType768  MidambleShiftAndBurstType768          OPTIONAL,
  tFCI-Presence           TFCI-Presence          OPTIONAL,
  dL-Code-Information768  TDD-DL-Code-InformationModifyList-RL-ReconfReadyTDD768  OPTIONAL,
  iE-Extensions          ProtocolExtensionContainer { {DL-TimeSlot-InformationModifyItem-RL-ReconfReadyTDD768-ExtIEs} } OPTIONAL,
  ...
}

DL-TimeSlot-InformationModifyItem-RL-ReconfReadyTDD768-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

TDD-DL-Code-InformationModifyList-RL-ReconfReadyTDD768 ::= SEQUENCE ( SIZE (1..maxNrOfDPCHs768)) OF TDD-DL-Code-InformationModifyItem-RL-ReconfReadyTDD768

TDD-DL-Code-InformationModifyItem-RL-ReconfReadyTDD768 ::= SEQUENCE {
  dPCH-ID768              DPCH-ID768,
  tDD-ChannelisationCode768  TDD-ChannelisationCode768          OPTIONAL,
  iE-Extensions          ProtocolExtensionContainer { {TDD-DL-Code-InformationModifyItem-RL-ReconfReadyTDD768-ExtIEs} } OPTIONAL,
  ...
}

TDD-DL-Code-InformationModifyItem-RL-ReconfReadyTDD768-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

DL-DPCH-InformationDeleteList-RL-ReconfReadyTDD ::= ProtocolIE-Single-Container {{DL-DPCH-InformationDeleteListIEs-RL-ReconfReadyTDD}}

DL-DPCH-InformationDeleteListIEs-RL-ReconfReadyTDD RNSAP-PROTOCOL-IES ::= {
  { ID id-DL-DPCH-InformationDeleteListIE-RL-ReconfReadyTDD  CRITICALITY ignore  TYPE DL-DPCH-InformationDeleteListIE-RL-ReconfReadyTDD
  PRESENCE mandatory }
}

DL-DPCH-InformationDeleteListIE-RL-ReconfReadyTDD ::= SEQUENCE (SIZE (0..maxNrOfDPCHs)) OF DL-DPCH-InformationDeleteItem-RL-ReconfReadyTDD

DL-DPCH-InformationDeleteItem-RL-ReconfReadyTDD ::= SEQUENCE {
  dPCH-ID                DPCH-ID,
  iE-Extensions          ProtocolExtensionContainer { {DL-DPCH-InformationDeleteList-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
  ...
}

```

```

DL-DPCH-InformationDeleteList-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

DL-DPCH-InformationDeleteList768-RL-ReconfReadyTDD ::= SEQUENCE (SIZE (0..maxNrOfDPCHs768)) OF DL-DPCH-InformationDeleteItem768-RL-ReconfReadyTDD

DL-DPCH-InformationDeleteItem768-RL-ReconfReadyTDD ::= SEQUENCE {
  dPCH-ID768                DPCH-ID768,
  iE-Extensions             ProtocolExtensionContainer { {DL-DPCH-InformationDeleteList768-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
  ...
}

DL-DPCH-InformationDeleteList768-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

DCH-InformationResponseList-RL-ReconfReadyTDD                ::= ProtocolIE-Single-Container { {DCH-InformationResponseListIEs-RL-ReconfReadyTDD} }

DCH-InformationResponseListIEs-RL-ReconfReadyTDD RNSAP-PROTOCOL-IES ::= {
  { ID id-DCH-InformationResponse      CRITICALITY ignore TYPE DCH-InformationResponse      PRESENCE mandatory }
}

DSCHToBeAddedOrModified-RL-ReconfReadyTDD                ::= ProtocolIE-Single-Container { {DSCHToBeAddedOrModifiedIEs-RL-ReconfReadyTDD} }

DSCHToBeAddedOrModifiedIEs-RL-ReconfReadyTDD RNSAP-PROTOCOL-IES ::= {
  { ID id-DSCHToBeAddedOrModifiedList-RL-ReconfReadyTDD  CRITICALITY ignore TYPE DSCHToBeAddedOrModifiedList-RL-ReconfReadyTDD  PRESENCE
mandatory }
}

DSCHToBeAddedOrModifiedList-RL-ReconfReadyTDD ::= SEQUENCE (SIZE (0..maxNoOfDSCHs)) OF DSCHToBeAddedOrModifiedItem-RL-ReconfReadyTDD

DSCHToBeAddedOrModifiedItem-RL-ReconfReadyTDD ::= SEQUENCE {
  dsch-ID                DSCH-ID,
  transportFormatManagement TransportFormatManagement,
  dsch-FlowControlInformation DSCH-FlowControlInformation,
  bindingID              BindingID OPTIONAL,
  transportLayerAddress  TransportLayerAddress OPTIONAL,
  iE-Extensions          ProtocolExtensionContainer { {DSCHToBeAddedOrModifiedItem-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
  ...
}

DSCHToBeAddedOrModifiedItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

USCHToBeAddedOrModified-RL-ReconfReadyTDD                ::= ProtocolIE-Single-Container { {USCHToBeAddedOrModifiedIEs-RL-ReconfReadyTDD} }
}USCHToBeAddedOrModifiedIEs-RL-ReconfReadyTDD RNSAP-PROTOCOL-IES ::= {
  { ID id-USCHToBeAddedOrModifiedList-RL-ReconfReadyTDD  CRITICALITY ignore TYPE USCHToBeAddedOrModifiedList-RL-ReconfReadyTDD  PRESENCE
mandatory }
}

USCHToBeAddedOrModifiedList-RL-ReconfReadyTDD ::= SEQUENCE (SIZE (0..maxNoOfUSCHs)) OF USCHToBeAddedOrModifiedItem-RL-ReconfReadyTDD

```

```

USCHToBeAddedOrModifiedItem-RL-ReconfReadyTDD ::= SEQUENCE {
    uSCH-ID                USCH-ID,
    transportFormatManagement TransportFormatManagement,
    bindingID              BindingID OPTIONAL,
    transportLayerAddress  TransportLayerAddress OPTIONAL,
    iE-Extensions          ProtocolExtensionContainer { {USCHToBeAddedOrModifiedItem-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
    ...
}

USCHToBeAddedOrModifiedItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RadioLinkReconfigurationReadyTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-HSDSCH-RNTI                CRITICALITY ignore      EXTENSION HSDSCH-RNTI                PRESENCE optional }|
    { ID id-DSCH-RNTI                  CRITICALITY ignore      EXTENSION DSCH-RNTI                  PRESENCE optional }|
    { ID id-HSDSCH-TDD-Information-Response CRITICALITY ignore      EXTENSION HSDSCH-TDD-Information-Response PRESENCE optional }|
    { ID id-MACHs-ResetIndicator        CRITICALITY ignore      EXTENSION MACHs-ResetIndicator        PRESENCE optional }|
    { ID id-Multiple-RL-InformationResponse-RL-ReconfReadyTDD CRITICALITY ignore      EXTENSION Multiple-RL-InformationResponse-RL-
ReconfReadyTDD PRESENCE optional }|
-- This is for RL repetitions 2 and on in RL list.
    { ID id-E-DCH-Information-Response CRITICALITY ignore      EXTENSION E-DCH-Information-Response PRESENCE optional }|
    { ID id-E-DCH-768-Information-Response CRITICALITY ignore      EXTENSION E-DCH-768-Information-Response PRESENCE optional }|
    { ID id-E-DCH-LCR-Information-Response CRITICALITY ignore      EXTENSION E-DCH-LCR-Information-Response PRESENCE optional }|
    { ID id-PowerControlGAP             CRITICALITY ignore      EXTENSION ControlGAP                 PRESENCE optional }|
    -- Applicable to 1.28Mcps TDD only
    { ID id-IdleIntervalInformation      CRITICALITY ignore      EXTENSION IdleIntervalInformation     PRESENCE optional }|
    { ID id-ContinuousPacketConnectivity-DRX-Information-ResponseLCR CRITICALITY ignore      EXTENSION                               EXTENSION
ContinuousPacketConnectivity-DRX-Information-ResponseLCR PRESENCE optional }|
    { ID id-HS-DSCH-Semi-PersistentScheduling-Information-ResponseLCR CRITICALITY ignore      EXTENSION HS-DSCH-Semi-PersistentScheduling-
Information-ResponseLCR PRESENCE optional }|
    { ID id-E-DCH-Semi-PersistentScheduling-Information-ResponseLCR CRITICALITY ignore      EXTENSION E-DCH-Semi-PersistentScheduling-
Information-ResponseLCR PRESENCE optional }|
    { ID id-E-RNTI-For-FACH              CRITICALITY ignore      EXTENSION E-RNTI                    PRESENCE optional }|
    { ID id-H-RNTI-For-FACH              CRITICALITY ignore      EXTENSION HSDSCH-RNTI                PRESENCE optional },
    ...
}

Multiple-RL-InformationResponse-RL-ReconfReadyTDD ::= SEQUENCE (SIZE (1..maxNrOfRLs-1)) OF RL-InformationResponse-RL-ReconfReadyTDD

-- *****
--
-- RADIO LINK RECONFIGURATION COMMIT
--
-- *****

RadioLinkReconfigurationCommit ::= SEQUENCE {
    protocolIEs                ProtocolIE-Container    {{RadioLinkReconfigurationCommit-IEs}},
    protocolExtensions          ProtocolExtensionContainer {{RadioLinkReconfigurationCommit-Extensions}}
    ...
}

RadioLinkReconfigurationCommit-IEs RNSAP-PROTOCOL-IES ::= {

```



```

    { ID id-CFN                CRITICALITY ignore  TYPE CFN                PRESENCE mandatory  }|
    { ID id-Active-Pattern-Sequence-Information  CRITICALITY ignore  TYPE Active-Pattern-Sequence-Information  PRESENCE optional  },--FDD only
    ...
}

RadioLinkReconfigurationCommit-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-Fast-Reconfiguration-Mode  CRITICALITY reject  EXTENSION Fast-Reconfiguration-Mode  PRESENCE optional  },--FDD only
    ...
}

-- *****
--
-- RADIO LINK RECONFIGURATION FAILURE
--
-- *****

RadioLinkReconfigurationFailure ::= SEQUENCE {
    protocolIEs                ProtocolIE-Container  {{RadioLinkReconfigurationFailure-IEs}},
    protocolExtensions          ProtocolExtensionContainer  {{RadioLinkReconfigurationFailure-Extensions}}          OPTIONAL,
    ...
}

RadioLinkReconfigurationFailure-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-CauseLevel-RL-ReconfFailure  CRITICALITY ignore  TYPE CauseLevel-RL-ReconfFailure  PRESENCE mandatory  } |
    { ID id-CriticalityDiagnostics        CRITICALITY ignore  TYPE CriticalityDiagnostics        PRESENCE optional  },
    ...
}

CauseLevel-RL-ReconfFailure ::= CHOICE {
    generalCause                GeneralCauseList-RL-ReconfFailure,
    rLSpecificCause             RLSpecificCauseList-RL-ReconfFailure,
    ...
}

GeneralCauseList-RL-ReconfFailure ::= SEQUENCE {
    cause                        Cause,
    iE-Extensions                ProtocolExtensionContainer { { GeneralCauseItem-RL-ReconfFailure-ExtIEs } }          OPTIONAL,
    ...
}

GeneralCauseItem-RL-ReconfFailure-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RLSpecificCauseList-RL-ReconfFailure ::= SEQUENCE {
    rL-ReconfigurationFailureList-RL-ReconfFailure  RL-ReconfigurationFailureList-RL-ReconfFailure  OPTIONAL,
    iE-Extensions  ProtocolExtensionContainer { { RLSpecificCauseItem-RL-ReconfFailure-ExtIEs } }
    OPTIONAL,
    ...
}

RLSpecificCauseItem-RL-ReconfFailure-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```
RL-ReconfigurationFailureList-RL-ReconfFailure ::= SEQUENCE (SIZE (0..maxNrOfRLs)) OF ProtocolIE-Single-Container { {RL-ReconfigurationFailure-RL-ReconfFailure-IEs} }
```

```
RL-ReconfigurationFailure-RL-ReconfFailure-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-ReconfigurationFailure-RL-ReconfFail CRITICALITY ignore TYPE RL-ReconfigurationFailure-RL-ReconfFail PRESENCE mandatory }
}
```

```
RL-ReconfigurationFailure-RL-ReconfFail ::= SEQUENCE {
  rL-ID          RL-ID,
  cause         Cause,
  iE-Extensions ProtocolExtensionContainer { {RL-ReconfigurationFailure-RL-ReconfFailure-ExtIEs} } OPTIONAL,
  ...
}
```

```
RL-ReconfigurationFailure-RL-ReconfFailure-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-Max-UE-DTX-Cycle CRITICALITY ignore EXTENSION Max-UE-DTX-Cycle PRESENCE conditional },
  -- This IE shall be present if the Cause IE is set to "Continuous Packet Connectivity UE DTX Cycle not Available".
  ...
}
```

```
RadioLinkReconfigurationFailure-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}
```

```
-- *****
--
-- RADIO LINK RECONFIGURATION CANCEL
--
-- *****
```

```
RadioLinkReconfigurationCancel ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container  {{RadioLinkReconfigurationCancel-IEs}},
  protocolExtensions   ProtocolExtensionContainer {{RadioLinkReconfigurationCancel-Extensions}}
  ...
}
OPTIONAL,
```

```
RadioLinkReconfigurationCancel-IEs RNSAP-PROTOCOL-IES ::= {
  ...
}
```

```
RadioLinkReconfigurationCancel-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}
```

```
-- *****
--
-- RADIO LINK RECONFIGURATION REQUEST FDD
--
-- *****
```

```
RadioLinkReconfigurationRequestFDD ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container  {{RadioLinkReconfigurationRequestFDD-IEs}},
  protocolExtensions   ProtocolExtensionContainer {{RadioLinkReconfigurationRequestFDD-Extensions}}
  ...
}
OPTIONAL,
```

```

}
...
}
RadioLinkReconfigurationRequestFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-AllowedQueuingTime          CRITICALITY reject  TYPE AllowedQueuingTime          PRESENCE optional
  } |
  { ID id-UL-DPCH-Information-RL-ReconfRqstFDD  CRITICALITY reject  TYPE UL-DPCH-Information-RL-ReconfRqstFDD  PRESENCE optional
  } |
  { ID id-DL-DPCH-Information-RL-ReconfRqstFDD  CRITICALITY reject  TYPE DL-DPCH-Information-RL-ReconfRqstFDD  PRESENCE optional
  } |
  { ID id-FDD-DCHs-to-Modify           CRITICALITY reject  TYPE FDD-DCHs-to-Modify                   PRESENCE optional
  } |
  { ID id-DCHs-to-Add-FDD              CRITICALITY reject  TYPE DCH-FDD-Information                   PRESENCE optional
  } |
  { ID id-DCH-DeleteList-RL-ReconfRqstFDD  CRITICALITY reject  TYPE DCH-DeleteList-RL-ReconfRqstFDD      PRESENCE optional
  } |
  { ID id-Transmission-Gap-Pattern-Sequence-Information  CRITICALITY reject  TYPE Transmission-Gap-Pattern-Sequence-Information  PRESENCE optional
  },
  ...
}

UL-DPCH-Information-RL-ReconfRqstFDD ::= SEQUENCE {
  tFCS                TFCS    OPTIONAL,
  iE-Extensions       ProtocolExtensionContainer { {UL-DPCH-Information-RL-ReconfRqstFDD-ExtIEs} } OPTIONAL,
  ...
}

UL-DPCH-Information-RL-ReconfRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-UL-DPCHIndicatorEDCH  CRITICALITY reject      EXTENSION UL-DPCHIndicatorEDCH      PRESENCE optional },
  ...
}

DL-DPCH-Information-RL-ReconfRqstFDD ::= SEQUENCE {
  tFCS                TFCS    OPTIONAL,
  tFCI-SignallingMode  TFCS    OPTIONAL,
  limitedPowerIncrease LimitedPowerIncrease  OPTIONAL,
  iE-Extensions       ProtocolExtensionContainer { {DL-DPCH-Information-RL-ReconfRqstFDD-ExtIEs} } OPTIONAL,
  ...
}

DL-DPCH-Information-RL-ReconfRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

DCH-DeleteList-RL-ReconfRqstFDD ::= SEQUENCE (SIZE (0..maxNrOfDCHs)) OF DCH-DeleteItem-RL-ReconfRqstFDD

DCH-DeleteItem-RL-ReconfRqstFDD ::= SEQUENCE {
  dCH-ID              DCH-ID,
  iE-Extensions       ProtocolExtensionContainer { {DCH-DeleteItem-RL-ReconfRqstFDD-ExtIEs} } OPTIONAL,
  ...
}

DCH-DeleteItem-RL-ReconfRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

```

```

}

RadioLinkReconfigurationRequestFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-RL-ReconfigurationRequestFDD-RL-InformationList CRITICALITY ignore EXTENSION RL-ReconfigurationRequestFDD-RL-InformationList
  PRESENCE optional} |
  { ID id-DL-ReferencePowerInformation CRITICALITY ignore EXTENSION DL-ReferencePowerInformation PRESENCE optional } |
  { ID id-HSDSCH-FDD-Information CRITICALITY reject EXTENSION HSDSCH-FDD-Information PRESENCE optional} |
  { ID id-HSDSCH-Information-to-Modify-Unsynchronised CRITICALITY reject EXTENSION HSDSCH-Information-to-Modify-Unsynchronised PRESENCE
optional} |
  { ID id-HSDSCH-MACdFlows-to-Add CRITICALITY reject EXTENSION HSDSCH-MACdFlows-Information PRESENCE optional} |
  { ID id-HSDSCH-MACdFlows-to-Delete CRITICALITY reject EXTENSION HSDSCH-MACdFlows-to-Delete PRESENCE optional} |
  { ID id-HSPDSCH-RL-ID CRITICALITY reject EXTENSION RL-ID PRESENCE optional} |
  { ID id-EDPCH-Information-RLReconfRequest-FDD CRITICALITY reject EXTENSION EDPCH-Information-RLReconfRequest-FDD PRESENCE optional} |
  { ID id-EDCH-FDD-Information CRITICALITY reject EXTENSION EDCH-FDD-Information PRESENCE optional} |
  { ID id-EDCH-FDD-Information-To-Modify CRITICALITY reject EXTENSION EDCH-FDD-Information-To-Modify PRESENCE optional} |
  { ID id-EDCH-MACdFlows-To-Add CRITICALITY reject EXTENSION EDCH-MACdFlows-Information PRESENCE optional} |
  { ID id-EDCH-MACdFlows-To-Delete CRITICALITY reject EXTENSION EDCH-MACdFlows-To-Delete PRESENCE optional} |
  { ID id-Serving-EDCH-RL-ID CRITICALITY reject EXTENSION EDCH-Serving-RL PRESENCE optional} |
  { ID id-CPC-Information CRITICALITY reject EXTENSION CPC-Information PRESENCE optional} |
  { ID id-NoOfTargetCellHS-SCCH-Order CRITICALITY ignore EXTENSION NoOfTargetCellHS-SCCH-Order PRESENCE optional} |
  { ID id-Additional-HS-Cell-Information-RL-Reconf-Req CRITICALITY reject EXTENSION Additional-HS-Cell-Information-RL-Reconf-Req
PRESENCE optional},
  ...
}

Additional-HS-Cell-Information-RL-Reconf-Req ::= SEQUENCE (SIZE (1..maxNrOfHSDSCH-1)) OF Additional-HS-Cell-Information-RL-Reconf-Req-ItemIEs

Additional-HS-Cell-Information-RL-Reconf-Req-ItemIEs ::=SEQUENCE{
  hSPDSCH-RL-ID RL-ID,
  c-ID C-ID OPTIONAL,
  hS-DSCH-FDD-Secondary-Serving-Information HS-DSCH-FDD-Secondary-Serving-Information OPTIONAL,
  hS-DSCH-FDD-Secondary-Serving-Information-To-Modify-Unsynchronised HS-DSCH-FDD-Secondary-Serving-Information-To-Modify-Unsynchronised
OPTIONAL,
  hS-DSCH-Secondary-Serving-Remove HS-DSCH-Secondary-Serving-Remove OPTIONAL,
  iE-Extensions ProtocolExtensionContainer { { Additional-HS-Cell-Information-RL-Reconf-Req-ExtIEs } } OPTIONAL,
  ...
}

Additional-HS-Cell-Information-RL-Reconf-Req-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

RL-ReconfigurationRequestFDD-RL-InformationList ::= SEQUENCE (SIZE (0..maxNrOfRLs)) OF ProtocolIE-Single-Container {
  {RL-ReconfigurationRequestFDD-RL-Information-ListItem} }

RL-ReconfigurationRequestFDD-RL-Information-ListItem RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-ReconfigurationRequestFDD-RL-Information-IES CRITICALITY ignore TYPE RL-ReconfigurationRequestFDD-RL-Information-IES PRESENCE
optional }
}

RL-ReconfigurationRequestFDD-RL-Information-IES ::= SEQUENCE {
  rL-ID RL-ID,
  rL-Specific-DCH-Info RL-Specific-DCH-Info OPTIONAL,

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```

    iE-Extensions          ProtocolExtensionContainer { { RL-ReconfigurationRequestFDD-RL-Information-ExtIEs} } OPTIONAL,
    ...
}

RL-ReconfigurationRequestFDD-RL-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-RL-Specific-EDCH-Information          CRITICALITY reject          EXTENSION RL-Specific-EDCH-Information          PRESENCE optional } |
  { ID id-EDCH-RL-Indication                    CRITICALITY reject          EXTENSION EDCH-RL-Indication                    PRESENCE optional },
  ...
}

-- *****
--
-- RADIO LINK RECONFIGURATION REQUEST TDD
--
-- *****

RadioLinkReconfigurationRequestTDD ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container          {{RadioLinkReconfigurationRequestTDD-IEs}},
  protocolExtensions  ProtocolExtensionContainer {{RadioLinkReconfigurationRequestTDD-Extensions}}          OPTIONAL,
  ...
}

RadioLinkReconfigurationRequestTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-AllowedQueuingTime          CRITICALITY reject          TYPE AllowedQueuingTime          PRESENCE optional } |
  optional { ID id-UL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD          CRITICALITY notify          TYPE UL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD          PRESENCE optional } |
  optional { ID id-UL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD          CRITICALITY notify          TYPE UL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD          PRESENCE optional } |
  optional { ID id-DL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD          CRITICALITY notify          TYPE DL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD          PRESENCE optional } |
  optional { ID id-DL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD          CRITICALITY notify          TYPE DL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD          PRESENCE optional } |
  { ID id-TDD-DCHs-to-Modify          CRITICALITY reject          TYPE TDD-DCHs-to-Modify          PRESENCE optional } |
  { ID id-DCHs-to-Add-TDD          CRITICALITY reject          TYPE DCH-TDD-Information          PRESENCE optional } |
  { ID id-DCH-DeleteList-RL-ReconfRqstTDD          CRITICALITY reject          TYPE DCH-DeleteList-RL-ReconfRqstTDD          PRESENCE optional },
  ...
}

UL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD ::= SEQUENCE (SIZE (0..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container { {UL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD-IEs} }

UL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD-IEs RNSAP-PROTOCOL-IES ::= {
  mandatory { ID id-UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD          CRITICALITY notify          TYPE UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD          PRESENCE mandatory }
}

UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD ::= SEQUENCE {
  cCCTrCH-ID          CCTrCH-ID,
  tFCS          TFCS          OPTIONAL,
  iE-Extensions          ProtocolExtensionContainer { {UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD-ExtIEs} } OPTIONAL,
  ...
}

UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {

```

```

    { ID id-UL-SIRTarget      CRITICALITY reject      EXTENSION      UL-SIR      PRESENCE optional },
    -- Applicable to 1.28Mcps TDD only
    ...
}

UL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD ::= SEQUENCE (SIZE (0..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container { {UL-CCTrCH-
InformationDeleteList-RL-ReconfRqstTDD-IEs} }

UL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD      CRITICALITY notify      TYPE UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD      PRESENCE
mandatory }
}

UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD ::= SEQUENCE {
  cCTrCH-ID              CCTrCH-ID,
  iE-Extensions          ProtocolExtensionContainer { {UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD-ExtIEs} } OPTIONAL,
  ...
}

UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

DL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD ::= SEQUENCE (SIZE (0..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container { {DL-CCTrCH-
InformationModifyList-RL-ReconfRqstTDD-IEs} }

DL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD      CRITICALITY notify      TYPE DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD      PRESENCE
mandatory }
}

DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD ::= SEQUENCE {
  cCTrCH-ID              CCTrCH-ID,
  tFCS                   TFCS          OPTIONAL,
  iE-Extensions          ProtocolExtensionContainer { {DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD-ExtIEs} } OPTIONAL,
  ...
}

DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

DL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD ::= SEQUENCE (SIZE (0..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container { {DL-CCTrCH-
InformationDeleteList-RL-ReconfRqstTDD-IEs} }

DL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD      CRITICALITY notify      TYPE DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD      PRESENCE
mandatory }
}

DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD ::= SEQUENCE {
  cCTrCH-ID              CCTrCH-ID,
  iE-Extensions          ProtocolExtensionContainer { {DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD-ExtIEs} } OPTIONAL,
  ...
}

```

```

}
DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}
DCH-DeleteList-RL-ReconfRqstTDD ::= SEQUENCE (SIZE(0..maxNrOfDCHs)) OF DCH-DeleteItem-RL-ReconfRqstTDD
DCH-DeleteItem-RL-ReconfRqstTDD ::= SEQUENCE {
  dCH-ID DCH-ID,
  iE-Extensions ProtocolExtensionContainer { {DCH-DeleteItem-RL-ReconfRqstTDD-ExtIEs} } OPTIONAL,
  ...
}
DCH-DeleteItem-RL-ReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}
RadioLinkReconfigurationRequestTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-RL-ReconfigurationRequestTDD-RL-Information CRITICALITY ignore EXTENSION Multiple-RL-ReconfigurationRequestTDD-RL-Information
    PRESENCE optional} |
  { ID id-HSDSCH-TDD-Information CRITICALITY reject EXTENSION HSDSCH-TDD-Information PRESENCE optional} |
  { ID id-HSDSCH-Information-to-Modify-Unsynchronised CRITICALITY reject EXTENSION HSDSCH-Information-to-Modify-Unsynchronised PRESENCE
optional} |
  { ID id-HSDSCH-MACdFlows-to-Add CRITICALITY reject EXTENSION HSDSCH-MACdFlows-Information PRESENCE optional} |
  { ID id-HSDSCH-MACdFlows-to-Delete CRITICALITY reject EXTENSION HSDSCH-MACdFlows-to-Delete PRESENCE optional} |
  { ID id-HSPDSCH-RL-ID CRITICALITY reject EXTENSION RL-ID PRESENCE optional} |
  { ID id-E-DCH-Information-Reconfig CRITICALITY reject EXTENSION E-DCH-Information-Reconfig PRESENCE optional} |
  { ID id-E-DCH-Serving-RL-ID CRITICALITY reject EXTENSION RL-ID PRESENCE optional} |
  { ID id-E-DCH-768-Information-Reconfig CRITICALITY reject EXTENSION E-DCH-768-Information-Reconfig PRESENCE optional} |
  { ID id-E-DCH-LCR-Information-Reconfig CRITICALITY reject EXTENSION E-DCH-LCR-Information-Reconfig PRESENCE optional} |
  { ID id-CPC-InformationLCR CRITICALITY reject EXTENSION CPC-InformationLCR PRESENCE optional} |
  { ID id-RNTI-Allocation-Indicator CRITICALITY ignore EXTENSION RNTI-Allocation-Indicator PRESENCE optional },
  ...
}
Multiple-RL-ReconfigurationRequestTDD-RL-Information ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF RL-ReconfigurationRequestTDD-RL-Information
RL-ReconfigurationRequestTDD-RL-Information ::= SEQUENCE {
  rL-ID RL-ID,
  rL-Specific-DCH-Info RL-Specific-DCH-Info OPTIONAL,
  iE-Extensions ProtocolExtensionContainer { { RL-ReconfigurationRequestTDD-RL-Information-ExtIEs} } OPTIONAL,
  ...
}
RL-ReconfigurationRequestTDD-RL-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-UL-Synchronisation-Parameters-LCR CRITICALITY ignore EXTENSION UL-Synchronisation-Parameters-LCR PRESENCE
optional } | -- Mandatory for 1.28Mcps TDD, Not Applicable to 3.84Mcps TDD or 7.68Mcps TDD
  { ID id-NeedforIdleInterval CRITICALITY ignore EXTENSION NeedforIdleInterval PRESENCE optional },
  ...
}
-- *****
--

```

```

-- RADIO LINK RECONFIGURATION RESPONSE FDD
--
-- *****

RadioLinkReconfigurationResponseFDD ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container      {{RadioLinkReconfigurationResponseFDD-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{RadioLinkReconfigurationResponseFDD-Extensions}}    OPTIONAL,
    ...
}

RadioLinkReconfigurationResponseFDD-IEs RNSAP-PROTOCOL-IES ::= {
    optional { ID id-RL-InformationResponseList-RL-ReconfRspFDD      CRITICALITY ignore TYPE RL-InformationResponseList-RL-ReconfRspFDD      PRESENCE
    { ID id-CriticalityDiagnostics          CRITICALITY ignore TYPE CriticalityDiagnostics          PRESENCE optional },
    ...
}

RL-InformationResponseList-RL-ReconfRspFDD ::= SEQUENCE (SIZE (0..maxNrOfRLs)) OF ProtocolIE-Single-Container { {RL-InformationResponse-RL-ReconfRspFDD-IEs} }

RL-InformationResponse-RL-ReconfRspFDD-IEs RNSAP-PROTOCOL-IES ::= {
    mandatory { ID id-RL-InformationResponseItem-RL-ReconfRspFDD      CRITICALITY ignore TYPE RL-InformationResponseItem-RL-ReconfRspFDD      PRESENCE
}

RL-InformationResponseItem-RL-ReconfRspFDD ::= SEQUENCE {
    rL-ID                RL-ID,
    max-UL-SIR           UL-SIR          OPTIONAL,
    min-UL-SIR           UL-SIR          OPTIONAL,
    maximumDLTxPower     DL-Power        OPTIONAL,
    minimumDLTxPower     DL-Power        OPTIONAL,
    not-Used-secondary-CCPCH-Info    NULL          OPTIONAL,
    dCHsInformationResponseList    DCH-InformationResponseList-RL-ReconfRspFDD OPTIONAL,
    dL-CodeInformationList-RL-ReconfResp    DL-CodeInformationList-RL-ReconfRspFDD OPTIONAL,
    iE-Extensions        ProtocolExtensionContainer { {RL-InformationResponseItem-RL-ReconfRspFDD-ExtIEs} } OPTIONAL,
    ...
}

RL-InformationResponseItem-RL-ReconfRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-DL-PowerBalancing-UpdatedIndicator CRITICALITY ignore EXTENSION DL-PowerBalancing-UpdatedIndicator PRESENCE optional }|
    { ID id-EDCH-FDD-InformationResponse      CRITICALITY ignore EXTENSION EDCH-FDD-InformationResponse      PRESENCE optional }|
    { ID id-EDCH-RLSet-Id                    CRITICALITY ignore EXTENSION RL-Set-ID                    PRESENCE optional }|
    { ID id-EDCH-FDD-DL-ControlChannelInformation CRITICALITY ignore EXTENSION EDCH-FDD-DL-ControlChannelInformation PRESENCE optional }|
    { ID id-F-DPCH-SlotFormat                CRITICALITY ignore EXTENSION F-DPCH-SlotFormat                PRESENCE optional },
    ...
}

DCH-InformationResponseList-RL-ReconfRspFDD ::= ProtocolIE-Single-Container { {DCH-InformationResponseListIEs-RL-ReconfRspFDD} }

DCH-InformationResponseListIEs-RL-ReconfRspFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DCH-InformationResponse CRITICALITY ignore TYPE DCH-InformationResponse PRESENCE mandatory }
}

DL-CodeInformationList-RL-ReconfRspFDD ::= ProtocolIE-Single-Container { {DL-CodeInformationListIEs-RL-ReconfRspFDD} }

```



```

DL-CodeInformationListIEs-RL-ReconfRspFDD RNSAP-PROTOCOL-IES ::= {
  { ID id-FDD-DL-CodeInformation CRITICALITY ignore TYPE FDD-DL-CodeInformation PRESENCE optional }
}

RadioLinkReconfigurationResponseFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-HSDSCH-RNTI CRITICALITY ignore EXTENSION HSDSCH-RNTI PRESENCE optional }|
  { ID id-HSDSCH-FDD-Information-Response CRITICALITY ignore EXTENSION HSDSCH-FDD-Information-Response PRESENCE optional }|
  { ID id-MACHs-ResetIndicator CRITICALITY ignore EXTENSION MACHs-ResetIndicator PRESENCE optional }|
  { ID id-Continuous-Packet-Connectivity-HS-SCCH-Less-Information-Response CRITICALITY ignore EXTENSION Continuous-Packet-
Connectivity-HS-SCCH-Less-Information-Response PRESENCE optional }|
  { ID id-Additional-HS-Cell-Information-Response CRITICALITY ignore EXTENSION Additional-HS-Cell-Information-Response-List PRESENCE
optional },
  ...
}

-- *****
--
-- RADIO LINK RECONFIGURATION RESPONSE TDD
--
-- *****

RadioLinkReconfigurationResponseTDD ::= SEQUENCE {
  protocolIEs ProtocolIE-Container {{RadioLinkReconfigurationResponseTDD-IEs}},
  protocolExtensions ProtocolExtensionContainer {{RadioLinkReconfigurationResponseTDD-Extensions}} OPTIONAL,
  ...
}

RadioLinkReconfigurationResponseTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-InformationResponse-RL-ReconfRspTDD CRITICALITY ignore TYPE RL-InformationResponse-RL-ReconfRspTDD PRESENCE optional }
|
  --This RL-InformationResponse-RL-ReconfRspTDD is for the first RL repetition in the list.
  --Repetitions 2 and on are defined in Multiple-RL-InformationResponse-RL-ReconfRspTDD.
  { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
  ...
}

RL-InformationResponse-RL-ReconfRspTDD ::= SEQUENCE {
  rL-ID RL-ID,
  max-UL-SIR UL-SIR OPTIONAL,
  min-UL-SIR UL-SIR OPTIONAL,
  maximumDLTxPower DL-Power OPTIONAL,
  minimumDLTxPower DL-Power OPTIONAL,
  dCHsInformationResponseList DCH-InformationResponseList-RL-ReconfRspTDD OPTIONAL,
  iE-Extensions ProtocolExtensionContainer { {RL-InformationResponse-RL-ReconfRspTDD-ExtIEs} } OPTIONAL,
  ...
}

RL-InformationResponse-RL-ReconfRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-DL-CCTrCH-InformationList-RL-ReconfRspTDD CRITICALITY ignore EXTENSION DL-CCTrCH-InformationList-RL-ReconfRspTDD PRESENCE optional }|
  { ID id-UL-TimingAdvanceCtrl-LCR CRITICALITY ignore EXTENSION UL-TimingAdvanceCtrl-LCR PRESENCE optional },
  --For 1.28Mcps TDD only
  ...
}

```

```

}

DL-CCTrCH-InformationList-RL-ReconfRspTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF DL-CCTrCH-InformationItem-RL-ReconfRspTDD

DL-CCTrCH-InformationItem-RL-ReconfRspTDD ::= SEQUENCE {
  cCTrCH-ID                CCTrCH-ID,
  dl-DPCH-ModifyInformation-LCR          DL-DPCH-InformationModifyList-LCR-RL-ReconfRspTDD      OPTIONAL,
  --For 1.28Mcps TDD only
  cCTrCH-Maximum-DL-Power                DL-Power          OPTIONAL,
  --For 3.84Mcps TDD and 7.68Mcps TDD only, this is a DCH type CCTrCH power
  cCTrCH-Minimum-DL-Power                DL-Power          OPTIONAL,
  --For 3.84Mcps TDD and 7.68Mcps TDD only, this is a DCH type CCTrCH power
  iE-Extensions                ProtocolExtensionContainer { { DL-CCTrCH-InformationItem-RL-ReconfRspTDD-ExtIEs } }  OPTIONAL,
  ...
}

DL-CCTrCH-InformationItem-RL-ReconfRspTDD-ExtIEs  RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

DL-DPCH-InformationModifyList-LCR-RL-ReconfRspTDD ::= ProtocolIE-Single-Container { { DL-DPCH-InformationModifyListIEs-LCR-RL-ReconfRspTDD } }

DL-DPCH-InformationModifyListIEs-LCR-RL-ReconfRspTDD RNSAP-PROTOCOL-IES ::= {
  {ID id-DL-DPCH-InformationModifyItem-LCR-RL-ReconfRspTDD  CRITICALITY ignore  TYPE DL-DPCH-InformationModifyItem-LCR-RL-ReconfRspTDD
  PRESENCE optional },
  ...
}

DL-DPCH-InformationModifyItem-LCR-RL-ReconfRspTDD ::= SEQUENCE {
  dl-Timeslot-LCR-InformationModifyList-RL-ReconfRqstTDD          DL-Timeslot-LCR-InformationModifyList-RL-ReconfRspTDD      OPTIONAL,
  iE-ExtensionsProtocolExtensionContainer { { DL-DPCH-InformationModifyItem-LCR-RL-ReconfRspTDD-ExtIEs } }  OPTIONAL,
  ...
}

DL-DPCH-InformationModifyItem-LCR-RL-ReconfRspTDD-ExtIEs  RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

DL-Timeslot-LCR-InformationModifyList-RL-ReconfRspTDD ::= SEQUENCE (SIZE (1..maxNrOfDLTsLCR)) OF DL-Timeslot-LCR-InformationModifyItem-RL-ReconfRspTDD

DL-Timeslot-LCR-InformationModifyItem-RL-ReconfRspTDD ::= SEQUENCE {
  timeslotLCR                TimeSlotLCR,
  maxPowerLCR                DL-Power  OPTIONAL,
  minPowerLCR                DL-Power  OPTIONAL,
  iE-Extensions                ProtocolExtensionContainer { { DL-Timeslot-LCR-InformationModifyItem-RL-ReconfRspTDD-ExtIEs } }
  OPTIONAL,
  ...
}

DL-Timeslot-LCR-InformationModifyItem-RL-ReconfRspTDD-ExtIEs  RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

```

```

DCH-InformationResponseList-RL-ReconfRspTDD ::= ProtocolIE-Single-Container { {DCH-InformationResponseListIEs-RL-ReconfRspTDD} }

DCH-InformationResponseListIEs-RL-ReconfRspTDD RNSAP-PROTOCOL-IES ::= {
  { ID id-DCH-InformationResponse CRITICALITY ignore TYPE DCH-InformationResponse PRESENCE optional }
}

RadioLinkReconfigurationResponseTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-HSDSCH-RNTI CRITICALITY ignore EXTENSION HSDSCH-RNTI PRESENCE optional }|
  { ID id-HSDSCH-TDD-Information-Response CRITICALITY ignore EXTENSION HSDSCH-TDD-Information-Response PRESENCE optional }|
  { ID id-MACHs-ResetIndicator CRITICALITY ignore EXTENSION MACHs-ResetIndicator PRESENCE optional }|
  { ID id-RL-ReconfigurationResponseTDD-RL-Information CRITICALITY ignore EXTENSION Multiple-RL-InformationResponse-RL-ReconfRspTDD
  PRESENCE optional }|
  { ID id-E-DCH-Information-Response CRITICALITY ignore EXTENSION E-DCH-Information-Response PRESENCE optional }|
  { ID id-E-DCH-768-Information-Response CRITICALITY ignore EXTENSION E-DCH-768-Information-Response PRESENCE optional }|
  { ID id-E-DCH-LCR-Information-Response CRITICALITY ignore EXTENSION E-DCH-LCR-Information-Response PRESENCE optional }|
  { ID id-PowerControlGAP CRITICALITY ignore EXTENSION ControlGAP PRESENCE optional }|
  -- Applicable to 1.28Mcps TDD only
  { ID id-IdleIntervalInformation CRITICALITY ignore EXTENSION IdleIntervalInformation PRESENCE optional }|
  { ID id-ContinuousPacketConnectivity-DRX-Information-ResponseLCR CRITICALITY ignore EXTENSION
  ContinuousPacketConnectivity-DRX-Information-ResponseLCR PRESENCE optional }|
  { ID id-HS-DSCH-Semi-PersistentScheduling-Information-ResponseLCR CRITICALITY ignore EXTENSION HS-DSCH-Semi-PersistentScheduling-
  Information-ResponseLCR PRESENCE optional }|
  { ID id-E-DCH-Semi-PersistentScheduling-Information-ResponseLCR CRITICALITY ignore EXTENSION E-DCH-Semi-PersistentScheduling-
  Information-ResponseLCR PRESENCE optional }|
  { ID id-E-RNTI-For-FACH CRITICALITY ignore EXTENSION E-RNTI PRESENCE optional }|
  { ID id-H-RNTI-For-FACH CRITICALITY ignore EXTENSION HSDSCH-RNTI PRESENCE optional },
  ...
}

Multiple-RL-InformationResponse-RL-ReconfRspTDD ::= SEQUENCE (SIZE (1..maxNrOfRLs-1)) OF RL-InformationResponse-RL-ReconfRspTDD
--Includes the 2nd through the max number of radio link information repetitions.

-- *****
--
-- RADIO LINK FAILURE INDICATION
--
-- *****

RadioLinkFailureIndication ::= SEQUENCE {
  protocolIEs ProtocolIE-Container {{RadioLinkFailureIndication-IEs}},
  protocolExtensions ProtocolExtensionContainer {{RadioLinkFailureIndication-Extensions}} OPTIONAL,
  ...
}

RadioLinkFailureIndication-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-Reporting-Object-RL-FailureInd CRITICALITY ignore TYPE Reporting-Object-RL-FailureInd PRESENCE mandatory },
  ...
}

Reporting-Object-RL-FailureInd ::= CHOICE {
  rL RL-RL-FailureInd,
  rL-Set RL-Set-RL-FailureInd, --FDD only
  ...,
  cCTrCH CCTrCH-RL-FailureInd --TDD only
}

```

```

}
RL-RL-FailureInd ::= SEQUENCE {
  rL-InformationList-RL-FailureInd  RL-InformationList-RL-FailureInd,
  iE-Extensions                      ProtocolExtensionContainer { { RLItem-RL-FailureInd-ExtIEs } } OPTIONAL,
  ...
}

RLItem-RL-FailureInd-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

RL-InformationList-RL-FailureInd ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container { {RL-Information-RL-FailureInd-IEs} }

RL-Information-RL-FailureInd-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-Information-RL-FailureInd          CRITICALITY ignore  TYPE RL-Information-RL-FailureInd          PRESENCE mandatory }
}

RL-Information-RL-FailureInd ::= SEQUENCE {
  rL-ID                RL-ID,
  cause                Cause,
  iE-Extensions        ProtocolExtensionContainer { {RL-Information-RL-FailureInd-ExtIEs} } OPTIONAL,
  ...
}

RL-Information-RL-FailureInd-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

RL-Set-RL-FailureInd ::= SEQUENCE {
  rL-Set-InformationList-RL-FailureInd  RL-Set-InformationList-RL-FailureInd,
  iE-Extensions                          ProtocolExtensionContainer { { RL-SetItem-RL-FailureInd-ExtIEs } } OPTIONAL,
  ...
}

RL-SetItem-RL-FailureInd-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

RL-Set-InformationList-RL-FailureInd ::= SEQUENCE (SIZE (1..maxNrOfRLSets)) OF ProtocolIE-Single-Container { {RL-Set-Information-RL-FailureInd-IEs} }

RL-Set-Information-RL-FailureInd-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-Set-Information-RL-FailureInd          CRITICALITY ignore  TYPE RL-Set-Information-RL-FailureInd          PRESENCE mandatory }
}

RL-Set-Information-RL-FailureInd ::= SEQUENCE {
  rL-Set-ID                RL-Set-ID,
  cause                    Cause,
  iE-Extensions            ProtocolExtensionContainer { {RL-Set-Information-RL-FailureInd-ExtIEs} } OPTIONAL,
  ...
}

```

```

RL-Set-Information-RL-FailureInd-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

RadioLinkFailureIndication-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

CCTrCH-RL-FailureInd ::= SEQUENCE {
  rL-ID                               RL-ID,
  cCTrCH-InformationList-RL-FailureInd CCTrCH-InformationList-RL-FailureInd,
  iE-Extensions                       ProtocolExtensionContainer { { CCTrCHItem-RL-FailureInd-ExtIEs } } OPTIONAL,
  ...
}

CCTrCHItem-RL-FailureInd-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

CCTrCH-InformationList-RL-FailureInd ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container {{ CCTrCH-InformationItemIE-RL-FailureInd}}

CCTrCH-InformationItemIE-RL-FailureInd RNSAP-PROTOCOL-IES ::= {
  { ID      id-CCTrCH-InformationItem-RL-FailureInd      CRITICALITY   ignore          TYPE CCTrCH-InformationItem-RL-FailureInd
  PRESENCE  mandatory}
}

CCTrCH-InformationItem-RL-FailureInd ::= SEQUENCE {
  cCTrCH-ID                               CCTrCH-ID,
  cause                                     Cause,
  iE-Extensions                           ProtocolExtensionContainer { { CCTrCH-InformationItem-RL-FailureInd-ExtIEs } } OPTIONAL,
  ...
}

CCTrCH-InformationItem-RL-FailureInd-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- RADIO LINK PREEMPTION REQUIRED INDICATION
--
-- *****

RadioLinkPreemptionRequiredIndication ::= SEQUENCE {
  protocolIEs           ProtocolIE-Container   {{RadioLinkPreemptionRequiredIndication-IEs}},
  protocolExtensions    ProtocolExtensionContainer {{RadioLinkPreemptionRequiredIndication-Extensions}}
  ...
}

RadioLinkPreemptionRequiredIndication-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-InformationList-RL-PreemptRequiredInd      CRITICALITY ignore TYPE RL-InformationList-RL-PreemptRequiredInd PRESENCE optional },
  ...
}

```

```

RL-InformationList-RL-PreemptRequiredInd ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container { {RL-InformationItemIEs-RL-PreemptRequiredInd} }

RL-InformationItemIEs-RL-PreemptRequiredInd RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-InformationItem-RL-PreemptRequiredInd CRITICALITY ignore TYPE RL-InformationItem-RL-PreemptRequiredInd PRESENCE mandatory }
}

RL-InformationItem-RL-PreemptRequiredInd ::= SEQUENCE {
  rL-ID RL-ID,
  iE-Extensions ProtocolExtensionContainer { {RL-Information-RL-PreemptRequiredInd-ExtIEs} } OPTIONAL,
  ...
}

RL-Information-RL-PreemptRequiredInd-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-EDCH-MacdFlowSpecificInformationList-RL-PreemptRequiredInd CRITICALITY ignore EXTENSION EDCH-MacdFlowSpecificInformationList-RL-PreemptRequiredInd PRESENCE optional },
  ...
}

RadioLinkPreemptionRequiredIndication-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-HSDSCHMacdFlowSpecificInformationList-RL-PreemptRequiredInd CRITICALITY ignore EXTENSION HSDSCHMacdFlowSpecificInformationList-RL-PreemptRequiredInd PRESENCE optional },
  ...
}

HSDSCHMacdFlowSpecificInformationList-RL-PreemptRequiredInd ::= SEQUENCE (SIZE (1.. maxNrOfMACdFlows)) OF ProtocolIE-Single-Container { {HSDSCHMacdFlowSpecificInformationItemIEs-RL-PreemptRequiredInd} }

HSDSCHMacdFlowSpecificInformationItemIEs-RL-PreemptRequiredInd RNSAP-PROTOCOL-IES ::= {
  { ID id-HSDSCHMacdFlowSpecificInformationItem-RL-PreemptRequiredInd CRITICALITY ignore TYPE HSDSCHMacdFlowSpecificInformationItem-RL-PreemptRequiredInd PRESENCE mandatory }
}

HSDSCHMacdFlowSpecificInformationItem-RL-PreemptRequiredInd ::= SEQUENCE {
  hSDSCH-MACdFlow-ID HSDSCH-MACdFlow-ID,
  iE-Extensions ProtocolExtensionContainer { { HSDSCHMacdFlowSpecificInformation-RL-PreemptRequiredInd-ExtIEs} } OPTIONAL,
  ...
}

HSDSCHMacdFlowSpecificInformation-RL-PreemptRequiredInd-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

EDCH-MacdFlowSpecificInformationList-RL-PreemptRequiredInd ::= SEQUENCE (SIZE (1.. maxNrOfEDCHMACdFlows)) OF ProtocolIE-Single-Container { {EDCH-MacdFlowSpecificInformationItemIEs-RL-PreemptRequiredInd} }

EDCH-MacdFlowSpecificInformationItemIEs-RL-PreemptRequiredInd RNSAP-PROTOCOL-IES ::= {
  { ID id-EDCH-MacdFlowSpecificInformationItem-RL-PreemptRequiredInd CRITICALITY ignore TYPE EDCH-MacdFlowSpecificInformationItem-RL-PreemptRequiredInd PRESENCE mandatory }
}

EDCH-MacdFlowSpecificInformationItem-RL-PreemptRequiredInd ::= SEQUENCE {

```

```

    eDCH-MACdFlow-ID          EDCH-MACdFlow-ID,
    iE-Extensions             ProtocolExtensionContainer { { EDCH-MacdFlowSpecificInformation-RL-PreemptRequiredInd-ExtIEs } } OPTIONAL,
    ...
}

EDCH-MacdFlowSpecificInformation-RL-PreemptRequiredInd-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK RESTORE INDICATION
--
-- *****

RadioLinkRestoreIndication ::= SEQUENCE {
    protocolIEs             ProtocolIE-Container    {{RadioLinkRestoreIndication-IEs}},
    protocolExtensions      ProtocolExtensionContainer {{RadioLinkRestoreIndication-Extensions}}          OPTIONAL,
    ...
}

RadioLinkRestoreIndication-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-Reporting-Object-RL-RestoreInd    CRITICALITY ignore    TYPE Reporting-Object-RL-RestoreInd    PRESENCE mandatory    },
    ...
}

Reporting-Object-RL-RestoreInd ::= CHOICE {
    rL                RL-RL-RestoreInd, --TDD only
    rL-Set            RL-Set-RL-RestoreInd, --FDD only
    ...,
    cCTrCH            CCTrCH-RL-RestoreInd --TDD only
}

RL-RL-RestoreInd ::= SEQUENCE {
    rL-InformationList-RL-RestoreInd    RL-InformationList-RL-RestoreInd,
    iE-Extensions                       ProtocolExtensionContainer { { RLItem-RL-RestoreInd-ExtIEs } } OPTIONAL,
    ...
}

RLItem-RL-RestoreInd-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-InformationList-RL-RestoreInd ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container { {RL-Information-RL-RestoreInd-IEs} }

RL-Information-RL-RestoreInd-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-Information-RL-RestoreInd    CRITICALITY ignore    TYPE RL-Information-RL-RestoreInd    PRESENCE mandatory    }
}

RL-Information-RL-RestoreInd ::= SEQUENCE {
    rL-ID                RL-ID,
    iE-Extensions        ProtocolExtensionContainer { {RL-Information-RL-RestoreInd-ExtIEs} } OPTIONAL,

```

```

}
...
}
RL-Information-RL-RestoreInd-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}
RL-Set-RL-RestoreInd ::= SEQUENCE {
  rL-Set-InformationList-RL-RestoreInd      RL-Set-InformationList-RL-RestoreInd,
  iE-Extensions                             ProtocolExtensionContainer { { RL-SetItem-RL-RestoreInd-ExtIEs } } OPTIONAL,
  ...
}
RL-SetItem-RL-RestoreInd-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}
RL-Set-InformationList-RL-RestoreInd          ::= SEQUENCE (SIZE (1..maxNrOfRLSets)) OF ProtocolIE-Single-Container { {RL-Set-Information-RL-RestoreInd-IEs} }
RL-Set-Information-RL-RestoreInd-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-Set-Information-RL-RestoreInd      CRITICALITY ignore   TYPE RL-Set-Information-RL-RestoreInd   PRESENCE mandatory }
}
RL-Set-Information-RL-RestoreInd ::= SEQUENCE {
  rL-Set-ID          RL-Set-ID,
  iE-Extensions      ProtocolExtensionContainer { {RL-Set-Information-RL-RestoreInd-ExtIEs} } OPTIONAL,
  ...
}
RL-Set-Information-RL-RestoreInd-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}
RadioLinkRestoreIndication-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
...
}
CCTrCH-RL-RestoreInd ::= SEQUENCE {
  rL-ID          RL-ID,
  cCTrCH-InformationList-RL-RestoreInd      CCTrCH-InformationList-RL-RestoreInd,
  iE-Extensions                             ProtocolExtensionContainer { { CCTrCHItem-RL-RestoreInd-ExtIEs } }      OPTIONAL,
  ...
}
CCTrCHItem-RL-RestoreInd-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}
CCTrCH-InformationList-RL-RestoreInd ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container {{ CCTrCH-InformationItemIE-RL-RestoreInd}}
CCTrCH-InformationItemIE-RL-RestoreInd RNSAP-PROTOCOL-IES ::= {

```



```

    { ID id-CCTrCH-InformationItem-RL-RestoreInd          CRITICALITY ignore          TYPE CCTrCH-InformationItem-RL-RestoreInd
      PRESENCE mandatory}
  }

CCTrCH-InformationItem-RL-RestoreInd ::= SEQUENCE {
  cCCTrCH-ID          CCTrCH-ID,
  iE-Extensions      ProtocolExtensionContainer { { CCTrCH-InformationItem-RL-RestoreInd-ExtIEs } } OPTIONAL,
  ...
}

CCTrCH-InformationItem-RL-RestoreInd-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- DOWNLINK POWER CONTROL REQUEST
--
-- *****

DL-PowerControlRequest ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container  {{DL-PowerControlRequest-IEs}},
  protocolExtensions  ProtocolExtensionContainer {{DL-PowerControlRequest-Extensions}} OPTIONAL,
  ...
}

DL-PowerControlRequest-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-PowerAdjustmentType          CRITICALITY ignore          TYPE PowerAdjustmentType          PRESENCE mandatory} |
  { ID id-DLReferencePower             CRITICALITY ignore          TYPE DL-Power                     PRESENCE conditional}
  |
  -- This IE shall be present if Power Adjustment Type IE equals to 'Common'
  { ID id-InnerLoopDLPCStatus          CRITICALITY ignore          TYPE InnerLoopDLPCStatus          PRESENCE optional } |
  { ID id-DLReferencePowerList-DL-PC-Rqst CRITICALITY ignore          TYPE DL-ReferencePowerInformationList-DL-PC-Rqst PRESENCE conditional}
  |
  -- This IE shall be present if Power Adjustment Type IE equals to 'Individual'
  { ID id-MaxAdjustmentStep            CRITICALITY ignore          TYPE MaxAdjustmentStep            PRESENCE conditional }
  |
  -- This IE shall be present if Power Adjustment Type IE equals to 'Common' or 'Individual'
  { ID id-AdjustmentPeriod             CRITICALITY ignore          TYPE AdjustmentPeriod             PRESENCE conditional
} |
  -- This IE shall be present if Power Adjustment Type IE equals to 'Common' or 'Individual'
  { ID id-AdjustmentRatio              CRITICALITY ignore          TYPE ScaledAdjustmentRatio        PRESENCE conditional
},
  -- This IE shall be present if Power Adjustment Type IE equals to 'Common' or 'Individual'
  ...
}

DL-ReferencePowerInformationList-DL-PC-Rqst ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container { {DL-ReferencePowerInformation-DL-PC-Rqst-IEs} }

DL-ReferencePowerInformation-DL-PC-Rqst-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-DL-ReferencePowerInformation-DL-PC-Rqst CRITICALITY ignore TYPE DL-ReferencePowerInformation-DL-PC-Rqst PRESENCE mandatory }
}

```

```

DL-ReferencePowerInformation-DL-PC-Rqst ::= SEQUENCE {
    rL-ID                RL-ID,
    dl-Reference-Power   DL-Power,
    iE-Extensions        ProtocolExtensionContainer { {DL-ReferencePowerInformation-DL-PC-Rqst-ExtIEs} } OPTIONAL,
    ...
}

DL-ReferencePowerInformation-DL-PC-Rqst-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-PowerControlRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- DOWNLINK POWER TIMESLOT CONTROL REQUEST TDD
--
-- *****

DL-PowerTimeslotControlRequest ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{DL-PowerTimeslotControlRequest-IEs}},
    protocolExtensions  ProtocolExtensionContainer {{DL-PowerTimeslotControlRequest-Extensions}}          OPTIONAL,
    ...
}

DL-PowerTimeslotControlRequest-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-timeSlot-ISCP  CRITICALITY ignore  TYPE DL-TimeSlot-ISCP-Info  PRESENCE optional},
    --Mandatory for 3.84Mcps TDD and 7.68 Mcps TDD only
    ...
}

DL-PowerTimeslotControlRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-timeSlot-ISCP-LCR-List-DL-PC-Rqst-TDD  CRITICALITY ignore  EXTENSION DL-TimeSlot-ISCP-LCR-Information  PRESENCE optional}|
    --Mandatory for 1.28Mcps TDD only
    { ID id-PrimCCPCH-RSCP-DL-PC-RqstTDD          CRITICALITY ignore  EXTENSION PrimaryCCPCH-RSCP          PRESENCE optional }|
    { ID id-PrimaryCCPCH-RSCP-Delta              CRITICALITY ignore  EXTENSION PrimaryCCPCH-RSCP-Delta      PRESENCE optional },
    ...
}

-- *****
--
-- PHYSICAL CHANNEL RECONFIGURATION REQUEST FDD
--
-- *****

PhysicalChannelReconfigurationRequestFDD ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{PhysicalChannelReconfigurationRequestFDD-IEs}},
    protocolExtensions  ProtocolExtensionContainer {{PhysicalChannelReconfigurationRequestFDD-Extensions}}          OPTIONAL,
    ...
}

PhysicalChannelReconfigurationRequestFDD-IEs RNSAP-PROTOCOL-IES ::= {

```

```

    { ID id-RL-Information-PhyChReconfRqstFDD    CRITICALITY reject    TYPE RL-Information-PhyChReconfRqstFDD    PRESENCE mandatory    },
    ...
}

RL-Information-PhyChReconfRqstFDD ::= SEQUENCE {
    rL-ID                RL-ID,
    dl-CodeInformation    DL-CodeInformationList-PhyChReconfRqstFDD,
    iE-Extensions        ProtocolExtensionContainer { {RL-Information-PhyChReconfRqstFDD-ExtIEs} } OPTIONAL,
    ...
}

RL-Information-PhyChReconfRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-F-DPCH-SlotFormat                CRITICALITY ignore    EXTENSION F-DPCH-SlotFormat                PRESENCE optional},
    ...
}

DL-CodeInformationList-PhyChReconfRqstFDD ::= ProtocolIE-Single-Container { {DL-CodeInformationListIEs-PhyChReconfRqstFDD} }

DL-CodeInformationListIEs-PhyChReconfRqstFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-FDD-DL-CodeInformation    CRITICALITY notify    TYPE FDD-DL-CodeInformation    PRESENCE mandatory }
}

PhysicalChannelReconfigurationRequestFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- PHYSICAL CHANNEL RECONFIGURATION REQUEST TDD
--
-- *****

PhysicalChannelReconfigurationRequestTDD ::= SEQUENCE {
    protocolIEs                ProtocolIE-Container        {{PhysicalChannelReconfigurationRequestTDD-IEs}},
    protocolExtensions        ProtocolExtensionContainer {{PhysicalChannelReconfigurationRequestTDD-Extensions}}
    ...
}

PhysicalChannelReconfigurationRequestTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-Information-PhyChReconfRqstTDD    CRITICALITY reject    TYPE RL-Information-PhyChReconfRqstTDD    PRESENCE mandatory    },
    ...
}

RL-Information-PhyChReconfRqstTDD ::= SEQUENCE {
    rL-ID                RL-ID,
    ul-CCTrCH-Information    UL-CCTrCH-InformationList-PhyChReconfRqstTDD    OPTIONAL,
    dl-CCTrCH-Information    DL-CCTrCH-InformationList-PhyChReconfRqstTDD    OPTIONAL,
    iE-Extensions        ProtocolExtensionContainer { {RL-Information-PhyChReconfRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

RL-Information-PhyChReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-HSPDSCH-Timeslot-InformationList-PhyChReconfRqstTDD    CRITICALITY reject    EXTENSION HSPDSCH-Timeslot-InformationList-PhyChReconfRqstTDD    PRESENCE optional } |

```

```

--For 3.84Mcps TDD only
{ ID id-HSPDSCH-Timeslot-InformationListLCR-PhyChReconfRqstTDD
PhyChReconfRqstTDD PRESENCE optional }|
--For 1.28Mcps TDD only
{ ID id-HSPDSCH-Timeslot-InformationList-PhyChReconfRqstTDD768
PhyChReconfRqstTDD768 PRESENCE optional }|
--For 7.68Mcps TDD only
{ ID id-UARFCNforNt
-- Applicable to 1.28Mcps TDD only
...
}

UL-CCTrCH-InformationList-PhyChReconfRqstTDD ::= ProtocolIE-Single-Container { {UL-CCTrCH-InformationListIEs-PhyChReconfRqstTDD} }

UL-CCTrCH-InformationListIEs-PhyChReconfRqstTDD RNSAP-PROTOCOL-IES ::= {
{ ID id-UL-CCTrCH-InformationListIE-PhyChReconfRqstTDD CRITICALITY reject TYPE UL-CCTrCH-InformationListIE-PhyChReconfRqstTDD PRESENCE
mandatory }
}

UL-CCTrCH-InformationListIE-PhyChReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF UL-CCTrCH-InformationItem-PhyChReconfRqstTDD

UL-CCTrCH-InformationItem-PhyChReconfRqstTDD ::= SEQUENCE {
cCTrCH-ID CCTrCH-ID,
ul-DPCH-Information UL-DPCH-InformationList-PhyChReconfRqstTDD,
iE-Extensions ProtocolExtensionContainer { {UL-CCTrCH-InformationItem-PhyChReconfRqstTDD-ExtIEs} } OPTIONAL,
...
}

UL-CCTrCH-InformationItem-PhyChReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

UL-DPCH-InformationList-PhyChReconfRqstTDD ::= ProtocolIE-Single-Container {{UL-DPCH-InformationListIEs-PhyChReconfRqstTDD}}

UL-DPCH-InformationListIEs-PhyChReconfRqstTDD RNSAP-PROTOCOL-IES ::= {
{ ID id-UL-DPCH-InformationItem-PhyChReconfRqstTDD CRITICALITY notify TYPE UL-DPCH-InformationItem-PhyChReconfRqstTDD PRESENCE mandatory }
}

UL-DPCH-InformationItem-PhyChReconfRqstTDD ::= SEQUENCE {
repetitionPeriod RepetitionPeriod OPTIONAL,
repetitionLength RepetitionLength OPTIONAL,
tDD-DPCHOffset TDD-DPCHOffset OPTIONAL,
uL-Timeslot-InformationList-PhyChReconfRqstTDD UL-Timeslot-InformationList-PhyChReconfRqstTDD OPTIONAL,
--For 3.84Mcps TDD only
iE-Extensions ProtocolExtensionContainer { {UL-DPCH-InformationItem-PhyChReconfRqstTDD-ExtIEs} } OPTIONAL,
...
}

UL-DPCH-InformationItem-PhyChReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
{ ID id-UL-Timeslot-LCR-InformationList-PhyChReconfRqstTDD CRITICALITY reject EXTENSION UL-TimeslotLCR-InformationList-
PhyChReconfRqstTDD PRESENCE optional }|
--For 1.28Mcps TDD only
{ ID id-UL-Timeslot-InformationList-PhyChReconfRqstTDD768 CRITICALITY reject EXTENSION UL-Timeslot-InformationList-
PhyChReconfRqstTDD768 PRESENCE optional },

```

```

--For 7.68Mcps TDD only
...
}

UL-TimeslotLCR-InformationList-PhyChReconfRqstTDD ::= SEQUENCE ( SIZE (1..maxNrOfTsLCR)) OF UL-TimeslotLCR-InformationItem-PhyChReconfRqstTDD

UL-TimeslotLCR-InformationItem-PhyChReconfRqstTDD ::= SEQUENCE {
    timeSlotLCR                TimeSlotLCR,
    midambleShiftLCR           MidambleShiftLCR          OPTIONAL,
    tFCI-Presence              TFCI-Presence            OPTIONAL,
    uL-Code-LCR-Information    TDD-UL-Code-LCR-Information  OPTIONAL,
    iE-Extensions              ProtocolExtensionContainer { {UL-TimeslotLCR-InformationItem-PhyChReconfRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

UL-TimeslotLCR-InformationItem-PhyChReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-PLCCH-Information-PhyChReconfRqstTDD          CRITICALITY reject          EXTENSION PLCCHinformation          PRESENCE optional },
    ...
}

UL-Timeslot-InformationList-PhyChReconfRqstTDD ::= SEQUENCE ( SIZE (1..maxNrOfTs)) OF UL-Timeslot-InformationItem-PhyChReconfRqstTDD

UL-Timeslot-InformationItem-PhyChReconfRqstTDD ::= SEQUENCE {
    timeSlot                TimeSlot,
    midambleShiftAndBurstType MidambleShiftAndBurstType          OPTIONAL,
    tFCI-Presence          TFCI-Presence            OPTIONAL,
    uL-Code-Information    TDD-UL-Code-Information  OPTIONAL,
    iE-Extensions          ProtocolExtensionContainer { {UL-Timeslot-InformationItem-PhyChReconfRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

UL-Timeslot-InformationItem-PhyChReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-Timeslot-InformationList-PhyChReconfRqstTDD768 ::= SEQUENCE ( SIZE (1..maxNrOfTs)) OF UL-Timeslot-InformationItem-PhyChReconfRqstTDD768

UL-Timeslot-InformationItem-PhyChReconfRqstTDD768 ::= SEQUENCE {
    timeSlot                TimeSlot,
    midambleShiftAndBurstType768 MidambleShiftAndBurstType768          OPTIONAL,
    tFCI-Presence          TFCI-Presence            OPTIONAL,
    uL-Code-Information768 TDD-UL-Code-Information768          OPTIONAL,
    iE-Extensions          ProtocolExtensionContainer { {UL-Timeslot-InformationItem-PhyChReconfRqstTDD768-ExtIEs} } OPTIONAL,
    ...
}

UL-Timeslot-InformationItem-PhyChReconfRqstTDD768-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CCTrCH-InformationList-PhyChReconfRqstTDD ::= ProtocolIE-Single-Container { {DL-CCTrCH-InformationListIEs-PhyChReconfRqstTDD} }

DL-CCTrCH-InformationListIEs-PhyChReconfRqstTDD RNSAP-PROTOCOL-IES ::= {

```

```

    { ID id-DL-CCTrCH-InformationListIE-PhyChReconfRqstTDD      CRITICALITY reject  TYPE DL-CCTrCH-InformationListIE-PhyChReconfRqstTDD      PRESENCE
mandatory }
}

DL-CCTrCH-InformationListIE-PhyChReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF DL-CCTrCH-InformationItem-PhyChReconfRqstTDD

DL-CCTrCH-InformationItem-PhyChReconfRqstTDD ::= SEQUENCE {
    cCTrCH-ID                CCTrCH-ID,
    dl-DPCH-Information      DL-DPCH-InformationList-PhyChReconfRqstTDD,
    iE-Extensions            ProtocolExtensionContainer { {DL-CCTrCH-InformationItem-PhyChReconfRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

DL-CCTrCH-InformationItem-PhyChReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-InformationList-PhyChReconfRqstTDD ::= ProtocolIE-Single-Container {{DL-DPCH-InformationListIEs-PhyChReconfRqstTDD}}

DL-DPCH-InformationListIEs-PhyChReconfRqstTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-DPCH-InformationItem-PhyChReconfRqstTDD      CRITICALITY notify TYPE DL-DPCH-InformationItem-PhyChReconfRqstTDD      PRESENCE mandatory }
}

DL-DPCH-InformationItem-PhyChReconfRqstTDD ::= SEQUENCE {
    repetitionPeriod                RepetitionPeriod                OPTIONAL,
    repetitionLength                RepetitionLength                OPTIONAL,
    tDD-DPCHOffset                  TDD-DPCHOffset                OPTIONAL,
    dl-Timeslot-InformationList-PhyChReconfRqstTDD  DL-Timeslot-InformationList-PhyChReconfRqstTDD  OPTIONAL,
    iE-Extensions                    ProtocolExtensionContainer { {DL-DPCH-InformationItem-PhyChReconfRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

DL-DPCH-InformationItem-PhyChReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-DL-Timeslot-LCR-InformationList-PhyChReconfRqstTDD      CRITICALITY reject      EXTENSION DL-TimeslotLCR-InformationList-
PhyChReconfRqstTDD      PRESENCE optional }|
    --For 1.28Mcps TDD only
    { ID id-DL-Timeslot-InformationList-PhyChReconfRqstTDD768      CRITICALITY reject      EXTENSION DL-Timeslot-InformationList-
PhyChReconfRqstTDD768      PRESENCE optional },
    --For 7.68Mcps TDD only
    ...
}

DL-TimeslotLCR-InformationList-PhyChReconfRqstTDD ::= SEQUENCE ( SIZE (1..maxNrOfTsLCR)) OF DL-TimeslotLCR-InformationItem-PhyChReconfRqstTDD

DL-TimeslotLCR-InformationItem-PhyChReconfRqstTDD ::= SEQUENCE {
    timeSlotLCR                    TimeSlotLCR,
    midambleShiftLCR                MidambleShiftLCR                OPTIONAL,
    tFCI-Presence                    TFCI-Presence                OPTIONAL,
    dl-Code-LCR-Information          TDD-DL-Code-LCR-Information        OPTIONAL,
    iE-Extensions                    ProtocolExtensionContainer { {DL-TimeslotLCR-InformationItem-PhyChReconfRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

DL-TimeslotLCR-InformationItem-PhyChReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {

```

```

}
...
}
DL-Timeslot-InformationList-PhyChReconfRqstTDD ::= SEQUENCE ( SIZE (1..maxNrOfTS)) OF DL-Timeslot-InformationItem-PhyChReconfRqstTDD
DL-Timeslot-InformationItem-PhyChReconfRqstTDD ::= SEQUENCE {
    timeSlot                TimeSlot,
    midambleShiftAndBurstType MidambleShiftAndBurstType OPTIONAL,
    tFCI-Presence            TFCI-Presence OPTIONAL,
    dL-Code-Information      TDD-DL-Code-Information OPTIONAL,
    iE-Extensions            ProtocolExtensionContainer { {DL-Timeslot-InformationItem-PhyChReconfRqstTDD-ExtIEs} } OPTIONAL,
    ...
}
DL-Timeslot-InformationItem-PhyChReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
DL-Timeslot-InformationList-PhyChReconfRqstTDD768 ::= SEQUENCE ( SIZE (1..maxNrOfTS)) OF DL-Timeslot-InformationItem-PhyChReconfRqstTDD768
DL-Timeslot-InformationItem-PhyChReconfRqstTDD768 ::= SEQUENCE {
    timeSlot                TimeSlot,
    midambleShiftAndBurstType768 MidambleShiftAndBurstType768 OPTIONAL,
    tFCI-Presence            TFCI-Presence OPTIONAL,
    dL-Code-Information768   TDD-DL-Code-Information768 OPTIONAL,
    iE-Extensions            ProtocolExtensionContainer { {DL-Timeslot-InformationItem-PhyChReconfRqstTDD768-ExtIEs} } OPTIONAL,
    ...
}
DL-Timeslot-InformationItem-PhyChReconfRqstTDD768-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
HSPDSCH-Timeslot-InformationList-PhyChReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfDLTs)) OF HSPDSCH-Timeslot-InformationItem-PhyChReconfRqstTDD
HSPDSCH-Timeslot-InformationItem-PhyChReconfRqstTDD ::= SEQUENCE {
    timeslot                TimeSlot,
    midambleShiftAndBurstType MidambleShiftAndBurstType,
    iE-Extensions            ProtocolExtensionContainer { { HSPDSCH-Timeslot-InformationItem-PhyChReconfRqstTDD-ExtIEs } }
    OPTIONAL,
    ...
}
HSPDSCH-Timeslot-InformationItem-PhyChReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
HSPDSCH-Timeslot-InformationListLCR-PhyChReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfDLTsLCR)) OF HSPDSCH-Timeslot-InformationItemLCR-PhyChReconfRqstTDD
HSPDSCH-Timeslot-InformationItemLCR-PhyChReconfRqstTDD ::= SEQUENCE {
    timeslotLCR              TimeSlotLCR,
    midambleShiftLCR         MidambleShiftLCR,

```

```

    iE-Extensions          ProtocolExtensionContainer { { HSPDSCH-Timeslot-InformationItemLCR-PhyChReconfRqstTDD-ExtIEs } }
      OPTIONAL,
    ...
  }
}

HSPDSCH-Timeslot-InformationItemLCR-PhyChReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

HSPDSCH-Timeslot-InformationList-PhyChReconfRqstTDD768 ::= SEQUENCE (SIZE (1..maxNrOfDLTs)) OF HSPDSCH-Timeslot-InformationItem-
PhyChReconfRqstTDD768

HSPDSCH-Timeslot-InformationItem-PhyChReconfRqstTDD768 ::= SEQUENCE {
  timeslot                TimeSlot,
  midambleShiftAndBurstType768 MidambleShiftAndBurstType768,
  iE-Extensions          ProtocolExtensionContainer { { HSPDSCH-Timeslot-InformationItem-PhyChReconfRqstTDD768-ExtIEs } }
  OPTIONAL,
  ...
}

HSPDSCH-Timeslot-InformationItem-PhyChReconfRqstTDD768-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

PhysicalChannelReconfigurationRequestTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- PHYSICAL CHANNEL RECONFIGURATION COMMAND
--
-- *****

PhysicalChannelReconfigurationCommand ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container  {{PhysicalChannelReconfigurationCommand-IEs}},
  protocolExtensions  ProtocolExtensionContainer {{PhysicalChannelReconfigurationCommand-Extensions}}
  OPTIONAL,
  ...
}

PhysicalChannelReconfigurationCommand-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-CFN          CRITICALITY ignore TYPE CFN          PRESENCE mandatory } |
  { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
  ...
}

PhysicalChannelReconfigurationCommand-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- PHYSICAL CHANNEL RECONFIGURATION FAILURE
--

```



```

-- *****
PhysicalChannelReconfigurationFailure ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{PhysicalChannelReconfigurationFailure-IEs}},
    protocolExtensions  ProtocolExtensionContainer {{PhysicalChannelReconfigurationFailure-Extensions}}
    ...
}
OPTIONAL,

PhysicalChannelReconfigurationFailure-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-Cause          CRITICALITY ignore TYPE Cause          PRESENCE mandatory } |
    { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
    ...
}

PhysicalChannelReconfigurationFailure-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK CONGESTION INDICATION
--
-- *****

RadioLinkCongestionIndication ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{RadioLinkCongestionIndication-IEs}},
    protocolExtensions  ProtocolExtensionContainer {{RadioLinkCongestionIndication-Extensions}}
    ...
}
OPTIONAL,

RadioLinkCongestionIndication-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-CongestionCause          CRITICALITY ignore TYPE CongestionCause          PRESENCE optional } |
    { ID id-RL-InformationList-RL-CongestInd CRITICALITY ignore TYPE RL-InformationList-RL-CongestInd PRESENCE mandatory },
    ...
}

RL-InformationList-RL-CongestInd ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container { {RL-InformationItemIEs-RL-CongestInd} }

RL-InformationItemIEs-RL-CongestInd RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationItem-RL-CongestInd CRITICALITY ignore TYPE RL-InformationItem-RL-CongestInd PRESENCE mandatory }
}

RL-InformationItem-RL-CongestInd ::= SEQUENCE {
    rL-ID          RL-ID,
    dCH-Rate-Information DCH-Rate-Information-RL-CongestInd,
    iE-Extensions  ProtocolExtensionContainer { {RL-Information-RL-CongestInd-ExtIEs} } OPTIONAL,
    ...
}

DCH-Rate-Information-RL-CongestInd ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF ProtocolIE-Single-Container { {DCH-Rate-InformationItemIEs-RL-CongestInd} }

DCH-Rate-InformationItemIEs-RL-CongestInd RNSAP-PROTOCOL-IES ::= {

```

```

    { ID id-DCH-Rate-InformationItem-RL-CongestInd      CRITICALITY ignore  TYPE DCH-Rate-InformationItem-RL-CongestInd      PRESENCE mandatory }
  }

DCH-Rate-InformationItem-RL-CongestInd ::= SEQUENCE {
  dCH-ID                DCH-ID,
  allowed-Rate-Information  Allowed-Rate-Information OPTIONAL,
  iE-Extensions          ProtocolExtensionContainer { {DCH-Rate-InformationItem-RL-CongestInd-ExtIEs} } OPTIONAL,
  ...
}

DCH-Rate-InformationItem-RL-CongestInd-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

RL-Information-RL-CongestInd-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-EDCH-MacFlowSpecificInformationList-RL-CongestInd  CRITICALITY ignore  EXTENSION EDCH-MacFlowSpecificInformationList-RL-CongestInd
  PRESENCE optional } |
  { ID id-DCH-Indicator-For-E-DCH-HSDPA-Operation          CRITICALITY ignore  EXTENSION DCH-Indicator-For-E-DCH-HSDPA-Operation
  PRESENCE optional },
  ...
}

RadioLinkCongestionIndication-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

EDCH-MacFlowSpecificInformationList-RL-CongestInd ::= SEQUENCE (SIZE (1.. maxNrOfEDCHMACdFlows)) OF ProtocolIE-Single-Container { {EDCH-
MacFlowSpecificInformationItemIEs-RL-CongestInd} }

EDCH-MacFlowSpecificInformationItemIEs-RL-CongestInd RNSAP-PROTOCOL-IES ::= {
  { ID id-EDCH-MacFlowSpecificInformationItem-RL-CongestInd      CRITICALITY ignore  TYPE EDCH-MacFlowSpecificInformationItem-RL-CongestInd
  PRESENCE mandatory }
}

EDCH-MacFlowSpecificInformationItem-RL-CongestInd ::= SEQUENCE {
  eDCH-MACdFlow-ID          EDCH-MACdFlow-ID,
  iE-Extensions            ProtocolExtensionContainer { { EDCH-MacFlowSpecificInformation-RL-CongestInd-ExtIEs} } OPTIONAL,
  ...
}

EDCH-MacFlowSpecificInformation-RL-CongestInd-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- UPLINK SIGNALLING TRANSFER INDICATION FDD
--
-- *****

UplinkSignallingTransferIndicationFDD ::= SEQUENCE {
  protocolIEs              ProtocolIE-Container      {{UplinkSignallingTransferIndicationFDD-IEs}},
  protocolExtensions       ProtocolExtensionContainer {{UplinkSignallingTransferIndicationFDD-Extensions}}
  ...
  OPTIONAL,
  ...
}

```

```

}
UplinkSignallingTransferIndicationFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-UC-ID                CRITICALITY ignore  TYPE UC-ID                PRESENCE mandatory }
  |
  { ID id-SAI                  CRITICALITY ignore  TYPE SAI                   PRESENCE mandatory }
  |
  { ID id-GA-Cell              CRITICALITY ignore  TYPE GA-Cell               PRESENCE optional  }
  |
  { ID id-C-RNTI               CRITICALITY ignore  TYPE C-RNTI                PRESENCE mandatory }
  |
  { ID id-S-RNTI               CRITICALITY ignore  TYPE S-RNTI                PRESENCE mandatory }
  |
  { ID id-D-RNTI               CRITICALITY ignore  TYPE D-RNTI                PRESENCE optional  }
  |
  { ID id-PropagationDelay     CRITICALITY ignore  TYPE PropagationDelay      PRESENCE mandatory }
  |
  { ID id-STTD-SupportIndicator CRITICALITY ignore  TYPE STTD-SupportIndicator PRESENCE mandatory }
  |
  { ID id-ClosedLoopModel-SupportIndicator CRITICALITY ignore  TYPE ClosedLoopModel-SupportIndicator PRESENCE mandatory }
  |
  { ID id-L3-Information       CRITICALITY ignore  TYPE L3-Information        PRESENCE mandatory }
  |
  { ID id-CN-PS-DomainIdentifier CRITICALITY ignore  TYPE CN-PS-DomainIdentifier PRESENCE optional  }
  |
  { ID id-CN-CS-DomainIdentifier CRITICALITY ignore  TYPE CN-CS-DomainIdentifier PRESENCE optional  }
  |
  { ID id-URA-Information     CRITICALITY ignore  TYPE URA-Information       PRESENCE optional  },
  ...
}

UplinkSignallingTransferIndicationFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-GA-CellAdditionalShapes CRITICALITY ignore  EXTENSION GA-CellAdditionalShapes PRESENCE optional }|
  { ID id-DPC-Mode-Change-SupportIndicator CRITICALITY ignore  EXTENSION DPC-Mode-Change-SupportIndicator PRESENCE optional }|
  { ID id-CommonTransportChannelResourcesInitialisationNotRequired CRITICALITY ignore  EXTENSION PRESENCE optional }|
CommonTransportChannelResourcesInitialisationNotRequired PRESENCE optional }|
  { ID id-CellCapabilityContainer-FDD CRITICALITY ignore  EXTENSION CellCapabilityContainer-FDD PRESENCE optional }|
  { ID id-SNA-Information CRITICALITY ignore  EXTENSION SNA-Information PRESENCE optional }|
  { ID id-CellPortionID CRITICALITY ignore  EXTENSION CellPortionID PRESENCE optional }|
  { ID id-Active-MBMS-Bearer-ServiceFDD CRITICALITY ignore  EXTENSION Active-MBMS-Bearer-Service-ListFDD PRESENCE optional }|
  { ID id-Inter-Frequency-Cell-List CRITICALITY ignore  EXTENSION Inter-Frequency-Cell-List PRESENCE optional }|
  { ID id-ExtendedPropagationDelay CRITICALITY ignore  EXTENSION ExtendedPropagationDelay PRESENCE optional }|
  { ID id-HSDSCH-RNTI CRITICALITY ignore  EXTENSION HSDSCH-RNTI PRESENCE optional }|
  { ID id-Multiple-PLMN-List CRITICALITY ignore  EXTENSION Multiple-PLMN-List PRESENCE optional }|
  { ID id-E-RNTI CRITICALITY ignore  EXTENSION E-RNTI PRESENCE optional }|
  { ID id-Max-UE-DTX-Cycle CRITICALITY ignore  EXTENSION Max-UE-DTX-Cycle PRESENCE optional }|
conditional }|
  -- This IE shall be present if the Continuous Packet Connectivity DTX-DRX Support Indicator IE in Cell Capability Container FDD IE is set to 1.
  { ID id-CellCapabilityContainerExtension-FDD CRITICALITY ignore  EXTENSION CellCapabilityContainerExtension-FDD PRESENCE optional }|
  { ID id-Secondary-Serving-Cell-List CRITICALITY ignore  EXTENSION Secondary-Serving-Cell-List PRESENCE optional },
  ...
}
-- *****

```

```

--
-- UPLINK SIGNALLING TRANSFER INDICATION TDD
--
-- *****

UplinkSignallingTransferIndicationTDD ::= SEQUENCE {
    protocolIEs                ProtocolIE-Container    {{UplinkSignallingTransferIndicationTDD-IEs}},
    protocolExtensions         ProtocolExtensionContainer {{UplinkSignallingTransferIndicationTDD-Extensions}}
    ...
}

UplinkSignallingTransferIndicationTDD-IEs RNSAP-PROTOCOL-IES ::= {
|   { ID id-UC-ID                CRITICALITY ignore    TYPE UC-ID                PRESENCE mandatory }
|   { ID id-SAI                  CRITICALITY ignore    TYPE SAI                   PRESENCE mandatory }
|   { ID id-GA-Cell              CRITICALITY ignore    TYPE GA-Cell              PRESENCE optional  }
|   { ID id-C-RNTI              CRITICALITY ignore    TYPE C-RNTI               PRESENCE mandatory }
|   { ID id-S-RNTI              CRITICALITY ignore    TYPE S-RNTI               PRESENCE mandatory }
|   { ID id-D-RNTI              CRITICALITY ignore    TYPE D-RNTI               PRESENCE optional  }
|   { ID id-RxTimingDeviationForTA CRITICALITY ignore    TYPE RxTimingDeviationForTA PRESENCE mandatory }
|   { ID id-L3-Information       CRITICALITY ignore    TYPE L3-Information       PRESENCE mandatory }
|   { ID id-CN-PS-DomainIdentifier CRITICALITY ignore    TYPE CN-PS-DomainIdentifier PRESENCE optional  }
|   { ID id-CN-CS-DomainIdentifier CRITICALITY ignore    TYPE CN-CS-DomainIdentifier PRESENCE optional  }
|   { ID id-URA-Information     CRITICALITY ignore    TYPE URA-Information      PRESENCE optional },
|   ...
}

UplinkSignallingTransferIndicationTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
|   { ID id-GA-CellAdditionalShapes CRITICALITY ignore    EXTENSION GA-CellAdditionalShapes PRESENCE optional }|
|   { ID id-CommonTransportChannelResourcesInitialisationNotRequired CRITICALITY ignore    EXTENSION CommonTransportChannelResourcesInitialisationNotRequired PRESENCE optional }|
EXTENSION CommonTransportChannelResourcesInitialisationNotRequired
|   { ID id-CellCapabilityContainer-TDD CRITICALITY ignore    EXTENSION CellCapabilityContainer-TDD PRESENCE optional }|
-- Applicable to 3.84Mcps TDD only
|   { ID id-CellCapabilityContainer-TDD-LCR CRITICALITY ignore    EXTENSION CellCapabilityContainer-TDD-LCR PRESENCE optional }|
-- Applicable to 1.28Mcps TDD only
|   { ID id-SNA-Information       CRITICALITY ignore    EXTENSION SNA-Information     PRESENCE optional }|
|   { ID id-Active-MBMS-Bearer-ServiceTDD CRITICALITY ignore    EXTENSION Active-MBMS-Bearer-Service-ListTDD PRESENCE optional }|
|   { ID id-CellCapabilityContainer-TDD768 CRITICALITY ignore    EXTENSION CellCapabilityContainer-TDD768 PRESENCE optional }|
-- Applicable to 7.68Mcps TDD only
|   { ID id-RxTimingDeviationForTA768 CRITICALITY ignore    EXTENSION RxTimingDeviationForTA768 PRESENCE optional }|
|   { ID id-RxTimingDeviationForTAext CRITICALITY ignore    EXTENSION RxTimingDeviationForTAext PRESENCE optional }|
|   { ID id-Multiple-PLMN-List    CRITICALITY ignore    EXTENSION Multiple-PLMN-List  PRESENCE optional }|
|   { ID id-HSDSCH-RNTI          CRITICALITY ignore    EXTENSION HSDSCH-RNTI        PRESENCE optional }|
|   { ID id-E-RNTI              CRITICALITY ignore    EXTENSION E-RNTI             PRESENCE optional },
|   ...
}

```

```

}
-- *****
--
-- DOWNLINK SIGNALLING TRANSFER REQUEST
--
-- *****

DownlinkSignallingTransferRequest ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{DownlinkSignallingTransferRequest-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{DownlinkSignallingTransferRequest-Extensions}}      OPTIONAL,
    ...
}

DownlinkSignallingTransferRequest-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-C-ID          CRITICALITY ignore  TYPE C-ID          PRESENCE mandatory } |
    -- May be a GERAN cell identifier
    { ID id-D-RNTI        CRITICALITY ignore  TYPE D-RNTI          PRESENCE mandatory } |
    { ID id-L3-Information CRITICALITY ignore  TYPE L3-Information  PRESENCE mandatory } |
    { ID id-D-RNTI-ReleaseIndication CRITICALITY ignore  TYPE D-RNTI-ReleaseIndication PRESENCE mandatory },
    ...
}

DownlinkSignallingTransferRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-URA-ID          CRITICALITY ignore  EXTENSION  URA-ID          PRESENCE optional}|
    { ID id-MBMS-Bearer-Service-List CRITICALITY ignore  EXTENSION MBMS-Bearer-Service-List PRESENCE optional}|
    { ID id-Old-URA-ID      CRITICALITY ignore  EXTENSION  URA-ID          PRESENCE optional}|
    { ID id-SRNC-ID          CRITICALITY ignore  EXTENSION  RNC-ID          PRESENCE conditional}|
    -- This IE shall be present if the URA-ID IE or Old URA-ID IE is present.
    { ID id-Extended-SRNC-ID CRITICALITY reject  EXTENSION  Extended-RNC-ID      PRESENCE optional}|
    { ID id-Enhanced-PCH-Capability CRITICALITY ignore  EXTENSION  Enhanced-PCH-Capability PRESENCE optional},
    -- FDD and 1.28Mcps TDD only
    ...
}

-- *****
--
-- RELOCATION COMMIT
--
-- *****

RelocationCommit ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{RelocationCommit-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{RelocationCommit-Extensions}}      OPTIONAL,
    ...
}

RelocationCommit-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-D-RNTI          CRITICALITY ignore  TYPE D-RNTI          PRESENCE optional } |
    { ID id-RANAP-RelocationInformation CRITICALITY ignore  TYPE RANAP-RelocationInformation PRESENCE optional },
    ...
}

```

```

RelocationCommit-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- PAGING REQUEST
--
-- *****

PagingRequest ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container    {{PagingRequest-IEs}},
  protocolExtensions   ProtocolExtensionContainer {{PagingRequest-Extensions}}    OPTIONAL,
  ...
}

PagingRequest-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-PagingArea-PagingRqst      CRITICALITY ignore TYPE PagingArea-PagingRqst      PRESENCE mandatory } |
  { ID id-SRNC-ID                    CRITICALITY ignore TYPE RNC-ID                    PRESENCE mandatory } | -- May be a BSC-Id.
  { ID id-S-RNTI                     CRITICALITY ignore TYPE S-RNTI                    PRESENCE mandatory } |
  { ID id-IMSI                       CRITICALITY ignore TYPE IMSI                    PRESENCE mandatory } |
  { ID id-DRXCycleLengthCoefficient   CRITICALITY ignore TYPE DRXCycleLengthCoefficient   PRESENCE mandatory } |
  { ID id-CNOriginatedPage-PagingRqst CRITICALITY ignore TYPE CNOriginatedPage-PagingRqst   PRESENCE optional   },
  ...
}

PagingArea-PagingRqst ::= CHOICE {
  uRA          URA-PagingRqst, -- May be a GRA-ID.
  cell        Cell-PagingRqst, -- UTRAN only
  ...
}

URA-PagingRqst ::= SEQUENCE {
  uRA-ID          URA-ID,
  iE-Extensions   ProtocolExtensionContainer { { URAItem-PagingRqst-ExtIEs } } OPTIONAL,
  ...
}

URAItem-PagingRqst-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

Cell-PagingRqst ::= SEQUENCE {
  c-ID          C-ID,
  iE-Extensions ProtocolExtensionContainer { { CellItem-PagingRqst-ExtIEs } } OPTIONAL,
  ...
}

CellItem-PagingRqst-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

CNOriginatedPage-PagingRqst ::= SEQUENCE {

```

```

    pagingCause          PagingCause,
    cNDomainType         CNDomainType,
    pagingRecordType     PagingRecordType,
    iE-Extensions        ProtocolExtensionContainer { { CNOriginatedPage-PagingRqst-ExtIEs} } OPTIONAL,
    ...
}

CNOriginatedPage-PagingRqst-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

PagingRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-Extended-SRNC-ID          CRITICALITY reject      EXTENSION   Extended-RNC-ID          PRESENCE optional } |
    { ID id-Enhanced-PCH-Capability   CRITICALITY ignore   EXTENSION   Enhanced-PCH-Capability  PRESENCE optional } |
    -- FDD and 1.28Mcps TDD only
    ...
}

-- *****
--
-- DEDICATED MEASUREMENT INITIATION REQUEST
--
-- *****

DedicatedMeasurementInitiationRequest ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container      {{DedicatedMeasurementInitiationRequest-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{DedicatedMeasurementInitiationRequest-Extensions}}
    ...
}

DedicatedMeasurementInitiationRequest-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-MeasurementID          CRITICALITY reject  TYPE MeasurementID          PRESENCE mandatory } |
    { ID id-DedicatedMeasurementObjectType-DM-Rqst CRITICALITY reject  TYPE DedicatedMeasurementObjectType-DM-Rqst PRESENCE mandatory } |

    { ID id-DedicatedMeasurementType          CRITICALITY reject  TYPE DedicatedMeasurementType          PRESENCE mandatory } |
    { ID id-MeasurementFilterCoefficient      CRITICALITY reject  TYPE MeasurementFilterCoefficient      PRESENCE optional } |
    { ID id-ReportCharacteristics             CRITICALITY reject  TYPE ReportCharacteristics             PRESENCE mandatory } |
    { ID id-CFNReportingIndicator             CRITICALITY reject  TYPE FNReportingIndicator             PRESENCE mandatory } |
    { ID id-CFN                               CRITICALITY reject  TYPE CFN                               PRESENCE optional } |
    ...
}

DedicatedMeasurementObjectType-DM-Rqst ::= CHOICE {
    rL          RL-DM-Rqst,
    rLS         RL-Set-DM-Rqst,
    allRL       All-RL-DM-Rqst,
    allRLS      All-RL-Set-DM-Rqst,
    ...
}

RL-DM-Rqst ::= SEQUENCE {
    rL-InformationList-DM-Rqst  RL-InformationList-DM-Rqst,
    iE-Extensions               ProtocolExtensionContainer { { RLItem-DM-Rqst-ExtIEs} } OPTIONAL,
    ...
}

```

```

    }
RLItem-DM-Rqst-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
RL-InformationList-DM-Rqst ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container { {RL-Information-DM-Rqst-IEs} }
RL-Information-DM-Rqst-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationItem-DM-Rqst          CRITICALITY reject  TYPE RL-InformationItem-DM-Rqst          PRESENCE mandatory  }
}
RL-InformationItem-DM-Rqst ::= SEQUENCE {
    rL-ID                RL-ID,
    dPCH-ID              DPCH-ID          OPTIONAL,
    iE-Extensions        ProtocolExtensionContainer { {RL-InformationItem-DM-Rqst-ExtIEs} } OPTIONAL,
    ...
}
RL-InformationItem-DM-Rqst-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-HSSICH-Info-DM-Rqst                CRITICALITY reject                EXTENSION HSSICH-Info-DM-Rqst                PRESENCE optional}|
    -- TDD only
    { ID id-DPCH-ID768-DM-Rqst                CRITICALITY reject                EXTENSION DPCH-ID768                PRESENCE optional}|
    { ID id-HSSICH-Info-DM-Rqst-Extension      CRITICALITY reject                EXTENSION HSSICH-Info-DM-Rqst-Extension      PRESENCE optional},
    -- Applicable for 1.28Mcps TDD only when the HS-SICH ID IE is more than 31
    ...
}
HSSICH-Info-DM-Rqst ::= SEQUENCE (SIZE (1..maxNrOfHSSICHs)) OF HS-SICH-ID
HSSICH-Info-DM-Rqst-Extension ::= SEQUENCE (SIZE (1..maxNrOfHSSICHs)) OF HS-SICH-ID-Extension
RL-Set-DM-Rqst ::= SEQUENCE {
    rL-Set-InformationList-DM-Rqst  RL-Set-InformationList-DM-Rqst,
    iE-Extensions                    ProtocolExtensionContainer { { RL-SetItem-DM-Rqst-ExtIEs} } OPTIONAL,
    ...
}
RL-SetItem-DM-Rqst-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
RL-Set-InformationList-DM-Rqst ::= SEQUENCE (SIZE (1..maxNrOfRLSets)) OF ProtocolIE-Single-Container { {RL-Set-Information-DM-Rqst-IEs} }
RL-Set-Information-DM-Rqst-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-Set-InformationItem-DM-Rqst          CRITICALITY reject  TYPE RL-Set-InformationItem-DM-Rqst          PRESENCE mandatory  }
}
RL-Set-InformationItem-DM-Rqst ::= SEQUENCE {
    rL-Set-ID                RL-Set-ID,
    iE-Extensions            ProtocolExtensionContainer { {RL-Set-InformationItem-DM-Rqst-ExtIEs} } OPTIONAL,
    ...
}

```



```

RL-Set-InformationItem-DM-Rqst-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

All-RL-DM-Rqst ::= NULL

All-RL-Set-DM-Rqst ::= NULL

DedicatedMeasurementInitiationRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-PartialReportingIndicator          CRITICALITY ignore EXTENSION PartialReportingIndicator          PRESENCE optional } |
    { ID id-MeasurementRecoveryBehavior        CRITICALITY ignore EXTENSION MeasurementRecoveryBehavior        PRESENCE optional } |
    { ID id-AlternativeFormatReportingIndicator CRITICALITY ignore EXTENSION AlternativeFormatReportingIndicator PRESENCE optional },
    ...
}

-- *****
--
-- DEDICATED MEASUREMENT INITIATION RESPONSE
--
-- *****

DedicatedMeasurementInitiationResponse ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{DedicatedMeasurementInitiationResponse-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{DedicatedMeasurementInitiationResponse-Extensions}}
    ...
}

DedicatedMeasurementInitiationResponse-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-MeasurementID          CRITICALITY ignore TYPE MeasurementID          PRESENCE mandatory } |
    { ID id-DedicatedMeasurementObjectType-DM-Rsp CRITICALITY ignore TYPE DedicatedMeasurementObjectType-DM-Rsp PRESENCE optional } |
    { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
    ...
}

DedicatedMeasurementObjectType-DM-Rsp ::= CHOICE {
    rLs          RL-DM-Rsp,
    rLS          RL-Set-DM-Rsp,
    allRL       RL-DM-Rsp,
    allRLS      RL-Set-DM-Rsp,
    ...
}

RL-DM-Rsp ::= SEQUENCE {
    rL-InformationList-DM-Rsp          RL-InformationList-DM-Rsp,
    iE-Extensions                      ProtocolExtensionContainer { { RLItem-DM-Rsp-ExtIEs } } OPTIONAL,
    ...
}

RLItem-DM-Rsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-Set-DM-Rsp ::= SEQUENCE {

```

```

    rL-Set-InformationList-DM-Rsp  RL-Set-InformationList-DM-Rsp,
    iE-Extensions                  ProtocolExtensionContainer { { RL-SetItem-DM-Rsp-ExtIEs } } OPTIONAL,
    ...
}

RL-SetItem-DM-Rsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-InformationList-DM-Rsp          ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container { {RL-Information-DM-Rsp-IEs} }

RL-Information-DM-Rsp-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationItem-DM-Rsp          CRITICALITY ignore  TYPE RL-InformationItem-DM-Rsp  PRESENCE mandatory  }
}

RL-InformationItem-DM-Rsp ::= SEQUENCE {
    rL-ID                RL-ID,
    dPCH-ID              DPCH-ID          OPTIONAL,
    dedicatedMeasurementValue DedicatedMeasurementValue,
    cFN                  CFN              OPTIONAL,
    iE-Extensions        ProtocolExtensionContainer { {RL-InformationItem-DM-Rsp-ExtIEs} } OPTIONAL,
    ...
}

RL-InformationItem-DM-Rsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    {ID id-HSSICH-Info-DM          CRITICALITY reject          EXTENSION  HS-SICH-ID          PRESENCE optional}|
    -- TDD only
    { ID  id-multiple-DedicatedMeasurementValueList-TDD-DM-Rsp  CRITICALITY ignore  EXTENSION Multiple-DedicatedMeasurementValueList-TDD-DM-Rsp
    PRESENCE optional  }|
    -- Applicable to 3.84Mcps TDD only. This list of dedicated measurement values is used for the 2nd and beyond measurements of a RL when multiple
    dedicated measurement values need to be reported.
    { ID  id-multiple-DedicatedMeasurementValueList-LCR-TDD-DM-Rsp  CRITICALITY ignore  EXTENSION Multiple-DedicatedMeasurementValueList-LCR-
    TDD-DM-Rsp  PRESENCE optional  }|
    -- Applicable to 1.28Mcps TDD only. This list of dedicated measurement values is used for the 2nd and beyond measurements of a RL when multiple
    dedicated measurement values need to be reported.
    { ID  id-multiple-HSSICHMeasurementValueList-TDD-DM-Rsp          CRITICALITY ignore  EXTENSION Multiple-HSSICHMeasurementValueList-TDD-DM-
    Rsp  PRESENCE optional  }|
    -- TDD only. This list of HS-SICH measurement values is used for the 2nd and beyond measurements of a RL when multiple HS-SICH measurement
    values need to be reported.
    { ID  id-multiple-DedicatedMeasurementValueList-TDD768-DM-Rsp  CRITICALITY ignore  EXTENSION Multiple-DedicatedMeasurementValueList-
    TDD768-DM-Rsp  PRESENCE optional  }|
    -- Applicable to 7.68Mcps TDD only. This list of dedicated measurement values is used for the 2nd and beyond measurements of a RL when multiple
    dedicated measurement values need to be reported.
    { ID  id-DPCH-ID768-DM-Rsp          CRITICALITY ignore  EXTENSION DPCH-ID768
    PRESENCE optional}|
    { ID id-HS-SICH-ID-Extension          CRITICALITY ignore  EXTENSION HS-SICH-ID-Extension
    PRESENCE optional},
    -- Applicable for 1.28Mcps TDD only when the HS-SICH ID IE is more than 31
    ...
}

RL-Set-InformationList-DM-Rsp  ::= SEQUENCE (SIZE (1..maxNrOfRLSets)) OF ProtocolIE-Single-Container { {RL-Set-Information-DM-Rsp-IEs} }

RL-Set-Information-DM-Rsp-IEs RNSAP-PROTOCOL-IES ::= {

```

```

    { ID id-RL-Set-InformationItem-DM-Rsp          CRITICALITY ignore  TYPE RL-Set-InformationItem-DM-Rsp  PRESENCE mandatory  }
  }

RL-Set-InformationItem-DM-Rsp ::= SEQUENCE {
  rL-Set-ID          RL-Set-ID,
  dedicatedMeasurementValue  DedicatedMeasurementValue,
  cFN                CFN          OPTIONAL,
  iE-Extensions      ProtocolExtensionContainer { {RL-Set-InformationItem-DM-Rspns-ExtIEs} }  OPTIONAL,
  ...
}

RL-Set-InformationItem-DM-Rspns-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

DedicatedMeasurementInitiationResponse-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-MeasurementRecoverySupportIndicator  CRITICALITY ignore  EXTENSION MeasurementRecoverySupportIndicator  PRESENCE optional
  },
  ...
}

Multiple-DedicatedMeasurementValueList-TDD-DM-Rsp ::= SEQUENCE (SIZE (1.. maxNrOfDPCHsPerRL-1)) OF Multiple-DedicatedMeasurementValueItem-TDD-DM-Rsp

Multiple-DedicatedMeasurementValueItem-TDD-DM-Rsp ::= SEQUENCE {
  dPCH-ID          DPCH-ID,
  dedicatedMeasurementValue  DedicatedMeasurementValue,
  iE-Extensions      ProtocolExtensionContainer { { Multiple-DedicatedMeasurementValueItem-TDD-DM-Rsp-ExtIEs} }  OPTIONAL,
  ...
}

Multiple-DedicatedMeasurementValueItem-TDD-DM-Rsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

Multiple-DedicatedMeasurementValueList-LCR-TDD-DM-Rsp ::= SEQUENCE (SIZE (1.. maxNrOfDPCHsLCRPerRL-1)) OF Multiple-DedicatedMeasurementValueItem-LCR-TDD-DM-Rsp

Multiple-DedicatedMeasurementValueItem-LCR-TDD-DM-Rsp ::= SEQUENCE {
  dPCH-ID          DPCH-ID,
  dedicatedMeasurementValue  DedicatedMeasurementValue,
  iE-Extensions      ProtocolExtensionContainer { { Multiple-DedicatedMeasurementValueItem-LCR-TDD-DM-Rsp-ExtIEs} }
  OPTIONAL,
  ...
}

Multiple-DedicatedMeasurementValueItem-LCR-TDD-DM-Rsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

Multiple-HSSICHMeasurementValueList-TDD-DM-Rsp ::= SEQUENCE (SIZE (1.. maxNrOfHSSICHs-1)) OF Multiple-HSSICHMeasurementValueItem-TDD-DM-Rsp

Multiple-HSSICHMeasurementValueItem-TDD-DM-Rsp ::= SEQUENCE {

```

```

    hsSICH-ID                HS-SICH-ID,
    dedicatedMeasurementValue DedicatedMeasurementValue,
    iE-Extensions            ProtocolExtensionContainer { { Multiple-HSSICHMeasurementValueItem-TDD-DM-Rsp-ExtIEs} } OPTIONAL,
    ...
}

Multiple-HSSICHMeasurementValueItem-TDD-DM-Rsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-HS-SICH-ID-Extension          CRITICALITY ignore          EXTENSION HS-SICH-ID-Extension          PRESENCE optional },
  -- Applicable for 1.28Mcps TDD only when the HS-SICH ID IE is more than 31
  ...
}

Multiple-DedicatedMeasurementValueList-TDD768-DM-Rsp ::= SEQUENCE (SIZE (1.. maxNrOfDPCHs768PerRL-1)) OF Multiple-DedicatedMeasurementValueItem-TDD768-DM-Rsp

Multiple-DedicatedMeasurementValueItem-TDD768-DM-Rsp ::= SEQUENCE {
  dPCH-ID768                DPCH-ID768,
  dedicatedMeasurementValue DedicatedMeasurementValue,
  iE-Extensions            ProtocolExtensionContainer { { Multiple-DedicatedMeasurementValueItem-TDD768-DM-Rsp-ExtIEs} } OPTIONAL,
  ...
}

Multiple-DedicatedMeasurementValueItem-TDD768-DM-Rsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- DEDICATED MEASUREMENT INITIATION FAILURE
--
-- *****

DedicatedMeasurementInitiationFailure ::= SEQUENCE {
  protocolIEs                ProtocolIE-Container          {{DedicatedMeasurementInitiationFailure-IEs}},
  protocolExtensions        ProtocolExtensionContainer {{DedicatedMeasurementInitiationFailure-Extensions}}
  ...
}

DedicatedMeasurementInitiationFailure-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-MeasurementID          CRITICALITY ignore          TYPE MeasurementID          PRESENCE mandatory } |
  { ID id-Cause                  CRITICALITY ignore          TYPE Cause                  PRESENCE mandatory } |
  { ID id-CriticalityDiagnostics CRITICALITY ignore          TYPE CriticalityDiagnostics PRESENCE optional },
  ...
}

DedicatedMeasurementInitiationFailure-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-DedicatedMeasurementObjectType-DM-Fail CRITICALITY ignore EXTENSION DedicatedMeasurementObjectType-DM-Fail PRESENCE optional },
  ...
}

DedicatedMeasurementObjectType-DM-Fail ::= CHOICE {
  rL                            RL-DM-Fail,

```

```

    rLS                RL-Set-DM-Fail,
    allRL              RL-DM-Fail,
    allRLS             RL-Set-DM-Fail,
    ...
}

RL-DM-Fail ::= SEQUENCE {
    rL-unsuccessful-InformationRespList-DM-Fail    RL-Unsuccessful-InformationRespList-DM-Fail,
    rL-successful-InformationRespList-DM-Fail      RL-Successful-InformationRespList-DM-Fail    OPTIONAL,
    iE-Extensions                                ProtocolExtensionContainer { { RLItem-DM-Fail-ExtIEs } } OPTIONAL,
    ...
}

RLItem-DM-Fail-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-Set-DM-Fail ::= SEQUENCE {
    rL-Set-unsuccessful-InformationRespList-DM-Fail    RL-Set-Unsuccessful-InformationRespList-DM-Fail,
    rL-Set-successful-InformationRespList-DM-Fail      RL-Set-Successful-InformationRespList-DM-Fail    OPTIONAL,
    iE-Extensions                                ProtocolExtensionContainer { { RL-SetItem-DM-Fail-ExtIEs } } OPTIONAL,
    ...
}

RL-SetItem-DM-Fail-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-Unsuccessful-InformationRespList-DM-Fail    ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container { {RL-Unsuccessful-InformationResp-DM-Fail-IEs} }

RL-Unsuccessful-InformationResp-DM-Fail-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-Unsuccessful-InformationItem-DM-Fail    CRITICALITY ignore    TYPE RL-Unsuccessful-InformationItem-DM-Fail    PRESENCE mandatory }
}

RL-Unsuccessful-InformationItem-DM-Fail ::= SEQUENCE {
    rL-ID                RL-ID,
    individualcause      Cause    OPTIONAL,
    iE-Extensions        ProtocolExtensionContainer { {RL-Unsuccessful-InformationItem-DM-Fail-ExtIEs} } OPTIONAL,
    ...
}

RL-Unsuccessful-InformationItem-DM-Fail-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-Successful-InformationRespList-DM-Fail    ::= SEQUENCE (SIZE (1..maxNrOfRLs-1)) OF ProtocolIE-Single-Container { {RL-Successful-InformationResp-DM-Fail-IEs} }

RL-Successful-InformationResp-DM-Fail-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-Successful-InformationItem-DM-Fail    CRITICALITY ignore    TYPE RL-Successful-InformationItem-DM-Fail    PRESENCE mandatory }
}

RL-Successful-InformationItem-DM-Fail ::= SEQUENCE {

```

```

    rL-ID                RL-ID,
    dPCH-ID              DPCH-ID          OPTIONAL,
    dedicatedMeasurementValue DedicatedMeasurementValue,
    cFN                  CFN              OPTIONAL,
    iE-Extensions        ProtocolExtensionContainer { {RL-Successful-InformationItem-DM-Fail-ExtIEs} } OPTIONAL,
    ...
}

RL-Successful-InformationItem-DM-Fail-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-HSSICH-Info-DM          CRITICALITY reject          EXTENSION HS-SICH-ID          PRESENCE optional} |
  -- TDD only
  { ID id-HS-SICH-ID-Extension    CRITICALITY ignore          EXTENSION HS-SICH-ID-Extension    PRESENCE optional},
  -- Applicable for 1.28Mcps TDD only when the HS-SICH ID IE is more than 31
  ...
}

RL-Set-Unsuccessful-InformationRespList-DM-Fail ::= SEQUENCE (SIZE (1..maxNrOfRLSets)) OF ProtocolIE-Single-Container { {RL-Set-
Unsuccessful-InformationResp-DM-Fail-IEs} }

RL-Set-Unsuccessful-InformationResp-DM-Fail-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-Set-Unsuccessful-InformationItem-DM-Fail    CRITICALITY ignore    TYPE RL-Set-Unsuccessful-InformationItem-DM-Fail    PRESENCE
mandatory }
}

RL-Set-Unsuccessful-InformationItem-DM-Fail ::= SEQUENCE {
  rL-Set-ID                RL-Set-ID,
  individualCause          Cause          OPTIONAL,
  iE-Extensions            ProtocolExtensionContainer { {RL-Set-Unsuccessful-InformationItem-DM-Failns-ExtIEs} } OPTIONAL,
  ...
}

RL-Set-Unsuccessful-InformationItem-DM-Failns-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

RL-Set-Successful-InformationRespList-DM-Fail ::= SEQUENCE (SIZE (1..maxNrOfRLSets-1)) OF ProtocolIE-Single-Container { {RL-Set-
Successful-InformationResp-DM-Fail-IEs} }

RL-Set-Successful-InformationResp-DM-Fail-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-Set-Successful-InformationItem-DM-Fail    CRITICALITY ignore    TYPE RL-Set-Successful-InformationItem-DM-Fail    PRESENCE
mandatory }
}

RL-Set-Successful-InformationItem-DM-Fail ::= SEQUENCE {
  rL-Set-ID                RL-Set-ID,
  dedicatedMeasurementValue DedicatedMeasurementValue,
  cFN                      CFN              OPTIONAL,
  iE-Extensions            ProtocolExtensionContainer { {RL-Set-Successful-InformationItem-DM-Failns-ExtIEs} } OPTIONAL,
  ...
}

RL-Set-Successful-InformationItem-DM-Failns-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

```

```

-- *****
--
-- DEDICATED MEASUREMENT REPORT
--
-- *****

DedicatedMeasurementReport ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{DedicatedMeasurementReport-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{DedicatedMeasurementReport-Extensions}} OPTIONAL,
    ...
}

DedicatedMeasurementReport-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-MeasurementID          CRITICALITY ignore TYPE MeasurementID          PRESENCE mandatory } |
    { ID id-DedicatedMeasurementObjectType-DM-Rprt CRITICALITY ignore TYPE DedicatedMeasurementObjectType-DM-Rprt PRESENCE mandatory },
    ...
}

DedicatedMeasurementObjectType-DM-Rprt ::= CHOICE {
    rLs          RL-DM-Rprt,
    rLS          RL-Set-DM-Rprt,
    allRL       RL-DM-Rprt,
    allRLS      RL-Set-DM-Rprt,
    ...
}

RL-DM-Rprt ::= SEQUENCE {
    rL-InformationList-DM-Rprt   RL-InformationList-DM-Rprt,
    iE-Extensions                ProtocolExtensionContainer { { RLItem-DM-Rprt-ExtIEs } } OPTIONAL,
    ...
}

RLItem-DM-Rprt-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-Set-DM-Rprt ::= SEQUENCE {
    rL-Set-InformationList-DM-Rprt   RL-Set-InformationList-DM-Rprt,
    iE-Extensions                    ProtocolExtensionContainer { { RL-SetItem-DM-Rprt-ExtIEs } } OPTIONAL,
    ...
}

RL-SetItem-DM-Rprt-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-InformationList-DM-Rprt          ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container { {RL-Information-DM-Rprt-IEs} }

RL-Information-DM-Rprt-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationItem-DM-Rprt          CRITICALITY ignore TYPE RL-InformationItem-DM-Rprt          PRESENCE mandatory }
}

RL-InformationItem-DM-Rprt ::= SEQUENCE {

```

```

    rL-ID                RL-ID,
    dPCH-ID              DPCH-ID          OPTIONAL,
    dedicatedMeasurementValueInformation DedicatedMeasurementValueInformation,
    iE-Extensions        ProtocolExtensionContainer { {RL-InformationItem-DM-Rprt-ExtIEs} } OPTIONAL,
    ...
}

RL-InformationItem-DM-Rprt-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-HSSICH-Info-DM-Rprt          CRITICALITY ignore          EXTENSION HS-SICH-ID          PRESENCE optional} |
  -- TDD only
  { ID id-DPCH-ID768-DM-Rprt          CRITICALITY ignore          EXTENSION DPCH-ID768          PRESENCE optional} |
  { ID id-HS-SICH-ID-Extension        CRITICALITY ignore          EXTENSION HS-SICH-ID-Extension PRESENCE optional},
  -- Applicable for 1.28Mcps TDD only when the HS-SICH ID IE is more than 31
  ...
}

RL-Set-InformationList-DM-Rprt ::= SEQUENCE (SIZE (1..maxNrOfRLSets)) OF ProtocolIE-Single-Container { {RL-Set-Information-DM-Rprt-IEs} }

RL-Set-Information-DM-Rprt-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-Set-InformationItem-DM-Rprt CRITICALITY ignore TYPE RL-Set-InformationItem-DM-Rprt PRESENCE mandatory }
}

RL-Set-InformationItem-DM-Rprt ::= SEQUENCE {
  rL-Set-ID                RL-Set-ID,
  dedicatedMeasurementValueInformation DedicatedMeasurementValueInformation,
  iE-Extensions            ProtocolExtensionContainer { {RL-Set-InformationItem-DM-Rprt-ExtIEs} } OPTIONAL,
  ...
}

RL-Set-InformationItem-DM-Rprt-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

DedicatedMeasurementReport-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-MeasurementRecoveryReportingIndicator CRITICALITY ignore EXTENSION MeasurementRecoveryReportingIndicator PRESENCE optional },
  ...
}

-- *****
--
-- DEDICATED MEASUREMENT TERMINATION REQUEST
--
-- *****

DedicatedMeasurementTerminationRequest ::= SEQUENCE {
  protocolIEs                ProtocolIE-Container {{DedicatedMeasurementTerminationRequest-IEs}},
  protocolExtensions         ProtocolExtensionContainer {{DedicatedMeasurementTerminationRequest-Extensions}}
  ...
}

DedicatedMeasurementTerminationRequest-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-MeasurementID          CRITICALITY ignore TYPE MeasurementID          PRESENCE mandatory },

```



```

}
...
}
DedicatedMeasurementTerminationRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}
-- *****
--
-- DEDICATED MEASUREMENT FAILURE INDICATION
--
-- *****

DedicatedMeasurementFailureIndication ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container      {{DedicatedMeasurementFailureIndication-IEs}},
  protocolExtensions  ProtocolExtensionContainer {{DedicatedMeasurementFailureIndication-Extensions}}
  ...
}
OPTIONAL,

DedicatedMeasurementFailureIndication-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-MeasurementID          CRITICALITY ignore TYPE MeasurementID          PRESENCE mandatory } |
  { ID id-Cause                  CRITICALITY ignore TYPE Cause                  PRESENCE mandatory },
  ...
}

DedicatedMeasurementFailureIndication-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-DedicatedMeasurementObjectType-DM-Fail-Ind CRITICALITY ignore EXTENSION DedicatedMeasurementObjectType-DM-Fail-Ind PRESENCE optional
  },
  ...
}

DedicatedMeasurementObjectType-DM-Fail-Ind ::= CHOICE {
  rL          RL-DM-Fail-Ind,
  rLS         RL-Set-DM-Fail-Ind,
  allRL       RL-DM-Fail-Ind,
  allRLS      RL-Set-DM-Fail-Ind,
  ...
}

RL-DM-Fail-Ind ::= SEQUENCE {
  rL-unsuccessful-InformationRespList-DM-Fail-Ind  RL-Unsuccessful-InformationRespList-DM-Fail-Ind,
  iE-Extensions                                    ProtocolExtensionContainer { { RLItem-DM-Fail-Ind-ExtIEs} } OPTIONAL,
  ...
}

RLItem-DM-Fail-Ind-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

RL-Set-DM-Fail-Ind ::= SEQUENCE {
  rL-Set-unsuccessful-InformationRespList-DM-Fail-Ind  RL-Set-Unsuccessful-InformationRespList-DM-Fail-Ind,
  iE-Extensions                                        ProtocolExtensionContainer { { RL-SetItem-DM-Fail-Ind-ExtIEs} } OPTIONAL,
  ...
}

```

```

RL-SetItem-DM-Fail-Ind-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-Unsuccessful-InformationRespList-DM-Fail-Ind ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container { {RL-Unsuccessful-
InformationResp-DM-Fail-Ind-IEs} }

RL-Unsuccessful-InformationResp-DM-Fail-Ind-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-Unsuccessful-InformationItem-DM-Fail-Ind CRITICALITY ignore TYPE RL-Unsuccessful-InformationItem-DM-Fail-Ind PRESENCE
mandatory }
}

RL-Unsuccessful-InformationItem-DM-Fail-Ind ::= SEQUENCE {
    rL-ID RL-ID,
    individualCause Cause OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { {RL-Unsuccessful-InformationItem-DM-Fail-Ind-ExtIEs} } OPTIONAL,
    ...
}

RL-Unsuccessful-InformationItem-DM-Fail-Ind-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-Set-Unsuccessful-InformationRespList-DM-Fail-Ind ::= SEQUENCE (SIZE (1..maxNrOfRLSets)) OF ProtocolIE-Single-Container { {RL-Set-
Unsuccessful-InformationResp-DM-Fail-Ind-IEs} }

RL-Set-Unsuccessful-InformationResp-DM-Fail-Ind-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-Set-Unsuccessful-InformationItem-DM-Fail-Ind CRITICALITY ignore TYPE RL-Set-Unsuccessful-InformationItem-DM-Fail-Ind PRESENCE
mandatory }
}

RL-Set-Unsuccessful-InformationItem-DM-Fail-Ind ::= SEQUENCE {
    rL-Set-ID RL-Set-ID,
    individualCause Cause OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { {RL-Set-Unsuccessful-InformationItem-DM-Fail-Indns-ExtIEs} } OPTIONAL,
    ...
}

RL-Set-Unsuccessful-InformationItem-DM-Fail-Indns-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- COMMON TRANSPORT CHANNEL RESOURCES RELEASE REQUEST
--
-- *****

CommonTransportChannelResourcesReleaseRequest ::= SEQUENCE {
    protocolIEs ProtocolIE-Container {{CommonTransportChannelResourcesReleaseRequest-IEs}},
    protocolExtensions ProtocolExtensionContainer {{CommonTransportChannelResourcesReleaseRequest-Extensions}}
OPTIONAL,
    ...
}

```

```

}

CommonTransportChannelResourcesReleaseRequest-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-D-RNTI          CRITICALITY ignore  TYPE D-RNTI          PRESENCE mandatory },
  ...
}

CommonTransportChannelResourcesReleaseRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- COMMON TRANSPORT CHANNEL RESOURCES REQUEST
--
-- *****

CommonTransportChannelResourcesRequest ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container    {{CommonTransportChannelResourcesRequest-IEs}},
  protocolExtensions  ProtocolExtensionContainer {{CommonTransportChannelResourcesRequest-Extensions}}  OPTIONAL,
  ...
}

CommonTransportChannelResourcesRequest-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-D-RNTI          CRITICALITY reject  TYPE D-RNTI          PRESENCE mandatory } |
  { ID id-C-ID           CRITICALITY reject  TYPE C-ID           PRESENCE optional } |
  { ID id-TransportBearerRequestIndicator CRITICALITY reject  TYPE TransportBearerRequestIndicator PRESENCE mandatory } |
  { ID id-TransportBearerID CRITICALITY reject  TYPE TransportBearerID   PRESENCE mandatory },
  ...
}

CommonTransportChannelResourcesRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-Permanent-NAS-UE-Identity CRITICALITY ignore  EXTENSION Permanent-NAS-UE-Identity PRESENCE optional } |
  { ID id-BindingID CRITICALITY ignore  EXTENSION BindingID PRESENCE optional } |
  -- Shall be ignored if bearer establishment with ALCAP.
  { ID id-TransportLayerAddress CRITICALITY ignore  EXTENSION TransportLayerAddress PRESENCE optional } |
  -- Shall be ignored if bearer establishment with ALCAP.
  { ID id-MBMS-Bearer-Service-List CRITICALITY notify  EXTENSION MBMS-Bearer-Service-List PRESENCE optional } |
  { ID id-TnIQos CRITICALITY ignore  EXTENSION TnIQos PRESENCE optional } |
  { ID id-Enhanced-FACH-Support-Indicator CRITICALITY ignore  EXTENSION Enhanced-FACH-Support-Indicator PRESENCE optional } |
  -- FDD and 1.28Mcps TDD only
  { ID id-Common-EDCH-Support-Indicator CRITICALITY ignore  EXTENSION Common-EDCH-Support-Indicator PRESENCE optional } |
  -- FDD only
  { ID id-HSDSCH-Physical-Layer-Category CRITICALITY ignore  EXTENSION HSDSCH-Physical-Layer-Category PRESENCE optional },
  ...}

-- *****
--
-- COMMON TRANSPORT CHANNEL RESOURCES RESPONSE FDD
--
-- *****

CommonTransportChannelResourcesResponseFDD ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container    {{CommonTransportChannelResourcesResponseFDD-IEs}},

```

```

    protocolExtensions          ProtocolExtensionContainer {{CommonTransportChannelResourcesResponseFDD-Extensions}}      OPTIONAL,
    ...
}

CommonTransportChannelResourcesResponseFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-S-RNTI                CRITICALITY ignore  TYPE S-RNTI                PRESENCE mandatory } |
  { ID id-C-RNTI                CRITICALITY ignore  TYPE C-RNTI                PRESENCE optional } |
  { ID id-FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspFDD  CRITICALITY ignore  TYPE FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspFDD  PRESENCE mandatory } |
  { ID id-TransportLayerAddress  CRITICALITY ignore  TYPE TransportLayerAddress  PRESENCE optional } |
  { ID id-BindingID              CRITICALITY ignore  TYPE BindingID              PRESENCE optional } |
  { ID id-CriticalityDiagnostics  CRITICALITY ignore  TYPE CriticalityDiagnostics  PRESENCE optional },
  ...
}

FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspFDD ::= SEQUENCE {
  fACH-FlowControlInformation  FACH-FlowControlInformation-CTCH-ResourceRspFDD,
  -- If the Enhanced FACH Information Response IE is included in the message, the FACH Flow Control Information IE shall be ignored.
  IE-Extensions                ProtocolExtensionContainer { {FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspFDD-ExtIEs} } OPTIONAL,
  ...
}

FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

FACH-FlowControlInformation-CTCH-ResourceRspFDD ::= ProtocolIE-Single-Container {{ FACH-FlowControlInformationIEs-CTCH-ResourceRspFDD }}

FACH-FlowControlInformationIEs-CTCH-ResourceRspFDD RNSAP-PROTOCOL-IES ::= {
  { ID id-FACH-FlowControlInformation CRITICALITY ignore  TYPE FACH-FlowControlInformation PRESENCE mandatory }
}

CommonTransportChannelResourcesResponseFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-C-ID                CRITICALITY ignore  EXTENSION C-ID
  PRESENCE mandatory } |
  { ID id-Active-MBMS-Bearer-ServiceFDD  CRITICALITY ignore  EXTENSION Active-MBMS-Bearer-Service-ListFDD
  PRESENCE optional } |
  { ID id-Enhanced-FACH-Information-ResponseFDD  CRITICALITY ignore  EXTENSION Enhanced-FACH-Information-ResponseFDD
  PRESENCE optional } |
  { ID id-Common-EDCH-MAC-d-Flow-Specific-InformationFDD  CRITICALITY ignore  EXTENSION Common-EDCH-MAC-d-Flow-Specific-InformationFDD
  PRESENCE optional } |
  { ID id-E-RNTI  CRITICALITY ignore  EXTENSION E-RNTI  PRESENCE optional },
  ...
}

-- *****
--
-- COMMON TRANSPORT CHANNEL RESOURCES RESPONSE TDD
--
-- *****

CommonTransportChannelResourcesResponseTDD ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container  {{CommonTransportChannelResourcesResponseTDD-IEs}},
  protocolExtensions  ProtocolExtensionContainer {{CommonTransportChannelResourcesResponseTDD-Extensions}}      OPTIONAL,
}

```

```

}
...
}
CommonTransportChannelResourcesResponseTDD-IES RNSAP-PROTOCOL-IES ::= {
  { ID id-S-RNTI          CRITICALITY ignore  TYPE S-RNTI          PRESENCE mandatory } |
  { ID id-C-RNTI          CRITICALITY ignore  TYPE C-RNTI          PRESENCE optional  } |
  { ID id-FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspTDD  CRITICALITY ignore  TYPE FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspTDD  PRESENCE mandatory } |
  { ID id-TransportLayerAddress  CRITICALITY ignore  TYPE TransportLayerAddress  PRESENCE optional } |
  { ID id-BindingID  CRITICALITY ignore  TYPE BindingID  PRESENCE optional } |
  { ID id-CriticalityDiagnostics  CRITICALITY ignore  TYPE CriticalityDiagnostics  PRESENCE optional },
  ...
}

FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspTDD ::= SEQUENCE {
  fACH-FlowControlInformation  FACH-FlowControlInformation-CTCH-ResourceRspTDD,
  iE-Extensions  ProtocolExtensionContainer { {FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspTDD-ExtIEs} } OPTIONAL,
  ...
}

FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

FACH-FlowControlInformation-CTCH-ResourceRspTDD ::= ProtocolIE-Single-Container {{ FACH-FlowControlInformationIES-CTCH-ResourceRspTDD }}

FACH-FlowControlInformationIES-CTCH-ResourceRspTDD RNSAP-PROTOCOL-IES ::= {
  { ID id-FACH-FlowControlInformation  CRITICALITY ignore  TYPE  FACH-FlowControlInformation  PRESENCE mandatory }
}

CommonTransportChannelResourcesResponseTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-C-ID          CRITICALITY ignore          EXTENSION  C-ID
  PRESENCE mandatory } |
  { ID id-Active-MBMS-Bearer-ServiceTDD          CRITICALITY ignore          EXTENSION  Active-MBMS-Bearer-Service-ListTDD
  PRESENCE optional } |
  { ID id-Enhanced-FACH-Information-ResponseLCR          CRITICALITY ignore          EXTENSION  Enhanced-FACH-Information-ResponseLCR
  PRESENCE optional } |
  { ID id-Common-EDCH-MAC-d-Flow-Specific-InformationLCR          CRITICALITY ignore          EXTENSION  Common-EDCH-MAC-d-Flow-Specific-InformationLCR
  PRESENCE optional },
  ...
}

-- *****
--
-- COMMON TRANSPORT CHANNEL RESOURCES FAILURE
--
-- *****

CommonTransportChannelResourcesFailure ::= SEQUENCE {
  protocolIES          ProtocolIE-Container  {{CommonTransportChannelResourcesFailure-IEs}},
  protocolExtensions  ProtocolExtensionContainer  {{CommonTransportChannelResourcesFailure-Extensions}}
  ...
}

```

```

CommonTransportChannelResourcesFailure-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-S-RNTI          CRITICALITY ignore TYPE S-RNTI          PRESENCE mandatory } |
  { ID id-Cause          CRITICALITY ignore TYPE Cause          PRESENCE mandatory } |
  { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
  ...
}

CommonTransportChannelResourcesFailure-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- COMPRESSED MODE COMMAND
--
-- *****

CompressedModeCommand ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container    {{CompressedModeCommand-IEs}},
  protocolExtensions  ProtocolExtensionContainer {{CompressedModeCommand-Extensions}}
  ...
}

CompressedModeCommand-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-Active-Pattern-Sequence-Information CRITICALITY ignore TYPE Active-Pattern-Sequence-Information PRESENCE mandatory },
  ...
}

CompressedModeCommand-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- ERROR INDICATION
--
-- *****

ErrorIndication ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container    {{ErrorIndication-IEs}},
  protocolExtensions  ProtocolExtensionContainer {{ErrorIndication-Extensions}}
  ...
}

ErrorIndication-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-Cause          CRITICALITY ignore TYPE Cause          PRESENCE optional } |
  { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
  ...
}

ErrorIndication-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-S-RNTI          CRITICALITY ignore EXTENSION S-RNTI          PRESENCE optional } |
  { ID id-D-RNTI          CRITICALITY ignore EXTENSION D-RNTI          PRESENCE optional },
  ...
}

```

```

}
-- *****
--
-- COMMON MEASUREMENT INITIATION REQUEST
--
-- *****

CommonMeasurementInitiationRequest ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{CommonMeasurementInitiationRequest-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{CommonMeasurementInitiationRequest-Extensions}}    OPTIONAL,
    ...
}

CommonMeasurementInitiationRequest-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-MeasurementID          CRITICALITY reject TYPE MeasurementID          PRESENCE mandatory }|
    { ID id-CommonMeasurementObjectType-CM-Rqst CRITICALITY reject TYPE CommonMeasurementObjectType-CM-Rqst PRESENCE mandatory }|
    { ID id-CommonMeasurementType CRITICALITY reject TYPE CommonMeasurementType PRESENCE mandatory }|
    { ID id-MeasurementFilterCoefficient CRITICALITY reject TYPE MeasurementFilterCoefficient PRESENCE optional }|
    -- UTRAN only
    { ID id-ReportCharacteristics CRITICALITY reject TYPE ReportCharacteristics PRESENCE mandatory }|
    { ID id-SFNReportingIndicator CRITICALITY reject TYPE SFNReportingIndicator PRESENCE mandatory }|
    { ID id-SFN CRITICALITY reject TYPE SFN PRESENCE optional }|
    -- UTRAN only
    { ID id-CommonMeasurementAccuracy CRITICALITY reject TYPE CommonMeasurementAccuracy PRESENCE optional },
    -- UTRAN only
    ...
}

CommonMeasurementInitiationRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-MeasurementRecoveryBehavior CRITICALITY ignore EXTENSION MeasurementRecoveryBehavior PRESENCE optional }|
    }|
    -- UTRAN only
    { ID id-GANSS-Time-ID CRITICALITY ignore EXTENSION GANSS-Time-ID PRESENCE optional},
    ...
}

CommonMeasurementObjectType-CM-Rqst ::= CHOICE {
    cell Cell-CM-Rqst,
    ...
}

Cell-CM-Rqst ::= SEQUENCE {
    uC-ID UC-ID,
    -- May be a GERAN cell identifier
    timeSlot TimeSlot OPTIONAL, --3.84Mcps TDD and 7.68Mcps TDD only
    timeSlotLCR TimeSlotLCR OPTIONAL, --1.28Mcps TDD only
    neighbouringCellMeasurementInformation NeighbouringCellMeasurementInfo OPTIONAL,
    -- UTRAN only
    iE-Extensions ProtocolExtensionContainer { { CellItem-CM-Rqst-ExtIEs } } OPTIONAL,
    ...
}

NeighbouringCellMeasurementInfo ::= SEQUENCE (SIZE (1..maxNrOfMeasNCell)) OF

```

```

CHOICE {
    neighbouringFDDCellMeasurementInformation      NeighbouringFDDCellMeasurementInformation,
    neighbouringTDDCellMeasurementInformation      NeighbouringTDDCellMeasurementInformation,
    ...,
    extension-neighbouringCellMeasurementInformation      Extension-neighbouringCellMeasurementInformation,
    extension-neighbouringCellMeasurementInformation768      Extension-neighbouringCellMeasurementInformation768
}

Extension-neighbouringCellMeasurementInformation ::= ProtocolIE-Single-Container {{ Extension-neighbouringCellMeasurementInformationIE }}

Extension-neighbouringCellMeasurementInformationIE RNSAP-PROTOCOL-IES ::= {
    { ID id-neighbouringTDDCellMeasurementInformationLCR      CRITICALITY reject  TYPE NeighbouringTDDCellMeasurementInformationLCR  PRESENCE
mandatory },
    ...
}

Extension-neighbouringCellMeasurementInformation768 ::= ProtocolIE-Single-Container {{ Extension-neighbouringCellMeasurementInformation768IE }}

Extension-neighbouringCellMeasurementInformation768IE RNSAP-PROTOCOL-IES ::= {
    { ID id-neighbouringTDDCellMeasurementInformation768      CRITICALITY reject  TYPE NeighbouringTDDCellMeasurementInformation768  PRESENCE
mandatory },
    ...
}

CellItem-CM-Rqst-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-UARFCNforNt      CRITICALITY ignore  EXTENSION UARFCN      PRESENCE optional }|
    -- Applicable to 1.28Mcps TDD only
    { ID id-UPPCHPositionLCR      CRITICALITY reject  EXTENSION UPPCHPositionLCR      PRESENCE optional},
    -- Applicable to 1.28Mcps TDD only
    ...
}

-- *****
--
-- COMMON MEASUREMENT INITIATION RESPONSE
--
-- *****

CommonMeasurementInitiationResponse ::= SEQUENCE {
    protocolIEs      ProtocolIE-Container      {{CommonMeasurementInitiationResponse-IEs}},
    protocolExtensions      ProtocolExtensionContainer      {{CommonMeasurementInitiationResponse-Extensions}}      OPTIONAL,
    ...
}

CommonMeasurementInitiationResponse-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-MeasurementID      CRITICALITY ignore  TYPE      MeasurementID      PRESENCE mandatory }|
    { ID id-CommonMeasurementObjectType-CM-Rsp      CRITICALITY ignore  TYPE      CommonMeasurementObjectType-CM-Rsp      PRESENCE optional }|
    { ID id-SFN      CRITICALITY ignore  TYPE      SFN      PRESENCE optional }|
    -- UTRAN only
    { ID id-CriticalityDiagnostics      CRITICALITY ignore  TYPE      CriticalityDiagnostics      PRESENCE optional }|
    { ID id-CommonMeasurementAccuracy      CRITICALITY reject  TYPE      CommonMeasurementAccuracy      PRESENCE optional },
    -- UTRAN only
    ...
}

```



```

}

CommonMeasurementInitiationResponse-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-MeasurementRecoverySupportIndicator CRITICALITY ignore EXTENSION MeasurementRecoverySupportIndicator PRESENCE optional
  },
  -- UTRAN only
  ...
}

CommonMeasurementObjectType-CM-Rsp ::= CHOICE {
  cell Cell-CM-Rsp,
  ...
}

Cell-CM-Rsp ::= SEQUENCE {
  commonMeasurementValue CommonMeasurementValue,
  iE-Extensions ProtocolExtensionContainer { { CellItem-CM-Rsp-ExtIEs } } OPTIONAL,
  ...
}

CellItem-CM-Rsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- COMMON MEASUREMENT INITIATION FAILURE
--
-- *****

CommonMeasurementInitiationFailure ::= SEQUENCE {
  protocolIEs ProtocolIE-Container {{CommonMeasurementInitiationFailure-IEs}},
  protocolExtensions ProtocolExtensionContainer {{CommonMeasurementInitiationFailure-Extensions}} OPTIONAL,
  ...
}

CommonMeasurementInitiationFailure-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-MeasurementID CRITICALITY ignore TYPE MeasurementID PRESENCE mandatory } |
  { ID id-Cause CRITICALITY ignore TYPE Cause PRESENCE mandatory } |
  { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
  ...
}

CommonMeasurementInitiationFailure-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- COMMON MEASUREMENT REPORT
--
-- *****

CommonMeasurementReport ::= SEQUENCE {

```

```

    protocolIEs          ProtocolIE-Container    {{CommonMeasurementReport-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{CommonMeasurementReport-Extensions}} OPTIONAL,
    ...
}

CommonMeasurementReport-IEs RNSAP-PROTOCOL-IES ::= {
  { ID    id-MeasurementID          CRITICALITY ignore  TYPE    MeasurementID          PRESENCE mandatory }|
  { ID    id-CommonMeasurementObjectType-CM-Rprt CRITICALITY ignore  TYPE    CommonMeasurementObjectType-CM-Rprt PRESENCE mandatory }|
  { ID    id-SFN                    CRITICALITY ignore  TYPE    SFN                    PRESENCE optional },
  -- UTRAN only
  ...
}

CommonMeasurementReport-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  { ID    id-MeasurementRecoveryReportingIndicator CRITICALITY ignore  EXTENSION MeasurementRecoveryReportingIndicator PRESENCE
optional },
  -- UTRAN only
  ...
}

CommonMeasurementObjectType-CM-Rprt ::= CHOICE {
  cell          Cell-CM-Rprt,
  ...
}

Cell-CM-Rprt ::= SEQUENCE {
  commonMeasurementValueInformation CommonMeasurementValueInformation,
  IE-Extensions                    ProtocolExtensionContainer {{ CellItem-CM-Rprt-ExtIEs }} OPTIONAL,
  ...
}

CellItem-CM-Rprt-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- COMMON MEASUREMENT TERMINATION REQUEST
--
-- *****

CommonMeasurementTerminationRequest ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container    {{CommonMeasurementTerminationRequest-IEs}},
  protocolExtensions   ProtocolExtensionContainer {{CommonMeasurementTerminationRequest-Extensions}} OPTIONAL,
  ...
}

CommonMeasurementTerminationRequest-IEs RNSAP-PROTOCOL-IES ::= {
  { ID    id-MeasurementID          CRITICALITY ignore  TYPE    MeasurementID          PRESENCE mandatory},
  ...
}

CommonMeasurementTerminationRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::= {

```

```

}
...
}
-- *****
--
-- COMMON MEASUREMENT FAILURE INDICATION
--
-- *****

CommonMeasurementFailureIndication ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{CommonMeasurementFailureIndication-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{CommonMeasurementFailureIndication-Extensions}}    OPTIONAL,
    ...
}

CommonMeasurementFailureIndication-IEs RNSAP-PROTOCOL-IES ::= {
    { ID      id-MeasurementID          CRITICALITY ignore          TYPE      MeasurementID          PRESENCE mandatory }|
    { ID      id-Cause                  CRITICALITY ignore          TYPE      Cause                    PRESENCE mandatory }|
    ...
}

CommonMeasurementFailureIndication-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- INFORMATION EXCHANGE INITIATION REQUEST
--
-- *****

InformationExchangeInitiationRequest ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{InformationExchangeInitiationRequest-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{InformationExchangeInitiationRequest-Extensions}}    OPTIONAL,
    ...
}

InformationExchangeInitiationRequest-IEs RNSAP-PROTOCOL-IES ::= {
    { ID      id-InformationExchangeID          CRITICALITY reject          TYPE      InformationExchangeID          PRESENCE mandatory
    }|
    { ID      id-InformationExchangeObjectType-InfEx-Rqst          CRITICALITY reject          TYPE      InformationExchangeObjectType-InfEx-Rqst          PRESENCE
    mandatory }|
    { ID      id-InformationType                CRITICALITY reject          TYPE      InformationType                PRESENCE mandatory
    }|
    { ID      id-InformationReportCharacteristics          CRITICALITY reject          TYPE      InformationReportCharacteristics          PRESENCE mandatory
    },
    ...
}

InformationExchangeInitiationRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

InformationExchangeObjectType-InfEx-Rqst ::= CHOICE {
    cell                                 Cell-InfEx-Rqst,
    ...,
    extension-InformationExchangeObjectType-InfEx-Rqst  Extension-InformationExchangeObjectType-InfEx-Rqst
}

Cell-InfEx-Rqst ::= SEQUENCE {
    c-ID                                C-ID, --May be a GERAN cell identifier
    iE-Extensions                       ProtocolExtensionContainer { { CellItem-InfEx-Rqst-ExtIEs } }  OPTIONAL,
    ...
}

CellItem-InfEx-Rqst-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

Extension-InformationExchangeObjectType-InfEx-Rqst ::= ProtocolIE-Single-Container { { Extension-InformationExchangeObjectType-InfEx-RqstIE } }

Extension-InformationExchangeObjectType-InfEx-RqstIE RNSAP-PROTOCOL-IES ::= {
    { ID id-GSM-Cell-InfEx-Rqst          CRITICALITY reject          TYPE GSM-Cell-InfEx-Rqst
    PRESENCE mandatory } |
    { ID id-MBMS-Bearer-Service-List     CRITICALITY reject        TYPE MBMS-Bearer-Service-List
    PRESENCE mandatory } |
    { ID id-MBMS-Bearer-Service-in-MBMS-Cell-InfEx-Rqst  CRITICALITY reject        TYPE MBMS-Bearer-Service-in-MBMS-Cell-InfEx-Rqst
    PRESENCE mandatory } |
    { ID id-MBMS-Cell-InfEx-Rqst        CRITICALITY reject        TYPE MBMS-Cell-InfEx-Rqst          PRESENCE
    mandatory }
}

GSM-Cell-InfEx-Rqst ::= SEQUENCE {
    cGI                                  CGI,
    iE-Extensions                       ProtocolExtensionContainer { { GSMCellItem-InfEx-Rqst-ExtIEs } }  OPTIONAL,
    ...
}

GSMCellItem-InfEx-Rqst-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

MBMS-Bearer-Service-in-MBMS-Cell-InfEx-Rqst ::= SEQUENCE (SIZE (1..maxNrOfCells)) OF MBMS-Bearer-Service-in-MBMS-Cell-Item-InfEx-Rqst

MBMS-Bearer-Service-in-MBMS-Cell-Item-InfEx-Rqst ::= SEQUENCE {
    c-ID                                C-ID,
    mBMS-Bearer-Service-List-InfEx-Rqst MBMS-Bearer-Service-List-InfEx-Rqst,
    iE-Extensions                       ProtocolExtensionContainer { { MBMS-Bearer-Service-in-MBMS-Cell-Item-InfEx-Rqst-ExtIEs } }  OPTIONAL,
    ...
}

MBMS-Bearer-Service-in-MBMS-Cell-Item-InfEx-Rqst-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

MBMS-Bearer-Service-List-InfEx-Rqst ::= SEQUENCE (SIZE (1..maxNrOfMBMSServices)) OF TMGI

MBMS-Cell-InfEx-Rqst ::= SEQUENCE (SIZE (1..maxNrOfCells)) OF C-ID

```
-- *****
--
-- INFORMATION EXCHANGE INITIATION RESPONSE
--
-- *****
```

```
InformationExchangeInitiationResponse ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container    {{InformationExchangeInitiationResponse-IEs}},
  protocolExtensions  ProtocolExtensionContainer {{InformationExchangeInitiationResponse-Extensions}} OPTIONAL,
  ...
}
```

```
InformationExchangeInitiationResponse-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-InformationExchangeID          CRITICALITY ignore TYPE InformationExchangeID          PRESENCE mandatory }|
  { ID id-InformationExchangeObjectType-InfEx-Rsp CRITICALITY ignore TYPE InformationExchangeObjectType-InfEx-Rsp PRESENCE optional }|
  { ID id-CriticalityDiagnostics          CRITICALITY ignore TYPE CriticalityDiagnostics          PRESENCE optional },
  ...
}
```

```
InformationExchangeInitiationResponse-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}
```

```
InformationExchangeObjectType-InfEx-Rsp ::= CHOICE {
  cell          Cell-InfEx-Rsp,
  ...,
  extension-InformationExchangeObjectType-InfEx-Rsp    Extension-InformationExchangeObjectType-InfEx-Rsp
}
```

```
Cell-InfEx-Rsp ::= SEQUENCE {
  requestedDataValue      RequestedDataValue,
  iE-Extensions           ProtocolExtensionContainer { { CellItem-InfEx-Rsp-ExtIEs } } OPTIONAL,
  ...
}
```

```
CellItem-InfEx-Rsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}
```

```
Extension-InformationExchangeObjectType-InfEx-Rsp ::= ProtocolIE-Single-Container {{ Extension-InformationExchangeObjectType-InfEx-RspIE }}
```

```
Extension-InformationExchangeObjectType-InfEx-RspIE RNSAP-PROTOCOL-IES ::= {
  { ID id-MBMS-Bearer-Service-List-InfEx-Rsp          CRITICALITY ignore TYPE MBMS-Bearer-Service-List-InfEx-Rsp
  PRESENCE mandatory }|
  { ID id-MBMS-Bearer-Service-in-MBMS-Cell-InfEx-Rsp CRITICALITY ignore TYPE MBMS-Bearer-Service-in-MBMS-Cell-InfEx-Rsp
  PRESENCE mandatory }|
}
```

```

    { ID id-MBMS-Cell-InfEx-Rsp
      PRESENCE mandatory}
    CRITICALITY ignore
    TYPE MBMS-Cell-InfEx-Rsp
  }

MBMS-Bearer-Service-List-InfEx-Rsp ::= SEQUENCE (SIZE (1..maxNrOfMBSServices)) OF MBMS-Bearer-ServiceItemIEs-InfEx-Rsp

MBMS-Bearer-ServiceItemIEs-InfEx-Rsp ::=SEQUENCE{
  tmgi TMGI,
  requestedDataValue RequestedDataValue,
  iE-Extensions ProtocolExtensionContainer { { MBMS-Bearer-ServiceItem-InfEx-Rsp-ExtIEs} } OPTIONAL,
  ...
}

MBMS-Bearer-ServiceItem-InfEx-Rsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

MBMS-Bearer-Service-in-MBMS-Cell-InfEx-Rsp ::= SEQUENCE (SIZE (1..maxNrOfCells)) OF MBMS-Bearer-Service-in-MBMS-Cell-Item-InfEx-Rsp

MBMS-Bearer-Service-in-MBMS-Cell-Item-InfEx-Rsp ::= SEQUENCE {
  c-ID C-ID,
  mBMS-Bearer-Service-List-InfEx-Rsp MBMS-Bearer-Service-List-InfEx-Rsp,
  iE-Extensions ProtocolExtensionContainer { { MBMS-Bearer-Service-in-MBMS-Cell-Item-InfEx-Rsp-ExtIEs} } OPTIONAL,
  ...
}

MBMS-Bearer-Service-in-MBMS-Cell-Item-InfEx-Rsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

MBMS-Cell-InfEx-Rsp ::= SEQUENCE (SIZE (1..maxNrOfCells)) OF MBMS-Cell-Item-InfEx-Rsp

MBMS-Cell-Item-InfEx-Rsp ::= SEQUENCE {
  c-ID C-ID,
  requestedDataValue RequestedDataValue,
  iE-Extensions ProtocolExtensionContainer { { MBMS-Cell-Item-InfEx-Rsp-ExtIEs} } OPTIONAL,
  ...
}

MBMS-Cell-Item-InfEx-Rsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- INFORMATION EXCHANGE INITIATION FAILURE
--
-- *****

InformationExchangeInitiationFailure ::= SEQUENCE {
  protocolIEs ProtocolIE-Container {{InformationExchangeInitiationFailure-IEs}},

```

```

    protocolExtensions      ProtocolExtensionContainer  {{InformationExchangeInitiationFailure-Extensions}}      OPTIONAL,
    ...
}

InformationExchangeInitiationFailure-IEs RNSAP-PROTOCOL-IES ::= {
  { ID      id-InformationExchangeID      CRITICALITY  ignore      TYPE      InformationExchangeID      PRESENCE mandatory  }|
  { ID      id-Cause                       CRITICALITY  ignore      TYPE      Cause                          PRESENCE mandatory  }|
  { ID      id-CriticalityDiagnostics      CRITICALITY  ignore      TYPE      CriticalityDiagnostics          PRESENCE optional   },
  ...
}

InformationExchangeInitiationFailure-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- INFORMATION REPORT
--
-- *****

InformationReport ::= SEQUENCE {
  protocolIEs      ProtocolIE-Container  {{InformationReport-IEs}},
  protocolExtensions      ProtocolExtensionContainer  {{InformationReport-Extensions}}      OPTIONAL,
  ...
}

InformationReport-IEs RNSAP-PROTOCOL-IES ::= {
  { ID      id-InformationExchangeID      CRITICALITY  ignore      TYPE      InformationExchangeID      PRESENCE
  mandatory  }|
  { ID      id-InformationExchangeObjectType-InfEx-Rprt      CRITICALITY  ignore      TYPE      InformationExchangeObjectType-InfEx-Rprt      PRESENCE
  mandatory  },
  ...
}

InformationReport-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

InformationExchangeObjectType-InfEx-Rprt ::= CHOICE {
  cell                      Cell-InfEx-Rprt,
  ...,
  extension-InformationExchangeObjectType-InfEx-Rprt      Extension-InformationExchangeObjectType-InfEx-Rprt
}

Extension-InformationExchangeObjectType-InfEx-Rprt ::= ProtocolIE-Single-Container  {{ Extension-InformationExchangeObjectType-InfEx-RprtIE }}

Extension-InformationExchangeObjectType-InfEx-RprtIE RNSAP-PROTOCOL-IES ::= {
  { ID id-MBMS-Bearer-Service-in-MBMS-Cell-InfEx-Rprt      CRITICALITY  ignore      TYPE      MBMS-Bearer-Service-in-MBMS-Cell-InfEx-Rprt
  PRESENCE      mandatory}|
  { ID id-MBMS-Cell-InfEx-Rprt      CRITICALITY  ignore      TYPE      MBMS-Cell-InfEx-Rprt
  PRESENCE      mandatory}
}

```

```

}

Cell-InfEx-Rprt ::= SEQUENCE {
    requestedDataValueInformation RequestedDataValueInformation,
    iE-Extensions                 ProtocolExtensionContainer {{ CellItem-InfEx-Rprt-ExtIEs }} OPTIONAL,
    ...
}

CellItem-InfEx-Rprt-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

MBMS-Bearer-Service-in-MBMS-Cell-InfEx-Rprt ::= SEQUENCE (SIZE (1..maxNrOfCells)) OF MBMS-Bearer-Service-in-MBMS-Cell-Item-InfEx-Rprt

MBMS-Bearer-Service-in-MBMS-Cell-Item-InfEx-Rprt ::= SEQUENCE {
    c-ID                C-ID,
    mBMS-Bearer-Service-List-InfEx-Rprt MBMS-Bearer-Service-List-InfEx-Rprt,
    iE-Extensions       ProtocolExtensionContainer { { MBMS-Bearer-Service-in-MBMS-Cell-Item-InfEx-Rprt-ExtIEs } } OPTIONAL,
    ...
}

MBMS-Bearer-Service-in-MBMS-Cell-Item-InfEx-Rprt-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

MBMS-Bearer-Service-List-InfEx-Rprt ::= SEQUENCE (SIZE (1..maxNrOfMBMSServices)) OF MBMS-Bearer-Service-List-Item-InfEx-Rprt

MBMS-Bearer-Service-List-Item-InfEx-Rprt ::= SEQUENCE {
    tmgi                TMGI,
    requestedDataValueInformation RequestedDataValueInformation,
    iE-Extensions       ProtocolExtensionContainer { { MBMS-Bearer-Service-List-Item-InfEx-Rprt-ExtIEs } } OPTIONAL,
    ...
}

MBMS-Bearer-Service-List-Item-InfEx-Rprt-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

MBMS-Cell-InfEx-Rprt ::= SEQUENCE (SIZE (1..maxNrOfCells)) OF MBMS-Cell-Item-InfEx-Rprt

MBMS-Cell-Item-InfEx-Rprt ::= SEQUENCE {
    c-ID                C-ID,
    requestedDataValueInformation RequestedDataValueInformation,
    iE-Extensions       ProtocolExtensionContainer { { MBMS-Cell-Item-InfEx-Rprt-ExtIEs } } OPTIONAL,
    ...
}

MBMS-Cell-Item-InfEx-Rprt-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```



```

-- *****
--
-- INFORMATION EXCHANGE TERMINATION REQUEST
--
-- *****

InformationExchangeTerminationRequest ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{InformationExchangeTerminationRequest-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{InformationExchangeTerminationRequest-Extensions}}    OPTIONAL,
    ...
}

InformationExchangeTerminationRequest-IEs RNSAP-PROTOCOL-IES ::= {
    { ID      id-InformationExchangeID          CRITICALITY ignore          TYPE      InformationExchangeID          PRESENCE mandatory },
    ...
}

InformationExchangeTerminationRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- INFORMATION EXCHANGE FAILURE INDICATION
--
-- *****

InformationExchangeFailureIndication ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{InformationExchangeFailureIndication-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{InformationExchangeFailureIndication-Extensions}}    OPTIONAL,
    ...
}

InformationExchangeFailureIndication-IEs RNSAP-PROTOCOL-IES ::= {
    { ID      id-InformationExchangeID          CRITICALITY ignore          TYPE      InformationExchangeID          PRESENCE mandatory },
    { ID      id-Cause                          CRITICALITY ignore          TYPE      Cause                          PRESENCE mandatory },
    ...
}

InformationExchangeFailureIndication-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RESET REQUEST
--
-- *****

ResetRequest ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{ResetRequest-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{ResetRequest-Extensions}}    OPTIONAL,
    ...
}

```

```

}

ResetRequest-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RNC-ID          CRITICALITY reject  TYPE RNC-ID      PRESENCE mandatory} |
  { ID id-ResetIndicator  CRITICALITY reject  TYPE ResetIndicator PRESENCE mandatory},
  ...
}

ResetRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-Extended-RNC-ID          CRITICALITY reject  EXTENSION Extended-RNC-ID          PRESENCE optional},
  ...
}

ResetIndicator ::= CHOICE {
  context          ContextList-Reset,
  all-contexts     NULL,
  ...,
  contextGroup     ContextGroupList-Reset
}

ContextList-Reset ::= SEQUENCE {
  contextInfoList-Reset          ContextInfoList-Reset,
  iE-Extensions                  ProtocolExtensionContainer { {ContextItem-Reset-ExtIEs} }  OPTIONAL,
  ...
}

ContextItem-Reset-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

ContextInfoList-Reset ::= SEQUENCE (SIZE (1.. maxResetContext)) OF ProtocolIE-Single-Container {{ ContextInfoItemIE-Reset }}

ContextInfoItemIE-Reset RNSAP-PROTOCOL-IES ::= {
  {ID id-ContextInfoItem-Reset          CRITICALITY reject          TYPE ContextInfoItem-Reset          PRESENCE mandatory}
}

ContextInfoItem-Reset ::= SEQUENCE {
  contextType-Reset          ContextType-Reset,
  iE-Extensions              ProtocolExtensionContainer { { ContextInfoItem-Reset-ExtIEs} }  OPTIONAL,
  ...
}

ContextInfoItem-Reset-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

ContextType-Reset ::= CHOICE {
  sRNTI          S-RNTI,
  dRNTI          D-RNTI,
  ...
}

ContextGroupList-Reset ::= SEQUENCE {
  contextGroupInfoList-Reset          ContextGroupInfoList-Reset,

```

```

    iE-Extensions          ProtocolExtensionContainer { {ContextGroupItem-Reset-ExtIEs} }    OPTIONAL,
    ...
}

ContextGroupItem-Reset-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

ContextGroupInfoList-Reset ::= SEQUENCE (SIZE (1.. maxResetContextGroup)) OF ProtocolIE-Single-Container {{ ContextGroupInfoItemIE-Reset }}

ContextGroupInfoItemIE-Reset RNSAP-PROTOCOL-IES ::= {
    {ID id-ContextGroupInfoItem-Reset          CRITICALITY reject          TYPE ContextGroupInfoItem-Reset          PRESENCE mandatory}
}

ContextGroupInfoItem-Reset ::= SEQUENCE {
    s-RNTI-Group          S-RNTI-Group,
    iE-Extensions          ProtocolExtensionContainer { { ContextGroupInfoItem-Reset-ExtIEs} }    OPTIONAL,
    ...
}

ContextGroupInfoItem-Reset-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RESET RESPONSE
--
-- *****

ResetResponse ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{ResetResponse-IEs}},
    protocolExtensions    ProtocolExtensionContainer {{ResetResponse-Extensions}}    OPTIONAL,
    ...
}

ResetResponse-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RNC-ID          CRITICALITY ignore TYPE RNC-ID          PRESENCE mandatory} |
    { ID id-CriticalityDiagnostics          CRITICALITY          ignore TYPE          CriticalityDiagnostics          PRESENCE optional},
    ...
}

ResetResponse-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-Extended-RNC-ID          CRITICALITY reject EXTENSION Extended-RNC-ID          PRESENCE optional},
    ...
}

-- *****
--
-- RADIO LINK ACTIVATION COMMAND FDD
--
-- *****

RadioLinkActivationCommandFDD ::= SEQUENCE {

```

```

    protocolIEs          ProtocolIE-Container    {{RadioLinkActivationCommandFDD-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{RadioLinkActivationCommandFDD-Extensions}}    OPTIONAL,
    ...
}

RadioLinkActivationCommandFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-DelayedActivationList-RL-ActivationCmdFDD          CRITICALITY ignore  TYPE    DelayedActivationInformationList-RL-ActivationCmdFDD
    PRESENCE    mandatory  },
    ...
}

RadioLinkActivationCommandFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DelayedActivationInformationList-RL-ActivationCmdFDD ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container {
    { DelayedActivationInformation-RL-ActivationCmdFDD-IEs } }

DelayedActivationInformation-RL-ActivationCmdFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-DelayedActivationInformation-RL-ActivationCmdFDD    CRITICALITY ignore  TYPE DelayedActivationInformation-RL-ActivationCmdFDD    PRESENCE
    optional    }
}

DelayedActivationInformation-RL-ActivationCmdFDD ::= SEQUENCE {
    rL-ID                RL-ID,
    delayed-activation-update    DelayedActivationUpdate,
    iE-Extensions        ProtocolExtensionContainer { { DelayedActivationInformation-RL-ActivationCmdFDD-ExtIEs } } OPTIONAL,
    ...
}

DelayedActivationInformation-RL-ActivationCmdFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK ACTIVATION COMMAND TDD
--
-- *****

RadioLinkActivationCommandTDD ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{RadioLinkActivationCommandTDD-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{RadioLinkActivationCommandTDD-Extensions}}    OPTIONAL,
    ...
}

RadioLinkActivationCommandTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-DelayedActivationList-RL-ActivationCmdTDD          CRITICALITY ignore  TYPE    DelayedActivationInformationList-RL-ActivationCmdTDD
    PRESENCE    mandatory  },
    ...
}

RadioLinkActivationCommandTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

}

DelayedActivationInformationList-RL-ActivationCmdTDD ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container {
  { DelayedActivationInformation-RL-ActivationCmdTDD-IEs } }

DelayedActivationInformation-RL-ActivationCmdTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-DelayedActivationInformation-RL-ActivationCmdTDD    CRITICALITY ignore  TYPE DelayedActivationInformation-RL-ActivationCmdTDD  PRESENCE
optional    }
}

DelayedActivationInformation-RL-ActivationCmdTDD ::= SEQUENCE {
  rL-ID                RL-ID,
  delayed-activation-update  DelayedActivationUpdate,
  iE-Extensions         ProtocolExtensionContainer { { DelayedActivationInformation-RL-ActivationCmdTDD-ExtIEs } } OPTIONAL,
  ...
}

DelayedActivationInformation-RL-ActivationCmdTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- GERAN UPLINK SIGNALLING TRANSFER INDICATION
--
-- *****

GERANUplinkSignallingTransferIndication ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container    {{GERANUplinkSignallingTransferIndication-IEs}},
  protocolExtensions   ProtocolExtensionContainer {{GERANUplinkSignallingTransferIndication-Extensions}} OPTIONAL,
  ...
}

GERANUplinkSignallingTransferIndication-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-UC-ID                CRITICALITY ignore  TYPE UC-ID                PRESENCE mandatory } |
  -- UC-Id may be GERAN cell identifier.
  { ID id-SAI                  CRITICALITY ignore  TYPE SAI                  PRESENCE mandatory } |
  { ID id-S-RNTI               CRITICALITY ignore  TYPE S-RNTI               PRESENCE mandatory } |
  { ID id-D-RNTI               CRITICALITY ignore  TYPE D-RNTI               PRESENCE optional   } |
  { ID id-L3-Information        CRITICALITY ignore  TYPE L3-Information        PRESENCE mandatory } |
  { ID id-CN-PS-DomainIdentifier CRITICALITY ignore  TYPE CN-PS-DomainIdentifier PRESENCE optional   } |
  { ID id-CN-CS-DomainIdentifier CRITICALITY ignore  TYPE CN-CS-DomainIdentifier PRESENCE optional   } |
  { ID id-URA-Information       CRITICALITY ignore  TYPE URA-Information       PRESENCE optional   },
  -- URA information may be GRA information
  ...
}

GERANUplinkSignallingTransferIndication-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- RADIO LINK PARAMETER UPDATE INDICATION FDD

```

```

--
-- *****
RadioLinkParameterUpdateIndicationFDD ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{RadioLinkParameterUpdateIndicationFDD-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{RadioLinkParameterUpdateIndicationFDD-Extensions}}    OPTIONAL,
    ...
}

RadioLinkParameterUpdateIndicationFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-HSDSCH-FDD-Update-Information          CRITICALITY ignore TYPE HSDSCH-FDD-Update-Information          PRESENCE optional}|
    { ID id-RL-ParameterUpdateIndicationFDD-RL-InformationList CRITICALITY ignore TYPE RL-ParameterUpdateIndicationFDD-RL-InformationList PRESENCE optional }},
    ...
}

RL-ParameterUpdateIndicationFDD-RL-InformationList ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container { { RL-ParameterUpdateIndicationFDD-RL-InformationList-IEs} }

RL-ParameterUpdateIndicationFDD-RL-InformationList-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-ParameterUpdateIndicationFDD-RL-Information-Item CRITICALITY ignore TYPE RL-ParameterUpdateIndicationFDD-RL-Information-Item PRESENCE mandatory }
}

RL-ParameterUpdateIndicationFDD-RL-Information-Item ::= SEQUENCE {
    rL-ID          RL-ID,
    phase-Reference-Update-Indicator Phase-Reference-Update-Indicator OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { { RL-ParameterUpdateIndicationFDD-RL-Information-ExtIEs} } OPTIONAL,
    ...
}

RL-ParameterUpdateIndicationFDD-RL-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RadioLinkParameterUpdateIndicationFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-E-DCH-FDD-Update-Information CRITICALITY ignore EXTENSION E-DCH-FDD-Update-Information PRESENCE optional}|
    { ID id-Additional-HS-Cell-Information-RL-Param-Upd CRITICALITY ignore EXTENSION Additional-HS-Cell-Information-RL-Param-Upd PRESENCE optional }},
    ...
}

Additional-HS-Cell-Information-RL-Param-Upd ::= SEQUENCE (SIZE (1..maxNrOfHSDSCH-1)) OF Additional-HS-Cell-Information-RL-Param-Upd-ItemIEs

Additional-HS-Cell-Information-RL-Param-Upd-ItemIEs ::=SEQUENCE{
    hSPDSCH-RL-ID          RL-ID,
    hS-DSCH-FDD-Secondary-Serving-Update-Information HS-DSCH-FDD-Secondary-Serving-Update-Information,
    iE-Extensions          ProtocolExtensionContainer { { Additional-HS-Cell-Information-RL-Setup-ExtIEs} } OPTIONAL,
    ...
}

```

```

Additional-HS-Cell-Information-RL-Setup-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- RADIO LINK PARAMETER UPDATE INDICATION TDD
--
-- *****

RadioLinkParameterUpdateIndicationTDD ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container   {{RadioLinkParameterUpdateIndicationTDD-IEs}},
  protocolExtensions  ProtocolExtensionContainer {{RadioLinkParameterUpdateIndicationTDD-Extensions}}   OPTIONAL,
  ...
}

RadioLinkParameterUpdateIndicationTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-HSDSCH-TDD-Update-Information          CRITICALITY ignore      TYPE HSDSCH-TDD-Update-Information          PRESENCE optional},
  ...
}

RadioLinkParameterUpdateIndicationTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- UE MEASUREMENT INITIATION REQUEST
--
-- *****

UEMeasurementInitiationRequest ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container   {{UEMeasurementInitiationRequest-IEs}},
  protocolExtensions  ProtocolExtensionContainer {{UEMeasurementInitiationRequest-Extensions}}   OPTIONAL,
  ...
}

UEMeasurementInitiationRequest-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-AllowedQueuingTime          CRITICALITY reject      TYPE AllowedQueuingTime          PRESENCE optional } |
  { ID id-MeasurementID               CRITICALITY reject      TYPE MeasurementID               PRESENCE mandatory } |
  { ID id-UEMeasurementType           CRITICALITY reject      TYPE UEMeasurementType           PRESENCE mandatory } |
  { ID id-UEMeasurementTimeslotInfoHCR CRITICALITY reject      TYPE UEMeasurementTimeslotInfoHCR PRESENCE optional } |
  { ID id-UEMeasurementTimeslotInfoLCR CRITICALITY reject      TYPE UEMeasurementTimeslotInfoLCR PRESENCE optional } |
  { ID id-MeasurementFilterCoefficient CRITICALITY reject      TYPE MeasurementFilterCoefficient PRESENCE optional } |
  { ID id-UEMeasurementReportCharacteristics CRITICALITY reject      TYPE UEMeasurementReportCharacteristics PRESENCE mandatory } |
  { ID id-UEMeasurementParameterModAllow CRITICALITY reject      TYPE UEMeasurementParameterModAllow PRESENCE mandatory },
  ...
}

UEMeasurementInitiationRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-UEMeasurementTimeslotInfo768          CRITICALITY reject      EXTENSION UEMeasurementTimeslotInfo768 PRESENCE optional},
  ...
}

```

```

-- *****
--
-- UE MEASUREMENT INITIATION RESPONSE
--
-- *****

UEMeasurementInitiationResponse ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{UEMeasurementInitiationResponse-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{UEMeasurementInitiationResponse-Extensions}}
    ...
}

UEMeasurementInitiationResponse-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-MeasurementID          CRITICALITY ignore TYPE MeasurementID          PRESENCE mandatory } |
    { ID id-MeasurementFilterCoefficient CRITICALITY reject TYPE MeasurementFilterCoefficient PRESENCE optional } |
    { ID id-UEMeasurementReportCharacteristics CRITICALITY reject TYPE UEMeasurementReportCharacteristics PRESENCE optional } |
    { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
    ...
}

UEMeasurementInitiationResponse-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- UE MEASUREMENT INITIATION FAILURE
--
-- *****

UEMeasurementInitiationFailure ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{UEMeasurementInitiationFailure-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{UEMeasurementInitiationFailure-Extensions}}
    ...
}

UEMeasurementInitiationFailure-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-MeasurementID          CRITICALITY ignore TYPE MeasurementID          PRESENCE mandatory } |
    { ID id-Cause                  CRITICALITY ignore TYPE Cause                  PRESENCE mandatory } |
    { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
    ...
}

UEMeasurementInitiationFailure-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- UE MEASUREMENT REPORT
--
-- *****

UEMeasurementReport ::= SEQUENCE {

```



```

    protocolIEs          ProtocolIE-Container  {{UEMeasurementReport-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{UEMeasurementReport-Extensions}}
    ...
}

UEMeasurementReport-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-MeasurementID          CRITICALITY ignore  TYPE MeasurementID          PRESENCE mandatory } |
  { ID id-UEMeasurementValueInformation  CRITICALITY ignore  TYPE UEMeasurementValueInformation  PRESENCE mandatory },
  ...
}

UEMeasurementReport-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- UE MEASUREMENT TERMINATION REQUEST
--
-- *****

UEMeasurementTerminationRequest ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container  {{UEMeasurementTerminationRequest-IEs}},
  protocolExtensions   ProtocolExtensionContainer {{UEMeasurementTerminationRequest-Extensions}}
  ...
}

UEMeasurementTerminationRequest-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-MeasurementID          CRITICALITY ignore  TYPE MeasurementID          PRESENCE mandatory },
  ...
}

UEMeasurementTerminationRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- UE MEASUREMENT FAILURE INDICATION
--
-- *****

UEMeasurementFailureIndication ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container  {{UEMeasurementFailureIndication-IEs}},
  protocolExtensions   ProtocolExtensionContainer {{UEMeasurementFailureIndication-Extensions}}
  ...
}

UEMeasurementFailureIndication-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-MeasurementID          CRITICALITY ignore  TYPE MeasurementID          PRESENCE mandatory } |
  { ID id-Cause                  CRITICALITY ignore  TYPE Cause                  PRESENCE mandatory },
  ...
}

```

```

UEMeasurementFailureIndication-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- IUR INVOKE TRACE
--
-- *****

IurInvokeTrace ::= SEQUENCE {
  protocolIEs                ProtocolIE-Container    {{IurInvokeTrace-IEs}},
  protocolExtensions         ProtocolExtensionContainer {{IurInvokeTrace-Extensions}}  OPTIONAL,
  ...
}

IurInvokeTrace-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-D-RNTI                CRITICALITY ignore  TYPE D-RNTI                PRESENCE optional  }|
  { ID id-TraceReference         CRITICALITY ignore  TYPE TraceReference         PRESENCE mandatory }|
  { ID id-UEIdentity             CRITICALITY ignore  TYPE UEIdentity             PRESENCE mandatory }|
  { ID id-TraceRecordingSessionReference CRITICALITY ignore  TYPE TraceRecordingSessionReference PRESENCE mandatory }|
  { ID id-ListOfInterfacesToTrace CRITICALITY ignore  TYPE ListOfInterfacesToTrace PRESENCE optional  }|
  { ID id-TraceDepth             CRITICALITY ignore  TYPE TraceDepth             PRESENCE mandatory }|
  ...
}

ListOfInterfacesToTrace ::= SEQUENCE (SIZE (1..maxNrOfInterfaces)) OF ProtocolIE-Single-Container {{ InterfacesToBeTracedItemIE }}

InterfacesToBeTracedItemIE RNSAP-PROTOCOL-IES ::= {
  { ID id-InterfacesToTraceItem  CRITICALITY ignore  TYPE InterfacesToTraceItem  PRESENCE mandatory  }
}

InterfacesToTraceItem ::= SEQUENCE {
  interface                ENUMERATED {iub,iur,...},
  iE-Extensions            ProtocolExtensionContainer { {InterfacesToTraceItem-ExtIEs} }  OPTIONAL,
  ...
}

InterfacesToTraceItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

IurInvokeTrace-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- IUR DEACTIVATE TRACE
--
-- *****

IurDeactivateTrace ::= SEQUENCE {

```

```

    protocolIEs          ProtocolIE-Container    {{IurDeactivateTrace-IEs}},
    protocolExtensions    ProtocolExtensionContainer {{IurDeactivateTrace-Extensions}} OPTIONAL,
    ...
}

IurDeactivateTrace-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-D-RNTI          CRITICALITY ignore TYPE D-RNTI          PRESENCE optional } |
    { ID id-TraceReference CRITICALITY ignore TYPE TraceReference PRESENCE mandatory } |
    ...
}

IurDeactivateTrace-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- MBMS ATTACH COMMAND
--
-- *****

MBMSAttachCommand ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{MBMSAttachCommand-IEs}},
    protocolExtensions    ProtocolExtensionContainer {{MBMSAttachCommand-Extensions}} OPTIONAL,
    ...
}

MBMSAttachCommand-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-MBMS-Bearer-Service-List CRITICALITY ignore TYPE MBMS-Bearer-Service-List PRESENCE mandatory } |
    { ID id-UE-State                 CRITICALITY ignore TYPE UE-State                 PRESENCE optional},
    ...
}

MBMSAttachCommand-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- MBMS DETACH COMMAND
--
-- *****

MBMSDetachCommand ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{MBMSDetachCommand-IEs}},
    protocolExtensions    ProtocolExtensionContainer {{MBMSDetachCommand-Extensions}} OPTIONAL,
    ...
}

MBMSDetachCommand-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-MBMS-Bearer-Service-List CRITICALITY ignore TYPE MBMS-Bearer-Service-List PRESENCE mandatory } |
    { ID id-UE-State                 CRITICALITY ignore TYPE UE-State                 PRESENCE optional},
    ...
}

```

```

MBMSDetachCommand-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- DIRECT INFORMATION TRANSFER
--
-- *****

DirectInformationTransfer ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container      {{DirectInformationTransfer-IEs}},
  protocolExtensions  ProtocolExtensionContainer {{DirectInformationTransfer-Extensions}} OPTIONAL,
  ...
}

DirectInformationTransfer-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RNC-ID          CRITICALITY ignore  TYPE RNC-ID          PRESENCE mandatory } |
  { ID id-ProvidedInformation CRITICALITY ignore  TYPE ProvidedInformation PRESENCE mandatory } ,
  ...
}

DirectInformationTransfer-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-Extended-RNC-ID          CRITICALITY reject  EXTENSION Extended-RNC-ID  PRESENCE optional },
  ...
}

-- *****
--
-- ENHANCED RELOCATION REQUEST
--
-- *****

EnhancedRelocationRequest ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container      {{EnhancedRelocationRequest-IEs}},
  protocolExtensions  ProtocolExtensionContainer {{EnhancedRelocationRequest-Extensions}} OPTIONAL,
  ...
}

EnhancedRelocationRequest-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-Cause          CRITICALITY reject  TYPE Cause          PRESENCE mandatory } |
  { ID id-Permanent-NAS-UE-Identity CRITICALITY reject  TYPE Permanent-NAS-UE-Identity PRESENCE mandatory } |
  { ID id-SRNC-ID        CRITICALITY reject  TYPE SRNC-ID PRESENCE optional } |
  -- This IE shall be present if the Relocation type IE is set to "UE involved in relocation of SRNS" --
  { ID id-Extended-SRNC-ID CRITICALITY reject  TYPE Extended-RNC-ID  PRESENCE optional } |
  { ID id-S-RNTI         CRITICALITY reject  TYPE S-RNTI PRESENCE mandatory } |
  { ID id-RANAP-EnhancedRelocationInformationRequest CRITICALITY reject  TYPE RANAP-EnhancedRelocationInformationRequest PRESENCE mandatory },
  ...
}

EnhancedRelocationRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

```

```

}
-- *****
--
-- ENHANCED RELOCATION RESPONSE
--
-- *****

EnhancedRelocationResponse ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{EnhancedRelocationResponse-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{EnhancedRelocationResponse-Extensions}}      OPTIONAL,
    ...
}

EnhancedRelocationResponse-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RANAP-EnhancedRelocationInformationResponse    CRITICALITY ignore    TYPE RANAP-EnhancedRelocationInformationResponse    PRESENCE
mandatory },
    ...
}

EnhancedRelocationResponse-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- ENHANCED RELOCATION FAILURE
--
-- *****

EnhancedRelocationFailure ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{EnhancedRelocationFailure-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{EnhancedRelocationFailure-Extensions}}      OPTIONAL,
    ...
}

EnhancedRelocationFailure-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-Cause          CRITICALITY ignore    TYPE Cause          PRESENCE mandatory }|
    { ID id-CriticalityDiagnostics    CRITICALITY ignore    TYPE CriticalityDiagnostics    PRESENCE optional },
    ...
}

EnhancedRelocationFailure-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- ENHANCED RELOCATION CANCEL
--
-- *****

EnhancedRelocationCancel ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{EnhancedRelocationCancel-IEs}},

```

```

    protocolExtensions          ProtocolExtensionContainer {{EnhancedRelocationCancel-Extensions}}
    ...
}
EnhancedRelocationCancel-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-Cause          CRITICALITY ignore TYPE Cause          PRESENCE mandatory },
    ...
}
EnhancedRelocationCancel-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- ENHANCED RELOCATION SIGNALLING TRANSFER
--
-- *****

EnhancedRelocationSignallingTransfer ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container          {{EnhancedRelocationSignallingTransfer-IEs}},
    protocolExtensions  ProtocolExtensionContainer {{EnhancedRelocationSignallingTransfer-Extensions}}
    ...
}
EnhancedRelocationSignallingTransfer-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-L3-Information CRITICALITY ignore TYPE L3-Information PRESENCE mandatory },
    ...
}
EnhancedRelocationSignallingTransfer-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- ENHANCED RELOCATION RELEASE
--
-- *****

EnhancedRelocationRelease ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container          {{EnhancedRelocationRelease-IEs}},
    protocolExtensions  ProtocolExtensionContainer {{EnhancedRelocationRelease-Extensions}}
    ...
}
EnhancedRelocationRelease-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-Released-CN-Domain CRITICALITY ignore TYPE Released-CN-Domain PRESENCE mandatory },
    ...
}
EnhancedRelocationRelease-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

-- *****
--
-- MBSFN MCCH INFORMATION
--
-- *****

MBSFNMCCInformation ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{MBSFNMCCInformation-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{MBSFNMCCInformation-Extensions}}    OPTIONAL,
    ...
}

MBSFNMCCInformation-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-MBSFN-Cluster-Identity CRITICALITY ignore TYPE MBSFN-Cluster-Identity PRESENCE mandatory} |
    { ID id-MCCH-Message-List CRITICALITY reject TYPE MCCH-Message-List PRESENCE mandatory} |
    { ID id-CFN CRITICALITY reject TYPE CFN PRESENCE mandatory} |
    { ID id-MCCH-Configuration-Info CRITICALITY ignore TYPE MCCH-Configuration-Info PRESENCE optional} |
    { ID id-MBSFN-Scheduling-Transmission-Time-Interval-Info-List CRITICALITY ignore TYPE MBSFN-Scheduling-Transmission-Time-Interval-Info-List PRESENCE optional},
    ...
}

MBSFNMCCInformation-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- PRIVATE MESSAGE
--
-- *****

PrivateMessage ::= SEQUENCE {
    privateIEs          PrivateIE-Container    {{PrivateMessage-IEs}},
    ...
}

PrivateMessage-IEs RNSAP-PRIVATE-IES ::= {
    ...
}

END

```

### 9.3.4 Information Element Definitions

```

-- *****
--
-- Information Element Definitions
--
-- *****

```

```
RNSAP-IEs {  
itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)  
umts-Access (20) modules (3) rnsap (1) version1 (1) rnsap-IEs (2) }
```

```
DEFINITIONS AUTOMATIC TAGS ::=
```

```
BEGIN
```

```
IMPORTS
```

```
maxCellsSIB11OrSIB12,  
maxNrOfFACHs,  
maxIBSEG,  
maxCellsMeas,  
maxNoOfDSCHs,  
maxNoOfUSCHs,  
maxNrOfDCHs,  
maxNrOfDL-Codes,  
maxNrOfDLTs,  
maxNrOfDLTsLCR,  
maxNrOfDPCHs,  
maxNrOfDPCHs768,  
maxNrOfDPCHsLCR,  
maxNrOfEDCH-HARQ-PO-QUANTSTEPS,  
maxNrOfEDCHHARQProcesses2msEDCH,  
maxNrOfBits-MACe-PDU-non-scheduled,  
maxNrOfEDPCCH-PO-QUANTSTEPS,  
maxNrOfRefETFCI-PO-QUANTSTEPS,  
maxNrOfRefETFCIs,  
maxNrOfErrors,  
maxNrOfFDDNeighboursPerRNC,  
maxNrOfMACcshSDU-Length,  
maxNrOfNeighbouringRNCs,  
maxNrOfTDDNeighboursPerRNC,  
maxNrOfLCRTDDNeighboursPerRNC,  
maxNrOfTS,  
maxNrOfTsLCR,  
maxNrOfULTs,  
maxNrOfULTsLCR,  
maxNrOfGSMNeighboursPerRNC,  
maxRateMatching,  
maxNrOfPoints,  
maxNoOfRB,  
maxNrOfRLs,  
maxNrOfTFCS,  
maxNrOfTFs,  
maxCTFC,  
maxRNCinURA-1,  
maxNrOfSCCPCHs,  
maxNrOfSCCPCHs768,  
maxTGPS,  
maxTTI-Count,  
maxNoGPSTypes,  
maxNoSat,  
maxNrOfActiveMBMSServices,
```



maxNrOfCells,  
maxNrOfSNAs,  
maxNrOfHARQProc,  
maxNrOfHSSCCHCodes,  
maxNrOfMACdFlows,  
maxNrOfMACdFlows-1,  
maxNrOfMACdPDUSize,  
maxNrOfMBMSL3,  
maxNrOfMCCHMessages,  
maxNrOfEDCHMACdFlows,  
maxNrOfEDCHMACdFlows-1,  
maxNrOfEDCHMACdFlowsLCR,  
maxNrOfEDCHMACdFlowsLCR-1,  
maxNrOfMBMSServices,  
maxNrOfPDUIndexes,  
maxNrOfPDUIndexes-1,  
maxNrOfPrioQueues,  
maxNrOfPrioQueues-1,  
maxNrOfSatAlmanac-maxNoSat,  
maxNrOfGERANSI,  
maxNrOfSigSeqERGHICH-1,  
maxNrOfUEs,  
maxNrOfAddFreq,  
maxNrOfCellsPerFreq,  
maxNoOfLogicalChannels,  
maxNrOfRefBetas,  
maxNrOfEAGCHCodes,  
maxNrOfHS-DSCHTBSs,  
maxNrOfHS-DSCHTBSs-HS-SCCHless,  
maxHS-PDSCHCodeNrComp-1,  
maxNrOfEHIHCodes,  
maxGANSSSat,  
maxNoGANSS,  
maxSgnType,  
maxNrOfBroadcastPLMNs,  
maxHSDPAFrequency,  
maxHSDPAFrequency-1,  
maxFrequencyinCell,  
maxFrequencyinCell-1,  
maxGANSSSatAlmanac,  
maxGANSSClockMod,  
maxNrOfEDCHRLs,  
maxNrOfEUTRANeighboursPerRNC,  
maxEARFCN,  
maxNrOfPreconfiguredNeighbours,  
maxNrOfHSDSCH-1,  
maxNrOfHSDSCH,  
maxGANSS-1,  
maxLengthMBMSconcatserlists,  
maxNoOfTBSs-Mapping-HS-DSCH-SPS,  
maxNoOfTBSs-Mapping-HS-DSCH-SPS-1,  
maxNoOfHS-DSCH-TBSsLCR,  
maxNoOfRepetition-Period-LCR,  
maxNoOfRepetitionPeriod-SPS-LCR-1,

maxNoOf-HS-SICH-SPS,  
maxNoOf-HS-SICH-SPS-1,  
maxNoOfNon-HS-SCCH-Assosiated-HS-SICH,

id-Allowed-Rate-Information,  
id-AntennaColocationIndicator,  
id-BindingID,  
id-Cell-Capacity-Class-Value,  
id-CellCapabilityContainer-FDD,  
id-CellCapabilityContainer-TDD,  
id-CellCapabilityContainer-TDD-LCR,  
id-Continuous-Packet-Connectivity-HS-SCCH-Less-Information,  
id-Continuous-Packet-Connectivity-HS-SCCH-Less-Information-Response,  
id-Counting-Information,  
id-CoverageIndicator,  
id-DPC-Mode-Change-SupportIndicator,  
id-E-DCH-Minimum-Set-E-TFCIValidityIndicator,  
id-E-RGCH-E-HICH-ChannelisationCodeValidityIndicator,  
id-Extended-Round-Trip-Time-Value,  
id-ExtendedPropagationDelay,  
id-Extended-SRNC-ID,  
id-Extended-RNC-ID,  
id-GERAN-Cell-Capability,  
id-GERAN-Classmark,  
id-Guaranteed-Rate-Information,  
id-HARQ-Preamble-Mode-Activation-Indicator,  
id-HCS-Prio,  
id-Inter-Frequency-Cell-Information,  
id-Load-Value,  
id-Load-Value-IncrDecrThres,  
id-Neighbouring-GSM-CellInformation,  
id-Neighbouring-UMTS-CellInformationItem,  
id-neighbouring-LCR-TDD-CellInformation,  
id-NRT-Load-Information-Value,  
id-NRT-Load-Information-Value-IncrDecrThres,  
id-OnModification,  
id-Received-Total-Wideband-Power-Value,  
id-Received-Total-Wideband-Power-Value-IncrDecrThres,  
id-RT-Load-Value,  
id-RT-Load-Value-IncrDecrThres,  
id-SFNMeasurementThresholdInformation,  
id-SNA-Information,  
id-TrafficClass,  
id-Transmitted-Carrier-Power-Value,  
id-Transmitted-Carrier-Power-Value-IncrDecrThres,  
id-TUTRANGPSMeasurementThresholdInformation,  
id-UL-Timeslot-ISCP-Value,  
id-UL-Timeslot-ISCP-Value-IncrDecrThres,  
maxNrOfLevels,  
maxNrOfMeasNCell,  
maxNrOfMeasNCell-1,  
id-MessageStructure,  
id-RestrictionStateIndicator,

id-Rx-Timing-Deviation-Value-LCR,  
id-TransportLayerAddress,  
id-Transmission-Mode-Information,  
id-TypeOfError,  
id-Angle-Of-Arrival-Value-LCR,  
id-IPDL-TDD-ParametersLCR,  
id-DSCH-InitialWindowSize,  
id-Maximum-DL-Power-TimeslotLCR-InformationItem,  
id-MBMS-Bearer-Service-Full-Address,  
id-MBMS-Neighbouring-Cell-Information,  
id-MBMS-RLC-Sequence-Number-Information,  
id-MBSFN-Cluster-Identity,  
id-MBSFN-Scheduling-Transmission-Time-Interval-Info-List,  
id-MCCH-Configuration-Info,  
id-MCCH-Message-List,  
id-Minimum-DL-Power-TimeslotLCR-InformationItem,  
id-HS-SICH-Reception-Quality,  
id-HS-SICH-Reception-Quality-Measurement-Value,  
id-HS-PDSCH-Code-Change-Grant,  
id-HS-PDSCH-Code-Change-Indicator,  
id-ExtendedGSMCellIndividualOffset,  
id-Unidirectional-DCH-Indicator,  
id-RTLloadValue,  
id-RLC-Sequence-Number,  
id-NRTLloadInformationValue,  
id-Satellite-Almanac-Information-ExtItem,  
id-TnlQos,  
id-UpPTSInterferenceValue,  
id-NACC-Related-Data,  
id-HARQ-Preamble-Mode,  
id-User-Plane-Congestion-Fields-Inclusion,  
id-FrequencyBandIndicator,  
id-PLCCH-Information-UL-TimeslotLCR-Info,  
id-CellCapabilityContainer-TDD768,  
id-hSSCCH-TDD-Specific-InfoList-Response768,  
id-hSPDSCH-TDD-Specific-InfoList-Response768,  
id-Rx-Timing-Deviation-Value-768,  
id-UEMeasurementValueTransmittedPowerList768,  
id-UEMeasurementValueTimeslotISCPList768,  
id-E-DCH-PowerOffset-for-SchedulingInfo,  
id-Rx-Timing-Deviation-Value-ext,  
id-TrCH-SrcStatisticsDescr,  
id-eDCH-MACdFlow-Retransmission-Timer-LCR,  
id-MIMO-ActivationIndicator,  
id-MIMO-InformationResponse,  
id-MIMO-Mode-Indicator,  
id-MIMO-N-M-Ratio,  
id-SixteenQAM-UL-Operation-Indicator,  
id-E-AGCH-Table-Choice,  
id-E-TFCI-Boost-Information,  
id-E-DPDCH-PowerInterpolation,  
id-HSDSCH-MACdPDUSizeFormat,  
id-MaximumMACdPDU-SizeExtended,  
id-GANSS-Common-Data,

id-GANSS-Information,  
id-GANSS-Generic-Data,  
id-TUTRANGANSSMeasurementThresholdInformation,  
id-TUTRANGANSSMeasurementValueInformation,  
id-HARQ-MemoryPartitioningInfoExtForMIMO,  
id-Ext-Reference-E-TFCI-PO,  
id-Ext-Max-Bits-MACe-PDU-non-scheduled,  
id-Multiple-PLMN-List,  
id-TransportBearerNotSetupIndicator,  
id-TransportBearerNotRequestedIndicator,  
id-UARFCNforNt,  
id-LCRTDD-uplink-Physical-Channel-Capability,  
id-number-Of-Supported-Carriers,  
id-HSSICH-SIRTarget,  
id-HSSICH-TPC-StepSize,  
id-tSN-Length,  
id-HS-SICH-ID-Extension,  
id-multipleFreq-HSPDSCH-InformationList-ResponseTDDLRCR,  
id-multicarrier-number,  
id-UpPCH-InformationList-LCRTDD,  
id-UpPCH-InformationItem-LCRTDD,  
id-Max-UE-DTX-Cycle,  
id-Default-Serving-Grant-in-DTX-Cycle2,  
id-SixtyfourQAM-UsageAllowedIndicator,  
id-SixtyfourQAM-DL-UsageIndicator,  
id-UE-Capabilities-Info,  
id-Extended-E-DCH-LCRTDD-PhysicalLayerCategory,  
id-Continuous-Packet-Connectivity-HS-SCCH-Less-Deactivate-Indicator,  
id-E-DCH-MACdPDUSizeFormat,  
id-E-PUCH-PowerControlGAP,  
id-MaximumNumber-Of-Retransmission-For-SchedulingInfo-LCRTDD,  
id-E-DCH-RetransmissionTimer-For-SchedulingInfo-LCRTDD,  
id-HSDSCH-TBSizeTableIndicator,  
id-E-DCH-DL-Control-Channel-Change-Information,  
id-E-DCH-DL-Control-Channel-Grant-Information,  
id-DGANSS-Corrections-Req,  
id-UE-with-enhanced-HS-SCCH-support-indicator,  
id-EnhancedHSServingCC-Abort,  
id-GANSS-Time-ID,  
id-GANSS-AddIonoModelReq,  
id-GANSS-EarthOrientParaReq,  
id-GANSS-AddNavigationModelsReq,  
id-GANSS-AddUTCModelsReq,  
id-GANSS-AuxInfoReq,  
id-GANSS-SBAS-ID,  
id-GANSS-ID,  
id-GANSS-Additional-Ionospheric-Model,  
id-GANSS-Earth-Orientation-Parameters,  
id-GANSS-Additional-Time-Models,  
id-GANSS-Additional-Navigation-Models,  
id-GANSS-Additional-UTC-Models,  
id-GANSS-Auxiliary-Information,  
id-GANSS-alm-keplerianNAValmanac,

```

id-GANSS-alm-keplerianReducedAlmanac,
id-GANSS-alm-keplerianMidiAlmanac,
id-GANSS-alm-keplerianGLONASS,
id-GANSS-alm-ecefSBASAlmanac,
id-Secondary-Serving-Cell-List,
id-MinimumReducedE-DPDCH-GainFactor,
id-E-AGCH-UE-Inactivity-Monitor-Threshold,
id-MACes-Maximum-Bitrate-LCR,
id-MultiCarrier-HSDSCH-Physical-Layer-Category,
id-MIMO-SFMode-For-HSPDSCHDualStream,
id-MIMO-SFMode-Supported-For-HSPDSCHDualStream,
id-MIMO-ReferenceSignal-InformationListLCR,
id-DL-RLC-PDU-Size-Format,
id-UE-SupportIndicatorExtension,
id-power-offset-for-S-CPICH-for-MIMO,
id-power-offset-for-S-CPICH-for-MIMO-Request-Indicator,
id-DiversityMode,
id-TransmitDiversityIndicator,
id-NonCellSpecificTxDiversity,
id-CellCapabilityContainerExtension-FDD,
id-HSDSCH-Physical-Layer-Category,
id-Out-of-Synchronization-Window

```

FROM RNSAP-Constants

```

Criticality,
ProcedureID,
ProtocolIE-ID,
TransactionID,
TriggeringMessage

```

FROM RNSAP-CommonDataTypes

```

ProtocolIE-Single-Container{},
ProtocolExtensionContainer{},
RNSAP-PROTOCOL-IES,
RNSAP-PROTOCOL-EXTENSION

```

FROM RNSAP-Containers;

-- A

AccessPointName ::= OCTET STRING (SIZE (1..255))

AckNack-RepetitionFactor ::= INTEGER (1..4,...)

-- Step: 1

Ack-Power-Offset ::= INTEGER (0..8,...)

-- According to mapping in ref. [21] subclause 4.2.1

Active-MBMS-Bearer-Service-ListFDD ::= SEQUENCE (SIZE (1..maxNrOfActiveMBMSServices)) OF MBMS-Bearer-ServiceItemFDD

Active-MBMS-Bearer-Service-ListFDD-PFL ::= SEQUENCE (SIZE (1..maxNrOfActiveMBMSServices)) OF MBMS-Bearer-ServiceItemFDD-PFL

Active-MBMS-Bearer-Service-ListTDD ::= SEQUENCE (SIZE (1..maxNrOfActiveMBMSServices)) OF MBMS-Bearer-ServiceItemTDD

Active-MBMS-Bearer-Service-ListTDD-PFL ::= SEQUENCE (SIZE (1..maxNrOfActiveMBSServices)) OF MBMS-Bearer-ServiceItemTDD-PFL

```
Active-Pattern-Sequence-Information ::= SEQUENCE {
    cmConfigurationChangeCFN          CFN,
    transmission-Gap-Pattern-Sequence-Status-List  OPTIONAL,
    iE-Extensions                      ProtocolExtensionContainer { {Active-Pattern-Sequence-Information-ExtIEs} } OPTIONAL,
    ...
}
```

```
Active-Pattern-Sequence-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

AdditionalPreferredFrequency ::= SEQUENCE (SIZE (1..maxNrOfAddFreq)) OF AdditionalPreferredFrequencyItem

```
AdditionalPreferredFrequencyItem ::= SEQUENCE {
    dL-UARFCN                UARFCN,
    correspondingCells        CorrespondingCells,
    iE-Extensions             ProtocolExtensionContainer { { AdditionalPreferredFrequencyItem-ExtIEs } } OPTIONAL,
    ...
}
```

```
AdditionalPreferredFrequencyItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

AdjustmentPeriod ::= INTEGER(1..256)  
-- Unit Frame

AffectedUEInformationForMBMS ::= SEQUENCE (SIZE (1..maxNrOfUEs)) OF S-RNTI

```
AllocationRetentionPriority ::= SEQUENCE {
    priorityLevel              PriorityLevel,
    pre-emptionCapability      Pre-emptionCapability,
    pre-emptionVulnerability   Pre-emptionVulnerability,
    iE-Extensions              ProtocolExtensionContainer { {AllocationRetentionPriority-ExtIEs} } OPTIONAL,
    ...
}
```

```
AllocationRetentionPriority-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

```
Allowed-Rate-Information ::= SEQUENCE {
    allowed-UL-Rate            Allowed-Rate OPTIONAL,
    allowed-DL-Rate            Allowed-Rate OPTIONAL,
    iE-Extensions              ProtocolExtensionContainer { {Allowed-Rate-Information-ExtIEs} } OPTIONAL,
    ...
}
```

```
Allowed-Rate-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

```

}

Allowed-Rate ::= INTEGER (1..maxNrOfTFs)
-- "1": TFI 0, "2": TFI 1, "3": TFI 2, ...

AllowedQueuingTime ::= INTEGER (1..60)
-- seconds

AlphaValue ::= INTEGER (0..8)
-- Actual value = Alpha / 8

AlternativeFormatReportingIndicator ::= ENUMERATED {
    alternativeFormatAllowed, ...
}

Angle-Of-Arrival-Value-LCR ::= SEQUENCE {
    aOA-LCR AOA-LCR,
    aOA-LCR-Accuracy-Class AOA-LCR-Accuracy-Class,
    iE-Extensions ProtocolExtensionContainer { {Angle-Of-Arrival-Value-LCR-ExtIEs} } OPTIONAL,
    ...
}

Angle-Of-Arrival-Value-LCR-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

AOA-LCR ::= INTEGER (0..719)
-- Angle Of Arrival for 1.28Mcps TDD

AOA-LCR-Accuracy-Class ::= ENUMERATED {a,b,c,d,e,f,g,h,...}

AntennaColocationIndicator ::= ENUMERATED {
    co-located,
    ...
}

-- B

BadSatellites ::= SEQUENCE {
    badSatelliteInformation SEQUENCE (SIZE (1..maxNoSat)) OF
        SEQUENCE {
            badSAT-ID SAT-ID,
            iE-Extensions ProtocolExtensionContainer { { BadSatelliteInformation-ExtIEs} } OPTIONAL,
            ...
        },
    iE-Extensions ProtocolExtensionContainer { { BadSatellites-ExtIEs} } OPTIONAL,
    ...
}

BadSatelliteInformation-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

BadSatellites-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {

```

```

    ...
}

Band-Indicator ::= ENUMERATED {
    dcs1800Band,
    pcs1900Band,
    ...
}

BCC ::= BIT STRING (SIZE (3))

BCCH-ARFCN ::= INTEGER (0..1023)

BetaCD ::= INTEGER (0..15)

BindingID          ::= OCTET STRING (SIZE (1..4,...))
-- If the Binding ID includes an UDP port, the UDP port is included in octet 1 and 2.

BLER               ::= INTEGER (-63..0)
-- Step 0.1 (Range -6.3..0). It is the Log10 of the BLER

SCTD-Indicator    ::= ENUMERATED {
    active,
    inactive
}

BSIC ::= SEQUENCE {
    nCC      NCC,
    bCC      BCC
}

BundlingModeIndicator ::= ENUMERATED {
    bundling,
    no-bundling
}

BurstModeParameters ::= SEQUENCE {
    burstStart      INTEGER (0..15),
    burstLength     INTEGER (10..25),
    burstFreq       INTEGER (1..16),
    iE-Extensions   ProtocolExtensionContainer { { BurstModeParameters-ExtIEs } } OPTIONAL,
    ...
}

BurstModeParameters-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- C

Cause ::= CHOICE {
    radioNetwork      CauseRadioNetwork,
    transport         CauseTransport,
    protocol          CauseProtocol,
}

```



```
        misc                CauseMisc,
        ...
    }

CauseMisc ::= ENUMERATED {
    control-processing-overload,
    hardware-failure,
    om-intervention,
    not-enough-user-plane-processing-resources,
    unspecified,
    ...
}

CauseProtocol ::= ENUMERATED {
    transfer-syntax-error,
    abstract-syntax-error-reject,
    abstract-syntax-error-ignore-and-notify,
    message-not-compatible-with-receiver-state,
    semantic-error,
    unspecified,
    abstract-syntax-error-falsely-constructed-message,
    ...
}

CauseRadioNetwork ::= ENUMERATED {
    unknown-C-ID,
    cell-not-available,
    power-level-not-supported,
    ul-scrambling-code-already-in-use,
    dl-radio-resources-not-available,
    ul-radio-resources-not-available,
    measurement-not-supported-for-the-object,
    combining-resources-not-available,
    combining-not-supported,
    reconfiguration-not-allowed,
    requested-configuration-not-supported,
    synchronisation-failure,
    requested-tx-diversity-mode-not-supported,
    measurement-temporarily-not-available,
    unspecified,
    invalid-CM-settings,
    reconfiguration-CFN-not-elapsed,
    number-of-DL-codes-not-supported,
    dedicated-transport-channel-type-not-supported,
    dl-shared-channel-type-not-supported,
    ul-shared-channel-type-not-supported,
    common-transport-channel-type-not-supported,
    ul-spreading-factor-not-supported,
    dl-spreading-factor-not-supported,
    cm-not-supported,
    transaction-not-supported-by-destination-node-b,
    rl-already-activated-or-allocated,
    ...,
    number-of-UL-codes-not-supported,
}
```

cell-reserved-for-operator-use,  
dpc-mode-change-not-supported,  
information-temporarily-not-available,  
information-provision-not-supported-for-the-object,  
power-balancing-status-not-compatible,  
delayed-activation-not-supported,  
rl-timing-adjustment-not-supported,  
unknown-RNTI,  
measurement-repetition-rate-not-compatible,  
ue-not-capable-of-support,  
f-dpch-not-supported,  
e-dch-not-supported,  
continuous-packet-connectivity-dtx-drx-operation-not-supported,  
continuous-packet-connectivity-hs-scch-less-operation-not-supported,  
mimo-not-supported,  
e-dch-tti2ms-not-supported,  
continuous-packet-connectivity-DTX-DRX-operation-not-available,  
continuous-packet-connectivity-UE-DTX-Cycle-not-available,  
mimo-not-available,  
sixteenQAM-UL-not-Supported,  
hSDSCH-MACdPDU-SizeFormatNotSupported,  
f-dpch-slot-format-operation-not-supported,  
e-DCH-MACdPDU-SizeFormat-not-available,  
e-DPCCH-Power-Boosting-not-supported,  
trelocprep-expiry,  
directed-retry,  
no-Iu-CS-UP-relocation,  
reduce-load-in-serving-cell,  
relocation-cancelled,  
relocation-desirable-for-radio-reasons,  
resource-optimisation-relocation,  
time-critical-relocation,  
traffic-load-in-the-target-cell-higher-than-in-the-source-cell,  
sixtyfourQAM-DL-and-MIMO-Combined-not-available,  
multi-Cell-operation-not-available,  
multi-Cell-operation-not-supported,  
semi-Persistent-scheduling-not-supported,  
continuous-Packet-Connectivity-DRX-not-supported,  
continuous-Packet-Connectivity-DRX-not-available,  
enhanced-relocation-not-supported,  
relocation-not-supported-due-to-PUESBINE-feature,  
relocation-failure-in-target-RNC,  
relocation-target-not-allowed,  
requested-ciphering-and-or-integrity-protection-algorithms-not-supported,  
sixtyfourQAM-DL-and-MIMO-Combined-not-supported,  
tx-diversity-for-mimo-on-DL-control-channels-not-available,  
dummy-single-Stream-MIMO-not-supported,  
dummy-single-Stream-MIMO-not-available,  
dummy-multi-Cell-operation-with-MIMO-not-supported,  
dummy-multi-Cell-operation-with-MIMO-not-available,  
dummy-multi-Cell-EDCH-operation-not-supported,  
dummy-multi-Cell-EDCH-operation-not-available,  
dummy-multi-Cell-operation-with-Single-Stream-MIMO-not-supported,  
dummy-multi-Cell-operation-with-Single-Stream-MIMO-not-available,

```

    cellSpecificTxDiversityHandlingForMultiCellOperationNotAvailable,
    cellSpecificTxDiversityHandlingForMultiCellOperationNotSupported
}

CauseTransport ::= ENUMERATED {
    transport-resource-unavailable,
    unspecified,
    ...
}

CellCapabilityContainer-FDD ::= BIT STRING (SIZE (32))
-- First bit: Flexible Hard Split Support Indicator
-- Second bit: Delayed Activation Support Indicator
-- Third bit: HS-DSCH Support Indicator
-- Fourth bit: DSCH Support Indicator
-- Fifth bit: F-DPCH Support Indicator
-- sixth bit: E-DCH Support Indicator
-- Seventh bit: E-DCH TTI2ms Support Indicator
-- Eighth bit: E-DCH 2sf2and2sf4 and all inferior SFs Support Indicator
-- Ninth bit: E-DCH 2sf2 and all inferior SFs Support Indicator
-- Tenth bit: E-DCH 2sf4 and all inferior SFs Support Indicator
-- Eleventh bit: E-DCH sf4 and all inferior SFs Support Indicator
-- Twelveth bit: E-DCH sf8 and all inferior SFs Support Indicator
-- Thirteenth bit: E-DCH HARQ IR Combining Support Indicator
-- Fourteenth bit: E-DCH HARQ Chase Combining Support Indicator
-- Fifteenth bit: Continuous Packet Connectivity DTX-DRX Support Indicator
-- Sixteenth bit: Continuous Packet Connectivity HS-SCCH less Support Indicator
-- Seventeenth bit: MIMO Support Indicator
-- Eighteenth bit: SixteenQAM UL Support Indicator
-- Nineteenth bit: Flexible MAC-d PDU Size Support Indicator
-- Twentieth bit: F-DPCH Slot Format Support Indicator
-- Twentyfirst bit: SixtyfourQAM DL Support Indicator
-- Twentysecond bit: Flexible E-DCH MAC-d PDU Size Support Indicator
-- Twentythird bit: E-DPCCH Power Boosting Support Indicator
-- Twentyfourth bit: SixtyfourQAM DL and MIMO Combined Support Indicator
-- Twentyfifth bit: Multi Cell Support Indicator Support Indicator
-- Twentysixth bit: MBMS Support Indicator
-- Twentyseventh bit: DRNS Support STTD on DL ctrl ch when the RL is in MIMO P-CPICH + S-CPICH cell
-- Twentyeighth bit: Reserved
-- Twentyninth bit: Reserved
-- Thirtieth bit: Preferred Precoding Weight Set Restriction Support Indicator
-- Note that undefined bits are considered as a spare bit and spare bits shall be set to 0 by the transmitter and shall be ignored by the receiver.

CellCapabilityContainerExtension-FDD ::= BIT STRING (SIZE (128))
-- First bit: Cell Specific Tx Diversity Handling For Multi Cell Operation Support Indicator
-- Note that undefined bits are considered as a spare bit and spare bits shall be set to 0 by the transmitter and shall be ignored by the receiver.

CellCapabilityContainer-TDD ::= BIT STRING (SIZE (32))
-- First bit: Delayed Activation Support Indicator
-- Second bit: HS-DSCH Support Indicator
-- Third bit: DSCH Support Indicator
-- The fourth bit: Flexible MAC-d PDU Size Support Indicator

```

-- Fifth bit: MBMS Support Indicator  
 -- Note that undefined bits are considered as a spare bit and spare bits shall be set to 0 by the transmitter and shall be ignored by the receiver.

CellCapabilityContainer-TDD-LCR ::= BIT STRING (SIZE (32))

-- First bit: Delayed Activation Support Indicator  
 -- Second bit: HS-DSCH Support Indicator  
 -- Third bit: DSCH Support Indicator  
 -- The fourth bit: Flexible MAC-d PDU Size Support Indicator  
 -- Note that undefined bits are considered as a spare bit and spare bits shall be set to 0 by the transmitter and shall be ignored by the receiver.

CellCapabilityContainer-TDD768 ::= BIT STRING (SIZE (32))

-- First bit: Delayed Activation Support Indicator  
 -- Second bit: HS-DSCH Support Indicator  
 -- Third bit: DSCH Support Indicator  
 -- The fourth bit: Flexible MAC-d PDU Size Support Indicator  
 -- Note that undefined bits are considered as a spare bit and spare bits shall be set to 0 by the transmitter and shall be ignored by the receiver.

C-ID ::= INTEGER (0..65535)

CCTrCH-ID ::= INTEGER (0..15)

Cell-Capacity-Class-Value ::= SEQUENCE {  
     uplinkCellCapacityClassValue INTEGER(1..100,...),  
     downlinkCellCapacityClassValue INTEGER(1..100,...)  
 }

CellIndividualOffset ::= INTEGER (-20..20)

CellParameterID ::= INTEGER (0..127,...)

CellPortionID ::= INTEGER (0..63,...)

CFN ::= INTEGER (0..255)

CGI ::= SEQUENCE {  
     LAI SEQUENCE {  
         pLMN-Identity PLMN-Identity,  
         lAC LAC,  
         iE-Extensions ProtocolExtensionContainer { {LAI-ExtIEs} } OPTIONAL,  
         ...  
     },  
     cI CI,  
     iE-Extensions ProtocolExtensionContainer { {CGI-ExtIEs} } OPTIONAL  
 }

LAI-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {  
     ...  
 }

CGI-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {  
     ...  
 }

```
ChannelCodingType ::= ENUMERATED {
    no-codingTDD,
    convolutional-coding,
    turbo-coding,
    ...
}

ChipOffset          ::= INTEGER (0..38399)

CI                  ::= OCTET STRING (SIZE (2))

ClosedLoopModel-SupportIndicator ::= ENUMERATED {
    closedLoop-Model-Supported,
    closedLoop-Model-not-Supported
}

Closedlooptimingadjustmentmode ::= ENUMERATED {
    adj-1-slot,
    adj-2-slot,
    ...
}

CodingRate ::= ENUMERATED {
    half,
    third,
    ...
}

CommonMeasurementAccuracy ::= CHOICE {
    tUTRANGPSMeasurementAccuracyClass    TUTRANGPSAccuracyClass,
    ...,
    tUTRANGANSSMeasurementAccuracyClass  TUTRANGANSSAccuracyClass
}

CommonMeasurementType ::= ENUMERATED {
    uTRAN-GPS-timing-of-cell-frames-for-UE-Positioning,
    sFN-SFN-observerd-time-difference,
    load,
    transmitted-carrier-power,
    received-total-wide-band-power,
    uplink-timeslot-iscp,
    ...,
    rT-load,
    nRT-load-Information,
    upPTSInterference,
    uTRAN-GANSS-timing-of-cell-frames-for-UE-Positioning
}

-- For measurements on the Iur-g interface, only load, RT Load and NRT Load information are requested.

CommonMeasurementValue ::= CHOICE {
    tUTRANGPSMeasurementValueInformation    TUTRANGPSMeasurementValueInformation,
    sFNsFNMeasurementValueInformation      sFNsFNMeasurementValueInformation,
    loadValue                               LoadValue,
}
```

```

    transmittedCarrierPowerValue      INTEGER(0..100),
    receivedTotalWideBandPowerValue   INTEGER(0..621),
    uplinkTimeslotISCPValue           UL-TimeslotISCP,
    ...
    extension-CommonMeasurementValue   Extension-CommonMeasurementValue
}

Extension-CommonMeasurementValue ::= ProtocolIE-Single-Container {{ Extension-CommonMeasurementValueIE }}

Extension-CommonMeasurementValueIE RNSAP-PROTOCOL-IES ::= {
  { ID id-RTLLoadValue           CRITICALITY ignore TYPE RTLLoadValue           PRESENCE mandatory } |
  { ID id-NRTLLoadInformationValue CRITICALITY ignore TYPE NRTLLoadInformationValue PRESENCE mandatory } |
  { ID id-UpPTSInterferenceValue  CRITICALITY reject TYPE UpPTSInterferenceValue  PRESENCE mandatory } |
  { ID id-TUTRANGANSSMeasurementValueInformation CRITICALITY reject TYPE TUTRANGANSSMeasurementValueInformation PRESENCE mandatory }
}

-- For measurements on the Iur-g interface, only load, RT Load and NRT Load values are reported.

CommonMeasurementValueInformation ::= CHOICE {
  measurementAvailable      CommonMeasurementAvailable,
  measurementnotAvailable   NULL
}

CommonMeasurementAvailable ::= SEQUENCE {
  commonMeasurementValue      CommonMeasurementValue,
  iE-Extensions               ProtocolExtensionContainer { { CommonMeasurementAvailableItem-ExtIEs} } OPTIONAL,
  ...
}

CommonMeasurementAvailableItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

CongestionCause ::= ENUMERATED {
  uTRAN-dynamic-resources,
  uTRAN-semistatic-resources,
  ...
}

CommonTransportChannelResourcesInitialisationNotRequired ::= ENUMERATED {
  not-Required
}

Common-EDCH-MAC-d-Flow-Specific-InformationFDD ::= SEQUENCE (SIZE (1..maxNrOfEDCHMACdFlows)) OF Common-EDCH-MAC-d-Flow-Specific-InformationFDDItem

Common-EDCH-MAC-d-Flow-Specific-InformationFDDItem ::= SEQUENCE {
  common-EDCH-MACdFlow-ID      EDCH-MACdFlow-ID,
  maximum-Number-of-Retransmissions-For-E-DCH MaxNr-Retransmissions-EDCH,
  eDCH-HARQ-PO-FDD             E-DCH-HARQ-PO-FDD,
  eDCH-MACdFlow-Multiplexing-List E-DCH-MACdFlow-Multiplexing-List OPTIONAL,
  common-E-DCHLogicalChannelInformation Common-E-DCH-LogicalChannelInformation,
  iE-Extensions               ProtocolExtensionContainer { { Common-EDCH-MAC-d-Flow-Specific-InformationFDDItem-ExtIEs} } OPTIONAL,
}

```

```

}
...
}
Common-EDCH-MAC-d-Flow-Specific-InformationFDDItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

Common-EDCH-MAC-d-Flow-Specific-InformationLCR ::= SEQUENCE (SIZE (1..maxNrOfEDCHMACdFlowsLCR)) OF Common-EDCH-MAC-d-Flow-Specific-
InformationItemLCR

Common-EDCH-MAC-d-Flow-Specific-InformationItemLCR ::= SEQUENCE {
common-EDCH-MACdFlow-ID-LCR EDCH-MACdFlow-ID-LCR,
maximum-Number-of-Retransmissions-For-E-DCH MaxNr-Retransmissions-EDCH,
eDCH-HARQ-PO-TDD E-DCH-HARQ-PO-TDD,
eDCH-MACdFlow-Multiplexing-List E-DCH-MACdFlow-Multiplexing-List OPTIONAL,
common-E-DCHLogicalChannelInformation Common-E-DCH-LogicalChannelInformation,
iE-Extensions ProtocolExtensionContainer { { Common-EDCH-MAC-d-Flow-Specific-InformationItemLCR-ExtIEs } }
OPTIONAL,
...
}

Common-EDCH-MAC-d-Flow-Specific-InformationItemLCR-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

Common-E-DCH-LogicalChannelInformation ::= SEQUENCE (SIZE (1..maxNoOfLogicalChannels)) OF Common-E-DCH-LogicalChannelInformationItem

Common-E-DCH-LogicalChannelInformationItem ::= SEQUENCE {
logicalChannelId LogicalChannelID,
maximumMACdPDU-SizeExtended MAC-PDU-SizeExtended,
iE-Extensions ProtocolExtensionContainer { { Common-E-DCH-LogicalChannelInformationItem-ExtIEs } } OPTIONAL,
...
}

Common-E-DCH-LogicalChannelInformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

Common-EDCH-Support-Indicator ::= NULL

Continuous-Packet-Connectivity-DTX-DRX-Information ::= SEQUENCE {
uE-DTX-DRX-Offset UE-DTX-DRX-Offset,
enabling-Delay Enabling-Delay,
dTX-Information DTX-Information,
dRX-Information DRX-Information OPTIONAL,
iE-Extensions ProtocolExtensionContainer { { Continuous-Packet-Connectivity-DTX-DRX-Information-ExtIEs } }
OPTIONAL,
...
}

Continuous-Packet-Connectivity-DTX-DRX-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

```

```

}

Continuous-Packet-Connectivity-DTX-DRX-Information-to-Modify ::= SEQUENCE {
    uE-DTX-DRX-Offset                UE-DTX-DRX-Offset                OPTIONAL,
    enabling-Delay                    Enabling-Delay                    OPTIONAL,
    dTX-Information-to-Modify          DTX-Information-to-Modify          OPTIONAL,
    dRX-Information-to-Modify          DRX-Information-to-Modify          OPTIONAL,
    iE-Extensions                     ProtocolExtensionContainer { { Continuous-Packet-Connectivity-DTX-DRX-Information-to-Modify-ExtIEs } }
} } OPTIONAL,
...
}

Continuous-Packet-Connectivity-DTX-DRX-Information-to-Modify-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

Continuous-Packet-Connectivity-HS-SCCH-Less-Information ::= SEQUENCE (SIZE (1..maxNrOfHS-DSCHTBSs-HS-SCCHless)) OF Continuous-Packet-Connectivity-
HS-SCCH-Less-InformationItem

Continuous-Packet-Connectivity-HS-SCCH-Less-InformationItem ::= SEQUENCE {
    transport-Block-Size-Index        Transport-Block-Size-Index,
    hSPDSCH-Second-Code-Support       HSPDSCH-Second-Code-Support,
    iE-Extensions                     ProtocolExtensionContainer { { Continuous-Packet-Connectivity-HS-SCCH-Less-InformationItem-ExtIEs } }
    OPTIONAL,
    ...
}

Continuous-Packet-Connectivity-HS-SCCH-Less-InformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

Continuous-Packet-Connectivity-HS-SCCH-Less-Information-Response ::= SEQUENCE {
    hSPDSCH-First-Code-Index          HSPDSCH-First-Code-Index,
    hSPDSCH-Second-Code-Index         HSPDSCH-Second-Code-Index          OPTIONAL,
    iE-Extensions                     ProtocolExtensionContainer { { Continuous-Packet-Connectivity-HS-SCCH-Less-Information-Response-ExtIEs } }
} } OPTIONAL,
...
}

Continuous-Packet-Connectivity-HS-SCCH-Less-Information-Response-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

CorrespondingCells ::= SEQUENCE (SIZE (1..maxNrOfCellsPerFreq)) OF C-ID

CoverageIndicator ::= ENUMERATED {
    overlap,
    covers,
    containedIn,
    ...
}

```



```

CPC-Information ::= SEQUENCE {
    continuous-Packet-Connectivity-DTX-DRX-Information          Continuous-Packet-Connectivity-DTX-DRX-Information
    OPTIONAL,
    continuous-Packet-Connectivity-DTX-DRX-Information-to-Modify Continuous-Packet-Connectivity-DTX-DRX-Information-to-Modify
    OPTIONAL,
    continuous-Packet-Connectivity-HS-SCCH-Less-Information      Continuous-Packet-Connectivity-HS-SCCH-Less-Information
    OPTIONAL,
    iE-Extensions
    OPTIONAL,
    ...
}

CPC-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    {ID id-Continuous-Packet-Connectivity-HS-SCCH-Less-Deactivate-Indicator          CRITICALITY reject          EXTENSION Continuous-Packet-
Connectivity-HS-SCCH-less-Deactivate-Indicator          PRESENCE optional},
    ...
}

Continuous-Packet-Connectivity-HS-SCCH-less-Deactivate-Indicator ::= NULL

Counting-Information ::= SEQUENCE ( SIZE (1..maxNrOfFDDNeighboursPerRNC,...)) OF Counting-Information-List

Counting-Information-List ::= SEQUENCE {
    c-ID          C-ID,
    counting-Result          Counting-Result,
    iE-Extensions          ProtocolExtensionContainer { { Counting-Information-List-ExtIEs } } OPTIONAL,
    ...
}

Counting-Information-List-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

Counting-Result ::= INTEGER (0..63)

CRC-Size          ::= ENUMERATED {
    v0,
    v8,
    v12,
    v16,
    v24,
    ...
}

CriticalityDiagnostics ::= SEQUENCE {
    procedureID          ProcedureID          OPTIONAL,
    triggeringMessage          TriggeringMessage          OPTIONAL,
    procedureCriticality          Criticality          OPTIONAL,
    transactionID          TransactionID          OPTIONAL,
    iEsCriticalityDiagnostics          CriticalityDiagnostics-IE-List          OPTIONAL,
    iE-Extensions          ProtocolExtensionContainer { {CriticalityDiagnostics-ExtIEs} } OPTIONAL,
    ...
}

```

```

}

CriticalityDiagnostics-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

CriticalityDiagnostics-IE-List ::= SEQUENCE (SIZE (1..maxNrOfErrors)) OF
  SEQUENCE {
    iECriticality          Criticality,
    iE-ID                  ProtocolIE-ID,
    repetitionNumber       RepetitionNumber0      OPTIONAL,
    iE-Extensions          ProtocolExtensionContainer { {CriticalityDiagnostics-IE-List-ExtIEs} } OPTIONAL,
    ...
  }

CriticalityDiagnostics-IE-List-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-MessageStructure    CRITICALITY ignore      EXTENSION MessageStructure    PRESENCE optional } |
  { ID id-TypeOfError         CRITICALITY ignore      EXTENSION TypeOfError         PRESENCE mandatory },
  ...
}

MessageStructure ::= SEQUENCE (SIZE (1..maxNrOfLevels)) OF
  SEQUENCE {
    iE-ID                  ProtocolIE-ID,
    repetitionNumber       RepetitionNumber1      OPTIONAL,
    iE-Extensions          ProtocolExtensionContainer { {MessageStructure-ExtIEs} } OPTIONAL,
    ...
  }

MessageStructure-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

CN-CS-DomainIdentifier ::= SEQUENCE {
  pLMN-Identity           PLMN-Identity,
  lAC                     LAC,
  iE-Extensions           ProtocolExtensionContainer { {CN-CS-DomainIdentifier-ExtIEs} } OPTIONAL
}

CN-CS-DomainIdentifier-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

CN-PS-DomainIdentifier ::= SEQUENCE {
  pLMN-Identity           PLMN-Identity,
  lAC                     LAC,
  rAC                     RAC,
  iE-Extensions           ProtocolExtensionContainer { {CN-PS-DomainIdentifier-ExtIEs} } OPTIONAL
}

CN-PS-DomainIdentifier-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

```

```

CNDomainType ::= ENUMERATED {
    cs-domain,
    ps-domain,
    dont-care,
    ...
}
-- See in [16]

CQI-DTX-Timer ::= ENUMERATED {v0, v1, v2, v4, v8, v16, v32, v64, v128, v256, v512, infinity}
-- Unit subframe

ControlGAP ::= INTEGER (1..255)

CQI-Feedback-Cycle ::= ENUMERATED {v0, v2, v4, v8, v10, v20, v40, v80, v160,..., v16, v32, v64}

CQI-Power-Offset ::= INTEGER (0..8,...)
-- According to mapping in ref. [21] subclause 4.2.1

CQI-RepetitionFactor ::= INTEGER (1..4,...)
-- Step: 1

C-RNTI ::= INTEGER (0..65535)

CodeRate ::= INTEGER (0..63)

CodeRate-short ::= INTEGER (0..10)

CPC-InformationLCR ::= SEQUENCE {
    continuousPacketConnectivity-DRX-InformationLCR          ContinuousPacketConnectivity-DRX-InformationLCR          OPTIONAL,
    continuousPacketConnectivity-DRX-Information-to-Modify-LCR ContinuousPacketConnectivity-DRX-Information-to-Modify-LCR OPTIONAL,
    hS-DSCH-Semi-PersistentScheduling-Information-LCR        HS-DSCH-Semi-PersistentScheduling-Information-LCR        OPTIONAL,
    hS-DSCH-Semi-PersistentScheduling-Information-to-Modify-LCR HS-DSCH-Semi-PersistentScheduling-Information-to-Modify-LCR OPTIONAL,
    hS-DSCH-SPS-Deactivate-Indicator-LCR                     NULL OPTIONAL,
    e-DCH-Semi-PersistentScheduling-Information-LCR          E-DCH-Semi-PersistentScheduling-Information-LCR          OPTIONAL,
    e-DCH-Semi-PersistentScheduling-Information-to-Modify-LCR E-DCH-Semi-PersistentScheduling-Information-to-Modify-LCR OPTIONAL,
    e-DCH-SPS-Deactivate-Indicator-LCR                       NULL OPTIONAL,
    iE-Extensions                                             ProtocolExtensionContainer { { CPC-InformationLCR-ExtIEs } } OPTIONAL,
    ...
}

CPC-InformationLCR-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

ContinuousPacketConnectivity-DRX-InformationLCR ::= SEQUENCE {
    enabling-Delay          Enabling-Delay,
    hS-SCCH-DRX-Information-LCR HS-SCCH-DRX-Information-LCR,
    e-AGCH-DRX-Information-LCR E-AGCH-DRX-Information-LCR OPTIONAL,
    iE-Extensions          ProtocolExtensionContainer { { ContinuousPacketConnectivity-DRX-InformationLCR-ExtIEs } } OPTIONAL,
    ...
}

ContinuousPacketConnectivity-DRX-InformationLCR-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {

```

```

}
...
}
HS-SCCH-DRX-Information-LCR ::= SEQUENCE {
    hS-SCCH-UE-DRX-Cycle-LCR                UE-DRX-Cycle-LCR,
    hS-SCCH-Inactivity-Threshold-for-UE-DRX-Cycle-LCR    Inactivity-Threshold-for-UE-DRX-Cycle-LCR    OPTIONAL,
    hS-SCCH-UE-DRX-Offset-LCR                UE-DRX-Offset-LCR,
    iE-Extensions                            ProtocolExtensionContainer { { HS-SCCH-DRX-Information-LCR-ExtIEs } } OPTIONAL,
    ...
}
HS-SCCH-DRX-Information-LCR-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
E-AGCH-DRX-Information-LCR ::= CHOICE {
    sameAsHS-SCCH                NULL,
    e-AGCH-DRX-Parameters        E-AGCH-DRX-Parameters,
    ...
}
E-AGCH-DRX-Parameters ::= SEQUENCE {
    e-AGCH-UE-DRX-Cycle-LCR                UE-DRX-Cycle-LCR,
    e-AGCH-UE-Inactivity-Monitor-Threshold    E-AGCH-UE-Inactivity-Monitor-Threshold    OPTIONAL,
    e-AGCH-UE-DRX-Offset-LCR                UE-DRX-Offset-LCR,
    iE-Extensions                            ProtocolExtensionContainer { { E-AGCH-DRX-Parameters-ExtIEs } } OPTIONAL,
    ...
}
E-AGCH-DRX-Parameters-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
UE-DRX-Cycle-LCR ::= ENUMERATED {v1, v2, v4, v8, v16, v32, v64,...}
-- Unit subframe
UE-DRX-Offset-LCR ::= INTEGER (0..63)
-- Unit subframe
Inactivity-Threshold-for-UE-DRX-Cycle-LCR ::= ENUMERATED {v1, v2, v4, v8, v16, v32, v64,...}
-- Unit subframe
E-AGCH-UE-Inactivity-Monitor-Threshold ::= ENUMERATED {v0, v1, v2, v4, v8, v16, v32, v64, v128, v256, v512, infinity,...}
-- Unit subframe
ContinuousPacketConnectivity-DRX-Information-to-Modify-LCR ::= SEQUENCE {
    enabling-Delay                Enabling-Delay                OPTIONAL,
    dRX-Information-to-Modify-LCR    DRX-Information-to-Modify-LCR    OPTIONAL,
    iE-Extensions                    ProtocolExtensionContainer { { ContinuousPacketConnectivity-DRX-Information-to-Modify-LCR-ExtIEs } }
}
OPTIONAL,
...
}
ContinuousPacketConnectivity-DRX-Information-to-Modify-LCR-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {

```

```

}
...
}
DRX-Information-to-Modify-LCR ::= CHOICE {
    modify          DRX-Information-to-Modify-Items-LCR,
    deactivate      NULL,
    ...
}

DRX-Information-to-Modify-Items-LCR ::= SEQUENCE {
    hS-SCCH-DRX-Information-LCR          HS-SCCH-DRX-Information-LCR          OPTIONAL,
    e-AGCH-DRX-Information-LCR          E-AGCH-DRX-Information-LCR          OPTIONAL,
    iE-Extensions                        ProtocolExtensionContainer { {DRX-Information-to-Modify-Items-LCR-ExtIEs} } OPTIONAL,
    ...
}

DRX-Information-to-Modify-Items-LCR-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

ContinuousPacketConnectivity-DRX-Information-ResponseLCR ::= SEQUENCE {
    enabling-Delay          Enabling-Delay          OPTIONAL,
    hS-SCCH-DRX-Information-ResponseLCR          HS-SCCH-DRX-Information-ResponseLCR          OPTIONAL,
    e-AGCH-DRX-Information-ResponseLCR          E-AGCH-DRX-Information-ResponseLCR          OPTIONAL,
    iE-Extensions          ProtocolExtensionContainer { { ContinuousPacketConnectivity-DRX-Information-ResponseLCR-ExtIEs } }
    OPTIONAL,
    ...
}

ContinuousPacketConnectivity-DRX-Information-ResponseLCR-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

HS-SCCH-DRX-Information-ResponseLCR ::= SEQUENCE {
    hS-SCCH-UE-DRX-Cycle-LCR          UE-DRX-Cycle-LCR          OPTIONAL,
    hS-SCCH-Inactivity-Threshold-for-UE-DRX-Cycle-LCR          Inactivity-Threshold-for-UE-DRX-Cycle-LCR          OPTIONAL,
    hS-SCCH-UE-DRX-Offset-LCR          UE-DRX-Offset-LCR          OPTIONAL,
    iE-Extensions          ProtocolExtensionContainer { { HS-SCCH-DRX-Information-ResponseLCR-ExtIEs } } OPTIONAL,
    ...
}

HS-SCCH-DRX-Information-ResponseLCR-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

E-AGCH-DRX-Information-ResponseLCR ::= CHOICE {
    sameAsHS-SCCH          NULL,
    e-AGCH-DRX-Parameters-Response          E-AGCH-DRX-Parameters-Response,
    ...
}

E-AGCH-DRX-Parameters-Response ::= SEQUENCE {
    e-AGCH-UE-DRX-Cycle-LCR          UE-DRX-Cycle-LCR          OPTIONAL,
    e-AGCH-UE-Inactivity-Monitor-Threshold          E-AGCH-UE-Inactivity-Monitor-Threshold          OPTIONAL,

```

```

    e-AGCH-UE-DRX-Offset-LCR          UE-DRX-Offset-LCR          OPTIONAL,
    iE-Extensions                      ProtocolExtensionContainer { { E-AGCH-DRX-Parameters-Response-ExtIEs } } OPTIONAL,
    ...
}

E-AGCH-DRX-Parameters-Response-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- D

DATA-ID ::= INTEGER (0..3)

DCH-FDD-Information ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-FDD-InformationItem

DCH-FDD-InformationItem ::= SEQUENCE {
    payloadCRC-PresenceIndicator      PayloadCRC-PresenceIndicator,
    ul-FP-Mode                        UL-FP-Mode,
    toAWS                             ToAWS,
    toAWE                             ToAWE,
    dCH-SpecificInformationList       DCH-Specific-FDD-InformationList,
    iE-Extensions                    ProtocolExtensionContainer { {DCH-FDD-InformationItem-ExtIEs} } OPTIONAL,
    ...
}

DCH-FDD-InformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-TnIQos          CRITICALITY ignore EXTENSION TnIQos PRESENCE optional },
    ...
}

DCH-Specific-FDD-InformationList ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-Specific-FDD-Item

DCH-Specific-FDD-Item ::= SEQUENCE {
    dCH-ID                        DCH-ID,
    trCH-SrcStatisticsDescr       TrCH-SrcStatisticsDescr,
    ul-transportFormatSet         TransportFormatSet,
    dl-transportFormatSet         TransportFormatSet,
    ul-BLER                       BLER,
    dl-BLER                       BLER,
    allocationRetentionPriority    AllocationRetentionPriority,
    frameHandlingPriority          FrameHandlingPriority,
    qE-Selector                   QE-Selector,
    dRACControl                   DRACControl,
    iE-Extensions                ProtocolExtensionContainer { {DCH-FDD-SpecificItem-ExtIEs} } OPTIONAL,
    ...
}

DCH-FDD-SpecificItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-Guaranteed-Rate-Information CRITICALITY ignore EXTENSION Guaranteed-Rate-Information PRESENCE optional }|
    { ID id-TrafficClass CRITICALITY ignore EXTENSION TrafficClass PRESENCE mandatory }|
    { ID id-Unidirectional-DCH-Indicator CRITICALITY reject EXTENSION Unidirectional-DCH-Indicator PRESENCE optional },
    ...
}

```

```

DCH-Indicator-For-E-DCH-HSDPA-Operation ::= ENUMERATED {
    dch-not-present
}

DCH-ID ::= INTEGER (0..255)

DCH-InformationResponse ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-InformationResponseItem

DCH-InformationResponseItem ::= SEQUENCE {
    dCH-ID DCH-ID,
    bindingID BindingID OPTIONAL,
    transportLayerAddress TransportLayerAddress OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { {DCH-InformationResponseItem-ExtIEs} } OPTIONAL,
    ...
}

DCH-InformationResponseItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-Allowed-Rate-Information CRITICALITY ignore EXTENSION Allowed-Rate-Information PRESENCE optional }|
    { ID id-TransportBearerNotSetupIndicator CRITICALITY ignore EXTENSION TransportBearerNotSetupIndicator PRESENCE optional }, -- FDD only
    ...
}

DCH-TDD-Information ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-TDD-InformationItem

DCH-TDD-InformationItem ::= SEQUENCE {
    payloadCRC-PresenceIndicator PayloadCRC-PresenceIndicator,
    ul-FP-Mode UL-FP-Mode,
    toAWS ToAWS,
    toAWE ToAWE,
    dCH-SpecificInformationList DCH-Specific-TDD-InformationList,
    iE-Extensions ProtocolExtensionContainer { {DCH-TDD-InformationItem-ExtIEs} } OPTIONAL,
    ...
}

DCH-TDD-InformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-TnIQos CRITICALITY ignore EXTENSION TnIQos PRESENCE optional },
    ...
}

DCH-Specific-TDD-InformationList ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-Specific-TDD-Item

DCH-Specific-TDD-Item ::= SEQUENCE {
    dCH-ID DCH-ID,
    ul-cTrCH-ID CTrCH-ID, -- UL CTrCH in which the DCH is mapped
    dl-cTrCH-ID CTrCH-ID, -- DL CTrCH in which the DCH is mapped
    trCH-SrcStatisticsDescr TrCH-SrcStatisticsDescr,
    ul-transportFormatSet TransportFormatSet,
    dl-transportFormatSet TransportFormatSet,
    ul-BLER BLER,
    dl-BLER BLER,
    allocationRetentionPriority AllocationRetentionPriority,
    frameHandlingPriority FrameHandlingPriority,
    qE-Selector QE-Selector OPTIONAL,
}

```

```

-- This IE shall be present if DCH is part of set of Co-ordinated DCHs
iE-Extensions          ProtocolExtensionContainer { {DCH-Specific-TDD-Item-ExtIEs} } OPTIONAL,
...
}

DCH-Specific-TDD-Item-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-Guaranteed-Rate-Information      CRITICALITY ignore  EXTENSION Guaranteed-Rate-Information      PRESENCE optional }|
  { ID id-TrafficClass                    CRITICALITY ignore  EXTENSION TrafficClass      PRESENCE mandatory }|
  { ID id-Unidirectional-DCH-Indicator    CRITICALITY reject  EXTENSION Unidirectional-DCH-Indicator    PRESENCE optional },
  ...
}

DedicatedMeasurementType ::= ENUMERATED {
  sir,
  sir-error,
  transmitted-code-power,
  rSCP,
  rx-timing-deviation,
  round-trip-time,
  ...,
  rx-timing-deviation-LCR,
  angle-Of-Arrival-LCR,
  hs-sich-quality,
  rx-timing-deviation-768,
  rx-timing-deviation-ext
}

DedicatedMeasurementValue ::= CHOICE {
  sIR-Value          SIR-Value,
  sIR-ErrorValue     SIR-Error-Value,
  transmittedCodePowerValue  Transmitted-Code-Power-Value,
  rSCP              RSCP-Value, -- TDD only
  rxTimingDeviationValue  Rx-Timing-Deviation-Value, -- 3.84Mcps TDD only
  roundTripTime     Round-Trip-Time-Value, -- FDD only
  ...,
  extension-DedicatedMeasurementValue  Extension-DedicatedMeasurementValue
}

Extension-DedicatedMeasurementValue ::= ProtocolIE-Single-Container {{ Extension-DedicatedMeasurementValueIE }}

Extension-DedicatedMeasurementValueIE RNSAP-PROTOCOL-IES ::= {
  { ID id-Rx-Timing-Deviation-Value-LCR      CRITICALITY reject  TYPE Rx-Timing-Deviation-Value-LCR      PRESENCE mandatory }|
  { ID id-Angle-Of-Arrival-Value-LCR        CRITICALITY reject  TYPE Angle-Of-Arrival-Value-LCR        PRESENCE mandatory }|
  { ID id-HS-SICH-Reception-Quality        CRITICALITY reject  TYPE HS-SICH-Reception-Quality-Value    PRESENCE mandatory }|
  { ID id-Rx-Timing-Deviation-Value-768    CRITICALITY reject  TYPE Rx-Timing-Deviation-Value-768     PRESENCE mandatory }|
  { ID id-Rx-Timing-Deviation-Value-ext    CRITICALITY reject  TYPE Rx-Timing-Deviation-Value-ext     PRESENCE mandatory }|
  { ID id-Extended-Round-Trip-Time-Value   CRITICALITY reject  TYPE Extended-Round-Trip-Time-Value     PRESENCE mandatory },
  ...
}

DedicatedMeasurementValueInformation ::= CHOICE {
  measurementAvailable          DedicatedMeasurementAvailable,
  measurementnotAvailable      DedicatedMeasurementnotAvailable
}

```



```

}
DedicatedMeasurementAvailable ::= SEQUENCE {
    dedicatedmeasurementValue    DedicatedMeasurementValue,
    cFN                           CFN                       OPTIONAL,
    ie-Extensions                 ProtocolExtensionContainer { { DedicatedMeasurementAvailableItem-ExtIEs} } OPTIONAL,
    ...
}
DedicatedMeasurementAvailableItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
DedicatedMeasurementnotAvailable ::= NULL
DelayedActivation ::= CHOICE {
    cfn                           CFN,
    separate-indication          NULL
}
DelayedActivationUpdate ::= CHOICE {
    activate      Activate-Info,
    deactivate    Deactivate-Info
}
Activate-Info ::= SEQUENCE {
    activation-type      Execution-Type,
    initial-dl-tx-power  DL-Power,
    firstRLS-Indicator   FirstRLS-Indicator           OPTIONAL, --FDD Only
    propagation-delay    PropagationDelay             OPTIONAL, --FDD Only
    iE-Extensions        ProtocolExtensionContainer { { Activate-Info-ExtIEs} }   OPTIONAL,
    ...
}
Activate-Info-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-ExtendedPropagationDelay    CRITICALITY ignore    EXTENSION ExtendedPropagationDelay    PRESENCE optional },
    ...
}
Deactivate-Info ::= SEQUENCE {
    deactivation-type      Execution-Type,
    iE-Extensions        ProtocolExtensionContainer { { Deactivate-Info-ExtIEs} }   OPTIONAL,
    ...
}
Deactivate-Info-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
Execution-Type ::= CHOICE {
    synchronised    CFN,
    unsynchronised  NULL
}

```

```

}

DeltaSIR ::= INTEGER (0..30)
-- Step 0.1 dB, Range 0..3 dB.

DGANSSCorrections ::= SEQUENCE {
    dGANSS-ReferenceTime      INTEGER(0..119),
    dGANSS-Information        SEQUENCE (SIZE (1..maxSgnType)) OF SEQUENCE {
        gANSS-SignalId        GANSS-Signal-ID                                OPTIONAL,
        gANSS-StatusHealth    GANSS-StatusHealth,
-- The following IE shall be present if the StatusHealth IE value is not equal to "no data" or "invalid data"
        dGANSS-SignalInformation SEQUENCE (SIZE (1..maxGANSSSat)) OF SEQUENCE {
            satId              INTEGER(0..63),
            gANSS-iod          BIT STRING (SIZE (10)),
            udre               UDRE,
            ganss-prc          INTEGER(-2047..2047),
            ganss-rrc          INTEGER(-127..127),
            ie-Extensions     ProtocolExtensionContainer { { DGANSS-SignalInformationItem-ExtIEs } } OPTIONAL,
            ...
        }
        ie-Extensions        ProtocolExtensionContainer { { DGANSS-InformationItem-ExtIEs } } OPTIONAL,
        ...
    },
    ie-Extensions            ProtocolExtensionContainer { { DGANSSCorrections-ExtIEs } } OPTIONAL,
    ...
}

DGANSSCorrections-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DGANSS-Corrections-Req ::= SEQUENCE {
    dGANSS-Signal-ID        BIT STRING (SIZE (8)),
    ie-Extensions          ProtocolExtensionContainer { { DGANSS-Corrections-Req-ExtIEs } } OPTIONAL,
    ...
}

DGANSS-Corrections-Req-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    {ID id-GANSS-ID          CRITICALITY ignore EXTENSION GANSS-ID          PRESENCE optional},
    ...
}

DGANSS-InformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

DGANSS-SignalInformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DGANSSThreshold ::= SEQUENCE {
    pRCDeviation          PRCDeviation,
    ...
}

DGPSCorrections ::= SEQUENCE {
    gpSTOW                gpSTOW,
    gps-Status-Health     GPS-Status-Health,
    satellite-DGPSCorrections-Information SEQUENCE (SIZE (1..maxNoSat)) OF
        SEQUENCE {
            sAT-ID          SAT-ID,
            iode-dgps       BIT STRING (SIZE (8)),
            uDRE            UDRE,
            pRC             PRC,
            range-Correction-Rate Range-Correction-Rate,
            iE-Extensions   ProtocolExtensionContainer { { Satellite-DGPSCorrections-Information-ExtIEs} } OPTIONAL,
            ...
        },
    iE-Extensions         ProtocolExtensionContainer { { DGPSCorrections-ExtIEs} } OPTIONAL,
    ...
}

Satellite-DGPSCorrections-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DGPSCorrections-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DGPSThreshold ::= SEQUENCE {
    pRCDeviation          PRCDeviation,
    iE-Extensions         ProtocolExtensionContainer { { DGPSThreshold-ExtIEs} } OPTIONAL,
    ...
}

DGPSThreshold-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DiscardTimer ::= ENUMERATED
{v20,v40,v60,v80,v100,v120,v140,v160,v180,v200,v250,v300,v400,v500,v750,v1000,v1250,v1500,v1750,v2000,v2500,v3000,v3500,v4000,v4500,v5000,v7500,
...
}

```

```

DiversityControlField ::= ENUMERATED {
    may,
    must,
    must-not
}

DiversityMode ::= ENUMERATED {
    none,
    sTTD,
    closedLoopModel,
    not-used-closedLoopMode2,
    ...
}

DL-DPCH-SlotFormat ::= INTEGER (0..16,...)

DL-DPCH-TimingAdjustment ::= ENUMERATED {
    timing-advance,
    timing-delay
}

DL-Power ::= INTEGER (-350..150)
-- Value = DL-Power / 10
-- Unit dB, Range -35dB .. +15dB, Step 0.1dB

DL-PowerBalancing-Information ::= SEQUENCE {
    powerAdjustmentType PowerAdjustmentType,
    dlReferencePower DL-Power OPTIONAL,
    -- This IE shall be present if Power Adjustment Type IE equals to 'Common'
    dlReferencePowerList DL-ReferencePowerInformationList OPTIONAL,
    -- This IE shall be present if Power Adjustment Type IE equals to 'Individual'
    maxAdjustmentStep MaxAdjustmentStep OPTIONAL,
    -- This IE shall be present if Power Adjustment Type IE equals to 'Common' or 'Individual'
    adjustmentPeriod AdjustmentPeriod OPTIONAL,
    -- This IE shall be present if Power Adjustment Type IE equals to 'Common' or 'Individual'
    adjustmentRatio ScaledAdjustmentRatio OPTIONAL,
    -- This IE shall be present if Power Adjustment Type IE equals to 'Common' or 'Individual'
    iE-Extensions ProtocolExtensionContainer { { DL-PowerBalancing-Information-ExtIEs } } OPTIONAL,
    ...
}

DL-PowerBalancing-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-ReferencePowerInformationList ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF DL-ReferencePowerInformationItem

DL-ReferencePowerInformationItem ::= SEQUENCE {
    rL-ID RL-ID,
    dl-Reference-Power DL-Power,
    iE-Extensions ProtocolExtensionContainer { {DL-ReferencePowerInformationItem-ExtIEs} } OPTIONAL,
    ...
}

```

```

DL-ReferencePowerInformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-PowerBalancing-ActivationIndicator ::= ENUMERATED {
    DL-PowerBalancing-Activated
}

DL-PowerBalancing-UpdatedIndicator ::= ENUMERATED {
    DL-PowerBalancing-Updated
}

DL-ReferencePowerInformation ::= SEQUENCE {
    common-DL-ReferencePowerInformation DL-Power OPTIONAL,
    individual-DL-ReferencePowerInformation DL-ReferencePowerInformationList OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { { DL-ReferencePowerInformation-ExtIEs } } OPTIONAL,
    ...
}

DL-ReferencePowerInformation-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

D-RNTI ::= INTEGER (0..1048575)

D-RNTI-ReleaseIndication ::= ENUMERATED {
    release-D-RNTI,
    not-release-D-RNTI
}

DL-ScramblingCode ::= INTEGER (0..15)

DL-FrameType ::= ENUMERATED {
    typeA,
    typeB,
    ...
}

DL-Timeslot-Information ::= SEQUENCE ( SIZE (1..maxNrOfTS) ) OF DL-Timeslot-InformationItem

DL-Timeslot-InformationItem ::= SEQUENCE {
    timeSlot TimeSlot,
    midambleShiftAndBurstType MidambleShiftAndBurstType,
    tFCI-Presence TFCI-Presence,
    dL-Code-Information TDD-DL-Code-Information,
    iE-Extensions ProtocolExtensionContainer { {DL-Timeslot-InformationItem-ExtIEs} } OPTIONAL,
    ...
}

DL-Timeslot-InformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

DL-TimeslotLCR-Information ::= SEQUENCE (SIZE (1.. maxNrOfDLTsLCR)) OF DL-TimeslotLCR-InformationItem

```
DL-TimeslotLCR-InformationItem ::= SEQUENCE {
    timeSlotLCR                TimeSlotLCR,
    midambleShiftLCR          MidambleShiftLCR,
    tFCI-Presence              TFCI-Presence,
    dL-Code-LCR-Information    TDD-DL-Code-LCR-Information,
    iE-Extensions              ProtocolExtensionContainer { { DL-TimeslotLCR-InformationItem-ExtIEs } } OPTIONAL,
    ...
}
```

```
DL-TimeslotLCR-InformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-Maximum-DL-Power-TimeSlotLCR-InformationItem    CRITICALITY ignore    EXTENSION DL-Power                PRESENCE optional } |
    -- Applicable to 1.28Mcps TDD only
    { ID id-Minimum-DL-Power-TimeSlotLCR-InformationItem    CRITICALITY ignore    EXTENSION DL-Power                PRESENCE optional },
    -- Applicable to 1.28Mcps TDD only
    ...
}
```

DL-Timeslot-Information768 ::= SEQUENCE ( SIZE (1..maxNrOfTS)) OF DL-Timeslot-InformationItem768

```
DL-Timeslot-InformationItem768 ::= SEQUENCE {
    timeSlot                TimeSlot,
    midambleShiftAndBurstType768    MidambleShiftAndBurstType768,
    tFCI-Presence            TFCI-Presence,
    dL-Code-Information768    TDD-DL-Code-Information768,
    iE-Extensions            ProtocolExtensionContainer { {DL-Timeslot-InformationItem768-ExtIEs} } OPTIONAL,
    ...
}
```

```
DL-Timeslot-InformationItem768-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

DL-TimeSlot-ISCP-Info ::= SEQUENCE (SIZE (1..maxNrOfDLTs)) OF DL-TimeSlot-ISCP-InfoItem

```
DL-TimeSlot-ISCP-InfoItem ::= SEQUENCE {
    timeSlot                TimeSlot,
    dL-TimeSlotISCP          DL-TimeSlotISCP,
    iE-Extensions            ProtocolExtensionContainer { { DL-TimeSlot-ISCP-InfoItem-ExtIEs } } OPTIONAL,
    ...
}
```

```
DL-TimeSlot-ISCP-InfoItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

DL-TimeSlot-ISCP-LCR-Information ::= SEQUENCE (SIZE (1..maxNrOfDLTsLCR)) OF DL-TimeSlot-ISCP-LCR-InfoItem

```
DL-TimeSlot-ISCP-LCR-InfoItem ::= SEQUENCE {
    timeSlotLCR                TimeSlotLCR,
    dL-TimeSlotISCP            DL-TimeSlotISCP,
    iE-Extensions              ProtocolExtensionContainer { { DL-TimeSlot-ISCP-LCR-InfoItem-ExtIEs } } OPTIONAL,
    ...
}
```

```

}
DL-TimeSlot-ISCP-LCR-InfoItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}
DL-TimeslotISCP ::= INTEGER (0..91)
-- According to mapping in [24]
Downlink-Compressed-Mode-Method ::= ENUMERATED {
  not-Used-puncturing,
  sFdiv2,
  higher-layer-scheduling,
  ...
}
DPC-Mode ::= ENUMERATED {
  mode0,
  mode1,
  ...
}
DPC-Mode-Change-SupportIndicator ::= ENUMERATED {
  dPC-ModeChangeSupported
}
DPCH-ID ::= INTEGER (0..239)
DPCH-ID768 ::= INTEGER (0..479)
DPCHConstantValue ::= INTEGER (-10..10)
-- Unit dB, Step 1dB
DRACControl ::= ENUMERATED {
  not-Used-requested,
  not-requested
}
DRXCycleLengthCoefficient ::= INTEGER (3..9)
-- See in [16]
DRX-Information ::= SEQUENCE {
  uE-DRX-Cycle UE-DRX-Cycle,
  inactivity-Threshold-for-UE-DRX-Cycle Inactivity-Threshold-for-UE-DRX-Cycle,
  inactivity-Threshold-for-UE-Grant-Monitoring Inactivity-Threshold-for-UE-Grant-Monitoring,
  uE-DRX-Grant-Monitoring UE-DRX-Grant-Monitoring,
  iE-Extensions ProtocolExtensionContainer { {DRX-Information-ExtIEs} } OPTIONAL,
  ...
}
DRX-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

```

```

DRX-Information-to-Modify ::= CHOICE {
    modify          DRX-Information-to-Modify-Items,
    deactivate      NULL,
    ...
}

DRX-Information-to-Modify-Items ::= SEQUENCE {
    uE-DRX-Cycle          UE-DRX-Cycle          OPTIONAL,
    inactivity-Threshold-for-UE-DRX-Cycle      Inactivity-Threshold-for-UE-DRX-Cycle      OPTIONAL,
    inactivity-Threshold-for-UE-Grant-Monitoring Inactivity-Threshold-for-UE-Grant-Monitoring      OPTIONAL,
    uE-DRX-Grant-Monitoring          UE-DRX-Grant-Monitoring          OPTIONAL,
    iE-Extensions                    ProtocolExtensionContainer { {DRX-Information-to-Modify-Items-ExtIEs} } OPTIONAL,
    ...
}

DRX-Information-to-Modify-Items-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DSCH-RNTI ::= INTEGER (0..65535)

DSCH-FlowControlInformation ::= SEQUENCE (SIZE(1..16)) OF DSCH-FlowControlItem

DSCH-FlowControlItem ::= SEQUENCE {
    dSCH-SchedulingPriority      SchedulingPriorityIndicator,
    MAC-c-sh-SDU-Lengths        MAC-c-sh-SDU-LengthList,
    iE-Extensions                ProtocolExtensionContainer { {DSCH-FlowControlItem-ExtIEs} } OPTIONAL,
    ...
}

DSCH-FlowControlItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-DSCH-InitialWindowSize CRITICALITY ignore EXTENSION DSCH-InitialWindowSize PRESENCE optional },
    ...
}

DSCH-ID ::= INTEGER (0..255)

DSCH-InitialWindowSize ::= INTEGER (1..255)
-- Number of MAC-c/sh SDUs.
-- 255 = Unlimited number of MAC-c/sh SDUs

DSCH-TDD-Information ::= SEQUENCE (SIZE (1..maxNoOfDSCHs)) OF DSCH-TDD-InformationItem

DSCH-TDD-InformationItem ::= SEQUENCE {
    dSCH-ID          DSCH-ID,
    dl-ccTrCHID      CTrCH-ID, -- DL CTrCH in which the DSCH is mapped
    trChSourceStatisticsDescriptor TrCH-SourceStatisticsDescr,
    transportFormatSet TransportFormatSet,
    allocationRetentionPriority AllocationRetentionPriority,
    schedulingPriorityIndicator SchedulingPriorityIndicator,
    BLER              BLER,
    iE-Extensions     ProtocolExtensionContainer { {DSCH-TDD-InformationItem-ExtIEs} } OPTIONAL,
}

```



```

}
...
}
DSCH-TDD-InformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-TrafficClass          CRITICALITY ignore EXTENSION TrafficClass PRESENCE mandatory } |
  { ID id-BindingID            CRITICALITY ignore EXTENSION BindingID PRESENCE optional } |
  -- Shall be ignored if bearer establishment with ALCAP.
  { ID id-TransportLayerAddress CRITICALITY ignore EXTENSION TransportLayerAddress PRESENCE optional } |
  -- Shall be ignored if bearer establishment with ALCAP.
  { ID id-TnlQos                CRITICALITY ignore EXTENSION TnlQos PRESENCE optional },
  -- Shall be ignored if bearer establishment with ALCAP.
  ...
}
DsField ::= BIT STRING (SIZE (8))

DTX-Cycle-2ms-Items ::= SEQUENCE {
  uE-DTX-Cycle1-2ms UE-DTX-Cycle1-2ms,
  uE-DTX-Cycle2-2ms UE-DTX-Cycle2-2ms,
  mAC-DTX-Cycle-2ms MAC-DTX-Cycle-2ms,
  iE-Extensions ProtocolExtensionContainer { { DTX-Cycle-2ms-Items-ExtIEs } } OPTIONAL,
  ...
}

DTX-Cycle-2ms-Items-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

DTX-Cycle-2ms-to-Modify-Items ::= SEQUENCE {
  uE-DTX-Cycle1-2ms UE-DTX-Cycle1-2ms OPTIONAL,
  uE-DTX-Cycle2-2ms UE-DTX-Cycle2-2ms OPTIONAL,
  mAC-DTX-Cycle-2ms MAC-DTX-Cycle-2ms OPTIONAL,
  iE-Extensions ProtocolExtensionContainer { { DTX-Cycle-2ms-to-Modify-Items-ExtIEs } } OPTIONAL,
  ...
}

DTX-Cycle-2ms-to-Modify-Items-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

DTX-Cycle-10ms-Items ::= SEQUENCE {
  uE-DTX-Cycle1-10ms UE-DTX-Cycle1-10ms,
  uE-DTX-Cycle2-10ms UE-DTX-Cycle2-10ms,
  mAC-DTX-Cycle-10ms MAC-DTX-Cycle-10ms,
  iE-Extensions ProtocolExtensionContainer { { DTX-Cycle-10ms-Items-ExtIEs } } OPTIONAL,
  ...
}

DTX-Cycle-10ms-Items-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

DTX-Cycle-10ms-to-Modify-Items ::= SEQUENCE {

```

```

    uE-DTX-Cycle1-10ms          UE-DTX-Cycle1-10ms          OPTIONAL,
    uE-DTX-Cycle2-10ms          UE-DTX-Cycle2-10ms          OPTIONAL,
    mAC-DTX-Cycle-10ms          MAC-DTX-Cycle-10ms          OPTIONAL,
    iE-Extensions                ProtocolExtensionContainer { { DTX-Cycle-10ms-to-Modify-Items-ExtIEs} } OPTIONAL,
    ...
}

DTX-Cycle-10ms-to-Modify-Items-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DTX-Information ::= SEQUENCE {
    e-DCH-TTI-Length            E-DCH-TTI-Length,
    inactivity-Threshold-for-UE-DTX-Cycle2 Inactivity-Threshold-for-UE-DTX-Cycle2,
    uE-DTX-Long-Preamble        UE-DTX-Long-Preamble,
    mAC-Inactivity-Threshold    MAC-Inactivity-Threshold,
    cQI-DTX-Timer               CQI-DTX-Timer,
    uE-DPCCH-burst1             UE-DPCCH-burst1,
    uE-DPCCH-burst2             UE-DPCCH-burst2,
    iE-Extensions                ProtocolExtensionContainer { {DTX-Information-ExtIEs} } OPTIONAL,
    ...
}

DTX-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DTX-Information-to-Modify ::= CHOICE {
    modify            DTX-Information-to-Modify-Items,
    deactivate        NULL,
    ...
}

DTX-Information-to-Modify-Items ::= SEQUENCE {
    e-DCH-TTI-Length-to-Modify    E-DCH-TTI-Length-to-Modify          OPTIONAL,
    inactivity-Threshold-for-UE-DTX-Cycle2 Inactivity-Threshold-for-UE-DTX-Cycle2          OPTIONAL,
    uE-DTX-Long-Preamble          UE-DTX-Long-Preamble          OPTIONAL,
    mAC-Inactivity-Threshold      MAC-Inactivity-Threshold          OPTIONAL,
    cQI-DTX-Timer                 CQI-DTX-Timer                 OPTIONAL,
    uE-DPCCH-burst1               UE-DPCCH-burst1               OPTIONAL,
    uE-DPCCH-burst2               UE-DPCCH-burst2               OPTIONAL,
    iE-Extensions                ProtocolExtensionContainer { {DTX-Information-to-Modify-Items-ExtIEs} } OPTIONAL,
    ...
}

DTX-Information-to-Modify-Items-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- E

EARFCN ::= INTEGER (0..maxEARFCN)

```

```

EARFCN-Information ::= CHOICE {
    fDD    EARFCN-FDD,
    tDD    EARFCN,
    ...
}

EARFCN-FDD ::= SEQUENCE {
    uL-EARFCN    EARFCN,
    dL-EARFCN    EARFCN
}

E-AGCH-Table-Choice ::= ENUMERATED{table16B, table16B-1, ...}

ECGI ::= SEQUENCE {
    pLMN-Identity        PLMN-Identity,
    e-UTRAN-Cell-ID      BIT STRING (SIZE (28)),
    iE-Extensions        ProtocolExtensionContainer { {ECGI-ExtIEs} } OPTIONAL,
    ...
}

ECGI-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

EDCH-DDI-Value ::= INTEGER (0..62)

EDCH-FDD-DL-ControlChannelInformation ::= SEQUENCE {
    eAGCH-ERGCH-EHICH-FDD-ScramblingCode    DL-ScramblingCode            OPTIONAL,
    eAGCH-ChannelisationCode                FDD-DL-ChannelisationCodeNumber  OPTIONAL,
    primary-e-RNTI                          E-RNTI                          OPTIONAL,
    secondary-e-RNTI                        E-RNTI                          OPTIONAL,
    eRGCH-EHICH-ChannelisationCode          FDD-DL-ChannelisationCodeNumber,
    eRGCH-SignatureSequence                ERGCH-SignatureSequence          OPTIONAL,
    eHICH-SignatureSequence                EHICH-SignatureSequence          OPTIONAL,
    serving-Grant-Value                    E-Serving-Grant-Value           OPTIONAL,
    primary-Secondary-Grant-Selector        E-Primary-Secondary-Grant-Selector  OPTIONAL,
    e-RGCH-Release-Indicator                E-RGCH-Release-Indicator         OPTIONAL,
    iE-Extensions                            ProtocolExtensionContainer { { EDCH-FDD-DL-ControlChannelInformation-ExtIEs } }
    OPTIONAL,
    ...
}

EDCH-FDD-DL-ControlChannelInformation-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-E-RGCH-E-HICH-ChannelisationCodeValidityIndicator  CRITICALITY ignore  EXTENSION E-RGCH-E-HICH-ChannelisationCodeValidityIndicator
      PRESENCE optional }|
    { ID id-Default-Serving-Grant-in-DTX-Cycle2                CRITICALITY ignore  EXTENSION E-Serving-Grant-Value
      PRESENCE optional },
    ...
}

E-RGCH-E-HICH-ChannelisationCodeValidityIndicator ::= ENUMERATED {
    e-RGCH-E-HICH-Channelisation-Code-response-not-valid
}

```

```

EDCH-FDD-Information ::= SEQUENCE {
    eDCH-MACdFlows-Information          EDCH-MACdFlows-Information,
    hARQ-Process-Allocation-Scheduled-2ms-EDCH HARQ-Process-Allocation-2ms-EDCH          OPTIONAL,
    e-DCH-Maximum-Bitrate                E-DCH-Maximum-Bitrate                OPTIONAL,
    e-DCH-Processing-Overload-Level       E-DCH-Processing-Overload-Level       OPTIONAL,
    e-DCH-Reference-Power-Offset          E-DCH-Reference-Power-Offset          OPTIONAL,
    iE-Extensions                          ProtocolExtensionContainer { { EDCH-FDD-Information-ExtIEs } } OPTIONAL,
    ...
}

EDCH-FDD-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-E-DCH-PowerOffset-for-SchedulingInfo          CRITICALITY ignore EXTENSION E-DCH-PowerOffset-for-SchedulingInfo PRESENCE optional} |
    { ID id-SixteenQAM-UL-Operation-Indicator            CRITICALITY reject  EXTENSION SixteenQAM-UL-Operation-Indicator PRESENCE optional} |
    { ID id-E-AGCH-Table-Choice                          CRITICALITY ignore EXTENSION E-AGCH-Table-Choice PRESENCE conditional},
    -- The IE shall be present if the SixteenQAM UL Operation Indicator IE is set to "Activate"--
    ...
}

EDCH-FDD-InformationResponse ::= SEQUENCE {
    eDCH-MACdFlow-Specific-InformationResponse EDCH-MACdFlow-Specific-InformationResponse,
    hARQ-Process-Allocation-Scheduled-2ms-EDCH HARQ-Process-Allocation-2ms-EDCH          OPTIONAL,
    iE-Extensions                          ProtocolExtensionContainer { { EDCH-FDD-InformationResponse-ExtIEs } } OPTIONAL,
    ...
}

EDCH-FDD-InformationResponse-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

EDCH-MACdFlow-Specific-InformationResponse ::= SEQUENCE (SIZE (1..maxNrOfEDCHMACdFlows)) OF EDCH-MACdFlow-Specific-InformationResponseItem

EDCH-MACdFlow-Specific-InformationResponseItem ::= SEQUENCE {
    eDCH-MACdFlow-ID          EDCH-MACdFlow-ID,
    bindingID                  BindingID          OPTIONAL,
    transportLayerAddress      TransportLayerAddress OPTIONAL,
    hARQ-Process-Allocation-NonSched-2ms-EDCH HARQ-Process-Allocation-2ms-EDCH          OPTIONAL,
    iE-Extensions              ProtocolExtensionContainer { {EDCH-MACdFlow-Specific-InformationResponseItem-ExtIEs} } OPTIONAL,
    ...
}

EDCH-MACdFlow-Specific-InformationResponseItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-TransportBearerNotSetupIndicator CRITICALITY ignore EXTENSION TransportBearerNotSetupIndicator PRESENCE optional }, -- FDD only
    ...
}

EDCH-FDD-Information-To-Modify ::= SEQUENCE {
    eDCH-MACdFlow-Specific-Information EDCH-MACdFlow-Specific-InfoToModifyList,
    hARQ-Process-Allocation-Scheduled-2ms-EDCH HARQ-Process-Allocation-2ms-EDCH          OPTIONAL,
    e-DCH-Maximum-Bitrate                E-DCH-Maximum-Bitrate                OPTIONAL,
    e-DCH-Processing-Overload-Level       E-DCH-Processing-Overload-Level       OPTIONAL,
    e-DCH-Reference-Power-Offset          E-DCH-Reference-Power-Offset          OPTIONAL,
    mACeReset-Indicator                   MACeReset-Indicator                   OPTIONAL,
    iE-Extensions                          ProtocolExtensionContainer { { EDCH-FDD-Information-To-Modify-ExtIEs } } OPTIONAL,
}

```

```

    ...
}

EDCH-FDD-Information-To-Modify-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
{ ID id-E-DCH-PowerOffset-for-SchedulingInfo          CRITICALITY ignore EXTENSION E-DCH-PowerOffset-for-SchedulingInfo          PRESENCE optional } |
{ ID id-SixteenQAM-UL-Operation-Indicator            CRITICALITY reject  EXTENSION SixteenQAM-UL-Operation-Indicator            PRESENCE optional } |
{ ID id-E-DCH-MACdPDUSizeFormat                     CRITICALITY reject  EXTENSION E-DCH-MACdPDUSizeFormat                     PRESENCE optional } |
{ ID id-E-DCH-DL-Control-Channel-Grant-Information   CRITICALITY ignore  EXTENSION E-DCH-DL-Control-Channel-Grant-Information   PRESENCE optional } |
{ ID id-E-AGCH-Table-Choice                          CRITICALITY ignore  EXTENSION E-AGCH-Table-Choice                          PRESENCE optional } |
conditional},
-- The IE shall be present if the SixteenQAM UL Operation Indicator IE is set to "Activate"--
...
}

E-DCH-FDD-Update-Information ::= SEQUENCE {
    e-DCH-MACdFlow-Specific-UpdateInformation          E-DCH-MACdFlow-Specific-UpdateInformation          OPTIONAL,
    hARQ-Process-Allocation-Scheduled-2ms-EDCH        HARQ-Process-Allocation-2ms-EDCH                    OPTIONAL,
    iE-Extensions                                       ProtocolExtensionContainer { { E-DCH-FDD-Update-Information-ExtIEs } } OPTIONAL,
    ...
}

E-DCH-FDD-Update-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-E-DCH-DL-Control-Channel-Change-Information CRITICALITY ignore EXTENSION E-DCH-DL-Control-Channel-Change-Information
    PRESENCE optional},
    ...
}

E-DCH-MACdFlow-Specific-UpdateInformation ::= SEQUENCE (SIZE (1..maxNrOfEDCHMACdFlows)) OF E-DCH-MACdFlow-Specific-UpdateInformation-Item

E-DCH-MACdFlow-Specific-UpdateInformation-Item ::= SEQUENCE {
    e-DCH-MACdFlow-ID                                  EDCH-MACdFlow-ID,
    hARQ-Process-Allocation-NonSched-2ms-EDCH          HARQ-Process-Allocation-2ms-EDCH                    OPTIONAL,
    iE-Extensions                                       ProtocolExtensionContainer { { E-DCH-MACdFlow-Specific-UpdateInformation-Item-ExtIEs } } OPTIONAL,
    OPTIONAL,
    ...
}

E-DCH-MACdFlow-Specific-UpdateInformation-Item-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

E-DCH-DL-Control-Channel-Change-Information ::= SEQUENCE (SIZE (1..maxNrOfEDCHRLs)) OF E-DCH-DL-Control-Channel-Change-Information-Item

E-DCH-DL-Control-Channel-Change-Information-Item ::= SEQUENCE {
    e-DCH-RL-ID                                         RL-ID,
    iE-Extensions                                       ProtocolExtensionContainer { { E-DCH-DL-Control-Channel-Change-Information-Item-ExtIEs } } OPTIONAL,
    ...
}

E-DCH-DL-Control-Channel-Change-Information-Item-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

E-DCH-DL-Control-Channel-Grant-Information ::= SEQUENCE (SIZE (1..maxNrOfEDCHRLs)) OF E-DCH-DL-Control-Channel-Grant-Information-Item

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```

E-DCH-DL-Control-Channel-Grant-Information-Item ::= SEQUENCE {
    e-DCH-RL-ID                RL-ID,
    iE-Extensions              ProtocolExtensionContainer { { E-DCH-DL-Control-Channel-Grant-Information-Item-ExtIEs } } OPTIONAL,
    ...
}

E-DCH-DL-Control-Channel-Grant-Information-Item-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

E-DCH-Grant-Type-Information ::= CHOICE {
    e-DCH-Non-Scheduled-Transmission-Grant    E-DCH-Non-Scheduled-Transmission-Grant-Items,
    e-DCH-Scheduled-Transmission-Grant        NULL,
    ...
}

E-DCH-HARQ-PO-FDD ::= INTEGER (0.. maxNrOfEDCH-HARQ-PO-QUANTSTEPS)

E-DCH-LogicalChannelInformation ::= SEQUENCE (SIZE (1..maxNoOfLogicalChannels)) OF E-DCH-LogicalChannelInformationItem

E-DCH-LogicalChannelInformationItem ::= SEQUENCE {
    logicalChannelId          LogicalChannelID,
    schedulingPriorityIndicator SchedulingPriorityIndicator,
    schedulingInformation     SchedulingInformation,
    mACes-GuaranteedBitRate   MACes-Guaranteed-Bitrate    OPTIONAL,
    eDCH-DDI-Value           EDCH-DDI-Value,
    mACd-PDU-Size-List       E-DCH-MACdPDU-SizeList,
    iE-Extensions            ProtocolExtensionContainer { { E-DCH-LogicalChannelInformationItem-ExtIEs } }    OPTIONAL,
    ...
}

E-DCH-LogicalChannelInformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-MaximumMACdPDU-SizeExtended    CRITICALITY reject    EXTENSION    MAC-PDU-SizeExtended    PRESENCE optional } |
    { ID id-MACes-Maximum-Bitrate-LCR      CRITICALITY ignore     EXTENSION    MACes-Maximum-Bitrate-LCR    PRESENCE optional }, --1.28Mcps TDD only
    ...
}

E-DCH-Maximum-Bitrate ::= INTEGER (0..5742,...,5743..11498)

E-DCH-PowerOffset-for-SchedulingInfo ::= INTEGER (0.. maxNrOfEDCH-HARQ-PO-QUANTSTEPS)

E-DCH-Processing-Overload-Level ::= INTEGER (0..10,...)

E-DCH-Reference-Power-Offset ::= INTEGER (0.. maxNrOfEDCH-HARQ-PO-QUANTSTEPS)

E-DCH-MACdPDU-SizeList ::= SEQUENCE (SIZE (1..maxNrOfMACdPDUSize)) OF E-DCH-MACdPDU-SizeListItem

E-DCH-MACdPDU-SizeListItem ::= SEQUENCE {
    mACdPDU-Size              MACdPDU-Size,
    iE-Extensions              ProtocolExtensionContainer { { E-DCH-MACdPDU-SizeListItem-ExtIEs } }    OPTIONAL,

```

```

}
...
}
E-DCH-MACdPDU-SizeListItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}
E-DCH-MACdPDUSizeFormat ::= ENUMERATED {
fixedMACdPDU-Size,
flexibleMACdPDU-Size
}

E-DCH-LogicalChannelToModify ::= SEQUENCE (SIZE (1..maxNoOfLogicalChannels)) OF E-DCH-LogicalChannelToModifyItem

E-DCH-LogicalChannelToModifyItem ::= SEQUENCE {
logicalChannelId LogicalChannelID,
schedulingPriorityIndicator SchedulingPriorityIndicator OPTIONAL,
schedulingInformation SchedulingInformation OPTIONAL,
mACes-GuaranteedBitRate MACes-Guaranteed-Bitrate OPTIONAL,
eDCH-DDI-Value EDCH-DDI-Value OPTIONAL,
mACd-PDU-Size-List E-DCH-MACdPDU-SizeToModifyList,
iE-Extensions ProtocolExtensionContainer { { E-DCH-LogicalChannelToModifyItem-ExtIEs } } OPTIONAL,
...
}

E-DCH-LogicalChannelToModifyItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
{ ID id-MaximumMACdPDU-SizeExtended CRITICALITY reject EXTENSION MAC-PDU-SizeExtended PRESENCE optional}
{ ID id-MACes-Maximum-Bitrate-LCR CRITICALITY ignore EXTENSION MACes-Maximum-Bitrate-LCR PRESENCE optional}, --1.28Mcps TDD only
...
}

E-DCH-MACdPDU-SizeToModifyList ::= SEQUENCE (SIZE (0..maxNrOfMACdPDUSize)) OF E-DCH-MACdPDU-SizeListItem

E-DCH-LogicalChannelToDelete ::= SEQUENCE (SIZE (1..maxNoOfLogicalChannels)) OF E-DCH-LogicalChannelToDeleteItem

E-DCH-LogicalChannelToDeleteItem ::= SEQUENCE {
logicalChannelId LogicalChannelID,
iE-Extensions ProtocolExtensionContainer { { E-DCH-LogicalChannelToDeleteItem-ExtIEs } } OPTIONAL,
...
}

E-DCH-LogicalChannelToDeleteItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

LogicalChannelID ::= INTEGER (1..15)

EDCH-MACdFlow-ID ::= INTEGER (0..maxNrOfEDCHMACdFlows-1)

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EDCH-MACdFlow-ID-LCR ::= INTEGER (0..maxNrOfEDCHMACdFlowsLCR-1)

EDCH-MACdFlows-Information ::= SEQUENCE {
    eDCH-MACdFlow-Specific-Information          EDCH-MACdFlow-Specific-InfoList,
    iE-Extensions                               ProtocolExtensionContainer { { EDCH-MACdFlow-Information-ExtIEs } }
    ...
}

E-DCH-MACdFlow-Multiplexing-List ::= BIT STRING ( SIZE(maxNrOfEDCHMACdFlows) )

EDCH-MACdFlow-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

EDCH-MACdFlow-Specific-InfoList ::= SEQUENCE (SIZE (1..maxNrOfEDCHMACdFlows)) OF EDCH-MACdFlow-Specific-InfoItem

EDCH-MACdFlow-Specific-InfoItem ::= SEQUENCE {
    eDCH-MACdFlow-ID                          EDCH-MACdFlow-ID,
    allocationRetentionPriority                AllocationRetentionPriority          OPTIONAL,
    tnlQoS                                     TnlQoS                             OPTIONAL,
    payloadCRC-PresenceIndicator              PayloadCRC-PresenceIndicator,
    maxNr-Retransmissions-EDCH                MaxNr-Retransmissions-EDCH,
    trafficClass                              TrafficClass,
    eDCH-HARQ-PO-FDD                          E-DCH-HARQ-PO-FDD,
    eDCH-MACdFlow-Multiplexing-List           E-DCH-MACdFlow-Multiplexing-List   OPTIONAL,
    eDCH-Grant-Type-Information                E-DCH-Grant-Type-Information       OPTIONAL,
    bundlingModeIndicator                     BundlingModeIndicator               OPTIONAL,
    eDCHLogicalChannelInformation              E-DCH-LogicalChannelInformation,
    iE-Extensions                               ProtocolExtensionContainer { { EDCH-MACdFlow-Specific-InfoItem-ExtIEs } }
    ...
}

EDCH-MACdFlow-Specific-InfoItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    {ID id-TrCH-SrcStatisticsDescr CRITICALITY ignore EXTENSION TrCH-SrcStatisticsDescr PRESENCE optional },
    ...
}

EDCH-MACdFlow-Specific-InfoToModifyList ::= SEQUENCE (SIZE (1..maxNrOfEDCHMACdFlows)) OF EDCH-MACdFlow-Specific-InfoToModifyItem

EDCH-MACdFlow-Specific-InfoToModifyItem ::= SEQUENCE {
    eDCH-MACdFlow-ID                          EDCH-MACdFlow-ID,
    allocationRetentionPriority                AllocationRetentionPriority          OPTIONAL,
    transportBearerRequestIndicator            TransportBearerRequestIndicator,
    tnlQoS                                     TnlQoS                             OPTIONAL,
    maxNr-Retransmissions-EDCH                MaxNr-Retransmissions-EDCH         OPTIONAL,
    trafficClass                              TrafficClass                         OPTIONAL,
    eDCH-HARQ-PO-FDD                          E-DCH-HARQ-PO-FDD                 OPTIONAL,
    eDCH-MACdFlow-Multiplexing-List           E-DCH-MACdFlow-Multiplexing-List   OPTIONAL,
    eDCH-Grant-Type-Information                E-DCH-Grant-Type-Information       OPTIONAL,
    bundlingModeIndicator                     BundlingModeIndicator               OPTIONAL,
    eDCH-LogicalChannelToAdd                  E-DCH-LogicalChannelInformation    OPTIONAL,
    eDCH-LogicalChannelToModify               E-DCH-LogicalChannelToModify       OPTIONAL,
    eDCH-LogicalChannelToDelete               E-DCH-LogicalChannelToDelete       OPTIONAL,
    iE-Extensions                               ProtocolExtensionContainer { { EDCH-MACdFlow-Specific-InfoToModifyItem-ExtIEs } }
    ...
}

```



```

}
...
}
EDCH-MACdFlow-Specific-InfoToModifyItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}
EDCH-MACdFlows-To-Delete ::= SEQUENCE (SIZE (1..maxNrOfEDCHMACdFlows)) OF EDCH-MACdFlows-To-Delete-Item
EDCH-MACdFlows-To-Delete-Item ::= SEQUENCE {
    eDCH-MACdFlow-ID EDCH-MACdFlow-ID,
    iE-Extensions ProtocolExtensionContainer { { EDCH-MACdFlows-To-Delete-Item-ExtIEs } } OPTIONAL,
    ...
}
EDCH-MACdFlows-To-Delete-Item-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}
EDCH-RL-Indication ::= ENUMERATED {
    eDCH,
    non-EDCH
}
E-DCH-Non-Scheduled-Transmission-Grant-Items ::= SEQUENCE {
    -- The following IE shall be ignored if id-Ext-Max-Bits-MACe-PDU-non-scheduled is present in E-DCH-Non-Scheduled-Transmission-Grant-Items-ExtIEs
    maxBits-MACe-PDU-non-scheduled Max-Bits-MACe-PDU-non-scheduled,
    hARQ-Process-Allocation-NonSched-2ms HARQ-Process-Allocation-2ms-EDCH
    OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { { E-DCH-Non-Scheduled-Transmission-Grant-Items-ExtIEs } }
    OPTIONAL,
    ...
}
E-DCH-Non-Scheduled-Transmission-Grant-Items-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    -- The following IE shall be present if the maximum number of bits to be signalled exceeds maxNrOfBits-MACe-PDU-non-scheduled
    { ID id-Ext-Max-Bits-MACe-PDU-non-scheduled CRITICALITY reject EXTENSION Ext-Max-Bits-MACe-PDU-non-scheduled PRESENCE optional},
    ...
}
E-DCH-TFCI-Table-Index ::= INTEGER (0..1,...,2..7)
E-DCH-Serving-cell-change-informationResponse ::= SEQUENCE {
    e-DCH-serving-cell-outcome-choice E-DCH-serving-cell-change-choice,
    iE-Extensions ProtocolExtensionContainer { { E-DCH-serving-cell-change-informationResponse-ExtIEs } } OPTIONAL,
    ...
}
E-DCH-serving-cell-change-informationResponse-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}
E-DCH-serving-cell-change-choice ::= CHOICE {

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    e-DCH-serving-cell-change-successful      E-DCH-serving-cell-change-successful,
    e-DCH-serving-cell-change-unsuccessful    E-DCH-serving-cell-change-unsuccessful,
    ...
}

E-DCH-serving-cell-change-successful ::= SEQUENCE {
    e-DCH-RL-InformationList-Rsp      E-DCH-RL-InformationList-Rsp,
    iE-Extensions                     ProtocolExtensionContainer { { E-DCH-serving-cell-change-successful-ExtIEs } } OPTIONAL,
    ...
}

E-DCH-serving-cell-change-successful-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

E-DCH-RL-InformationList-Rsp ::= SEQUENCE (SIZE (0..maxNrOfRLs)) OF E-DCH-RL-InformationList-Rsp-Item

E-DCH-RL-InformationList-Rsp-Item ::= SEQUENCE {
    e-DCH-reconfigured-RL-Id          RL-ID,
    e-DCH-FDD-DL-Control-Channel-Info EDCH-FDD-DL-ControlChannelInformation,
    iE-Extensions                     ProtocolExtensionContainer { { E-DCH-RL-InformationList-Rsp-Item-ExtIEs } } OPTIONAL,
    ...
}

E-DCH-RL-InformationList-Rsp-Item-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

E-DCH-serving-cell-change-unsuccessful ::= SEQUENCE {
    cause                             Cause,
    iE-Extensions                     ProtocolExtensionContainer { { E-DCH-serving-cell-change-unsuccessful-ExtIEs } } OPTIONAL,
    ...
}

E-DCH-serving-cell-change-unsuccessful-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

E-DCH-TTI-Length ::= CHOICE {
    two-ms      DTX-Cycle-2ms-Items,
    ten-ms     DTX-Cycle-10ms-Items,
    ...
}

E-DCH-TTI-Length-to-Modify ::= CHOICE {
    two-ms      DTX-Cycle-2ms-to-Modify-Items,
    ten-ms     DTX-Cycle-10ms-to-Modify-Items,
    ...
}

EDPCH-Information-FDD ::= SEQUENCE {
    maxSet-E-DPDCHs                      Max-Set-E-DPDCHs,

```

```

    punctureLimit                PunctureLimit,
    e-TFCS-Information            E-TFCS-Information,
    e-TTI                        E-TTI,
    e-DPCCH-PO                   E-DPCCH-PO,
    e-RGCH-2-IndexStepThreshold  E-RGCH-2-IndexStepThreshold,
    e-RGCH-3-IndexStepThreshold  E-RGCH-3-IndexStepThreshold,
    hARQ-Info-for-E-DCH          HARQ-Info-for-E-DCH,
    hSDSCH-Configured-Indicator  HSDSCH-Configured-Indicator,
    iE-Extensions                ProtocolExtensionContainer { { EDPCH-Information-FDD-ExtIEs } } OPTIONAL,
    ...
}

EDPCH-Information-FDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-MinimumReducedE-DPDCH-GainFactor CRITICALITY ignore EXTENSION MinimumReducedE-DPDCH-GainFactor PRESENCE optional },
    ...
}

EDPCH-Information-RLReconfPrepare-FDD ::= SEQUENCE {
    maxSet-E-DPDCHs                Max-Set-E-DPDCHs                OPTIONAL,
    punctureLimit                  PunctureLimit                OPTIONAL,
    e-TFCS-Information              E-TFCS-Information        OPTIONAL,
    e-TTI                          E-TTI                    OPTIONAL,
    e-DPCCH-PO                      E-DPCCH-PO                OPTIONAL,
    e-RGCH-2-IndexStepThreshold     E-RGCH-2-IndexStepThreshold OPTIONAL,
    e-RGCH-3-IndexStepThreshold     E-RGCH-3-IndexStepThreshold OPTIONAL,
    hARQ-Info-for-E-DCH             HARQ-Info-for-E-DCH        OPTIONAL,
    hSDSCH-Configured-Indicator     HSDSCH-Configured-Indicator OPTIONAL,
    iE-Extensions                  ProtocolExtensionContainer { { EDPCH-Information-RLReconfPrepare-FDD-ExtIEs } } OPTIONAL,
    ...
}

EDPCH-Information-RLReconfPrepare-FDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-MinimumReducedE-DPDCH-GainFactor CRITICALITY ignore EXTENSION MinimumReducedE-DPDCH-GainFactor PRESENCE optional },
    ...
}

EDPCH-Information-RLReconfRequest-FDD ::= SEQUENCE {
    maxSet-E-DPDCHs                Max-Set-E-DPDCHs                OPTIONAL,
    punctureLimit                  PunctureLimit                OPTIONAL,
    e-TFCS-Information              E-TFCS-Information        OPTIONAL,
    e-TTI                          E-TTI                    OPTIONAL,
    e-DPCCH-PO                      E-DPCCH-PO                OPTIONAL,
    e-RGCH-2-IndexStepThreshold     E-RGCH-2-IndexStepThreshold OPTIONAL,
    e-RGCH-3-IndexStepThreshold     E-RGCH-3-IndexStepThreshold OPTIONAL,
    hARQ-Info-for-E-DCH             HARQ-Info-for-E-DCH        OPTIONAL,
    hSDSCH-Configured-Indicator     HSDSCH-Configured-Indicator OPTIONAL,
    iE-Extensions                  ProtocolExtensionContainer { { EDPCH-Information-RLReconfRequest-FDD-ExtIEs } } OPTIONAL,
    ...
}

EDPCH-Information-RLReconfRequest-FDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-MinimumReducedE-DPDCH-GainFactor CRITICALITY ignore EXTENSION MinimumReducedE-DPDCH-GainFactor PRESENCE optional },
    ...
}

```

```

E-DPCCH-PO ::= INTEGER (0..maxNrOfEDPCCH-PO-QUANTSTEPS)

E-DPDCH-PowerInterpolation ::= BOOLEAN

E-Primary-Secondary-Grant-Selector ::= ENUMERATED {
    primary,
    secondary
}

EHICH-SignatureSequence ::= INTEGER (0..maxNrofSigSeqERGHICH-1)

E-RGCH-Release-Indicator ::= ENUMERATED {e-RGCHreleased}

ERGCH-SignatureSequence ::= INTEGER (0..maxNrofSigSeqERGHICH-1)

E-Serving-Grant-Value ::= INTEGER (0..38)

E-RGCH-2-IndexStepThreshold ::= INTEGER (0..37)

E-RGCH-3-IndexStepThreshold ::= INTEGER (0..37)

EDCH-Serving-RL ::= CHOICE {
    e-DCH-Serving-RL-in-this-DRNS          EDCH-Serving-RL-in-this-DRNS,
    e-DCH-Serving-RL-not-in-this-DRNS     NULL,
    ...
}

EDCH-Serving-RL-in-this-DRNS ::= SEQUENCE {
    e-DCH-Serving-RL-Id          RL-ID,
    iE-Extensions                ProtocolExtensionContainer { { EDCH-Serving-RL-in-this-DRNS-ExtIEs } }    OPTIONAL,
    ...
}

EDCH-Serving-RL-in-this-DRNS-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

Enhanced-FACH-Information-ResponseFDD ::= SEQUENCE {
    common-HS-DSCH-RNTI-priorityQueueInfo-EnhancedFACH          PriorityQueue-InfoList-EnhancedFACH-PCH,
    dedicated-HS-DSCH-RNTI-priorityQueueInfo-EnhancedFACH       PriorityQueue-InfoList-EnhancedFACH-PCH,
    priorityQueueInfo-EnhancedPCH                                PriorityQueue-InfoList-EnhancedFACH-PCH    OPTIONAL,
    hSDSCH-Initial-Capacity-Allocation                          HSDSCH-Initial-Capacity-Allocation,
    hSDSCH-RNTI                                                  HSDSCH-RNTI
    iE-Extensions                ProtocolExtensionContainer { { Enhanced-FACH-Information-ResponseFDD-ExtIEs } }    OPTIONAL,
    ...
}

Enhanced-FACH-Information-ResponseFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

Enhanced-FACH-Information-ResponseLCR ::= SEQUENCE {
    common-HS-DSCH-RNTI-priorityQueueInfo-EnhancedFACH          PriorityQueue-InfoList-EnhancedFACH-PCH,
    dedicated-HS-DSCH-RNTI-priorityQueueInfo-EnhancedFACH      PriorityQueue-InfoList-EnhancedFACH-PCH,
    priorityQueueInfo-EnhancedPCH                               PriorityQueue-InfoList-EnhancedFACH-PCH          OPTIONAL,
    hSDSCH-Initial-Capacity-Allocation                         HSDSCH-Initial-Capacity-Allocation,
    hSDSCH-RNTI                                                HSDSCH-RNTI
    iE-Extensions                ProtocolExtensionContainer { { Enhanced-FACH-Information-ResponseLCR-ExtIEs } }    OPTIONAL,
    ...
}

Enhanced-FACH-Information-ResponseLCR-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

Enhanced-FACH-Support-Indicator ::= NULL

EnhancedHSServingCC-Abort ::= ENUMERATED {abortEnhancedHSServingCC,...}

Enhanced-PCH-Capability ::= ENUMERATED {
    enhanced-pch-capable,
    enhanced-pch-not-capable
}

E-RNTI ::= INTEGER (0..65535)

E-TFCI ::= INTEGER (0..127)

E-TFCI-BetaEC-Boost ::= INTEGER (0..127,...)

E-TFCI-Boost-Information ::= SEQUENCE {
    e-TFCI-BetaEC-Boost          E-TFCI-BetaEC-Boost,
    uL-Delta-T2TP                UL-Delta-T2TP          OPTIONAL,
    -- This IE shall be present if the E-TFCI BetaEC Boost IE value is not set to 127.
    iE-Extensions                ProtocolExtensionContainer { { E-TFCI-Boost-Information-ExtIEs} }    OPTIONAL,
    ...
}

E-TFCI-Boost-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

E-TFCS-Information ::= SEQUENCE {
    e-DCH-TFCI-Table-Index          E-DCH-TFCI-Table-Index,
    e-DCH-Min-Set-E-TFCI            E-TFCI,
    reference-E-TFCI-Information    Reference-E-TFCI-Information,
    iE-Extensions                ProtocolExtensionContainer { {E-TFCS-Information-ExtIEs} }    OPTIONAL,
    ...
}

E-TFCS-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {

```

```

    { ID id-E-DCH-Minimum-Set-E-TFCIValidityIndicator CRITICALITY reject EXTENSION E-DCH-Minimum-Set-E-TFCIValidityIndicator PRESENCE optional
  }|
  { ID id-E-TFCI-Boost-Information CRITICALITY reject EXTENSION E-TFCI-Boost-Information PRESENCE optional
  }|
  { ID id-E-DPDCH-PowerInterpolation CRITICALITY reject EXTENSION E-DPDCH-PowerInterpolation PRESENCE optional
  },
  ...
}

E-DCH-Minimum-Set-E-TFCIValidityIndicator ::= ENUMERATED {
  e-DCH-Minimum-Set-E-TFCI-response-not-valid
}

E-TTI ::= ENUMERATED {
  tti10,
  tti2
-- 10ms TTI, 2ms TTI
}

E-AGCH-PowerOffset ::= INTEGER (0..255,...)
-- PowerOffset = -32 + offset * 0.25
-- Unit dB, Range -32dB .. +31.75dB, Step +0.25dB

E-RGCH-PowerOffset ::= INTEGER (0..255,...)
-- PowerOffset = -32 + offset * 0.25
-- Unit dB, Range -32dB .. +31.75dB, Step +0.25dB

E-HICH-PowerOffset ::= INTEGER (0..255,...)
-- PowerOffset = -32 + offset * 0.25
-- Unit dB, Range -32dB .. +31.75dB, Step +0.25dB

Enhanced-PrimaryCPICH-EcNo ::= INTEGER (0..49)

EventA ::= SEQUENCE {
  measurementThreshold MeasurementThreshold,
  measurementHysteresisTime MeasurementHysteresisTime OPTIONAL,
  iE-Extensions ProtocolExtensionContainer { {EventA-ExtIEs} } OPTIONAL,
  ...
}

EventA-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

EventB ::= SEQUENCE {
  measurementThreshold MeasurementThreshold,
  measurementHysteresisTime MeasurementHysteresisTime OPTIONAL,
  iE-Extensions ProtocolExtensionContainer { {EventB-ExtIEs} } OPTIONAL,
  ...
}

EventB-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

```

```

EventC ::= SEQUENCE {
    measurementIncreaseDecreaseThreshold    MeasurementIncreaseDecreaseThreshold,
    measurementChangeTime                  MeasurementChangeTime,
    iE-Extensions                          ProtocolExtensionContainer { {EventC-ExtIEs} } OPTIONAL,
    ...
}

EventC-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

EventD ::= SEQUENCE {
    measurementIncreaseDecreaseThreshold    MeasurementIncreaseDecreaseThreshold,
    measurementChangeTime                  MeasurementChangeTime,
    iE-Extensions                          ProtocolExtensionContainer { {EventD-ExtIEs} } OPTIONAL,
    ...
}

EventD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

EventE ::= SEQUENCE {
    measurementThreshold1                  MeasurementThreshold,
    measurementThreshold2                  MeasurementThreshold OPTIONAL,
    measurementHysteresisTime              MeasurementHysteresisTime OPTIONAL,
    reportPeriodicity                      ReportPeriodicity OPTIONAL,
    iE-Extensions                          ProtocolExtensionContainer { {EventE-ExtIEs} } OPTIONAL,
    ...
}

EventE-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

EventF ::= SEQUENCE {
    measurementThreshold1                  MeasurementThreshold,
    measurementThreshold2                  MeasurementThreshold OPTIONAL,
    measurementHysteresisTime              MeasurementHysteresisTime OPTIONAL,
    reportPeriodicity                      ReportPeriodicity OPTIONAL,
    iE-Extensions                          ProtocolExtensionContainer { {EventF-ExtIEs} } OPTIONAL,
    ...
}

EventF-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

ExtendedGSMCellIndividualOffset ::= INTEGER (-50..-11|11..50)

E-DCH-Information ::= SEQUENCE {
    e-PUCH-Information                      E-PUCH-Information,

```

```

    e-TFCS-Information-TDD          E-TFCS-Information-TDD,
    e-DCH-MACdFlows-Information-TDD E-DCH-MACdFlows-Information-TDD,
    e-DCH-TDD-Information          E-DCH-TDD-Information,
    iE-Extensions                  ProtocolExtensionContainer { { E-DCH-Information-ExtIEs } }
    ...
}
E-DCH-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
E-PUCH-Information ::= SEQUENCE {
    minCR          CodeRate,
    maxCR          CodeRate,
    harqInfo       HARQ-Info-for-E-DCH,
    n-E-UCCH       N-E-UCCH,
    iE-Extensions ProtocolExtensionContainer { { E-PUCH-Information-ExtIEs } }
    ...
}
E-PUCH-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
E-TFCS-Information-TDD ::= SEQUENCE {
    e-DCH-QPSK-RefBetaInfo      E-DCH-QPSK-RefBetaInfo,
    e-DCH-sixteenQAM-RefBetaInfo E-DCH-sixteenQAM-RefBetaInfo,
    iE-Extensions              ProtocolExtensionContainer { { E-TFCS-Information-TDD-ExtIEs } }
    ...
}
E-TFCS-Information-TDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
E-DCH-QPSK-RefBetaInfo ::= SEQUENCE (SIZE (1..maxNrOfRefBetas)) OF E-DCH-RefBeta-Item
E-DCH-sixteenQAM-RefBetaInfo ::= SEQUENCE (SIZE (1..maxNrOfRefBetas)) OF E-DCH-RefBeta-Item
E-DCH-RefBeta-Item ::= SEQUENCE {
    refCodeRate      CodeRate-short,
    refBeta          RefBeta
}
E-DCH-MACdFlows-Information-TDD ::= SEQUENCE (SIZE (1..maxNrOfEDCHMACdFlows)) OF E-DCH-MACdFlow-InfoTDDItem
E-DCH-MACdFlow-InfoTDDItem ::= SEQUENCE {
    e-DCH-MACdFlow-ID          EDCH-MACdFlow-ID,
    allocationRetentionPriority AllocationRetentionPriority,
    tnlQos                      TnlQos                      OPTIONAL,
    bindingID                   BindingID                   OPTIONAL,
    transportLayerAddress        TransportLayerAddress        OPTIONAL,
    payloadCRC-PresenceIndicator PayloadCRC-PresenceIndicator,
    maximum-Number-of-Retransmissions-For-E-DCH MaxNr-Retransmissions-EDCH,

```



```

    eDCH-HARQ-PO-TDD
    eDCH-MACdFlow-Multiplexing-List
    eDCH-Grant-TypeTDD
    eDCHLogicalChannelInformation
    iE-Extensions
    ...
}

E-DCH-MACdFlow-InfoTDDItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-eDCH-MACdFlow-Retransmission-Timer-LCR CRITICALITY ignore EXTENSION E-DCH-MACdFlow-Retransmission-Timer-LCR PRESENCE optional
} |
  { ID id-TrafficClass CRITICALITY ignore EXTENSION TrafficClass PRESENCE
mandatory},
  ...
}

E-DCH-MACdFlow-Retransmission-Timer-LCR ::= ENUMERATED {
ms10, ms15, ms20, ms25, ms30, ms35, ms40, ms45, ms50, ms55, ms60, ms65, ms70, ms75, ms80, ms85, ms90,
ms95, ms100, ms110, ms120, ms140, ms160, ms200, ms240, ms280, ms320, ms400, ms480, ms560, ...
}

E-DCH-HARQ-PO-TDD ::= INTEGER (0..6)

E-DCH-Grant-TypeTDD ::= ENUMERATED {
  scheduled,
  non-scheduled
}

E-DCH-TimeslotResource ::= BIT STRING (SIZE (13))

E-DCH-PowerResource ::= INTEGER(1..32)

TddE-PUCH-Offset ::= INTEGER(0..255)

E-DCH-TDD-Information ::= SEQUENCE {
  e-DCH-TDD-Maximum-Bitrate E-DCH-TDD-Maximum-Bitrate OPTIONAL,
  e-DCH-Processing-Overload-Level E-DCH-Processing-Overload-Level OPTIONAL,
  e-DCH-PowerOffset-for-SchedulingInfo E-DCH-PowerOffset-for-SchedulingInfo OPTIONAL,
  iE-Extensions ProtocolExtensionContainer { { E-DCH-TDD-Information-ExtIEs } } OPTIONAL,
  ...
}

E-DCH-TDD-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

E-DCH-TDD-Maximum-Bitrate ::= INTEGER (0..9201,...)

E-DCH-Information-Reconfig ::= SEQUENCE {
  e-PUCH-Information E-PUCH-Information OPTIONAL,
  e-TFCS-Information-TDD E-TFCS-Information-TDD OPTIONAL,
  e-DCH-MACdFlows-to-Add E-DCH-MACdFlows-Information-TDD OPTIONAL,
  e-DCH-MACdFlows-to-Delete EDCH-MACdFlows-To-Delete OPTIONAL,

```

```

    e-DCH-Non-Scheduled-Grant-Info          E-DCH-Non-Scheduled-Grant-Info          OPTIONAL,
    e-DCH-TDD-Information                    E-DCH-TDD-Information                    OPTIONAL,
    e-DCH-TDD-Information-to-Modify          E-DCH-TDD-Information-to-Modify          OPTIONAL,
    iE-Extensions                            ProtocolExtensionContainer { { E-DCH-Information-Reconfig-ExtIEs } }  OPTIONAL,
    ...
}

E-DCH-Information-Reconfig-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

E-DCH-TDD-Information-to-Modify ::= SEQUENCE {
    e-DCH-TDD-Information-to-Modify-List    E-DCH-TDD-Information-to-Modify-List    OPTIONAL,
    mACeReset-Indicator                     mACeReset-Indicator                     OPTIONAL,
    iE-Extensions                            ProtocolExtensionContainer { { E-DCH-TDD-Information-to-Modify-ExtIEs } }  OPTIONAL,
    ...
}

E-DCH-TDD-Information-to-Modify-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-E-DCH-MACdPDUSizeFormat          CRITICALITY reject EXTENSION E-DCH-MACdPDUSizeFormat          PRESENCE optional},
    ...
}

E-DCH-TDD-Information-to-Modify-List ::= SEQUENCE (SIZE (1..maxNrOfEDCHMACdFlows)) OF E-DCH-MACdFlow-ModifyTDDItem

E-DCH-MACdFlow-ModifyTDDItem ::= SEQUENCE {
    e-DCH-MACdFlow-ID                       EDCH-MACdFlow-ID,
    allocationRetentionPriority              AllocationRetentionPriority              OPTIONAL,
    transportBearerRequestIndicator         TransportBearerRequestIndicator,
    bindingID                               BindingID                               OPTIONAL,
    transportLayerAddress                   TransportLayerAddress                   OPTIONAL,
    tnlQos                                  TnlQos                                 OPTIONAL,
    maximum-Number-of-Retransmissions-For-E-DCH MaxNr-Retransmissions-EDCH             OPTIONAL,
    eDCH-HARQ-PO-TDD                        E-DCH-HARQ-PO-TDD                      OPTIONAL,
    eDCH-MACdFlow-Multiplexing-List         E-DCH-MACdFlow-Multiplexing-List       OPTIONAL,
    eDCH-Grant-TypeTDD                     E-DCH-Grant-TypeTDD                    OPTIONAL,
    e-DCH-LogicalChannelToAdd              E-DCH-LogicalChannelInformation        OPTIONAL,
    e-DCH-LogicalChannelToModify            E-DCH-LogicalChannelToModify           OPTIONAL,
    e-DCH-LogicalChannelToDelete            E-DCH-LogicalChannelToDelete           OPTIONAL,
    iE-Extensions                            ProtocolExtensionContainer { {E-DCH-MACdFlow-ModifyTDDItem-ExtIEs } } OPTIONAL,
    ...
}

E-DCH-MACdFlow-ModifyTDDItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-eDCH-MACdFlow-Retransmission-Timer-LCR CRITICALITY ignore EXTENSION E-DCH-MACdFlow-Retransmission-Timer-LCR PRESENCE optional} |
    { ID id-TrafficClass                       CRITICALITY ignore EXTENSION TrafficClass PRESENCE optional},
    ...
}

E-DCH-Information-Response ::= SEQUENCE {
    e-DCH-TDD-MACdFlow-Specific-InformationResp E-DCH-TDD-MACdFlow-Specific-InformationResp OPTIONAL,
    e-AGCH-Specific-Information-ResponseTDD    E-AGCH-Specific-Information-ResponseTDD OPTIONAL,
    e-HICH-Information-Response                E-HICH-InformationResp                 OPTIONAL,
}

```

```

    e-DCH-Non-Scheduled-Grant-Info      E-DCH-Non-Scheduled-Grant-Info  OPTIONAL,
    e-RNTI                               E-RNTI,
    iE-Extensions                        ProtocolExtensionContainer { { E-DCH-Information-Response-ExtIEs } }  OPTIONAL,
    ...
}

E-DCH-Information-Response-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

E-DCH-TDD-MACdFlow-Specific-InformationResp ::= SEQUENCE (SIZE (1..maxNrOfEDCHMACdFlows)) OF E-DCH-TDD-MACdFlow-Specific-InformationResp-Item

E-DCH-TDD-MACdFlow-Specific-InformationResp-Item ::= SEQUENCE {
    e-DCH-MacdFlow-Id                  EDCH-MACdFlow-ID,
    bindingID                          BindingID                          OPTIONAL,
    transportLayerAddress               TransportLayerAddress             OPTIONAL,
    iE-Extensions                       ProtocolExtensionContainer { { E-DCH-TDD-MACdFlow-Specific-InformationRespItem-ExtIEs } }
    OPTIONAL,
    ...
}

E-DCH-TDD-MACdFlow-Specific-InformationRespItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

E-AGCH-Specific-InformationRespListTDD ::= SEQUENCE (SIZE (1..maxNrOfEAGCHCodes)) OF E-AGCH-Specific-InformationResp-ItemTDD

E-AGCH-Specific-InformationResp-ItemTDD ::= SEQUENCE {
    timeslot                            TimeSlot,
    midambleShiftAndBurstType           MidambleShiftAndBurstType,
    tDD-ChannelisationCode              TDD-ChannelisationCode,
    iE-Extensions                       ProtocolExtensionContainer { { E-AGCH-Specific-InformationResp-ItemTDD-ExtIEs } }  OPTIONAL,
    ...
}

E-AGCH-Specific-InformationResp-ItemTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

E-HICH-InformationResp ::= SEQUENCE {
    timeslot                            TimeSlot,
    midambleShiftAndBurstType           MidambleShiftAndBurstType,
    tDD-ChannelisationCode              TDD-ChannelisationCode,
    e-HICH-TimeOffset                  E-HICH-TimeOffset,
    iE-Extensions                       ProtocolExtensionContainer { { E-HICH-InformationResp-ExtIEs } }  OPTIONAL,
    ...
}

E-HICH-InformationResp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

E-HICH-TimeOffset ::= INTEGER (4..44)

```

```

E-DCH-Non-Scheduled-Grant-Info ::= SEQUENCE {
    timeslotResource      E-DCH-TimeslotResource,
    powerResource         E-DCH-PowerResource,
    repetitionPeriod      RepetitionPeriod,
    repetitionLength      RepetitionLength,
    tddE-PUCH-Offset      TddE-PUCH-Offset,
    tdd-ChannelisationCode TDD-ChannelisationCode,
    iE-Extensions         ProtocolExtensionContainer { { E-DCH-Non-Scheduled-Grant-Info-ExtIEs } } OPTIONAL,
    ...
}

E-DCH-Non-Scheduled-Grant-Info-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

E-DCH-768-Information ::= SEQUENCE {
    e-PUCH-Information      E-PUCH-Information,
    e-TFCS-Information-TDD  E-TFCS-Information-TDD,
    e-DCH-MACdFlows-Information-TDD E-DCH-MACdFlows-Information-TDD,
    e-DCH-TDD-Information768 E-DCH-TDD-Information768,
    iE-Extensions         ProtocolExtensionContainer { { E-DCH-768-Information-ExtIEs } } OPTIONAL,
    ...
}

E-DCH-768-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

E-DCH-TDD-Information768 ::= SEQUENCE {
    e-DCH-TDD-Maximum-Bitrate768 E-DCH-TDD-Maximum-Bitrate768 OPTIONAL,
    e-DCH-Processing-Overload-Level E-DCH-Processing-Overload-Level OPTIONAL,
    e-DCH-PowerOffset-for-SchedulingInfo E-DCH-PowerOffset-for-SchedulingInfo OPTIONAL,
    iE-Extensions         ProtocolExtensionContainer { { E-DCH-TDD-Information768-ExtIEs } } OPTIONAL,
    ...
}

E-DCH-TDD-Information768-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

E-DCH-TDD-Maximum-Bitrate768 ::= INTEGER (0..17713,...)

E-DCH-768-Information-Reconfig ::= SEQUENCE {
    e-PUCH-Information      E-PUCH-Information OPTIONAL,
    e-TFCS-Information-TDD  E-TFCS-Information-TDD OPTIONAL,
    e-DCH-MACdFlows-to-Add  E-DCH-MACdFlows-Information-TDD OPTIONAL,
    e-DCH-MACdFlows-to-Delete EDCH-MACdFlows-To-Delete OPTIONAL,
    e-DCH-Non-Scheduled-Grant-Info768 E-DCH-Non-Scheduled-Grant-Info768 OPTIONAL,
    e-DCH-TDD-Information768 E-DCH-TDD-Information768 OPTIONAL,
    e-DCH-TDD-Information-to-Modify E-DCH-TDD-Information-to-Modify OPTIONAL,
    iE-Extensions         ProtocolExtensionContainer { { E-DCH-768-Information-Reconfig-ExtIEs } } OPTIONAL,
    ...
}

```

```

E-DCH-768-Information-Reconfig-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}
E-DCH-768-Information-Response ::= SEQUENCE {
  e-DCH-TDD-MACdFlow-Specific-InformationResp      E-DCH-TDD-MACdFlow-Specific-InformationResp OPTIONAL,
  e-AGCH-Specific-Information-Response768TDD      E-AGCH-Specific-InformationRespList768TDD  OPTIONAL,
  e-HICH-Information-Response768                  E-HICH-InformationResp768  OPTIONAL,
  e-DCH-Non-Scheduled-Grant-Info768              E-DCH-Non-Scheduled-Grant-Info768  OPTIONAL,
  e-RNTI                                           E-RNTI,
  iE-Extensions                                   ProtocolExtensionContainer { { E-DCH-768-Information-Response-ExtIEs } }  OPTIONAL,
  ...
}
E-DCH-768-Information-Response-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}
E-AGCH-Specific-InformationRespList768TDD ::= SEQUENCE (SIZE (1..maxNrOfEAGCHCodes)) OF E-AGCH-Specific-InformationResp-Item768TDD
E-AGCH-Specific-InformationResp-Item768TDD ::= SEQUENCE {
  timeslot                                         TimeSlot,
  midambleShiftAndBurstType768                   MidambleShiftAndBurstType768,
  tDD-ChannelisationCode768                       TDD-ChannelisationCode768,
  iE-Extensions                                   ProtocolExtensionContainer { { E-AGCH-Specific-InformationResp-Item768TDD-ExtIEs } }
  OPTIONAL,
  ...
}
E-AGCH-Specific-InformationResp-Item768TDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}
E-HICH-InformationResp768 ::= SEQUENCE {
  timeslot                                         TimeSlot,
  midambleShiftAndBurstType768                   MidambleShiftAndBurstType768,
  tDD-ChannelisationCode768                       TDD-ChannelisationCode768,
  e-HICH-TimeOffset                               E-HICH-TimeOffset,
  iE-Extensions                                   ProtocolExtensionContainer { { E-HICH-InformationResp768-ExtIEs } }  OPTIONAL,
  ...
}
E-HICH-InformationResp768-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}
E-DCH-Non-Scheduled-Grant-Info768 ::= SEQUENCE {
  timeslotResource                               E-DCH-TimeslotResource,
  powerResource                                   E-DCH-PowerResource,
  repetitionPeriod                               RepetitionPeriod,
  repetitionLength                               RepetitionLength,
  tddE-PUCH-Offset                               TddE-PUCH-Offset,
  tdd-ChannelisationCode768                       TDD-ChannelisationCode768,
  iE-Extensions                                   ProtocolExtensionContainer { { E-DCH-Non-Scheduled-Grant-Info768-ExtIEs } }  OPTIONAL,

```

```

}
...
E-DCH-Non-Scheduled-Grant-Info768-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
}
...
E-DCH-LCR-Information ::= SEQUENCE {
    e-PUCH-LCR-Information          E-PUCH-LCR-Information,
    e-TFCS-Information-TDD          E-TFCS-Information-TDD,
    e-DCH-MACdFlows-Information-TDD E-DCH-MACdFlows-Information-TDD,
    e-DCH-LCR-TDD-Information       E-DCH-LCR-TDD-Information,
    iE-Extensions                   ProtocolExtensionContainer { { E-DCH-Information-LCR-ExtIEs } } OPTIONAL,
    ...
}
E-DCH-Information-LCR-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
}
...
E-PUCH-LCR-Information ::= SEQUENCE {
    minCR          CodeRate,
    maxCR          CodeRate,
    harqInfo       HARQ-Info-for-E-DCH,
    prxdesBase     E-PUCH-PRXdesBase,
    e-PUCH-TPC-Step-Size TDD-TPC-UplinkStepSize-LCR,
    n-E-UCCH-LCR   N-E-UCCH-LCR,
    iE-Extensions  ProtocolExtensionContainer { { E-PUCH-Information-LCR-ExtIEs } } OPTIONAL,
    ...
}
E-PUCH-Information-LCR-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-E-PUCH-PowerControlGAP          CRITICALITY ignore          EXTENSION ControlGAP          PRESENCE optional          },
    ...
}
E-PUCH-PRXdesBase ::= INTEGER(-112..-50)
--SETP=1
E-DCH-LCR-TDD-Information ::= SEQUENCE {
    e-DCH-Physical-Layer-Category-LCR          E-DCH-Physical-Layer-Category-LCR          OPTIONAL,
    e-DCH-Processing-Overload-Level            E-DCH-Processing-Overload-Level            OPTIONAL,
    e-DCH-PowerOffset-for-SchedulingInfo       E-DCH-PowerOffset-for-SchedulingInfo       OPTIONAL,
    iE-Extensions                             ProtocolExtensionContainer { { E-DCH-LCR-TDD-Information-ExtIEs } } OPTIONAL,
    ...
}
E-DCH-LCR-TDD-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-Extended-E-DCH-LCRTDD-PhysicalLayerCategory          CRITICALITY reject          EXTENSION Extended-E-DCH-LCRTDD-PhysicalLayerCategory          PRESENCE optional }|
    -- This IE shall be used if the E-DCH Physical Layer Category has a value larger than 5.
    { ID id-MaximumNumber-Of-Retransmission-For-SchedulingInfo-LCRTDD          CRITICALITY ignore          EXTENSION MaxNr-Retransmissions-EDCH          PRESENCE optional }|
}

```

```

    { ID id-E-DCH-RetransmissionTimer-For-SchedulingInfo-LCRTDD
Retransmission-Timer-LCR    PRESENCE optional }|
    { ID id-E-AGCH-UE-Inactivity-Monitor-Threshold
Monitor-Threshold    PRESENCE optional },
    ...
}

E-DCH-Physical-Layer-Category-LCR ::= INTEGER (1..5)

Extended-E-DCH-LCRTDD-PhysicalLayerCategory ::= INTEGER (6,...)

E-DCH-LCR-Information-Reconfig ::= SEQUENCE {
    e-PUCH-LCR-Information          E-PUCH-LCR-Information          OPTIONAL,
    e-TFCS-Information-TDD          E-TFCS-Information-TDD          OPTIONAL,
    e-DCH-MACdFlows-to-Add          E-DCH-MACdFlows-Information-TDD  OPTIONAL,
    e-DCH-MACdFlows-to-Delete       EDCH-MACdFlows-To-Delete         OPTIONAL,
    e-DCH-LCR-TDD-Information        E-DCH-LCR-TDD-Information        OPTIONAL,
    e-DCH-TDD-Information-to-Modify  E-DCH-TDD-Information-to-Modify  OPTIONAL,
    iE-Extensions                    ProtocolExtensionContainer { { E-DCH-Information-Reconfig-LCR-ExtIEs } } OPTIONAL,
    ...
}

E-DCH-Information-Reconfig-LCR-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

E-DCH-LCR-Information-Response ::= SEQUENCE {
    e-DCH-TDD-MACdFlow-Specific-InformationResp    E-DCH-TDD-MACdFlow-Specific-InformationResp OPTIONAL,
    e-AGCH-Specific-Information-Response-LCR-TDD   E-AGCH-Specific-InformationRespList-LCR-TDD OPTIONAL,
    e-HICH-Specific-Information-Response-LCR        E-HICH-Specific-InformationResp-LCR OPTIONAL,
    e-DCH-Non-Scheduled-Grant-Info-LCR             E-DCH-Non-Scheduled-Grant-Info-LCR OPTIONAL,
    e-RNTI                                           E-RNTI OPTIONAL,
    iE-Extensions                                    ProtocolExtensionContainer { { E-DCH-Information-Response-LCR-ExtIEs } } OPTIONAL,
    ...
}

E-DCH-Information-Response-LCR-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

E-AGCH-Specific-InformationRespList-LCR-TDD ::= SEQUENCE (SIZE (1..maxNrOfEAGCHCodes)) OF E-AGCH-Specific-InformationResp-Item-LCR-TDD

E-AGCH-Specific-InformationResp-Item-LCR-TDD ::= SEQUENCE {
    timeSlotLCR          TimeSlotLCR,
    midambleShiftLCR     MidambleShiftLCR,
    tDD-ChannelisationCode TDD-ChannelisationCode,
    iE-Extensions        ProtocolExtensionContainer { { E-AGCH-Specific-InformationResp-ItemTDD-LCR-ExtIEs } }
    OPTIONAL,
    ...
}

E-AGCH-Specific-InformationResp-ItemTDD-LCR-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

E-HICH-Specific-InformationResp-LCR ::= SEQUENCE {
    e-HICH-Scheduled-InformationResp-LCR          E-HICH-Scheduled-InformationRespList-LCR-TDD          OPTIONAL,
    e-HICH-non-Scheduled-InformationResp-LCR      E-HICH-InformationResp-LCR                            OPTIONAL,
    e-HICH-TimeOffset-lcr                        E-HICH-TimeOffset-LCR,
    iE-Extensions                                ProtocolExtensionContainer { { E-HICH-Specific-InformationResp-LCR-ExtIEs } }  OPTIONAL,
    ...
}

```

```

E-HICH-Specific-InformationResp-LCR-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

E-HICH-Scheduled-InformationRespList-LCR-TDD ::= SEQUENCE (SIZE (1..maxNrOfEHICHCodes)) OF E-HICH-Scheduled-InformationResp-Item-LCR-TDD

```

```

E-HICH-Scheduled-InformationResp-Item-LCR-TDD ::= SEQUENCE {
    e-HICH-EI                                E-HICH-EI,
    e-HICH-Scheduled-InformationResp-LCR      E-HICH-InformationResp-LCR,
    iE-Extensions                                ProtocolExtensionContainer { { E-HICH-Scheduled-InformationResp-LCR-ExtIEs } }  OPTIONAL,
    ...
}

```

```

E-HICH-Scheduled-InformationResp-LCR-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

E-HICH-EI ::= INTEGER (0..3)

```

```

E-HICH-InformationResp-LCR ::= SEQUENCE {
    timeSlotLCR                                TimeSlotLCR,
    midambleShiftLCR                            MidambleShiftLCR,
    tDD-ChannelisationCode                      TDD-ChannelisationCode,
    signatureSequenceGroupIndex                SignatureSequenceGroupIndex,
    iE-Extensions                                ProtocolExtensionContainer { { E-HICH-InformationResp-LCR-ExtIEs } }  OPTIONAL,
    ...
}

```

```

E-HICH-InformationResp-LCR-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

E-HICH-TimeOffset-LCR ::= INTEGER (4..15)

```

```

E-DCH-SubframeNumber-LCR ::= ENUMERATED{s0,s1}

```

```

E-DCH-TimeslotResource-LCR ::= BIT STRING (SIZE (5))

```

```

E-DCH-Non-Scheduled-Grant-Info-LCR ::= SEQUENCE {
    timeslotResource-LCR                      E-DCH-TimeslotResource-LCR,
    powerResource                              E-DCH-PowerResource,
}

```



```

    repetitionPeriod          RepetitionPeriod,
    repetitionLength          RepetitionLength,
    subframenumber            E-DCH-SubframeNumber-LCR,
    tddE-PUCH-Offset          Tdde-PUCH-Offset,
    tdd-ChannelisationCode    TDD-ChannelisationCode,
    iE-Extensions              ProtocolExtensionContainer { { E-DCH-Non-Scheduled-Grant-Info-LCR-ExtIEs } } OPTIONAL,
    ...
}

E-DCH-Non-Scheduled-Grant-Info-LCR-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

Enabling-Delay ::= ENUMERATED {v0, v1, v2, v4, v8, v16, v32, v64, v128}
-- Unit radio frame

Ext-Reference-E-TFCI-PO ::= INTEGER(30..31,...)

ExtendedPropagationDelay ::= INTEGER(255..1023)

Extended-RNC-ID           ::= INTEGER (4096..65535)

Extended-Round-Trip-Time-Value ::= INTEGER(32767..103041)
-- See also mapping in [23]

Ext-Max-Bits-MACe-PDU-non-scheduled ::= INTEGER(19983..22978,...)

E-DCH-Semi-PersistentScheduling-Information-LCR ::= SEQUENCE {
    repetition-Period-List-LCR          Repetition-Period-List-LCR,
    e-DCH-SPS-Indicator                  E-DCH-SPS-Indicator,
    e-DCH-SPS-Reservation-Indicator      SPS-Reservation-Indicator OPTIONAL,
    iE-Extensions                         ProtocolExtensionContainer { { E-DCH-Semi-PersistentScheduling-Information-LCR-ExtIEs } }
    OPTIONAL,
    ...
}

E-DCH-Semi-PersistentScheduling-Information-LCR-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

E-DCH-SPS-Indicator ::= BIT STRING (SIZE (16))

E-DCH-Semi-PersistentScheduling-Information-to-Modify-LCR ::= SEQUENCE {
    repetition-Period-List-LCR          Repetition-Period-List-LCR OPTIONAL,
    e-DCH-SPS-Indicator                  E-DCH-SPS-Indicator OPTIONAL,
    e-DCH-SPS-Reservation-Indicator      SPS-Reservation-Indicator OPTIONAL,
    iE-Extensions                         ProtocolExtensionContainer { { E-DCH-Semi-PersistentScheduling-Information-to-Modify-LCR-ExtIEs } }
    OPTIONAL,
    ...
}

E-DCH-Semi-PersistentScheduling-Information-to-Modify-LCR-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {

```

```

}
...
E-DCH-Semi-PersistentScheduling-Information-ResponseLCR ::= SEQUENCE {
    initial-E-DCH-SPS-resource          Initial-E-DCH-SPS-resource          OPTIONAL,
    e-DCH-SPS-HICH-Information          E-DCH-SPS-HICH-Information          OPTIONAL,
    iE-Extensions                       ProtocolExtensionContainer { { E-DCH-Semi-PersistentScheduling-Information-ResponseLCR-ExtIEs } }
    OPTIONAL,
    ...
}

E-DCH-Semi-PersistentScheduling-Information-ResponseLCR-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

Initial-E-DCH-SPS-resource ::= SEQUENCE {
    timeslot-Resource-Related-Information    E-DCH-TimeslotResource-LCR,
    powerResource                           E-DCH-PowerResource,
    repetitionPeriodIndex                   RepetitionPeriodIndex,
    repetitionLength                         RepetitionLength,
    subframeNumber                          ENUMERATED {v0, v1},
    tddE-PUCH-Offset                         TddE-PUCH-Offset,
    tdd-ChannelisationCode                  TDD-ChannelisationCode,
    n-E-UCCHLCR                             N-E-UCCH-LCR,
    iE-Extensions                           ProtocolExtensionContainer { { Initial-E-DCH-SPS-resource-ExtIEs } }
    OPTIONAL,
    ...
}

Initial-E-DCH-SPS-resource-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

E-DCH-SPS-HICH-Information ::= SEQUENCE {
    e-HICH-Configuration                    E-HICH-Configuration,
    signatureSequenceGroupIndex             SignatureSequenceGroupIndex,
    iE-Extensions                           ProtocolExtensionContainer { { E-DCH-SPS-HICH-Information-ExtIEs } }
    OPTIONAL,
    ...
}

E-DCH-SPS-HICH-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

E-HICH-Configuration ::= CHOICE {
    same-As-Scheduled-E-HICH               Same-As-Scheduled-E-HICH,
    explicit                                E-HICH-InformationResp-ExplicitConfiguration-LCR,
    ...
}

```

```

Same-As-Scheduled-E-HICH ::= SEQUENCE {
    e-HICH-EI                E-HICH-EI,
    ...
}

E-HICH-InformationResp-ExplicitConfiguration-LCR ::= SEQUENCE {
    timeSlotLCR              TimeSlotLCR,
    midambleShiftLCR        MidambleShiftLCR,
    tDD-ChannelisationCode   TDD-ChannelisationCode,
    iE-Extensions            ProtocolExtensionContainer { { E-HICH-InformationResp-ExplicitConfiguration-LCR-ExtIEs } }
    OPTIONAL,
    ...
}

E-HICH-InformationResp-ExplicitConfiguration-LCR-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- F

FACH-FlowControlInformation ::= SEQUENCE (SIZE (1..16)) OF FACH-FlowControlInformationItem

FACH-FlowControlInformationItem ::= SEQUENCE {
    fACH-SchedulingPriority   SchedulingPriorityIndicator,
    mAC-c-sh-SDU-Lengths     MAC-c-sh-SDU-LengthList,
    fACH-InitialWindowSize   FACH-InitialWindowSize,
    iE-Extensions            ProtocolExtensionContainer { {FACH-FlowControlInformationItem-ExtIEs} } OPTIONAL,
    ...
}

FACH-FlowControlInformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

FACH-InitialWindowSize      ::= INTEGER { unlimited(255) } (0..255)
-- Number of frames MAC-c-sh SDUs.
-- 255 = Unlimited number of FACH data frames

FACH-InformationList ::= SEQUENCE (SIZE(0.. maxNrOfFACHs)) OF FACH-InformationItem

FACH-InformationItem ::= SEQUENCE {
    transportFormatSet       TransportFormatSet,
    iE-Extensions            ProtocolExtensionContainer { { FACH-InformationItem-ExtIEs} } OPTIONAL,
    ...
}

FACH-InformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

Fast-Reconfiguration-Mode ::= ENUMERATED {fast,...}
Fast-Reconfiguration-Permission ::= ENUMERATED {allowed,...}

```

```

FDD-DCHs-to-Modify ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF FDD-DCHs-to-ModifyItem

FDD-DCHs-to-ModifyItem ::= SEQUENCE {
    ul-FP-Mode          UL-FP-Mode          OPTIONAL,
    toAWS              ToAWS              OPTIONAL,
    toAWE              ToAWE              OPTIONAL,
    transportBearerRequestIndicator TransportBearerRequestIndicator,
    dCH-SpecificInformationList FDD-DCHs-to-ModifySpecificInformationList,
    iE-Extensions      ProtocolExtensionContainer { {FDD-DCHs-to-ModifyItem-ExtIEs} } OPTIONAL,
    ...
}

FDD-DCHs-to-ModifyItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-TnlQos          CRITICALITY ignore      EXTENSION TnlQos PRESENCE optional },
    ...
}

FDD-DCHs-to-ModifySpecificInformationList ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF FDD-DCHs-to-ModifySpecificItem

FDD-DCHs-to-ModifySpecificItem ::= SEQUENCE {
    dCH-ID              DCH-ID,
    ul-TransportformatSet TransportFormatSet OPTIONAL,
    dl-TransportformatSet TransportFormatSet OPTIONAL,
    allocationRetentionPriority AllocationRetentionPriority OPTIONAL,
    frameHandlingPriority FrameHandlingPriority OPTIONAL,
    not-Used-dRACControl NULL OPTIONAL,
    iE-Extensions      ProtocolExtensionContainer { {FDD-DCHs-to-ModifySpecificItem-ExtIEs} } OPTIONAL,
    ...
}

FDD-DCHs-to-ModifySpecificItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-Guaranteed-Rate-Information CRITICALITY ignore      EXTENSION Guaranteed-Rate-Information PRESENCE optional }|
    { ID id-TrafficClass                CRITICALITY ignore      EXTENSION TrafficClass PRESENCE optional }|
    { ID id-Unidirectional-DCH-Indicator CRITICALITY reject     EXTENSION Unidirectional-DCH-Indicator PRESENCE optional},
    ...
}

FDD-DL-ChannelisationCodeNumber ::= INTEGER (0..511)
-- According to the mapping in [27]. The maximum value is equal to the DL spreading factor -1--

FDD-DL-CodeInformation ::= SEQUENCE (SIZE (1..maxNrOfDL-Codes)) OF FDD-DL-CodeInformationItem

FDD-DL-CodeInformationItem ::= SEQUENCE {
    dl-ScramblingCode          DL-ScramblingCode,
    fDD-DL-ChannelisationCodeNumber FDD-DL-ChannelisationCodeNumber,
    transmission-Gap-Pattern-Sequence-ScramblingCode-Information Transmission-Gap-Pattern-Sequence-ScramblingCode-Information OPTIONAL,
    iE-Extensions              ProtocolExtensionContainer { {FDD-DL-CodeInformationItem-ExtIEs} } OPTIONAL,
    ...
}

FDD-DL-CodeInformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```
FDD-TPC-DownlinkStepSize ::= ENUMERATED {
    step-size0-5,
    step-size1,
    step-size1-5,
    step-size2,
    ...
}

SchedulingPriorityIndicator ::= INTEGER { lowest(0), highest(15) } (0..15)

F-DPCH-SlotFormat ::= INTEGER (0..9)

F-DPCH-SlotFormatSupportRequest ::= NULL

FirstRLS-Indicator ::= ENUMERATED {
    first-RLS,
    not-first-RLS
}

FNReportingIndicator ::= ENUMERATED {
    fN-reporting-required,
    fN-reporting-not-required
}

FPACH-Information ::= SEQUENCE {
    timeSlotLCR           TimeSlotLCR,
    tDD-ChannelisationCodeLCR TDD-ChannelisationCodeLCR,
    midambleShiftLCR      MidambleShiftLCR,
    wT                    INTEGER (1..4),
    ...
}

FrameHandlingPriority ::= INTEGER { lowest(0), highest(15) } (0..15)

FrameOffset ::= INTEGER (0..255)
-- Frames

FrequencyBandIndicator ::= ENUMERATED {
    bandI,
    bandII,
    bandIII,
    bandIV,
    bandV,
    bandVI,
    bandVII,
    bandVIII,
    bandIX,
    bandX,
    bandXI,
    bandXII,
    bandXIII,
    bandXIV,
    bandXV,
    bandXVI,
}
```

```

    bandXVII,
    bandXVIII,
    bandXIX,
    bandXX,
    bandXXI,
    bandXXII,
    ...
}

-- G

GapLength                ::= INTEGER (1..14)
-- Unit Slot

GapDuration              ::= INTEGER (1..144,...)
-- Unit Frame

GA-Cell ::= SEQUENCE (SIZE (1..maxNrOfPoints)) OF
    SEQUENCE {
        cell-GAgeographicalCoordinate    GeographicalCoordinate,
        iE-Extensions                    ProtocolExtensionContainer { {GA-Cell-ExtIEs} } OPTIONAL,
        ...
    }

GA-Cell-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

GA-CellAdditionalShapes ::= CHOICE {
    pointWithUncertainty                GA-PointWithUnCertainty,
    pointWithUncertaintyEllipse         GA-PointWithUnCertaintyEllipse,
    pointWithAltitude                  GA-PointWithAltitude,
    pointWithAltitudeAndUncertaintyEllipsoid GA-PointWithAltitudeAndUncertaintyEllipsoid,
    ellipsoidArc                       GA-EllipsoidArc,
    ...
}

GA-AltitudeAndDirection ::= SEQUENCE {
    directionOfAltitude    ENUMERATED {height, depth},
    altitude               INTEGER (0..32767),
    ...
}

GA-EllipsoidArc ::= SEQUENCE {
    geographicalCoordinates    GeographicalCoordinate,
    innerRadius                INTEGER (0..65535),
    uncertaintyRadius          INTEGER (0..127),
    offsetAngle                INTEGER (0..179),
    includedAngle              INTEGER (0..179),
    confidence                  INTEGER (0..127),
    iE-Extensions              ProtocolExtensionContainer { { GA-EllipsoidArc-ExtIEs} } OPTIONAL,
    ...
}

```

```

GA-EllipsoidArc-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

GANSS-AddClockModels ::= CHOICE {
  navClockModel          GANSS-NAVclockModel,
  cnavClockModel         GANSS-CNAVclockModel,
  glonassClockModel      GANSS-GLONASSclockModel,
  sbasClockModel         GANSS-SBASclockModel,
  ...
}

GANSS-AddIonoModelReq ::= BIT STRING (SIZE(2))

GANSS-AddNavigationModelsReq ::= BOOLEAN

GANSS-AddOrbitModels ::= CHOICE {
  navKeplerianSet        GANSS-NavModel-NAVKeplerianSet,
  cnavKeplerianSet       GANSS-NavModel-CNAVKeplerianSet,
  glonassECEF            GANSS-NavModel-GLONASSecef,
  sbasECEF               GANSS-NavModel-SBAssecef,
  ...
}

GANSS-AddUTCModelsReq ::= BOOLEAN

GANSS-Additional-Ionospheric-Model ::= SEQUENCE {
  dataID                  BIT STRING (SIZE(2)),
  alpha-beta-parameters  GPS-Ionospheric-Model,
  ie-Extensions           ProtocolExtensionContainer { { GANSS-Additional-Ionospheric-Model-ExtIEs } } OPTIONAL,
  ...
}

GANSS-Additional-Ionospheric-Model-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

GANSS-Additional-Navigation-Models ::= SEQUENCE {
  ganss-Transmission-Time GANSS-Transmission-Time,
  non-broadcastIndication ENUMERATED { true } OPTIONAL,
  ganssSatInfoNavList     Ganss-Sat-Info-AddNavList,
  ie-Extensions           ProtocolExtensionContainer { { GANSS-Additional-Navigation-Models-ExtIEs } } OPTIONAL,
  ...
}

GANSS-Additional-Navigation-Models-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

GANSS-Additional-Time-Models ::= SEQUENCE (SIZE (1..maxGANS-1)) OF GANS-Time-Model

```

```

GANSS-Additional-UTC-Models ::= CHOICE {
    utcModel1          GANSS-UTCmodelSet1,
    utcModel2          GANSS-UTCmodelSet2,
    utcModel3          GANSS-UTCmodelSet3,
    ...
}

GANSS-Almanac ::= SEQUENCE{
    ganss-wk-number      INTEGER(0..255),
    gANSS-AlmanacModel  CHOICE {
        gANSS-keplerianParameters    SEQUENCE {
            t-oa                      INTEGER(0..255),
            iod-a                      INTEGER(0..3),
            gANSS-SatelliteInformationKP  GANSS-SatelliteInformationKP,
            ie-Extensions              ProtocolExtensionContainer { { GANSS-KeplerianParametersAlm-ExtIEs } } OPTIONAL,
            ...
        },
        ...,
        extension-GANSS-AlmanacModel  Extension-GANSS-AlmanacModel
    },
    ie-Extensions          ProtocolExtensionContainer { { GANSS-Almanac-ExtIEs } } OPTIONAL,
    ...
}

GANSS-KeplerianParametersAlm-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

Extension-GANSS-AlmanacModel ::= ProtocolIE-Single-Container {{ Extension-GANSS-AlmanacModel-IE }}

Extension-GANSS-AlmanacModel-IE RNSAP-PROTOCOL-IES ::= {
    { ID id-GANSS-alm-keplerianNAVALmanac      CRITICALITY ignore TYPE GANSS-alm-keplerianNAVALmanac PRESENCE mandatory} |
    { ID id-GANSS-alm-keplerianReducedAlmanac  CRITICALITY ignore TYPE GANSS-alm-keplerianReducedAlmanac PRESENCE mandatory} |
    { ID id-GANSS-alm-keplerianMidiAlmanac     CRITICALITY ignore TYPE GANSS-alm-keplerianMidiAlmanac PRESENCE mandatory} |
    { ID id-GANSS-alm-keplerianGLONASS        CRITICALITY ignore TYPE GANSS-alm-keplerianGLONASS PRESENCE mandatory} |
    { ID id-GANSS-alm-ecefSBASAlmanac         CRITICALITY ignore TYPE GANSS-alm-ecefSBASAlmanac PRESENCE mandatory}
}

GANSS-alm-keplerianNAVALmanac ::= SEQUENCE {
    t-oa          INTEGER (0..255),
    sat-info-NAVkpList  GANSS-SAT-Info-Almanac-NAVkpList,
    ie-Extensions      ProtocolExtensionContainer { { GANSS-ALM-NAVKeplerianSet-ExtIEs } } OPTIONAL,
    ...
}

```



```

GANSS-ALM-NAVKeplerianSet-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

GANSS-alm-keplerianReducedAlmanac ::= SEQUENCE {
    t-oa                INTEGER (0..255),
    sat-info-REDkpList  GANSS-SAT-Info-Almanac-REDkpList,
    ie-Extensions       ProtocolExtensionContainer { { GANSS-ALM-ReducedKeplerianSet-ExtIEs } }    OPTIONAL,
    ...
}

GANSS-ALM-ReducedKeplerianSet-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

GANSS-alm-keplerianMidiAlmanac ::= SEQUENCE {
    t-oa                INTEGER (0..255),
    sat-info-MIDIkpList GANSS-SAT-Info-Almanac-MIDIkpList,
    ie-Extensions       ProtocolExtensionContainer { { GANSS-ALM-MidiAlmanacSet-ExtIEs } }    OPTIONAL,
    ...
}

GANSS-ALM-MidiAlmanacSet-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

GANSS-alm-keplerianGLONASS ::= SEQUENCE {
    sat-info-GLOkpList  GANSS-SAT-Info-Almanac-GLOkpList,
    ie-Extensions       ProtocolExtensionContainer { { GANSS-ALM-GlonassAlmanacSet-ExtIEs } }    OPTIONAL,
    ...
}

GANSS-ALM-GlonassAlmanacSet-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

GANSS-alm-ecefSBASAlmanac ::= SEQUENCE {
    sat-info-SBAsSecefList GANSS-SAT-Info-Almanac-SBAsSecefList,
    ie-Extensions         ProtocolExtensionContainer { { GANSS-ALM-ECEFsbasAlmanacSet-ExtIEs } }    OPTIONAL,
    ...
}

```

```

GANSS-ALM-ECEFsbasAlmanacSet-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

GANSS-Almanac-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

GANSS-Auxiliary-Information ::= CHOICE {
    ganssID1      GANSS-AuxInfoGANSS-ID1,      -- This choice may only be present if GANSS ID indicates Modernized GPS
    ganssID3      GANSS-AuxInfoGANSS-ID3,      -- This choice may only be present if GANSS ID indicates GLONASS
    ...
}

GANSS-AuxInfoGANSS-ID1 ::= SEQUENCE (SIZE(1.. maxGANSSSat)) OF SEQUENCE {
    svID          INTEGER(0..63),
    signalsAvailable BIT STRING (SIZE(8)),
    ie-Extensions ProtocolExtensionContainer { { GANSS-AuxInfoGANSS-ID1-element-ExtIEs } } OPTIONAL,
    ...
}

GANSS-AuxInfoGANSS-ID1-element-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

GANSS-AuxInfoGANSS-ID3 ::= SEQUENCE (SIZE(1.. maxGANSSSat)) OF SEQUENCE {
    svID          INTEGER(0..63),
    signalsAvailable BIT STRING (SIZE(8)),
    channelNumber INTEGER (-7..13),
    ie-Extensions ProtocolExtensionContainer { { GANSS-AuxInfoGANSS-ID3-element-ExtIEs } } OPTIONAL,
    ...
}

GANSS-AuxInfoGANSS-ID3-element-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

GANSS-AuxInfoReq ::= BOOLEAN

GANSS-Clock-Model ::= SEQUENCE (SIZE (1..maxGANSSClockMod)) OF SEQUENCE {
    t-oc          BIT STRING (SIZE (14)),
    a-i2          BIT STRING (SIZE (12)),
    a-i1          BIT STRING (SIZE (18)),
    a-i0          BIT STRING (SIZE (28)),
    t-gd          BIT STRING (SIZE (10))
    model-id      INTEGER(0..1,...)
    ie-Extensions ProtocolExtensionContainer { { GANSS-ClockModelItem-ExtIEs } }
    ...
}
OPTIONAL,
OPTIONAL,
OPTIONAL,

```

```

GANSS-ClockModelItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

GANSS-CNAVclockModel ::= SEQUENCE {
    cnavToc          BIT STRING (SIZE (11)),
    cnavTop          BIT STRING (SIZE (11)),
    cnavURA0        BIT STRING (SIZE (5)),
    cnavURA1        BIT STRING (SIZE (3)),
    cnavURA2        BIT STRING (SIZE (3)),
    cnavAf2          BIT STRING (SIZE (10)),
    cnavAf1          BIT STRING (SIZE (20)),
    cnavAf0          BIT STRING (SIZE (26)),
    cnavTgd          BIT STRING (SIZE (13)),
    cnavISCl1cp      BIT STRING (SIZE (13))                OPTIONAL,
    cnavISCl1cd      BIT STRING (SIZE (13))                OPTIONAL,
    cnavISCl1ca      BIT STRING (SIZE (13))                OPTIONAL,
    cnavISCl2c       BIT STRING (SIZE (13))                OPTIONAL,
    cnavISCl5i5      BIT STRING (SIZE (13))                OPTIONAL,
    cnavISCl5q5      BIT STRING (SIZE (13))                OPTIONAL,
    ie-Extensions    ProtocolExtensionContainer { { GANSS-CNAVclockModel-ExtIEs } } OPTIONAL,
    ...
}

GANSS-CNAVclockModel-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

GANSS-Common-Data ::= SEQUENCE {
    ganss-Ionospheric-Model          GANSS-Ionospheric-Model                OPTIONAL,
    ganss-Rx-Pos                     GANSS-RX-Pos                          OPTIONAL,
    ie-Extensions                    ProtocolExtensionContainer { { GANSS-Common-Data-ExtIEs } } OPTIONAL,
    ...
}

GANSS-Common-Data-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-GANSS-Additional-Ionospheric-Model          CRITICALITY ignore EXTENSION GANSS-Additional-Ionospheric-Model PRESENCE optional } |
    { ID id-GANSS-Earth-Orientation-Parameters         CRITICALITY ignore EXTENSION GANSS-Earth-Orientation-Parameters PRESENCE optional },
    ...
}

GANSS-CommonDataInfoReq ::= SEQUENCE {
    ionospheric-Model                BOOLEAN                                OPTIONAL,
    ie-Extensions                    ProtocolExtensionContainer { { GANSS-CommonDataInfoReq-ExtIEs } } OPTIONAL,
    ...
}

GANSS-CommonDataInfoReq-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-GANSS-AddIonoModelReq          CRITICALITY ignore EXTENSION GANSS-AddIonoModelReq PRESENCE optional } |

```

```

    {ID id-GANSS-EarthOrientParaReq    CRITICALITY ignore  EXTENSION  GANSS-EarthOrientParaReq    PRESENCE optional} ,
    ...
}

GANSS-Data-Bit-Assistance ::= SEQUENCE {
    ganssTod                INTEGER (0..59,...),
    dataBitAssistancelist   GANSS-DataBitAssistanceList,
    ie-Extensions           ProtocolExtensionContainer { { GANSS-Data-Bit-Assistance-ExtIEs } }    OPTIONAL,
    ...
}

GANSS-Data-Bit-Assistance-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

GANSS-DataBitAssistanceList ::= SEQUENCE (SIZE (1..maxGANSSSat)) OF GANSS-DataBitAssistanceItem

GANSS-DataBitAssistanceItem ::= SEQUENCE {
    satId                INTEGER(0..63),
    dataBitAssistanceSgnList   GANSS-DataBitAssistanceSgnList,
    ie-Extensions           ProtocolExtensionContainer { { GANSS-DataBitAssistanceItem-ExtIEs } }    OPTIONAL,
    ...
}

GANSS-DataBitAssistanceItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

GANSS-DataBitAssistanceSgnList ::= SEQUENCE (SIZE (1..maxSgnType)) OF GANSS-DataBitAssistanceSgnItem

GANSS-DataBitAssistanceSgnItem ::= SEQUENCE {
    ganss-SignalId         GANSS-Signal-ID,
    ganssDataBits          BIT STRING (SIZE (1..1024)),
    ie-Extensions           ProtocolExtensionContainer { { GANSS-DataBitAssistanceSgnItem-ExtIEs } }    OPTIONAL,
    ...
}

GANSS-DataBitAssistanceSgnItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

GANSS-Data-Bit-Assistance-ReqItem ::= SEQUENCE {
    ganssTod                INTEGER (0..86399),
    ganss-Data-Bit-Assistance-ReqList   GANSS-Data-Bit-Assistance-ReqList,
    ie-Extensions           ProtocolExtensionContainer { { GANSS-Data-Bit-Assistance-ReqItem-ExtIEs } }    OPTIONAL,
    ...
}

GANSS-Data-Bit-Assistance-ReqItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

GANSS-Data-Bit-Assistance-ReqList ::= SEQUENCE {
    dGANSS-Signal-ID          BIT STRING (SIZE (8)),
    ganss-DataBitInterval     INTEGER(0..15),
    ganss-SatelliteInfo       SEQUENCE (SIZE (1..maxGANSSSat)) OF INTEGER(0..63)      OPTIONAL,
    ie-Extensions             ProtocolExtensionContainer { { GANSS-Data-Bit-Assistance-ReqList-ExtIEs } } OPTIONAL,
    ...
}

GANSS-Data-Bit-Assistance-ReqList-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

GANSS-DeltaUT1 ::= SEQUENCE {
    b1          BIT STRING (SIZE(11)),
    b2          BIT STRING (SIZE(10)),
    ie-Extensions ProtocolExtensionContainer { { GANSS-DeltaUT1-ExtIEs } }      OPTIONAL,
    ...
}

GANSS-DeltaUT1-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

GANSS-Earth-Orientation-Parameters ::= SEQUENCE {
    teop          BIT STRING (SIZE (16)),
    pmX           BIT STRING (SIZE (21)),
    pmXdot        BIT STRING (SIZE (15)),
    pmY           BIT STRING (SIZE (21)),
    pmYdot        BIT STRING (SIZE (15)),
    deltaUT1     BIT STRING (SIZE (31)),
    deltaUT1dot  BIT STRING (SIZE (19)),
    ie-Extensions ProtocolExtensionContainer { { GANSS-Earth-Orientation-Parameters-ExtIEs } }      OPTIONAL,
    ...
}

GANSS-Earth-Orientation-Parameters-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

GANSS-EarthOrientParaReq ::= BOOLEAN

GANSS-GenericDataInfoReqList ::= SEQUENCE (SIZE(1..maxNoGANSS)) OF GANSS-GenericDataInfoReqItem

GANSS-GenericDataInfoReqItem ::= SEQUENCE {
    ganss-Id          GANSS-ID          OPTIONAL,
    ganss-Nav-Model-And-Time-Recovery BOOLEAN      OPTIONAL,
    ganss-Time-Model-GNSS-GNSS BIT STRING (SIZE (9))      OPTIONAL,
    ganss-UTC-Model   BOOLEAN          OPTIONAL,
    ganss-Almanac     BOOLEAN          OPTIONAL,
    ganss-Real-Time-Integrity BOOLEAN      OPTIONAL,
    ganss-Data-Bit-Assistance-Req GANSS-Data-Bit-Assistance-ReqItem      OPTIONAL,
    ie-Extensions     ProtocolExtensionContainer { { GANSS-GenericDataInfoReqItem-ExtIEs } }      OPTIONAL,
}

```

```

}
...
}
GANSS-GenericDataInfoReqItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-GANSS-AddNavigationModelsReq CRITICALITY ignore EXTENSION GANSS-AddNavigationModelsReq PRESENCE optional } |
  { ID id-GANSS-AddUTCModelsReq CRITICALITY ignore EXTENSION GANSS-AddUTCModelsReq PRESENCE optional } |
  { ID id-GANSS-AuxInfoReq CRITICALITY ignore EXTENSION GANSS-AuxInfoReq PRESENCE optional } |
  -- The following IE shall be present if 'GANSS-ID' in 'GANSS-GenericDataInfoReqItem' is '0' (SBAS)
  { ID id-GANSS-SBAS-ID CRITICALITY ignore EXTENSION GANSS-SBAS-ID PRESENCE optional } ,
  ...
}

GANSS-Generic-Data ::= SEQUENCE (SIZE(1..maxNoGANSS)) OF GANSS-Generic-DataItem

GANSS-Generic-DataItem ::= SEQUENCE {
  ganss-Id GANSS-ID OPTIONAL,
  dganss-Correction DGANSSCorrections OPTIONAL,
  ganss-Navigation-Model-And-Time-Recovery GANSS-Navigation-Model-And-Time-Recovery OPTIONAL,
  ganss-Time-Model GANSS-Time-Model OPTIONAL,
  ganss-UTC-TIME GANSS-UTC-Model OPTIONAL,
  ganss-Almanac GANSS-Almanac OPTIONAL,
  ganss-Real-Time-Integrity GANSS-Real-Time-Integrity OPTIONAL,
  ganss-Data-Bit-Assistance GANSS-Data-Bit-Assistance OPTIONAL,
  ie-Extensions ProtocolExtensionContainer { { GANSS-Generic-DataItem-ExtIEs } } OPTIONAL,
  ...
}

GANSS-Generic-DataItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-GANSS-Additional-Time-Models CRITICALITY ignore EXTENSION GANSS-Additional-Time-Models PRESENCE optional } |
  { ID id-GANSS-Additional-Navigation-Models CRITICALITY ignore EXTENSION GANSS-Additional-Navigation-Models PRESENCE optional } |
  { ID id-GANSS-Additional-UTC-Models CRITICALITY ignore EXTENSION GANSS-Additional-UTC-Models PRESENCE optional } |
  { ID id-GANSS-Auxiliary-Information CRITICALITY ignore EXTENSION GANSS-Auxiliary-Information PRESENCE optional } |
  -- The following element shall be present if 'GANSS-ID' in 'GANSS-Generic-DataItem' is '0' ('SBAS')
  { ID id-GANSS-SBAS-ID CRITICALITY ignore EXTENSION GANSS-SBAS-ID PRESENCE optional } ,
  ...
}

GANSS-GLONASSclockModel ::= SEQUENCE {
  gloTau BIT STRING (SIZE (22)),
  gloGamma BIT STRING (SIZE (11)),
  gloDeltaTau BIT STRING (SIZE (5)) OPTIONAL,
  ie-Extensions ProtocolExtensionContainer { { GANSS-GLONASSclockModel-ExtIEs } } OPTIONAL,
  ...
}

GANSS-GLONASSclockModel-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

```

```

GANSS-ID ::= INTEGER(0..7,...)

GANSS-Information ::= SEQUENCE {
    gANSS-CommonDataInfoReq          GANSS-CommonDataInfoReq          OPTIONAL,
    gANSS-GenericDataInfoReqList     GANSS-GenericDataInfoReqList     OPTIONAL,
    ie-Extensions                    ProtocolExtensionContainer { { GANSS-Information-ExtIEs } } OPTIONAL,
    ...
}

GANSS-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

GANSS-Ionospheric-Model ::= SEQUENCE {
    alpha-zero-ionos                 BIT STRING (SIZE (12)),
    alpha-one-ionos                  BIT STRING (SIZE (12)),
    alpha-two-ionos                  BIT STRING (SIZE (12)),
    gANSS-IonosphereRegionalStormFlags GANSS-IonosphereRegionalStormFlags OPTIONAL,
    ie-Extensions                    ProtocolExtensionContainer { { GANSS-Ionospheric-Model-ExtIEs } } OPTIONAL,
    ...
}

GANSS-Ionospheric-Model-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

GANSS-IonosphereRegionalStormFlags ::= SEQUENCE {
    storm-flag-one                   BOOLEAN,
    storm-flag-two                   BOOLEAN,
    storm-flag-three                 BOOLEAN,
    storm-flag-four                 BOOLEAN,
    storm-flag-five                 BOOLEAN,
    ie-Extensions                    ProtocolExtensionContainer { { GANSS-IonosphereRegionalStormFlags-ExtIEs } } OPTIONAL,
    ...
}

GANSS-IonosphereRegionalStormFlags-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

GANSS-NAVclockModel ::= SEQUENCE {
    navToc                           BIT STRING (SIZE (16)),
    navaf2                            BIT STRING (SIZE (8)),
    navaf1                            BIT STRING (SIZE (16)),
    navaf0                            BIT STRING (SIZE (22)),
    navTgd                            BIT STRING (SIZE (8)),
    ie-Extensions                    ProtocolExtensionContainer { { GANSS-NAVclockModel-ExtIEs } } OPTIONAL,
    ...
}

```

```

GANSS-NAVclockModel-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

GANSS-NavModel-And-Time-Recovery ::= SEQUENCE {
    ganss-Transmission-Time      GANSS-Transmission-Time,
    non-broadcastIndication      ENUMERATED{true}          OPTIONAL,
    ganssSatInfoNav              GANSS-Sat-Info-Nav,
    ie-Extensions                ProtocolExtensionContainer { { GANSS-NavModel-And-Time-Recovery-ExtIEs } } OPTIONAL,
    ...
}

GANSS-NavModel-And-Time-Recovery-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

GANSS-NavModel-CNAVKeplerianSet ::= SEQUENCE {
    cnavTop                      BIT STRING (SIZE (11)),
    cnavURAindex                BIT STRING (SIZE (5)),
    cnavDeltaA                   BIT STRING (SIZE (26)),
    cnavAdot                     BIT STRING (SIZE (25)),
    cnavDeltaNo                  BIT STRING (SIZE (17)),
    cnavDeltaNoDot               BIT STRING (SIZE (23)),
    cnavMo                       BIT STRING (SIZE (33)),
    cnavE                        BIT STRING (SIZE (33)),
    cnavOmega                    BIT STRING (SIZE (33)),
    cnavOMEGA0                   BIT STRING (SIZE (33)),
    cnavDeltaOmegaDot            BIT STRING (SIZE (17)),
    cnavIo                       BIT STRING (SIZE (33)),
    cnavIoDot                    BIT STRING (SIZE (15)),
    cnavCis                      BIT STRING (SIZE (16)),
    cnavCic                      BIT STRING (SIZE (16)),
    cnavCrs                      BIT STRING (SIZE (24)),
    cnavCrc                      BIT STRING (SIZE (24)),
    cnavCus                      BIT STRING (SIZE (21)),
    cnavCuc                      BIT STRING (SIZE (21)),
    ie-Extensions                ProtocolExtensionContainer { { GANSS-NavModel-CNAVKeplerianSet-ExtIEs } }          OPTIONAL,
    ...
}

GANSS-NavModel-CNAVKeplerianSet-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

GANSS-NavModel-GLONASsecef ::= SEQUENCE {
    gloEn                        BIT STRING (SIZE (5)),
    gloP1                        BIT STRING (SIZE (2)),
    gloP2                        BIT STRING (SIZE (1)),
    gloM                          BIT STRING (SIZE (2))          OPTIONAL,
    gloX                          BIT STRING (SIZE (27)),
    gloXdot                      BIT STRING (SIZE (24)),
    gloXdotdot                   BIT STRING (SIZE (5)),

```



```

gloY                BIT STRING (SIZE (27)),
gloYdot             BIT STRING (SIZE (24)),
gloYdotdot         BIT STRING (SIZE (5)),
gloZ                BIT STRING (SIZE (27)),
gloZdot            BIT STRING (SIZE (24)),
gloZdotdot        BIT STRING (SIZE (5)),
ie-Extensions      ProtocolExtensionContainer { { GANSS-NavModel-GLONASSecef-ExtIEs } } OPTIONAL,
...
}

GANSS-NavModel-GLONASSecef-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

GANSS-NavModel-NAVKeplerianSet ::= SEQUENCE {
navURA            BIT STRING (SIZE (4)),
navFitFlag         BIT STRING (SIZE (1)),
navToe             BIT STRING (SIZE (16)),
navOmega           BIT STRING (SIZE (32)),
navDeltaN         BIT STRING (SIZE (16)),
navM0              BIT STRING (SIZE (32)),
navOmegaADot      BIT STRING (SIZE (24)),
navE               BIT STRING (SIZE (32)),
navIDot           BIT STRING (SIZE (14)),
navAPowerHalf     BIT STRING (SIZE (32)),
navI0              BIT STRING (SIZE (32)),
navOmegaA0        BIT STRING (SIZE (32)),
navCrs             BIT STRING (SIZE (16)),
navCis             BIT STRING (SIZE (16)),
navCus             BIT STRING (SIZE (16)),
navCrc             BIT STRING (SIZE (16)),
navCic             BIT STRING (SIZE (16)),
navCuc             BIT STRING (SIZE (16)),
ie-Extensions      ProtocolExtensionContainer { { GANSS-NavModel-NAVKeplerianSet-ExtIEs } } OPTIONAL,
...
}

GANSS-NavModel-NAVKeplerianSet-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

GANSS-NavModel-SBAsSecef ::= SEQUENCE {
-- the following IE shall be present if 'GANSS-SBASclockModel' in 'GANSS-AddClockModels' is not included in 'Ganss-Sat-Info-AddNavList'
sbasTo             BIT STRING (SIZE (13)) OPTIONAL,
sbasAccuracy       BIT STRING (SIZE (4)),
sbasXg             BIT STRING (SIZE (30)),
sbasYg             BIT STRING (SIZE (30)),
sbasZg             BIT STRING (SIZE (25)),
sbasXgDot          BIT STRING (SIZE (17)),
sbasYgDot          BIT STRING (SIZE (17)),
sbasZgDot          BIT STRING (SIZE (18)),
sbasXgDotDot       BIT STRING (SIZE (10)),

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```

    sbagYgDotDot          BIT STRING (SIZE (10)),
    sbasZgDotDot          BIT STRING (SIZE (10)),
    ie-Extensions         ProtocolExtensionContainer { { GANSS-NavModel-SBAscefc-ExtIEs } } OPTIONAL,
    ...
}

```

```

GANSS-NavModel-SBAscefc-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

GANSS-Orbit-Model ::= CHOICE {
    gANSS-keplerianParameters          SEQUENCE {
        toe-nav                        BIT STRING (SIZE (14)),
        ganss-omega-nav                 BIT STRING (SIZE (32)),
        delta-n-nav                     BIT STRING (SIZE (16)),
        m-zero-nav                      BIT STRING (SIZE (32)),
        omegadot-nav                    BIT STRING (SIZE (24)),
        ganss-e-nav                     BIT STRING (SIZE (32)),
        idot-nav                        BIT STRING (SIZE (14)),
        a-sqrt-nav                      BIT STRING (SIZE (32)),
        i-zero-nav                      BIT STRING (SIZE (32)),
        omega-zero-nav                  BIT STRING (SIZE (32)),
        c-rs-nav                        BIT STRING (SIZE (16)),
        c-is-nav                        BIT STRING (SIZE (16)),
        c-us-nav                        BIT STRING (SIZE (16)),
        c-rc-nav                        BIT STRING (SIZE (16)),
        c-ic-nav                        BIT STRING (SIZE (16)),
        c-uc-nav                        BIT STRING (SIZE (16)),
        ie-Extensions                   ProtocolExtensionContainer { { GANSS-KeplerianParametersOrb-ExtIEs } } OPTIONAL,
        ...
    },
    ...
}

```

```

GANSS-KeplerianParametersOrb-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

GANSS-Real-Time-Integrity ::= SEQUENCE (SIZE (1..maxGANSSSat)) OF SEQUENCE {
    bad-ganss-satId                   INTEGER(0..63),
    bad-ganss-signalId                 BIT STRING (SIZE (8)) OPTIONAL,
    ie-Extensions                       ProtocolExtensionContainer { { GANSS-RealTimeInformationItem-ExtIEs } } OPTIONAL,
    ...
}

```

```

GANSS-RealTimeInformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {

```

```

...
}

GANSS-RX-Pos ::= SEQUENCE {
    latitudeSign      ENUMERATED{north,south},
    degreesOfLatitude INTEGER(0..2147483647),
    degreesOfLongitude INTEGER(-2147483648..2147483647),
    directionOfAltitude ENUMERATED{height,depth},
    altitude          INTEGER(0..32767),
    ie-Extensions     ProtocolExtensionContainer { { GANSS-RX-Pos-ExtIEs } } OPTIONAL,
    ...
}

GANSS-RX-Pos-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

GANSS-SatelliteInformationKP ::= SEQUENCE (SIZE (1..maxGANSSSatAlmanac)) OF SEQUENCE {
    satId              INTEGER(0..63),
    ganss-e-alm        BIT STRING (SIZE (11)),
    ganss-delta-I-alm  BIT STRING (SIZE (11)),
    ganss-omegadot-alm BIT STRING (SIZE (11)),
    ganss-svhealth-alm BIT STRING (SIZE (4)),
    ganss-delta-a-sqrt-alm BIT STRING (SIZE (17)),
    ganss-omegazero-alm BIT STRING (SIZE (16)),
    ganss-m-zero-alm   BIT STRING (SIZE (16)),
    ganss-omega-alm    BIT STRING (SIZE (16)),
    ganss-af-zero-alm  BIT STRING (SIZE (14)),
    ganss-af-one-alm   BIT STRING (SIZE (11)),
    ie-Extensions     ProtocolExtensionContainer { { GANSS-SatelliteInformationKPItem-ExtIEs } } OPTIONAL,
    ...
}

GANSS-SatelliteInformationKPItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

Ganss-Sat-Info-AddNavList ::= SEQUENCE (SIZE (1..maxGANSSSat)) OF SEQUENCE {
    satId              INTEGER (0..63),
    svHealth           BIT STRING (SIZE (6)),
    iod                BIT STRING (SIZE (11)),
    ganssAddClockModels GANSS-AddClockModels,
    ganssAddOrbitModels GANSS-AddOrbitModels,
    ie-Extensions     ProtocolExtensionContainer { { Ganss-Sat-Info-AddNavList-ExtIEs } } OPTIONAL,
    ...
}

Ganss-Sat-Info-AddNavList-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

}

GANSS-SAT-Info-Almanac-GLOkpList ::= SEQUENCE (SIZE (1.. maxGANSSSatAlmanac)) OF SEQUENCE {
  gloAlmNA          BIT STRING (SIZE(11)),
  gloAlmNA          BIT STRING (SIZE(5)),
  gloAlmHA          BIT STRING (SIZE(5)),
  gloAlmLambdaA    BIT STRING (SIZE(21)),
  gloAlmTlambdaA   BIT STRING (SIZE(21)),
  gloAlmDeltaIA    BIT STRING (SIZE(18)),
  gloAkmDeltaTA    BIT STRING (SIZE(22)),
  gloAlmDeltaTdotA BIT STRING (SIZE(7)),
  gloAlmEpsilonA   BIT STRING (SIZE(15)),
  gloAlmOmegaA     BIT STRING (SIZE(16)),
  gloAlmTauA       BIT STRING (SIZE(10)),
  gloAlmCA         BIT STRING (SIZE(1)),
  gloAlmMA         BIT STRING (SIZE(2))
  ie-Extensions    ProtocolExtensionContainer { { GANSS-SAT-Info-Almanac-GLOkp-ExtIEs } }
  ...
}

GANSS-SAT-Info-Almanac-GLOkp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

GANSS-SAT-Info-Almanac-MIDIkpList ::= SEQUENCE (SIZE (1.. maxGANSSSatAlmanac)) OF SEQUENCE {
  svID              INTEGER(0..63),
  midiAlmE          BIT STRING (SIZE (11)),
  midiAlmDeltaI     BIT STRING (SIZE (11)),
  midiAlmOmegaDot   BIT STRING (SIZE (11)),
  midiAlmSqrtA      BIT STRING (SIZE (17)),
  midiAlmOmega0     BIT STRING (SIZE (16)),
  midiAlmOmega      BIT STRING (SIZE (16)),
  midiAlmMo         BIT STRING (SIZE (16)),
  midiAlmaf0        BIT STRING (SIZE (11)),
  midiAlmaf1        BIT STRING (SIZE (10)),
  midiAlmL1Health   BIT STRING (SIZE (1)),
  midiAlmL2Health   BIT STRING (SIZE (1)),
  midiAlmL5Health   BIT STRING (SIZE (1)),
  ie-Extensions    ProtocolExtensionContainer { { GANSS-SAT-Info-Almanac-MIDIkp-ExtIEs } }
  ...
}

GANSS-SAT-Info-Almanac-MIDIkp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

GANSS-SAT-Info-Almanac-NAVkpList ::= SEQUENCE (SIZE (1.. maxGANSSSatAlmanac)) OF SEQUENCE {
  svID              INTEGER(0..63),
  navAlmE           BIT STRING (SIZE (16)),
  navAlmDeltaI      BIT STRING (SIZE (16)),

```

```

navAlmOMEGADOT          BIT STRING (SIZE (16)),
navAlmSVHealth          BIT STRING (SIZE (8)),
navAlmSqrtA             BIT STRING (SIZE (24)),
navAlmOMEGAo           BIT STRING (SIZE (24)),
navAlmOmega            BIT STRING (SIZE (24)),
navAlmMo               BIT STRING (SIZE (24)),
navAlmaf0              BIT STRING (SIZE (11)),
navAlmaf1              BIT STRING (SIZE (11)),
ie-Extensions          ProtocolExtensionContainer { { GANSS-SAT-Info-Almanac-NAVkp-ExtIEs } } OPTIONAL,
...
}

```

```

GANSS-SAT-Info-Almanac-NAVkp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

```

```

GANSS-SAT-Info-Almanac-REDkpList ::= SEQUENCE (SIZE (1.. maxGANSSSatAlmanac)) OF SEQUENCE {
svID                    INTEGER(0..63),
redAlmDeltaA           BIT STRING (SIZE (8)),
redAlmOmega0          BIT STRING (SIZE (7)),
redAlmPhi0             BIT STRING (SIZE (7)),
redAlmL1Health        BIT STRING (SIZE (1)),
redAlmL2Health        BIT STRING (SIZE (1)),
redAlmL5Health        BIT STRING (SIZE (1)),
ie-Extensions          ProtocolExtensionContainer { { GANSS-SAT-Info-Almanac-REDkp-ExtIEs } } OPTIONAL,
...
}

```

```

GANSS-SAT-Info-Almanac-REDkp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

```

```

GANSS-SAT-Info-Almanac-SBAsSecefList ::= SEQUENCE (SIZE (1.. maxGANSSSatAlmanac)) OF SEQUENCE {
sbasAlmDataID          BIT STRING (SIZE (2)),
svID                   INTEGER(0..63),
sbasAlmHealth          BIT STRING (SIZE (8)),
sbasAlmXg              BIT STRING (SIZE (15)),
sbasAlmYg              BIT STRING (SIZE (15)),
sbasAlmZg              BIT STRING (SIZE (9)),
sbasAlmXgdot           BIT STRING (SIZE (3)),
sbasAlmYgDot           BIT STRING (SIZE (3)),
sbasAlmZgDot           BIT STRING (SIZE (4)),
sbasAlmTo              BIT STRING (SIZE (11)),
ie-Extensions          ProtocolExtensionContainer { { GANSS-SAT-Info-Almanac-SBAsSecef-ExtIEs } } OPTIONAL,
...
}

```

```

GANSS-SAT-Info-Almanac-SBAsSecef-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

```

```
}

```

```
GANSS-Sat-Info-Nav ::= SEQUENCE (SIZE(1..maxGANSSSat)) OF SEQUENCE {
  satId          INTEGER(0..63),
  svHealth       BIT STRING (SIZE(5)),
  iod            BIT STRING (SIZE(10)),
  ganssClockModel GANSS-Clock-Model,
  ganssOrbitModel GANSS-Orbit-Model,
  ie-Extensions  ProtocolExtensionContainer { { GANSS-Sat-Info-Nav-ExtIEs } } OPTIONAL,
  ...
}
```

```
GANSS-Sat-Info-Nav-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}
```

```
GANSS-SBAS-ID ::= ENUMERATED {
  waas,
  egnos,
  msas,
  gagan,
  ...
}
```

```
GANSS-SBASclockModel ::= SEQUENCE {
  sbasTo          BIT STRING (SIZE (13)),
  sbasAgfo        BIT STRING (SIZE (12)),
  sbasAgf1        BIT STRING (SIZE (8)),
  ie-Extensions  ProtocolExtensionContainer { { GANSS-SBASclockModel-ExtIEs } } OPTIONAL,
  ...
}
```

```
GANSS-SBASclockModel-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}
```

```
GANSS-Signal-ID ::= INTEGER(0..7,...)
```

```
GANSS-StatusHealth ::= ENUMERATED {
  udre-scale-1dot0,
  udre-scale-0dot75,
  udre-scale-0dot5,
  udre-scale-0dot3,
  udre-scale-0dot2,
  udre-scale-0dot1,
  no-data,
  invalid-data
}
```

GANSS-Time-ID ::= INTEGER(0..7,...)

```

GANSS-Time-Model ::= SEQUENCE {
  ganss-time-model-Ref-Time      INTEGER(0..37799),
  ganss-t-a0                     INTEGER(-2147483648..2147483647),
  ganss-t-a1                     INTEGER(-8388608..8388607)           OPTIONAL,
  ganss-t-a2                     INTEGER(-64..63)                   OPTIONAL,
  gnss-to-id                     ENUMERATED{gps,...,galileo,qzss,glonass},
  ganss-wk-number                INTEGER(0..8191)                   OPTIONAL,
  ie-Extensions                  ProtocolExtensionContainer { { GANSS-Time-Model-ExtIEs } } OPTIONAL,
  ...
}

```

```

GANSS-Time-Model-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

```

```

GANSS-Transmission-Time ::= SEQUENCE {
  ganssDay                       INTEGER(0..8191)                   OPTIONAL,
  ganssTod                       INTEGER(0..86399),
  ie-Extensions                  ProtocolExtensionContainer { { GANSS-Transmission-Time-ExtIEs } } OPTIONAL,
  ...
}

```

```

GANSS-Transmission-Time-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

```

```

GANSS-UTC-Model ::= SEQUENCE {
  a-one-utc                      BIT STRING (SIZE (24)),
  a-zero-utc                     BIT STRING (SIZE (32)),
  t-ot-utc                      BIT STRING (SIZE (8)),
  w-n-t-utc                      BIT STRING (SIZE (8)),
  delta-t-ls-utc                BIT STRING (SIZE (8)),
  w-n-lsf-utc                   BIT STRING (SIZE (8)),
  dn-utc                        BIT STRING (SIZE (8)),
  delta-t-lsf-utc               BIT STRING (SIZE (8)),
  ie-Extensions                  ProtocolExtensionContainer { { GANSS-UTC-Model-ExtIEs } } OPTIONAL,
  ...
}

```

```

GANSS-UTC-Model-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

```

```

GANSS-UTCmodelSet1 ::= SEQUENCE {
  utcA0                          BIT STRING (SIZE(16)),
  utcA1                          BIT STRING (SIZE(13)),
  utcA2                          BIT STRING (SIZE(7)),
}

```

```

    utcDeltaTls      BIT STRING (SIZE(8)),
    utcTot           BIT STRING (SIZE(16)),
    utcWNot         BIT STRING (SIZE(13)),
    utcWNlfsf       BIT STRING (SIZE(8)),
    utcDN           BIT STRING (SIZE(4)),
    utcDeltaTlsf    BIT STRING (SIZE(8)),
    ie-Extensions   ProtocolExtensionContainer { { GANSS-UTCmodelSet1-ExtIEs } } OPTIONAL,
    ...
}

GANSS-UTCmodelSet1-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

GANSS-UTCmodelSet2 ::= SEQUENCE {
    nA              BIT STRING (SIZE(11)),
    tauC           BIT STRING (SIZE(32)),
    deltaUT1       GANSS-DeltaUT1                               OPTIONAL,
    kp             BIT STRING (SIZE(2))                         OPTIONAL,
    ie-Extensions   ProtocolExtensionContainer { { GANSS-UTCmodelSet2-ExtIEs } } OPTIONAL,
    ...
}

GANSS-UTCmodelSet2-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

GANSS-UTCmodelSet3 ::= SEQUENCE {
    utcAlwnt       BIT STRING (SIZE(24)),
    utcA0wnt       BIT STRING (SIZE(32)),
    utcTot         BIT STRING (SIZE(8)),
    utcWnt         BIT STRING (SIZE(8)),
    utcDeltaTls    BIT STRING (SIZE(8)),
    utcWNlfsf     BIT STRING (SIZE(8)),
    utcDN          BIT STRING (SIZE(8)),
    utcDeltaTlsf   BIT STRING (SIZE(8)),
    utcStandardID  BIT STRING (SIZE(3)),
    ie-Extensions   ProtocolExtensionContainer { { GANSS-UTCmodelSet3-ExtIEs } } OPTIONAL,
    ...
}

GANSS-UTCmodelSet3-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

GA-PointWithAltitude ::= SEQUENCE {
    geographicalCoordinates GeographicalCoordinate,
    altitudeAndDirection    GA-AltitudeAndDirection,
    iE-Extensions           ProtocolExtensionContainer { { GA-PointWithAltitude-ExtIEs } } OPTIONAL,
    ...
}

```



```

GA-PointWithAltitude-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

GA-PointWithAltitudeAndUncertaintyEllipsoid ::= SEQUENCE {
    geographicalCoordinates      GeographicalCoordinate,
    altitudeAndDirection         GA-AltitudeAndDirection,
    uncertaintyEllipse            GA-UncertaintyEllipse,
    uncertaintyAltitude          INTEGER (0..127),
    confidence                    INTEGER (0..127),
    iE-Extensions                ProtocolExtensionContainer { { GA-PointWithAltitudeAndUncertaintyEllipsoid-ExtIEs } } OPTIONAL,
    ...
}

GA-PointWithAltitudeAndUncertaintyEllipsoid-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

GA-PointWithUnCertaintyEllipse ::= SEQUENCE {
    geographicalCoordinates      GeographicalCoordinate,
    uncertaintyEllipse           GA-UncertaintyEllipse,
    confidence                    INTEGER (0..127),
    iE-Extensions                ProtocolExtensionContainer { { GA-PointWithUnCertaintyEllipse-ExtIEs } } OPTIONAL,
    ...
}

GA-PointWithUnCertaintyEllipse-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

GA-UncertaintyEllipse ::= SEQUENCE {
    uncertaintySemi-major        INTEGER (0..127),
    uncertaintySemi-minor        INTEGER (0..127),
    orientationOfMajorAxis       INTEGER (0..179),    -- The values 90..179 shall not be used.
    ...
}

GA-PointWithUnCertainty ::= SEQUENCE {
    geographicalCoordinates      GeographicalCoordinate,
    uncertaintyCode              INTEGER (0..127),
    iE-Extensions                ProtocolExtensionContainer { {GA-PointWithUnCertainty-ExtIEs} } OPTIONAL,
    ...
}

GA-PointWithUnCertainty-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

GA-AccessPointPosition ::= SEQUENCE {
    geographicalCoordinate        GeographicalCoordinate,
    iE-Extensions                ProtocolExtensionContainer { {GA-AccessPoint-ExtIEs} } OPTIONAL,
    ...
}

```

```

GA-AccessPoint-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

GeographicalCoordinate ::= SEQUENCE {
    latitudeSign      ENUMERATED { north, south },
    latitude          INTEGER (0..8388607),
    longitude         INTEGER (-8388608..8388607),
    iE-Extensions    ProtocolExtensionContainer { {GeographicalCoordinate-ExtIEs} } OPTIONAL,
    ...
}

GeographicalCoordinate-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

GERAN-Cell-Capability ::= BIT STRING (SIZE (16))
-- First bit: A/Gb mode --
-- Second bit: Iu mode --
-- Note: undefined bits are considered as a spare bit and spare bits shall be set to 0 by the transmitter and shall be ignored by the receiver. --

GERAN-Classmark ::= OCTET STRING
-- GERAN Classmark as defined in (38) --

GERAN-SI-Type ::= CHOICE {
    sI                GERAN-SystemInfo,
    pSI               GERAN-SystemInfo,
    ...
}

GERAN-SystemInfo ::= SEQUENCE (SIZE (1..maxNrOfGERANSI)) OF
    SEQUENCE {
        gGERAN-SI-block    OCTET STRING (SIZE (1..23)),
        iE-Extensions     ProtocolExtensionContainer { { GERAN-SystemInfo-ExtIEs } } OPTIONAL,
        ...
    }

GERAN-SystemInfo-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

GenericTrafficCategory ::= BIT STRING (SIZE (8))

GPS-Almanac ::= SEQUENCE {
    wna-alm          BIT STRING (SIZE (8)),
    satellite-Almanac-Information SEQUENCE (SIZE (1..maxNoSat)) OF
        SEQUENCE {
            dATA-ID      DATA-ID,
            sAT-ID       SAT-ID,
            gps-e-alm    BIT STRING (SIZE (16)),
            gps-toa-alm  BIT STRING (SIZE (8)),
            gps-delta-I-alm BIT STRING (SIZE (16)),
            omegadot-alm BIT STRING (SIZE (16)),
            svhealth-alm BIT STRING (SIZE (8)),
        }
}

```

```

        gps-a-sqrt-alm      BIT STRING (SIZE (24)),
        omegazero-alm     BIT STRING (SIZE (24)),
        m-zero-alm       BIT STRING (SIZE (24)),
        gps-omega-alm     BIT STRING (SIZE (24)),
        gps-af-zero-alm   BIT STRING (SIZE (11)),
        gps-af-one-alm    BIT STRING (SIZE (11)),
        iE-Extensions     ProtocolExtensionContainer { { Satellite-Almanac-Information-ExtIEs} }    OPTIONAL,
        ...
    },
    -- This GPS-Almanac-Information is for the 1st 16 satellites
    sVGlobalHealth-alm    BIT STRING (SIZE (364))    OPTIONAL,
    iE-Extensions        ProtocolExtensionContainer { { GPS-Almanac-ExtIEs} }    OPTIONAL,
    ...
}

Satellite-Almanac-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

GPS-Almanac-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-Satellite-Almanac-Information-ExtItem CRITICALITY ignore    EXTENSION    Satellite-Almanac-Information-ExtItem    PRESENCE
    optional},
    ...
}

Satellite-Almanac-Information-ExtItem ::= SEQUENCE (SIZE (1..maxNrOfSatAlmanac-maxNoSat)) OF
    SEQUENCE {
        dATA-ID          DATA-ID,
        sAT-ID           SAT-ID,
        gps-e-alm        BIT STRING (SIZE (16)),
        gps-toa-alm      BIT STRING (SIZE (8)),
        gps-delta-I-alm  BIT STRING (SIZE (16)),
        omegadot-alm     BIT STRING (SIZE (16)),
        svhealth-alm     BIT STRING (SIZE (8)),
        gps-a-sqrt-alm   BIT STRING (SIZE (24)),
        omegazero-alm    BIT STRING (SIZE (24)),
        m-zero-alm       BIT STRING (SIZE (24)),
        gps-omega-alm    BIT STRING (SIZE (24)),
        gps-af-zero-alm  BIT STRING (SIZE (11)),
        gps-af-one-alm   BIT STRING (SIZE (11)),
        iE-Extensions    ProtocolExtensionContainer { { Satellite-Almanac-Information-ExtItemIEs} }    OPTIONAL,
        ...
    }
-- Includes the GPS-Almanac-Information for the 17th through 32nd satellites.

Satellite-Almanac-Information-ExtItemIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

GPSInformation ::= SEQUENCE (SIZE (1..maxNoGPSTypes)) OF
    SEQUENCE {
        gPSInformationItem    ENUMERATED {
            gPS-NavigationModel-and-TimeRecovery,
            gPS-Ionospheric-Model,

```

```

        GPS-UTC-Model,
        GPS-Almanac,
        GPS-RealTime-Integrity,
        ...
    },
    iE-Extensions          ProtocolExtensionContainer { { GPSInformation-ExtIEs } }    OPTIONAL,
    ...
}
-- This IE shall be present if the Information Type IE indicates 'GPS Information'

GPSInformation-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

GPS-Ionospheric-Model ::= SEQUENCE {
    alpha-zero-ionos      BIT STRING (SIZE (8)),
    alpha-one-ionos       BIT STRING (SIZE (8)),
    alpha-two-ionos       BIT STRING (SIZE (8)),
    alpha-three-ionos     BIT STRING (SIZE (8)),
    beta-zero-ionos       BIT STRING (SIZE (8)),
    beta-one-ionos        BIT STRING (SIZE (8)),
    beta-two-ionos        BIT STRING (SIZE (8)),
    beta-three-ionos      BIT STRING (SIZE (8)),
    iE-Extensions         ProtocolExtensionContainer { { GPS-Ionospheric-Model-ExtIEs } }    OPTIONAL,
    ...
}

GPS-Ionospheric-Model-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

GPS-NavigationModel-and-TimeRecovery ::= SEQUENCE (SIZE (1..maxNoSat)) OF
SEQUENCE {
    tx-tow-nav            INTEGER (0..1048575),
    SAT-ID                SAT-ID,
    tlm-message-nav       BIT STRING (SIZE (14)),
    tlm-revd-c-nav        BIT STRING (SIZE (2)),
    ho-word-nav           BIT STRING (SIZE (22)),
    w-n-nav               BIT STRING (SIZE (10)),
    ca-or-p-on-l2-nav     BIT STRING (SIZE (2)),
    user-range-accuracy-index-nav BIT STRING (SIZE (4)),
    sv-health-nav         BIT STRING (SIZE (6)),
    iodc-nav              BIT STRING (SIZE (10)),
    l2-p-dataflag-nav     BIT STRING (SIZE (1)),
    sf1-reserved-nav      BIT STRING (SIZE (87)),
    t-gd-nav              BIT STRING (SIZE (8)),
    t-oc-nav              BIT STRING (SIZE (16)),
    a-f-2-nav             BIT STRING (SIZE (8)),
    a-f-1-nav             BIT STRING (SIZE (16)),
    a-f-zero-nav          BIT STRING (SIZE (22)),
    c-rs-nav              BIT STRING (SIZE (16)),
    delta-n-nav           BIT STRING (SIZE (16)),
    m-zero-nav            BIT STRING (SIZE (32)),
    c-uc-nav              BIT STRING (SIZE (16)),

```

```

    gps-e-nav          BIT STRING (SIZE (32)),
    c-us-nav           BIT STRING (SIZE (16)),
    a-sqrt-nav         BIT STRING (SIZE (32)),
    t-oe-nav           BIT STRING (SIZE (16)),
    fit-interval-flag-nav BIT STRING (SIZE (1)),
    aodo-nav           BIT STRING (SIZE (5)),
    c-ic-nav           BIT STRING (SIZE (16)),
    omega-zero-nav     BIT STRING (SIZE (32)),
    c-is-nav           BIT STRING (SIZE (16)),
    i-zero-nav         BIT STRING (SIZE (32)),
    c-rc-nav           BIT STRING (SIZE (16)),
    gps-omega-nav      BIT STRING (SIZE (32)),
    omegadot-nav       BIT STRING (SIZE (24)),
    idot-nav           BIT STRING (SIZE (14)),
    spare-zero-fill    BIT STRING (SIZE (20)),
    iE-Extensions      ProtocolExtensionContainer { { GPS-NavigationModel-and-TimeRecoveryItem-ExtIEs } } OPTIONAL,
    ...
}

GPS-NavigationModel-and-TimeRecoveryItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

GPS-RealTime-Integrity ::= CHOICE {
    badSatellites          BadSatellites,
    noBadSatellite        NULL
}

GPS-RX-POS ::= SEQUENCE {
    geographicalCoordinate      GeographicalCoordinate,
    altitudeAndDirection        GA-AltitudeAndDirection,
    iE-Extensions               ProtocolExtensionContainer { { GPS-RX-POS-ExtIEs } } OPTIONAL,
    ...
}

GPS-RX-POS-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

GPS-Status-Health ::= ENUMERATED {
    udre-1-0,
    udre-0-75,
    udre-0-5,
    udre-0-3,
    udre-0-1,
    no-data,
    invalid-data
}

GPSTOW ::= INTEGER (0..604799)

GPS-UTC-Model ::= SEQUENCE {
    a-one-utc          BIT STRING (SIZE (24)),
    a-zero-utc         BIT STRING (SIZE (32)),

```

```

t-ot-utc          BIT STRING (SIZE (8)),
delta-t-ls-utc   BIT STRING (SIZE (8)),
w-n-t-utc        BIT STRING (SIZE (8)),
w-n-lsf-utc      BIT STRING (SIZE (8)),
dn-utc           BIT STRING (SIZE (8)),
delta-t-lsf-utc  BIT STRING (SIZE (8)),
iE-Extensions    ProtocolExtensionContainer { { GPS-UTC-Model-ExtIEs } }    OPTIONAL,
...
}

GPS-UTC-Model-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

Guaranteed-Rate-Information ::= SEQUENCE {
  guaranteed-UL-Rate      Guaranteed-Rate OPTIONAL,
  guaranteed-DL-Rate      Guaranteed-Rate OPTIONAL,
  iE-Extensions          ProtocolExtensionContainer { { Guaranteed-Rate-Information-ExtIEs } } OPTIONAL,
  ...
}

Guaranteed-Rate-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

Guaranteed-Rate ::= INTEGER (1..maxNrOfTFs)
-- "1": TFI 0, "2": TFI 1, "3": TFI 2, ...

-- H

HARQ-Info-for-E-DCH ::= ENUMERATED {
  rv0,
  rvtable
}

HARQ-MemoryPartitioning ::= CHOICE {
  implicit      HARQ-MemoryPartitioning-Implicit,
  explicit      HARQ-MemoryPartitioning-Explicit,
  ...
}

HARQ-MemoryPartitioning-Implicit ::= SEQUENCE {
  number-of-Processes      INTEGER (1..8,...,12|14|16),
  iE-Extensions            ProtocolExtensionContainer { { HARQ-MemoryPartitioning-Implicit-ExtIEs } }    OPTIONAL,
  ...
}

HARQ-MemoryPartitioning-Implicit-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

HARQ-MemoryPartitioning-Explicit ::= SEQUENCE {
  HARQ-MemoryPartitioningList HARQ-MemoryPartitioningList,
  iE-Extensions                ProtocolExtensionContainer { { HARQ-MemoryPartitioning-Explicit-ExtIEs } }    OPTIONAL,

```

```

}
...
}
HARQ-MemoryPartitioning-Explicit-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  {ID id-HARQ-MemoryPartitioningInfoExtForMIMO    CRITICALITY ignore  EXTENSION HARQ-MemoryPartitioningInfoExtForMIMO  PRESENCE optional},
  ...
}
HARQ-MemoryPartitioningList ::= SEQUENCE (SIZE (1..maxNrOfHARQProc)) OF HARQ-MemoryPartitioningItem
HARQ-MemoryPartitioningInfoExtForMIMO ::= SEQUENCE (SIZE (4|6|8)) OF HARQ-MemoryPartitioningItem
HARQ-MemoryPartitioningItem ::= SEQUENCE {
  process-Memory-Size          ENUMERATED {
    hms800, hms1600, hms2400, hms3200, hms4000,
    hms4800, hms5600, hms6400, hms7200, hms8000,
    hms8800, hms9600, hms10400, hms11200, hms12000,
    hms12800, hms13600, hms14400, hms15200, hms16000,
    hms17600, hms19200, hms20800, hms22400, hms24000,
    hms25600, hms27200, hms28800, hms30400, hms32000,
    hms36000, hms40000, hms44000, hms48000, hms52000,
    hms56000, hms60000, hms64000, hms68000, hms72000,
    hms76000, hms80000, hms88000, hms96000, hms104000,
    hms112000, hms120000, hms128000, hms136000, hms144000,
    hms152000, hms160000, hms176000, hms192000, hms208000,
    hms224000, hms240000, hms256000, hms272000, hms288000,
    hms304000, ...},
  iE-Extensions              ProtocolExtensionContainer { { HARQ-MemoryPartitioningItem-ExtIEs } }  OPTIONAL,
  ...
}
HARQ-MemoryPartitioningItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}
HARQ-Preamble-Mode ::= ENUMERATED {
  mode0,
  mode1
}
HARQ-Process-Allocation-2ms-EDCH ::= BIT STRING ( SIZE(maxNrOfEDCHHARQProcesses2msEDCH) )
HARQ-Preamble-Mode-Activation-Indicator ::=ENUMERATED  {
  harqPreambleModeSupported
}
HCS-Prio    ::= INTEGER (0..7)
-- 0 = lowest priority, ...7 = highest priority
HSDSCH-Configured-Indicator ::= ENUMERATED {
  configured-HS-DSCH,
  no-configured-HS-DSCH
}

```

```

HSDSCH-FDD-Information ::= SEQUENCE {
    hSDSCH-MACdFlows-Information          HSDSCH-MACdFlows-Information,
    uE-Capabilities-Info                  UE-Capabilities-Info,
    mACHs-Reordering-Buffer-Size-for-RLC-UM MACHsReorderingBufferSize-for-RLC-UM,
    cqiFeedback-CycleK                    CQI-Feedback-Cycle,
    cqiRepetitionFactor                    CQI-RepetitionFactor                OPTIONAL,
    -- This IE shall be present if the CQI Feedback Cycle k IE is set to a value greater than 0.
    ackNackRepetitionFactor                AckNack-RepetitionFactor,
    cqiPowerOffset                         CQI-Power-Offset,
    ackPowerOffset                         Ack-Power-Offset,
    nackPowerOffset                        Nack-Power-Offset,
    hsscch-PowerOffset                     HSSCCH-PowerOffset                OPTIONAL,
    iE-Extensions                          ProtocolExtensionContainer { { HSDSCH-FDD-Information-ExtIEs } }    OPTIONAL,
    ...
}

HSDSCH-FDD-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-HARQ-Preamble-Mode              CRITICALITY ignore EXTENSION HARQ-Preamble-Mode              PRESENCE optional } |
    { ID id-MIMO-ActivationIndicator         CRITICALITY reject EXTENSION MIMO-ActivationIndicator         PRESENCE optional } |
    { ID id-HSDSCH-MACdPDUSizeFormat        CRITICALITY reject EXTENSION HSDSCH-MACdPDUSizeFormat        PRESENCE optional } |
    { ID id-SixtyfourQAM-UsageAllowedIndicator CRITICALITY ignore EXTENSION SixtyfourQAM-UsageAllowedIndicator PRESENCE optional } |
    { ID id-UE-with-enhanced-HS-SCCH-support-indicator CRITICALITY ignore EXTENSION NULL PRESENCE optional } |
    { ID id-EnhancedHSServingCC-Abort       CRITICALITY reject EXTENSION EnhancedHSServingCC-Abort       PRESENCE optional } |
    { ID id-UE-SupportIndicatorExtension    CRITICALITY ignore EXTENSION UE-SupportIndicatorExtension    PRESENCE optional } |
    { ID id-power-offset-for-S-CPICH-for-MIMO-Request-Indicator CRITICALITY ignore EXTENSION PowerOffsetForSecondaryCPICHforMIMORequestIndicator PRESENCE optional } ,
    ...
}

HSDSCH-FDD-Information-Response ::= SEQUENCE {
    hSDSCH-MACdFlow-Specific-InfoList-Response HSDSCH-MACdFlow-Specific-InfoList-Response          OPTIONAL,
    hSSCCH-Specific-InfoList-Response          HSSCCH-FDD-Specific-InfoList-Response                OPTIONAL,
    hSPDSCH-and-HSSCCH-ScramblingCode         DL-ScramblingCode                                    OPTIONAL,
    measurement-Power-Offset                  Measurement-Power-Offset                              OPTIONAL,
    hARQ-MemoryPartitioning                   HARQ-MemoryPartitioning                              OPTIONAL,
    iE-Extensions                              ProtocolExtensionContainer { { HSDSCH-FDD-Information-Response-ExtIEs } }    OPTIONAL,
    ...
}

HSDSCH-FDD-Information-Response-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-User-Plane-Congestion-Fields-Inclusion CRITICALITY ignore EXTENSION User-Plane-Congestion-Fields-Inclusion PRESENCE optional } |
    { ID id-HARQ-Preamble-Mode-Activation-Indicator CRITICALITY ignore EXTENSION HARQ-Preamble-Mode-Activation-Indicator PRESENCE optional } |
    { ID id-MIMO-InformationResponse            CRITICALITY ignore EXTENSION MIMO-InformationResponse            PRESENCE optional } |
    { ID id-SixtyfourQAM-DL-UsageIndicator      CRITICALITY ignore EXTENSION SixtyfourQAM-DL-UsageIndicator      PRESENCE optional } |
    { ID id-HSDSCH-TBSizeTableIndicator        CRITICALITY ignore EXTENSION HSDSCH-TBSizeTableIndicator        PRESENCE optional } |
    { ID id-power-offset-for-S-CPICH-for-MIMO   CRITICALITY ignore EXTENSION PowerOffsetForSecondaryCPICHforMIMO   PRESENCE optional } ,
    ...
}

HS-DSCH-FDD-Secondary-Serving-Information ::= SEQUENCE {
    hsscch-PowerOffset                       HSSCCH-PowerOffset                                OPTIONAL,
    sixtyfourQAM-UsageAllowedIndicator       SixtyfourQAM-UsageAllowedIndicator                OPTIONAL,
    iE-Extensions                             ProtocolExtensionContainer { { HS-DSCH-FDD-Secondary-Serving-Information-ExtIEs } }
    OPTIONAL,
}

```



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}
...
}
HS-DSCH-FDD-Secondary-Serving-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
{ID id-DiversityMode          CRITICALITY reject      EXTENSION DiversityMode PRESENCE optional}|
{ID id-TransmitDiversityIndicator  CRITICALITY reject      EXTENSION TransmitDiversityIndicator  PRESENCE optional},
...
}

HS-DSCH-FDD-Secondary-Serving-Information-Response ::= SEQUENCE {
hSSCCH-Specific-InfoList-Response      HSSCCH-FDD-Specific-InfoList-Response      OPTIONAL,
hSPDSCH-and-HSSCCH-ScramblingCode      DL-ScramblingCode                          OPTIONAL,
measurement-Power-Offset                Measurement-Power-Offset                    OPTIONAL,
sixtyfourQAM-DL-UsageIndicator          SixtyfourQAM-DL-UsageIndicator              OPTIONAL,
hSDSCH-TBSizeTableIndicator             HSDSCH-TBSizeTableIndicator                OPTIONAL,
iE-Extensions                            ProtocolExtensionContainer { { HS-DSCH-FDD-Secondary-Serving-Information-Respons-ExtIEs } }
OPTIONAL,
...
}

HS-DSCH-FDD-Secondary-Serving-Information-Respons-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

HS-DSCH-Secondary-Serving-Information-To-Modify ::= SEQUENCE {
hsscch-PowerOffset                    HSSCCH-PowerOffset                        OPTIONAL,
hSSCCH-CodeChangeGrant                HSSCCH-Code-Change-Grant                  OPTIONAL,
sixtyfourQAM-UsageAllowedIndicator     SixtyfourQAM-UsageAllowedIndicator        OPTIONAL,
iE-Extensions                            ProtocolExtensionContainer { { HS-DSCH-Secondary-Serving-Information-To-Modify-ExtIEs } }
OPTIONAL,
...
}

HS-DSCH-Secondary-Serving-Information-To-Modify-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
{ID id-DiversityMode          CRITICALITY reject      EXTENSION DiversityMode PRESENCE optional}|
{ID id-TransmitDiversityIndicator  CRITICALITY reject      EXTENSION TransmitDiversityIndicator  PRESENCE optional}|
-- This IE shall be present if Diversity Mode IE is present and is not set to "none"
{ID id-NonCellSpecificTxDiversity  CRITICALITY reject      EXTENSION NonCellSpecificTxDiversity  PRESENCE optional},
...
}

HS-DSCH-FDD-Secondary-Serving-Information-To-Modify-Unsynchronised ::= SEQUENCE {
hsscch-PowerOffset                    HSSCCH-PowerOffset                        OPTIONAL,
sixtyfourQAM-UsageAllowedIndicator     SixtyfourQAM-UsageAllowedIndicator        OPTIONAL,
iE-Extensions                            ProtocolExtensionContainer { { HS-DSCH-FDD-Secondary-Serving-Information-To-Modify-Unsynchronised-ExtIEs } }
OPTIONAL,
...
}

HS-DSCH-FDD-Secondary-Serving-Information-To-Modify-Unsynchronised-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

HS-DSCH-FDD-Secondary-Serving-Update-Information ::= SEQUENCE {

```

```

hsSCCHCodeChangeIndicator          HSSCCH-CodeChangeIndicator          OPTIONAL,
hs-PDSCH-Code-Change-Indicator     HS-PDSCH-Code-Change-Indicator     OPTIONAL,
-- This IE shall never be included. If received it shall be ignored.
iE-Extensions                      ProtocolExtensionContainer { { HS-DSCH-FDD-Secondary-Serving-Update-Information-ExtIEs } }
OPTIONAL,
...
}

HS-DSCH-FDD-Secondary-Serving-Update-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

HS-DSCH-Secondary-Serving-Cell-Change-Information-Response ::= SEQUENCE {
hs-DSCH-Secondary-Serving-cell-choice HS-DSCH-Secondary-Serving-cell-change-choice,
iE-Extensions                      ProtocolExtensionContainer { { HS-DSCH-Secondary-Serving-Cell-Change-Information-Response-ExtIEs } }
}
OPTIONAL,
...
}

HS-DSCH-Secondary-Serving-Cell-Change-Information-Response-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

HS-DSCH-Secondary-Serving-cell-change-choice ::= CHOICE {
hs-Secondary-Serving-cell-change-successful HS-Secondary-Serving-cell-change-successful,
hs-Secondary-Serving-cell-change-unsuccessful HS-Secondary-Serving-cell-change-unsuccessful,
...
}

HS-Secondary-Serving-cell-change-successful ::= SEQUENCE {
hs-DSCH-FDD-Secondary-Serving-Information-Response HS-DSCH-FDD-Secondary-Serving-Information-Response,
hSDSCH-RNTI HSDSCH-RNTI,
iE-Extensions ProtocolExtensionContainer { { HS-Secondary-Serving-cell-change-successful-ExtIEs } } OPTIONAL,
...
}

HS-Secondary-Serving-cell-change-successful-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

HS-Secondary-Serving-cell-change-unsuccessful ::= SEQUENCE {
cause Cause,
iE-Extensions ProtocolExtensionContainer { { HS-Secondary-Serving-cell-change-unsuccessful-ExtIEs } } OPTIONAL,
...
}

HS-Secondary-Serving-cell-change-unsuccessful-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

HS-DSCH-Secondary-Serving-Remove ::= NULL

HSDSCH-Information-to-Modify ::= SEQUENCE {
hSDSCH-MACdFlow-Specific-InfoList-to-Modify HSDSCH-MACdFlow-Specific-InfoList-to-Modify OPTIONAL,

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priorityQueue-Info-to-Modify          PriorityQueue-InfoList-to-Modify          OPTIONAL,
mAchs-Reordering-Buffer-Size-for-RLC-UM  MAchsReorderingBufferSize-for-RLC-UM      OPTIONAL,
cqiFeedback-CycleK                    CQI-Feedback-Cycle                        OPTIONAL,    -- For FDD only
cqiRepetitionFactor                    CQI-RepetitionFactor                      OPTIONAL,    -- For FDD only
ackNackRepetitionFactor                 AckNack-RepetitionFactor                   OPTIONAL,    -- For FDD only
cqiPowerOffset                          CQI-Power-Offset                          OPTIONAL,    -- For FDD only
ackPowerOffset                          Ack-Power-Offset                          OPTIONAL,    -- For FDD only
nackPowerOffset                          Nack-Power-Offset                          OPTIONAL,    -- For FDD only
hsscch-PowerOffset                      HSSCCH-PowerOffset                         OPTIONAL,    -- For FDD only
hSSCCH-CodeChangeGrant                  HSSCCH-Code-Change-Grant                  OPTIONAL,
tDDAckNackPowerOffset                   TDD-AckNack-Power-Offset                   OPTIONAL,    -- For TDD only
iE-Extensions                            ProtocolExtensionContainer { { HSDSCH-Information-to-Modify-ExtIEs } }      OPTIONAL,
...
}

HSDSCH-Information-to-Modify-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
{ ID id-HARQ-Preamble-Mode                CRITICALITY ignore      EXTENSION  HARQ-Preamble-Mode                PRESENCE optional}|
{ ID id-HS-PDSCH-Code-Change-Grant        CRITICALITY ignore      EXTENSION  HS-PDSCH-Code-Change-Grant        PRESENCE optional}|
  -- Applicable to FDD only
{ ID id-MIMO-Mode-Indicator                CRITICALITY reject      EXTENSION  MIMO-Mode-Indicator                PRESENCE optional}|
{ ID id-HSDSCH-MACdPDUSizeFormat          CRITICALITY reject      EXTENSION  HSDSCH-MACdPDUSizeFormat          PRESENCE optional}|
{ ID id-SixtyfourQAM-UsageAllowedIndicator CRITICALITY ignore      EXTENSION  SixtyfourQAM-UsageAllowedIndicator PRESENCE optional}|
{ ID id-UE-Capabilities-Info              CRITICALITY ignore      EXTENSION  UE-Capabilities-Info              PRESENCE optional}|
{ ID id-EnhancedHSServingCC-Abort         CRITICALITY reject      EXTENSION  EnhancedHSServingCC-Abort         PRESENCE optional}|
{ ID id-UE-SupportIndicatorExtension       CRITICALITY ignore      EXTENSION  UE-SupportIndicatorExtension       PRESENCE optional}|
{ ID id-power-offset-for-S-CPICH-for-MIMO-Request-Indicator CRITICALITY ignore      EXTENSION  PowerOffsetForSecondaryCPICHforMIMOREquestIndicator PRESENCE optional},
...
}

HSDSCH-Information-to-Modify-Unsynchronised ::= SEQUENCE {
  hSDSCH-MACdFlow-Specific-InfoList-to-Modify HSDSCH-MACdFlow-Specific-InfoList-to-Modify          OPTIONAL,
  priorityQueueInfoToModifyUnsynchronised      PriorityQueue-InfoList-to-Modify-Unsynchronised        OPTIONAL,
  cqiPowerOffset                              CQI-Power-Offset          OPTIONAL,    -- For FDD only
  ackPowerOffset                              Ack-Power-Offset          OPTIONAL,    -- For FDD only
  nackPowerOffset                              Nack-Power-Offset          OPTIONAL,    -- For FDD only
  hsscch-PowerOffset                          HSSCCH-PowerOffset        OPTIONAL,    -- Only for FDD
  tDDAckNackPowerOffset                       TDD-AckNack-Power-Offset  OPTIONAL,    -- For TDD only
  iE-Extensions                               ProtocolExtensionContainer { { HSDSCH-Information-to-Modify-Unsynchronised-ExtIEs } }
  OPTIONAL,
  ...
}

HSDSCH-Information-to-Modify-Unsynchronised-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
{ ID id-HARQ-Preamble-Mode                CRITICALITY ignore      EXTENSION  HARQ-Preamble-Mode                PRESENCE optional}|
{ ID id-MIMO-Mode-Indicator                CRITICALITY reject      EXTENSION  MIMO-Mode-Indicator                PRESENCE optional}|
{ ID id-SixtyfourQAM-UsageAllowedIndicator CRITICALITY ignore      EXTENSION  SixtyfourQAM-UsageAllowedIndicator PRESENCE optional}|
{ ID id-EnhancedHSServingCC-Abort         CRITICALITY reject      EXTENSION  EnhancedHSServingCC-Abort         PRESENCE optional}|
{ ID id-UE-SupportIndicatorExtension       CRITICALITY ignore      EXTENSION  UE-SupportIndicatorExtension       PRESENCE optional}|
{ ID id-power-offset-for-S-CPICH-for-MIMO-Request-Indicator CRITICALITY ignore      EXTENSION  PowerOffsetForSecondaryCPICHforMIMOREquestIndicator PRESENCE optional},
...
}

```

```

HSDSCH-MACdFlow-ID ::= INTEGER (0..maxNrOfMACdFlows-1)

HSDSCH-MACdFlow-Specific-InfoList ::= SEQUENCE (SIZE (1..maxNrOfMACdFlows)) OF HSDSCH-MACdFlow-Specific-InfoItem

HSDSCH-MACdPDUSizeFormat ::= ENUMERATED {
    indexedMACdPDU-Size,
    flexibleMACdPDU-Size
}

HSDSCH-MACdFlow-Specific-InfoItem ::= SEQUENCE {
    hSDSCH-MACdFlow-ID          HSDSCH-MACdFlow-ID,
    allocationRetentionPriority AllocationRetentionPriority,
    trafficClass                TrafficClass,
    bindingID                   BindingID OPTIONAL,
    transportLayerAddress       TransportLayerAddress OPTIONAL,
    iE-Extensions               ProtocolExtensionContainer { { HSDSCH-MACdFlow-Specific-InfoItem-ExtIEs } } OPTIONAL,
    ...
}

HSDSCH-MACdFlow-Specific-InfoItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    {ID id-TnlQos          CRITICALITY ignore     EXTENSION TnlQos PRESENCE optional }|
    {ID id-TrCH-SrcStatisticsDescr CRITICALITY ignore EXTENSION TrCH-SrcStatisticsDescr PRESENCE optional },
    ...
}

HSDSCH-MACdFlow-Specific-InfoList-Response ::= SEQUENCE (SIZE (0..maxNrOfMACdFlows)) OF HSDSCH-MACdFlow-Specific-InfoItem-Response

HSDSCH-MACdFlow-Specific-InfoItem-Response ::= SEQUENCE {
    hSDSCH-MACdFlow-ID          HSDSCH-MACdFlow-ID,
    bindingID                   BindingID OPTIONAL,
    transportLayerAddress       TransportLayerAddress OPTIONAL,
    hSDSCH-Initial-Capacity-Allocation HSDSCH-Initial-Capacity-Allocation OPTIONAL,
    iE-Extensions               ProtocolExtensionContainer { { HSDSCH-MACdFlow-Specific-InfoItem-Response-ExtIEs } } OPTIONAL,
    ...
}

HSDSCH-MACdFlow-Specific-InfoItem-Response-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

HSDSCH-MACdFlow-Specific-InfoList-to-Modify ::= SEQUENCE (SIZE (1..maxNrOfMACdFlows)) OF HSDSCH-MACdFlow-Specific-InfoItem-to-Modify

HSDSCH-MACdFlow-Specific-InfoItem-to-Modify ::= SEQUENCE {
    hSDSCH-MACdFlow-ID          HSDSCH-MACdFlow-ID,
    allocationRetentionPriority AllocationRetentionPriority OPTIONAL,
    transportBearerRequestIndicator TransportBearerRequestIndicator,
    trafficClass                TrafficClass OPTIONAL,
    bindingID                   BindingID OPTIONAL,
    transportLayerAddress       TransportLayerAddress OPTIONAL,
    iE-Extensions               ProtocolExtensionContainer { { HSDSCH-MACdFlow-Specific-InfoItem-to-Modify-ExtIEs } } OPTIONAL,
    ...
}

HSDSCH-MACdFlow-Specific-InfoItem-to-Modify-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {

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    {ID id-TnlQos          CRITICALITY ignore      EXTENSION  TnlQos  PRESENCE optional },
    ...
}

HSDSCH-MACdFlows-Information ::= SEQUENCE {
    hSDSCH-MACdFlow-Specific-Info          HSDSCH-MACdFlow-Specific-InfoList,
    priorityQueue-Info                     PriorityQueue-InfoList,
    iE-Extensions                          ProtocolExtensionContainer { { HSDSCH-MACdFlows-Information-ExtIEs } } OPTIONAL,
    ...
}

HSDSCH-MACdFlows-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

HSDSCH-MACdFlows-to-Delete ::= SEQUENCE (SIZE (1..maxNrOfMACdFlows)) OF HSDSCH-MACdFlows-to-Delete-Item

HSDSCH-MACdFlows-to-Delete-Item ::= SEQUENCE {
    hsDSCH-MACdFlow-ID                    HSDSCH-MACdFlow-ID,
    iE-Extensions                          ProtocolExtensionContainer { { HSDSCH-MACdFlows-to-Delete-Item-ExtIEs} } OPTIONAL,
    ...
}

HSDSCH-MACdFlows-to-Delete-Item-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

HSDSCH-Initial-Capacity-Allocation ::= SEQUENCE (SIZE (1..maxNrOfPrioQueues)) OF HSDSCH-Initial-Capacity-AllocationItem

HSDSCH-Initial-Capacity-AllocationItem ::= SEQUENCE {
    schedulingPriorityIndicator            SchedulingPriorityIndicator,
    maximum-MACdPDU-Size                  MACdPDU-Size,
    hSDSCH-InitialWindowSize              HSDSCH-InitialWindowSize,
    iE-Extensions                          ProtocolExtensionContainer { {HSDSCH-Initial-Capacity-AllocationItem-ExtIEs} } OPTIONAL,
    ...
}

HSDSCH-Initial-Capacity-AllocationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-MaximumMACdPDU-SizeExtended    CRITICALITY ignore      EXTENSION  MAC-PDU-SizeExtended  PRESENCE optional},
    ...
}

HSDSCH-InitialWindowSize                ::= INTEGER (1..255)
-- Number of MAC-d PDUs.

HSDSCH-PreconfigurationInfo ::= SEQUENCE {
    setsOfHS-SCCH-Codes                  SetsOfHS-SCCH-Codes,
    hARQ-MemoryPartitioning              HARQ-MemoryPartitioning,
    eDCH-FDD-DL-ControlChannelInformation EDCH-FDD-DL-ControlChannelInformation OPTIONAL,
    hARQ-Preamble-Mode-Activation-Indicator HARQ-Preamble-Mode-Activation-Indicator OPTIONAL,
    mIMO-N-M-Ratio                       MIMO-InformationResponse OPTIONAL,

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    continuous-Packet-Connectivity-HS-SCCH-Less-Information-Response    Continuous-Packet-Connectivity-HS-SCCH-Less-Information-Response
    OPTIONAL,
    iE-Extensions                ProtocolExtensionContainer { { HSDSCH-PreconfigurationInfo-ExtIEs } }    OPTIONAL,
    ...
}

HSDSCH-PreconfigurationInfo-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
{ ID id-power-offset-for-S-CPICH-for-MIMO    CRITICALITY ignore    EXTENSION PowerOffsetForSecondaryCPICHforMIMO    PRESENCE optional},
    ...
}

HSDSCH-PreconfigurationSetup ::= SEQUENCE {
    mAChsResetScheme                MAChsResetScheme,
    hSDSCH-Physical-Layer-Category    INTEGER (1..64,...),
    mAChs-Reordering-Buffer-Size-for-RLC-UM    MAChsReorderingBufferSize-for-RLC-UM,
    secondaryServingCells            SecondaryServingCells    OPTIONAL,
    numPrimaryHS-SCCH-Codes          NumHS-SCCH-Codes    OPTIONAL,
    hARQ-Preamble-Mode              HARQ-Preamble-Mode    OPTIONAL,
    mIMO-ActivationIndicator          MIMO-ActivationIndicator    OPTIONAL,
    hSDSCH-MACdPDUSizeFormat          HSDSCH-MACdPDUSizeFormat    OPTIONAL,
    sixtyfourQAM-UsageAllowedIndicator    SixtyfourQAM-UsageAllowedIndicator    OPTIONAL,
    uE-with-enhanced-HS-SCCH-support-indicator    NULL    OPTIONAL,
    continuous-Packet-Connectivity-HS-SCCH-Less-Information    Continuous-Packet-Connectivity-HS-SCCH-Less-Information    OPTIONAL,
    iE-Extensions                ProtocolExtensionContainer { { HSDSCHPreconfigurationSetup-ExtIEs } }    OPTIONAL,
    ...
}

HSDSCHPreconfigurationSetup-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
{ ID id-UE-SupportIndicatorExtension    CRITICALITY ignore    EXTENSION UE-SupportIndicatorExtension    PRESENCE optional}|
{ ID id-power-offset-for-S-CPICH-for-MIMO-Request-Indicator    CRITICALITY ignore    EXTENSION PowerOffsetForSecondaryCPICHforMIMORequestIndicator
    PRESENCE optional},
    ...
}

HS-SCCH-PreconfiguredCodes ::= SEQUENCE (SIZE (1..maxNrOfHSSCCHCodes)) OF HS-SCCH-PreconfiguredCodesItem

HS-SCCH-PreconfiguredCodesItem ::= SEQUENCE {
    hS-SCCH-CodeNumber            HS-SCCH-CodeNumber,
    iE-Extensions                ProtocolExtensionContainer { { HS-SCCH-PreconfiguredCodesItem-ExtIEs } }    OPTIONAL,
    ...
}

HS-SCCH-PreconfiguredCodesItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

HS-SCCH-CodeNumber ::= INTEGER (0..127)

HSDSCH-RNTI ::= INTEGER (0..65535)

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HS-DSCH-serving-cell-change-information ::= SEQUENCE {
    hS-PDSCH-RLID          RL-ID,
    hSDSCH-FDD-Information HSDSCH-FDD-Information OPTIONAL,
    iE-Extensions         ProtocolExtensionContainer { { HS-DSCH-serving-cell-change-information-ExtIEs } } OPTIONAL,
    ...
}

HS-DSCH-serving-cell-change-information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-Continuous-Packet-Connectivity-HS-SCCH-Less-Information CRITICALITY reject EXTENSION Continuous-Packet-Connectivity-HS-SCCH-Less-Information PRESENCE optional},
    ...
}

HS-DSCH-serving-cell-change-informationResponse ::= SEQUENCE {
    hS-DSCH-serving-cell-choice HS-DSCH-serving-cell-change-choice,
    iE-Extensions              ProtocolExtensionContainer { { HS-DSCH-serving-cell-change-informationResponse-ExtIEs } } OPTIONAL,
    ...
}

HS-DSCH-serving-cell-change-informationResponse-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

HS-DSCH-serving-cell-change-choice ::= CHOICE {
    hS-serving-cell-change-successful HS-serving-cell-change-successful,
    hS-serving-cell-change-unsuccessful HS-serving-cell-change-unsuccessful,
    ...
}

HSDSCH-TBSizeTableIndicator ::= ENUMERATED {
    octet-aligned
}

HS-serving-cell-change-successful ::= SEQUENCE {
    hSDSCH-FDD-Information-Response HSDSCH-FDD-Information-Response,
    hSDSCH-RNTI                     HSDSCH-RNTI,
    iE-Extensions                   ProtocolExtensionContainer { { HS-serving-cell-change-successful-ExtIEs } } OPTIONAL,
    ...
}

HS-serving-cell-change-successful-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-Continuous-Packet-Connectivity-HS-SCCH-Less-Information-Response CRITICALITY ignore EXTENSION Continuous-Packet-Connectivity-HS-SCCH-Less-Information-Response PRESENCE optional},
    ...
}

HS-serving-cell-change-unsuccessful ::= SEQUENCE {
    cause                          Cause,
    iE-Extensions                  ProtocolExtensionContainer { { HS-serving-cell-change-unsuccessful-ExtIEs } } OPTIONAL,
    ...
}

HS-serving-cell-change-unsuccessful-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {

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}
...
}
HSPDSCH-First-Code-Index ::= INTEGER (1..maxHS-PDSCHCodeNrComp-1)
-- index of first HS-PDSCH code

HSPDSCH-Second-Code-Index ::= INTEGER (1..maxHS-PDSCHCodeNrComp-1)
-- index of second HS-PDSCH code

HSPDSCH-Second-Code-Support ::= BOOLEAN
-- true: applied, false: not applied

HSDSCH-TDD-Information ::= SEQUENCE {
    hSDSCH-MACdFlows-Information          HSDSCH-MACdFlows-Information,
    uE-Capabilities-Info                  UE-Capabilities-Info,
    mACHs-Reordering-Buffer-Size-for-RLC-UM MACHsReorderingBufferSize-for-RLC-UM,
    tDD-AckNack-Power-Offset              TDD-AckNack-Power-Offset,
    iE-Extensions                          ProtocolExtensionContainer { { HSDSCH-TDD-Information-ExtIEs } } OPTIONAL,
    ...
}

HSDSCH-TDD-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
{ ID id-HSDSCH-MACdPDUSizeFormat          CRITICALITY reject      EXTENSION HSDSCH-MACdPDUSizeFormat PRESENCE optional}|
{ ID id-HSSICH-SIRTarget                  CRITICALITY ignore       EXTENSION UL-SIR PRESENCE optional}|
-- Applicable to 1.28Mcps TDD only
{ ID id-HSSICH-TPC-StepSize                CRITICALITY ignore       EXTENSION TDD-TPC-UplinkStepSize-LCR PRESENCE optional}|
-- Mandatory for 1.28Mcps TDD only
{ ID id-tSN-Length                        CRITICALITY reject       EXTENSION TSN-Length PRESENCE optional }|
-- Applicable for 1.28Mcps TDD when using multiple frequencies
{ ID id-MIMO-ActivationIndicator           CRITICALITY reject       EXTENSION MIMO-ActivationIndicator PRESENCE optional},
    ...
}

HSDSCH-TDD-Information-Response ::= SEQUENCE {
    hSDSCH-MACdFlow-Specific-InfoList-Response HSDSCH-MACdFlow-Specific-InfoList-Response OPTIONAL,
    hSSCCH-TDD-Specific-InfoList-Response      HSSCCH-TDD-Specific-InfoList-Response OPTIONAL,
    -- Not Applicable to 1.28Mcps TDD
    hSSCCH-TDD-Specific-InfoList-Response-LCR HSSCCH-TDD-Specific-InfoList-Response-LCR OPTIONAL,
    -- Not Applicable to 3.84Mcps TDD or 7.68Mcps TDD. This HSSCCH Specific Information is for the first Frequency repetition, HSSCCH Specific
Information for Frequency repetitions 2 and on, should be defined in MultipleFreq-HSPDSCH-InformationList-ResponseTDDLRCR
    hSPDSCH-TDD-Specific-InfoList-Response     HSPDSCH-TDD-Specific-InfoList-Response OPTIONAL,
    hSPDSCH-TDD-Specific-InfoList-Response-LCR HSPDSCH-TDD-Specific-InfoList-Response-LCR OPTIONAL,
    hARQ-MemoryPartitioning                    HARQ-MemoryPartitioning OPTIONAL,
    -- For 1.28Mcps TDD, this HARQ Memory Partitioning Information is for the first Frequency repetition, HARQ Memory Partitioning Information for
Frequency repetitions 2 and on, should be defined in MultipleFreq-HSPDSCH-InformationList-ResponseTDDLRCR
    iE-Extensions                              ProtocolExtensionContainer { { HSDSCH-TDD-Information-Response-ExtIEs } } OPTIONAL,
    ...
}

HSDSCH-TDD-Information-Response-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
{ ID id-User-Plane-Congestion-Fields-Inclusion CRITICALITY ignore EXTENSION User-Plane-Congestion-Fields-Inclusion
PRESENCE optional}|

```



```

{ ID id-hSSCCH-TDD-Specific-InfoList-Response768          CRITICALITY ignore  EXTENSION HSSCCH-TDD-Specific-InfoList-Response768
  PRESENCE optional}|
{ ID id-hSPDSCH-TDD-Specific-InfoList-Response768        CRITICALITY ignore  EXTENSION HSPDSCH-TDD-Specific-InfoList-Response768
  PRESENCE optional}|
{ ID id-UARFCNforNt                                       CRITICALITY ignore  EXTENSION UARFCN
  PRESENCE optional}|
-- Applicable to 1.28Mcps TDD when using multiple frequencies ,This is the UARFCN for the first Frequency repetition
{ ID id-multipleFreq-HSPDSCH-InformationList-ResponseTDDLRCR  CRITICALITY ignore  EXTENSION MultipleFreq-HSPDSCH-InformationList-ResponseTDDLRCR
PRESENCE optional }|
-- Applicable to 1.28Mcps TDD when using multiple frequencies ,This MultipleFreq-HSPDSCH-InformationList-ResponseTDDLRCR is the HS-SCCH and HARQ
Memory Partitioning information for the 2nd and beyond HS-PDSCH frequencies
{ ID id-multicarrier-number                               CRITICALITY ignore  EXTENSION Multicarrier-Number
  PRESENCE optional }|
-- Applicable for 1.28Mcps TDD when using multiple frequencies
{ID id-MIMO-SFMode-For-HSPDSCHDualStream                 CRITICALITY reject   EXTENSION MIMO-SFMode-For-HSPDSCHDualStream           PRESENCE
optional}|
{ID id-MIMO-ReferenceSignal-InformationListLCR           CRITICALITY reject   EXTENSION MIMO-ReferenceSignal-InformationListLCR     PRESENCE optional}|
{ID id-Out-of-Synchronization-Window                   CRITICALITY reject   EXTENSION Out-of-Synchronization-Window              PRESENCE optional},
  ...
}

Multicarrier-Number ::= INTEGER (1..maxHSDPAFrequency)

HSPDSCH-TDD-Specific-InfoList-Response ::= SEQUENCE (SIZE (0..maxNrOfDLTs)) OF HSPDSCH-TDD-Specific-InfoItem-Response

HSPDSCH-TDD-Specific-InfoItem-Response ::= SEQUENCE {
  timeslot
  midambleShiftAndBurstType
  iE-Extensions
  OPTIONAL,
  ...
}

HSPDSCH-TDD-Specific-InfoItem-Response-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

HSPDSCH-TDD-Specific-InfoList-Response-LCR ::= SEQUENCE (SIZE (1.. maxNrOfDLTsLCR)) OF HSPDSCH-TDD-Specific-InfoItem-Response-LCR

HSPDSCH-TDD-Specific-InfoItem-Response-LCR ::= SEQUENCE {
  timeslotLCR
  midambleShiftLCR
  iE-Extensions
  OPTIONAL,
  ...
}

HSPDSCH-TDD-Specific-InfoItem-Response-LCR-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

HSPDSCH-TDD-Specific-InfoList-Response768 ::= SEQUENCE (SIZE (0..maxNrOfDLTs)) OF HSPDSCH-TDD-Specific-InfoItem-Response768

HSPDSCH-TDD-Specific-InfoItem-Response768 ::= SEQUENCE {

```

```

    timeslot                TimeSlot,
    midambleShiftAndBurstType768 MidambleShiftAndBurstType768,
    iE-Extensions           ProtocolExtensionContainer { { HSPDSCH-TDD-Specific-InfoItem-Response-768-ExtIEs } }
    OPTIONAL,
    ...
}

HSPDSCH-TDD-Specific-InfoItem-Response-768-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

HSSCCH-FDD-Specific-InfoList-Response ::= SEQUENCE (SIZE (0..maxNrOfHSSCCHCodes)) OF HSSCCH-FDD-Specific-InfoItem-Response

HSSCCH-FDD-Specific-InfoItem-Response ::= SEQUENCE {
    code-Number              INTEGER (0..127),
    iE-Extensions           ProtocolExtensionContainer { { HSSCCH-FDD-Specific-InfoItem-Response-ExtIEs } }
    OPTIONAL,
    ...
}

HSSCCH-FDD-Specific-InfoItem-Response-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

HSSCCH-PowerOffset ::= INTEGER (0..255)
-- PowerOffset = -32 + offset * 0.25
-- Unit dB, Range -32dB .. +31.75dB, Step +0.25dB

HSSCCH-TDD-Specific-InfoList-Response ::= SEQUENCE (SIZE (0..maxNrOfHSSCCHCodes)) OF HSSCCH-TDD-Specific-InfoItem-Response

HSSCCH-TDD-Specific-InfoItem-Response ::= SEQUENCE {
    timeslot                TimeSlot,
    midambleShiftAndBurstType MidambleShiftAndBurstType,
    tDD-ChannelisationCode  TDD-ChannelisationCode,
    hSSICH-Info             HSSICH-Info,
    iE-Extensions           ProtocolExtensionContainer { { HSSCCH-TDD-Specific-InfoItem-Response-ExtIEs } }
    OPTIONAL,
    ...
}

HSSCCH-TDD-Specific-InfoItem-Response-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

HSSCCH-TDD-Specific-InfoList-Response-LCR ::= SEQUENCE (SIZE (0..maxNrOfHSSCCHCodes)) OF HSSCCH-TDD-Specific-InfoItem-Response-LCR

HSSCCH-TDD-Specific-InfoItem-Response-LCR ::= SEQUENCE {
    timeslotLCR              TimeSlotLCR,
    midambleShiftLCR        MidambleShiftLCR,
    first-TDD-ChannelisationCode TDD-ChannelisationCode,
    second-TDD-ChannelisationCode TDD-ChannelisationCode,
    hSSICH-InfoLCR          HSSICH-InfoLCR,
    iE-Extensions           ProtocolExtensionContainer { { HSSCCH-TDD-Specific-InfoItem-Response-LCR-ExtIEs } }
    OPTIONAL,

```

```

}
...
}
HSSCCH-TDD-Specific-InfoItem-Response-LCR-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
HSSCCH-TDD-Specific-InfoList-Response768 ::= SEQUENCE (SIZE (0..maxNrOfHSSCCHCodes)) OF HSSCCH-TDD-Specific-InfoItem-Response768
HSSCCH-TDD-Specific-InfoItem-Response768 ::= SEQUENCE {
    timeslot                               TimeSlot,
    midambleShiftAndBurstType768          MidambleShiftAndBurstType768,
    tDD-ChannelisationCode768            TDD-ChannelisationCode768,
    hSSICH-Info768                        HSSICH-Info768,
    iE-Extensions                          ProtocolExtensionContainer { { HSSCCH-TDD-Specific-InfoItem-Response768-ExtIEs } }
    OPTIONAL,
    ...
}
HSSCCH-TDD-Specific-InfoItem-Response768-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
HSSICH-Info ::= SEQUENCE {
    hsSICH-ID                             HS-SICH-ID,
    timeslot                               TimeSlot,
    midambleShiftAndBurstType              MidambleShiftAndBurstType,
    tDD-ChannelisationCode                 TDD-ChannelisationCode,
    iE-Extensions                          ProtocolExtensionContainer { { HSSICH-Info-ExtIEs } }
    OPTIONAL,
    ...
}
HSSICH-Info-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
HSSICH-InfoLCR ::= SEQUENCE {
    hsSICH-ID                             HS-SICH-ID,
    timeslotLCR                            TimeSlotLCR,
    midambleShiftLCR                       MidambleShiftLCR,
    tDD-ChannelisationCode                 TDD-ChannelisationCode,
    iE-Extensions                          ProtocolExtensionContainer { { HSSICH-Info-LCR-ExtIEs } }
    OPTIONAL,
    ...
}
HSSICH-Info-LCR-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-HS-SICH-ID-Extension           CRITICALITY ignore      EXTENSION HS-SICH-ID-Extension  PRESENCE optional},
    -- Applicable for 1.28Mcps TDD only when the HS-SICH ID IE is more than 31
    ...
}
HSSICH-Info768 ::= SEQUENCE {
    hsSICH-ID                             HS-SICH-ID,
    timeslot                               TimeSlot,

```

```

midambleShiftAndBurstType768
tDD-ChannelisationCode768
iE-Extensions
...
}
HSSICH-Info-768-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}
HS-SICH-Reception-Quality-Value ::= SEQUENCE {
failed-HS-SICH          HS-SICH-failed,
missed-HS-SICH         HS-SICH-missed,
total-HS-SICH          HS-SICH-total,
iE-Extensions          ProtocolExtensionContainer { { HS-SICH-Reception-Quality-Value-ExtIEs } } OPTIONAL,
...
}
HS-SICH-Reception-Quality-Value-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}
HS-SICH-failed ::= INTEGER (0..20)
HS-SICH-missed ::= INTEGER (0..20)
HS-SICH-total  ::= INTEGER (0..20)
HS-SICH-Reception-Quality-Measurement-Value ::= INTEGER (0..20)
-- According to mapping in [23]
HS-SICH-ID ::= INTEGER (0..31)
HS-SICH-ID-Extension ::= INTEGER (32..255,...)
HSSCCH-CodeChangeIndicator ::= ENUMERATED {
hsSCCHCodeChangeNeeded
}
HSSCCH-Code-Change-Grant ::= ENUMERATED {
changeGranted
}
HS-PDSCH-Code-Change-Indicator ::= ENUMERATED {
hsPDSCHCodeChangeNeeded
}
HS-PDSCH-Code-Change-Grant ::= ENUMERATED {
changeGranted
}
HSDSCH-FDD-Update-Information ::= SEQUENCE {
hsSCCHCodeChangeIndicator          HSSCCH-CodeChangeIndicator          OPTIONAL,
cqiFeedback-CycleK                 CQI-Feedback-Cycle                 OPTIONAL,

```

```

    cqiRepetitionFactor          CQI-RepetitionFactor          OPTIONAL,
    ackNackRepetitionFactor      AckNack-RepetitionFactor  OPTIONAL,
    cqiPowerOffset               CQI-Power-Offset         OPTIONAL,
    ackPowerOffset               Ack-Power-Offset         OPTIONAL,
    nackPowerOffset              Nack-Power-Offset         OPTIONAL,
    iE-Extensions                ProtocolExtensionContainer { { HSDSCH-FDD-Update-Information-ExtIEs } } OPTIONAL,
    ...
}

HSDSCH-FDD-Update-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  {ID id-HS-PDSCH-Code-Change-Indicator    CRITICALITY ignore    EXTENSION    HS-PDSCH-Code-Change-Indicator    PRESENCE optional },
  ...
}

HSDSCH-TDD-Update-Information ::= SEQUENCE {
  hsSCCHCodeChangeIndicator          HSSCCH-CodeChangeIndicator          OPTIONAL,
  tDDAckNackPowerOffset              TDD-AckNack-Power-Offset            OPTIONAL,
  iE-Extensions                      ProtocolExtensionContainer { { HSDSCH-TDD-Update-Information-ExtIEs } } OPTIONAL,
  ...
}

HSDSCH-TDD-Update-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

MIMO-ReferenceSignal-InformationListLCR ::= SEQUENCE (SIZE (1..maxNrOfHSSCCHCodes)) OF HSSICH-ReferenceSignal-InformationLCR

HSSICH-ReferenceSignal-InformationLCR ::= SEQUENCE {
  midambleConfigurationLCR          MidambleConfigurationLCR,
  midambleShift                      INTEGER (0..15),
  timeSlotLCR                        TimeSlotLCR,
  iE-Extensions                      ProtocolExtensionContainer { { HSSICH-ReferenceSignal-InformationLCR-ExtIEs } } OPTIONAL,
  ...
}

HSSICH-ReferenceSignal-InformationLCR-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

HS-DSCH-Semi-PersistentScheduling-Information-LCR ::= SEQUENCE {
  transport-Block-Size-List          Transport-Block-Size-List-LCR,
  repetition-Period-List-LCR         Repetition-Period-List-LCR,
  hS-DSCH-SPS-Reservation-Indicator  SPS-Reservation-Indicator          OPTIONAL,
  hS-DSCH-SPS-Operation-Indicator    HS-DSCH-SPS-Operation-Indicator,
  iE-Extensions                      ProtocolExtensionContainer { { HS-DSCH-Semi-PersistentScheduling-Information-LCR-ExtIEs } } OPTIONAL,
  ...
}

HS-DSCH-Semi-PersistentScheduling-Information-LCR-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

HSDSCH-Physical-Layer-Category ::= INTEGER (1..64)

```

```

Transport-Block-Size-List-LCR ::= SEQUENCE (SIZE (1..maxNoOfTBSs-Mapping-HS-DSCH-SPS)) OF Transport-Block-Size-Item-LCR

Transport-Block-Size-Item-LCR ::= SEQUENCE {
    transport-Block-Size-mapping-Index-LCR      Transport-Block-Size-mapping-Index-LCR,
    transport-Block-Size-Index-LCR             Transport-Block-Size-Index-LCR,
    iE-Extensions                               ProtocolExtensionContainer { { Transport-Block-Size-Item-LCR-ExtIEs } }      OPTIONAL,
    ...
}

Transport-Block-Size-Item-LCR-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

Transport-Block-Size-mapping-Index-LCR ::= INTEGER (0..maxNoOfTBSs-Mapping-HS-DSCH-SPS-1)

Transport-Block-Size-Index-LCR ::= INTEGER (1..maxNoOfHS-DSCH-TBSsLCR)

Repetition-Period-List-LCR ::= SEQUENCE (SIZE (1..maxNoOfRepetition-Period-LCR)) OF Repetition-Period-Item-LCR

Repetition-Period-Item-LCR ::= SEQUENCE {
    repetitionPeriodIndex      RepetitionPeriodIndex,
    repetitionPeriod           RepetitionPeriod,
    repetitionLength           RepetitionLength      OPTIONAL,
    iE-Extensions              ProtocolExtensionContainer { { Repetition-Period-Item-LCR-ExtIEs } }      OPTIONAL,
    ...
}

Repetition-Period-Item-LCR-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RepetitionPeriodIndex ::= INTEGER (0..maxNoOfRepetitionPeriod-SPS-LCR-1)

SPS-Reservation-Indicator ::= ENUMERATED {
    reserve
}

HS-DSCH-SPS-Operation-Indicator ::= CHOICE {
    logicalChannellevel      LogicalChannellevel,
    priorityQueuelevel       PriorityQueuelevel,
    ...
}

LogicalChannellevel ::= BIT STRING (SIZE (16))

PriorityQueuelevel ::= BIT STRING (SIZE (8))

HS-DSCH-Semi-PersistentScheduling-Information-to-Modify-LCR ::= SEQUENCE {
    transport-Block-Size-List      Transport-Block-Size-List-LCR      OPTIONAL,
    repetition-Period-List-LCR    Repetition-Period-List-LCR      OPTIONAL,
    hS-DSCH-SPS-Reservation-Indicator  SPS-Reservation-Indicator      OPTIONAL,
    hS-DSCH-SPS-Operation-Indicator  HS-DSCH-SPS-Operation-Indicator      OPTIONAL,
}

```

```

    iE-Extensions                ProtocolExtensionContainer { { HS-DSCH-Semi-PersistentScheduling-Information-to-Modify-LCR-ExtIEs } }
                                OPTIONAL,
    ...
}

HS-DSCH-Semi-PersistentScheduling-Information-to-Modify-LCR-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

HS-DSCH-Semi-PersistentScheduling-Information-ResponseLCR ::= SEQUENCE {
    hS-SICH-InformationList-for-HS-DSCH-SPS    HS-SICH-InformationList-for-HS-DSCH-SPS,
    initial-HS-PDSCH-SPS-Resource             Initial-HS-PDSCH-SPS-Resource             OPTIONAL,
    buffer-Size-for-HS-DSCH-SPS               Process-Memory-Size                       OPTIONAL,
    number-of-Processes-for-HS-DSCH-SPS       Number-of-Processes-for-HS-DSCH-SPS       OPTIONAL,
    iE-Extensions                             ProtocolExtensionContainer { { HS-DSCH-Semi-PersistentScheduling-Information-ResponseLCR-ExtIEs } }
                                OPTIONAL,
    ...
}

HS-DSCH-Semi-PersistentScheduling-Information-ResponseLCR-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

HS-SICH-InformationList-for-HS-DSCH-SPS ::= SEQUENCE (SIZE (1..maxNoOf-HS-SICH-SPS)) OF HS-SICH-InformationItem-for-HS-DSCH-SPS

HS-SICH-InformationItem-for-HS-DSCH-SPS ::= SEQUENCE {
    hS-SICH-Mapping-Index                   HS-SICH-Mapping-Index                   OPTIONAL,
    hS-SICH-Type                             HS-SICH-Type,
    iE-Extensions                             ProtocolExtensionContainer { { HS-SICH-InformationItem-for-HS-DSCH-SPS-ExtIEs } }
                                OPTIONAL,
    ...
}

HS-SICH-InformationItem-for-HS-DSCH-SPS-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

HS-SICH-Mapping-Index ::= INTEGER (0..maxNoOf-HS-SICH-SPS-1)

HS-SICH-Type ::= CHOICE {
    hS-SCCH-Associated-HS-SICH               HS-SCCH-Associated-HS-SICH,
    non-HS-SCCH-Associated-HS-SICH           Non-HS-SCCH-Associated-HS-SICH,
    ...
}

HS-SCCH-Associated-HS-SICH ::= SEQUENCE {
    hS-SICH-ID                               HS-SICH-ID,
    extended-HS-SICH-ID                       HS-SICH-ID-Extension                     OPTIONAL,
    ...
}

Non-HS-SCCH-Associated-HS-SICH ::= SEQUENCE {
    non-HS-SCCH-Associated-HS-SICH-ID         Non-HS-SCCH-Associated-HS-SICH-ID,

```

```

...
}

Non-HS-SCCH-Associated-HS-SICH-ID ::= INTEGER (0..255)

Initial-HS-PDSCH-SPS-Resource ::= SEQUENCE {
    repetitionPeriodIndex      RepetitionPeriodIndex,
    repetitionLength           RepetitionLength          OPTIONAL,
    hS-PDSCH-Offset            TDD-PhysicalChannelOffset,
    hS-PDSCH-Midamble-Configuration MidambleShiftLCR,
    timeslot-Resource-Related-Information HS-DSCH-TimeslotResourceLCR,
    startCode                  TDD-ChannelisationCode,
    endCode                    TDD-ChannelisationCode,
    transport-Block-Size-Index Transport-Block-Size-Index-LCR,
    modulationType             ModulationSPS-LCR,
    hS-SICH-Mapping-Index      HS-SICH-Mapping-Index,
    iE-Extensions              ProtocolExtensionContainer { { Initial-HS-PDSCH-SPS-Resource-ExtIEs } } OPTIONAL,
    ...
}

Initial-HS-PDSCH-SPS-Resource-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

HS-DSCH-TimeslotResourceLCR ::= BIT STRING (SIZE (5))

ModulationSPS-LCR ::= ENUMERATED {
    qPSK,
    sixteenQAM,
    ...
}

Number-of-Processes-for-HS-DSCH-SPS ::= INTEGER (1..16)

-- I

IMEI      ::= OCTET STRING (SIZE(8))

IMEISV    ::= OCTET STRING (SIZE(8))

IMSI      ::= OCTET STRING (SIZE(3..8))

Inactivity-Threshold-for-UE-DTX-Cycle2 ::= ENUMERATED {v1, v4, v8, v16, v32, v64, v128, v256}
-- Unit E-DCH TTI

Inactivity-Threshold-for-UE-DRX-Cycle ::= ENUMERATED {v0, v1, v2, v4, v8, v16, v32, v64, v128, v256, v512}
-- Unit subframe

Inactivity-Threshold-for-UE-Grant-Monitoring ::= ENUMERATED {v0, v1, v2, v4, v8, v16, v32, v64, v128, v256}
-- Unit E-DCH TTI

InformationAvailable ::= SEQUENCE {

```



```

    requestedDataValue      RequestedDataValue,
    iE-Extensions           ProtocolExtensionContainer { { InformationAvailable-ExtIEs} }    OPTIONAL,
    ...
}

InformationAvailable-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

InformationExchangeID ::= INTEGER (0..1048575)

InformationNotAvailable ::= NULL

InformationReportCharacteristics ::= CHOICE {
    onDemand                NULL,
    periodic                 PeriodicInformation,
    onModification          OnModificationInformation,
    ...
}

InformationReportPeriodicity ::= CHOICE {
    min                     INTEGER (1..60,...),
    -- Unit min, Step 1min
    hour                    INTEGER (1..24,...),
    -- Unit hour, Step 1hour
    ...
}

InformationThreshold ::= CHOICE {
    dGPSThreshold           DGPSThreshold,
    ...,
    dGANSSThreshold        DGANSSThreshold
}

InformationType ::= SEQUENCE {
    informationTypeItem     ENUMERATED {
        gA-AccessPointPositionwithAltitude,
        gA-AccessPointPosition,
        iPDLParameters,
        gPSInformation,
        dGPSCorrections,
        gPS-RX-POS,
        sFNsFN-GA-AccessPointPosition,
        ...,
        cell-Capacity-Class,
        nACC-Related-Data,
        mBMSBearerServiceFullAddress,
        interFrequencyCellInformation,
        gANSSInformation,
        dGANSSCorrections,
        gANSS-RX-Pos,
        mBMS-Counting-Information,
        mBMS-Transmission-Mode,
    }
}

```

```

        mBMS-Neighbouring-Cell-Information,
        mBMS-RLC-Sequence-Number
    },
    gpsInformation          GPSInformation          OPTIONAL,
    iE-Extensions          ProtocolExtensionContainer { { InformationType-ExtIEs } }    OPTIONAL,
    ...
}

-- The GPS Information IE shall be present if the Information Exchange Type IE indicates 'GPS Information'
-- For information exchange on the Iur-g interface, only the Cell Capacity Class is used.

InformationType-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
-- The following IE shall be present if the Information Type Item IE indicates 'GANSS Information'
{ ID id-GANSS-Information          CRITICALITY ignore  EXTENSION GANSS-Information          PRESENCE conditional }|
-- The following IE shall be present if the Information Type Item IE indicates 'DGANSS Corrections'
{ ID id-DGANSS-Corrections-Req    CRITICALITY ignore  EXTENSION DGANSS-Corrections-Req    PRESENCE conditional }|
-- The following IE shall be present if the Information Type Item IE indicates 'MBMS RLC Sequence Number'
{ ID id-MBMS-RLC-Sequence-Number-Information    CRITICALITY ignore  EXTENSION MBMS-RLC-Sequence-Number-Information    PRESENCE conditional },
    ...
}

Initial-DL-DPCH-TimingAdjustment-Allowed ::= ENUMERATED {
    initial-DL-DPCH-TimingAdjustment-Allowed
}

InnerLoopDLPCStatus      ::= ENUMERATED {active, inactive}

IPDLParameters ::= CHOICE {
    iPDL-FDD-Parameters          IPDL-FDD-Parameters,
    iPDL-TDD-Parameters          IPDL-TDD-Parameters,    --3.84Mcps TDD and 7.68Mcps TDD only
    ...,
    extension-IPDLParameters     Extension-IPDLParameters
}

Extension-IPDLParameters    ::= ProtocolIE-Single-Container {{ Extension-IPDLParametersIE }}

Extension-IPDLParametersIE RNSAP-PROTOCOL-IES ::= {
    { ID id-IPDL-TDD-ParametersLCR    CRITICALITY reject  TYPE IPDL-TDD-ParametersLCR    PRESENCE mandatory },
    ...
}

Inter-Frequency-Cell-List    ::= SEQUENCE (SIZE (0..maxCellsMeas)) OF Inter-Frequency-Cell

Inter-Frequency-Cell ::= SEQUENCE {
    dL-UARFCN                    UARFCN,
    uL-UARFCN                    UARFCN          OPTIONAL,
    primaryScramblingCode        PrimaryScramblingCode,
    iE-Extensions                ProtocolExtensionContainer { {Inter-Frequency-Cell-ExtIEs} }    OPTIONAL,
    ...
}

Inter-Frequency-Cell-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

Inter-Frequency-Cell-Information ::= SEQUENCE {
    inter-Frequency-Cell-Information-SIB11    Inter-Frequency-Cell-Information-SIB11,
    inter-Frequency-Cell-Information-SIB12    Inter-Frequency-Cell-Information-SIB12,
    iE-Extensions                            ProtocolExtensionContainer { {Inter-Frequency-Cell-Information-ExtIEs } } OPTIONAL,
    ...
}

Inter-Frequency-Cell-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

Inter-Frequency-Cell-Information-SIB11 ::= SEQUENCE (SIZE (0..2)) OF Inter-Frequency-Cells-Information-SIB11-Per-Indication

Inter-Frequency-Cell-Information-SIB12 ::= SEQUENCE (SIZE (0..2)) OF Inter-Frequency-Cells-Information-SIB12-Per-Indication

Inter-Frequency-Cells-Information-SIB11-Per-Indication ::= SEQUENCE {
    inter-Frequency-Cell-Indication-SIB11    Inter-Frequency-Cell-Indication,
    inter-Frequency-Cell-List-SIB11         Inter-Frequency-Cell-SIB11-or-SIB12-List,
    iE-Extensions                            ProtocolExtensionContainer { { Inter-Frequency-Cells-Information-SIB11-Per-Indication-ExtIEs } } OPTIONAL,
    ...
}

Inter-Frequency-Cells-Information-SIB11-Per-Indication-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

Inter-Frequency-Cells-Information-SIB12-Per-Indication ::= SEQUENCE {
    inter-Frequency-Cell-Indication-SIB12    Inter-Frequency-Cell-Indication,
    inter-Frequency-Cell-List-SIB12         Inter-Frequency-Cell-SIB11-or-SIB12-List,
    iE-Extensions                            ProtocolExtensionContainer { { Inter-Frequency-Cells-Information-SIB12-Per-Indication-ExtIEs } } OPTIONAL,
    ...
}

Inter-Frequency-Cells-Information-SIB12-Per-Indication-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

Inter-Frequency-Cell-Indication ::= INTEGER (0..1)
Inter-Frequency-Cell-SIB11-or-SIB12-List ::= SEQUENCE (SIZE (0..maxCellSIB11OrSIB12)) OF Inter-Frequency-Cell-SIB11-or-SIB12

Inter-Frequency-Cell-SIB11-or-SIB12 ::= SEQUENCE {
    interFrequencyCellID                    InterFrequencyCellID,
    dL-UARFCN                               UARFCN,
    uL-UARFCN                               UARFCN OPTIONAL,
    primaryScramblingCode                   PrimaryScramblingCode,
    iE-Extensions                            ProtocolExtensionContainer { {Inter-Frequency-Cell-ExtIEs} } OPTIONAL,
    ...
}

InterFrequencyCellID ::= INTEGER (0..31)

```

```

IPDL-FDD-Parameters ::= SEQUENCE {
    iPSpacingFDD          IPSpacingFDD,
    iPLength              IPLength,
    iPOffset              IPOffset,
    seed                  Seed,
    burstModeParameters  BurstModeParameters OPTIONAL,
    iE-Extensions         ProtocolExtensionContainer { { IPDL-FDD-Parameters-ExtIEs } } OPTIONAL,
    ...
}

IPDL-FDD-Parameters-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

IPDL-TDD-Parameters ::= SEQUENCE {
    iPSpacingTDD          IPSpacingTDD,
    iPStart               IPStart,
    iPSlot                IPSlot,
    iP-P-CCPCH            IP-P-CCPCH,
    burstModeParameters  BurstModeParameters OPTIONAL,
    iE-Extensions         ProtocolExtensionContainer { { IPDL-TDD-Parameters-ExtIEs } } OPTIONAL,
    ...
}

-- The BurstModeParameters IE shall be included if the Idle Periods are arranged in Burst Mode.

IPDL-TDD-Parameters-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

IPDL-TDD-ParametersLCR ::= SEQUENCE {
    iPSpacingTDD          IPSpacingTDD,
    iPStart               IPStart,
    iPSub                 IPSub,
    burstModeParameters  BurstModeParameters OPTIONAL,
    iE-Extensions         ProtocolExtensionContainer { { IPDL-TDD-ParametersLCR-ExtIEs } } OPTIONAL,
    ...
}

-- The BurstModeParameters IE shall be included if the Idle Periods are arranged in Burst Mode.

IPDL-TDD-ParametersLCR-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

IPLength ::= ENUMERATED {
    ip15,
    ip110,
    ...
}

IPMulticastAddress ::= OCTET STRING (SIZE (4..16))

IPOffset ::= INTEGER (0..9)

```

```
IP-P-CCPCH ::= ENUMERATED {
    switchOff-1-Frame,
    switchOff-2-Frames
}

IPSlot ::= INTEGER (0..14)

IPSpacingFDD ::= ENUMERATED {
    ipsF5,
    ipsF7,
    ipsF10,
    ipsF15,
    ipsF20,
    ipsF30,
    ipsF40,
    ipsF50,
    ...
}

IPSpacingTDD ::= ENUMERATED {
    ipsT30,
    ipsT40,
    ipsT50,
    ipsT70,
    ipsT100,
    ...
}

IPStart ::= INTEGER (0..4095)

IPSub ::= ENUMERATED {
    first,
    second,
    both
}

IdleIntervalInformation ::= SEQUENCE {
    idleIntervalInfo-k          INTEGER(2..3),
    idleIntervalInfo-offset    INTEGER(0..7),
    ...
}

-- J
-- K
-- L

LAC ::= OCTET STRING (SIZE (2)) --(EXCEPT ('0000'H|'FFFE'H))

LimitedPowerIncrease ::= ENUMERATED {
    used,
    not-used
}
```

```

List-Of-PLMNs ::= SEQUENCE (SIZE (1..maxNrOfBroadcastPLMNs)) OF PLMN-Identity

L3-Information ::= BIT STRING

Load-Value-IncrDecrThres ::= INTEGER(0..100)

Load-Value ::= INTEGER(0..100)

LoadValue ::= SEQUENCE {
    uplinkLoadValue    INTEGER(0..100),
    downlinkLoadValue  INTEGER(0..100)
}

LCRTDD-Uplink-Physical-Channel-Capability ::= SEQUENCE {
    maxTimeslotsPerSubFrame    INTEGER(1..6),
    maxPhysChPerTimeslot       ENUMERATED{ts1, ts2, ts3, ts4,...},
    iE-Extensions              ProtocolExtensionContainer { { LCRTDD-Uplink-Physical-Channel-Capability-ExtIEs } } OPTIONAL,
    ...
}

LCRTDD-Uplink-Physical-Channel-Capability-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- M

MaxNrOfUL-DPCHs ::= INTEGER (1..6)

MAC-c-sh-SDU-Length ::= INTEGER (1..5000)

MAC-c-sh-SDU-LengthList ::= SEQUENCE(SIZE(1..maxNrOfMACcshSDU-Length)) OF MAC-c-sh-SDU-Length

MAC-DTX-Cycle-2ms ::= ENUMERATED {v1, v4, v5, v8, v10, v16, v20}

MAC-DTX-Cycle-10ms ::= ENUMERATED {v5, v10, v20}

MAC-ehs-Reset-Timer ::= ENUMERATED {v1, v2, v3, v4,...}

MAC-Inactivity-Threshold ::= ENUMERATED {v1, v2, v4, v8, v16, v32, v64, v128, v256, v512, infinity}
-- Unit subframe

MACdPDU-Size ::= INTEGER (1..5000,...)
-- In case of E-DCH value 8 and values not multiple of 8 shall not be used

MAC-PDU-SizeExtended ::= INTEGER (1..1504,...,1505)
-- In case of E-DCH value 1 shall not be used

MACdPDU-Size-IndexList ::= SEQUENCE (SIZE (1..maxNrOfPDUIndexes)) OF MACdPDU-Size-IndexItem

MACdPDU-Size-IndexItem ::= SEQUENCE {
    sID                SID,
    mACdPDU-Size       MACdPDU-Size,
    iE-Extensions      ProtocolExtensionContainer { { MACdPDU-Size-IndexItem-ExtIEs } } OPTIONAL,

```

```

    ...
}
MACdPDU-Size-IndexItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
MACdPDU-Size-IndexList-to-Modify ::= SEQUENCE (SIZE (1..maxNrOfPDUIndexes)) OF MACdPDU-Size-IndexItem-to-Modify
MACdPDU-Size-IndexItem-to-Modify ::= SEQUENCE {
    sID                SID,
    mACdPDU-Size      MACdPDU-Size,
    iE-Extensions     ProtocolExtensionContainer { { MACdPDU-Size-IndexItem-to-Modify-ExtIEs } } OPTIONAL,
    ...
}
MACdPDU-Size-IndexItem-to-Modify-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
MACes-Guaranteed-Bitrate ::= INTEGER (0..16777215,...,16777216..256000000)
MACes-Maximum-Bitrate-LCR ::= INTEGER (0..256000000,...)
MACeReset-Indicator ::= ENUMERATED {mACeReset}
MACHsGuaranteedBitRate ::= INTEGER (0..16777215,...,16777216..256000000)
MACHsReorderingBufferSize-for-RLC-UM ::= INTEGER (0..300,...)
-- Unit kBytes
MAC-hsWindowSize      ::= ENUMERATED {v4, v6, v8, v12, v16, v24, v32,...}
MACHsResetScheme ::= ENUMERATED {
    always,
    interNodeB-change
}
MaximumAllowedULTxPower ::= INTEGER (-50..33)
Max-Bits-MACe-PDU-non-scheduled ::= INTEGER(1..maxNrOfBits-MACe-PDU-non-scheduled)
MaxNrDLPhysicalchannels ::= INTEGER (1..224)
-- 1.28Mcps TDD 97 - 224 are unused
MaxNrDLPhysicalchannels768 ::= INTEGER (1..448)
MaxNrDLPhysicalchannelsTS ::= INTEGER (1..16)
MaxNrDLPhysicalchannelsTS768 ::= INTEGER (1..32)
MaxNr-Retransmissions-EDCH ::= INTEGER (0..15)
MaxNrTimeslots ::= INTEGER (1..14)

```

-- 1.28Mcps values 7-14 are unused

MaxNrULPhysicalchannels ::= INTEGER (1..2)

Max-Set-E-DPDCHs ::= ENUMERATED {  
 vN256, vN128, vN64, vN32, vN16, vN8, vN4, v2xN4, v2xN2, v2xN2plus2xN4,  
 ...,  
 v2xM2plus2xM4  
 }

-- Values related to [9]

Max-UE-DTX-Cycle ::= ENUMERATED {  
 v5, v10, v20, v40, v64, v80, v128, v160,  
 ...  
 }

MBMS-Bearer-Service-Full-Address ::= SEQUENCE {  
 accessPointName AccessPointName,  
 iPMulticastAddress IPMulticastAddress,  
 iE-Extensions ProtocolExtensionContainer { { MBMS-Bearer-Service-Full-Address-ExtIEs } } OPTIONAL,  
 ...  
 }

MBMS-Bearer-Service-Full-Address-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {  
 ...  
 }

MBMS-Bearer-Service-List ::= SEQUENCE (SIZE (1..maxNrOfMBMServices)) OF TMGI

MBMS-Bearer-ServiceItemFDD ::= SEQUENCE {  
 tmgi TMGI,  
 transmissionMode TransmissionMode,  
 iE-Extensions ProtocolExtensionContainer { { MBMS-Bearer-ServiceItemFDD-ExtIEs } } OPTIONAL,  
 ...  
 }

MBMS-Bearer-ServiceItemFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {  
 ...  
 }

MBMS-Bearer-ServiceItemFDD-PFL ::= SEQUENCE {  
 tmgi TMGI,  
 transmissionMode TransmissionMode OPTIONAL,  
 preferredFrequencyLayer UARFCN OPTIONAL,  
 iE-Extensions ProtocolExtensionContainer { { MBMS-Bearer-ServiceItemFDD-PFL-ExtIEs } } OPTIONAL,  
 ...  
 }

MBMS-Bearer-ServiceItemFDD-PFL-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {  
 ...  
 }



```

MBMS-Bearer-ServiceItemTDD ::=SEQUENCE{
    tmgi      TMGI,
    transmissionMode  TransmissionMode,
    iE-Extensions      ProtocolExtensionContainer { { MBMS-Bearer-ServiceItemTDD-ExtIEs} } OPTIONAL,
    ...
}

MBMS-Bearer-ServiceItemTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

MBMS-Bearer-ServiceItemTDD-PFL ::=SEQUENCE{
    tmgi      TMGI,
    transmissionMode  TransmissionMode  OPTIONAL,
    preferredFrequencyLayer  UARFCN  OPTIONAL,
    iE-Extensions      ProtocolExtensionContainer { { MBMS-Bearer-ServiceItemTDD-PFL-ExtIEs} } OPTIONAL,
    ...
}

MBMS-Bearer-ServiceItemTDD-PFL-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

MBMSChannelTypeInfo ::= SEQUENCE {
    tMGI      TMGI,
    pTM-Cell-List  PTMCellList  OPTIONAL,
    pTP-Cell-List  PTPCellList  OPTIONAL,
    not-Provided-Cell-List  NotProvidedCellList  OPTIONAL,
    iE-Extensions      ProtocolExtensionContainer { { MBMSChannelTypeInfo-ExtIEs} } OPTIONAL,
    ...
}

MBMSChannelTypeInfo-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

MBMSChannelTypeCellList ::= SEQUENCE {
    c-ID      C-ID,
    affectedUEInformationForMBMS  AffectedUEInformationForMBMS  OPTIONAL,
    iE-Extensions      ProtocolExtensionContainer { { MBMSChannelTypeCellList-ExtIEs} } OPTIONAL,
    ...
}

MBMSChannelTypeCellList-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

MBMSPreferredFreqLayerInfo ::= SEQUENCE {
    tMGI      TMGI,
    preferredFrequencyLayerInfo  PreferredFrequencyLayerInfo,
    iE-Extensions      ProtocolExtensionContainer { { MBMSPreferredFreqLayerInfo-ExtIEs} } OPTIONAL,
    ...
}

MBMSPreferredFreqLayerInfo-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {

```

```

}
...
}
MBMS-Neighbouring-Cell-Information ::= SEQUENCE {
    mBMS-ConcatenatedServiceList      MBMS-ConcatenatedServiceList,
    l3-Information-1                   L3-Information OPTIONAL,
-- This IE contains MBMS COMMON P-T-M RB INFORMATION defined in [16]
    l3-Information-2                   L3-Information OPTIONAL,
-- This IE contains MBMS CURRENT CELL P-T-M RB INFORMATION defined in [16]
    iE-Extensions                     ProtocolExtensionContainer { { MBMS-Neighbouring-Cell-Information-ExtIEs } } OPTIONAL,
    ...
}

MBMS-Neighbouring-Cell-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
MBMS-ConcatenatedServiceList ::= SEQUENCE (SIZE (1..maxLengthMBMSconcatlists)) OF TMGI

MBMS-RLC-Sequence-Number-Information ::= SEQUENCE (SIZE (1..maxNrOfCells)) OF MBMS-RLC-Sequence-Number-Information-List

MBMS-RLC-Sequence-Number-Information-List ::= SEQUENCE {
    c-ID                               C-ID,
    mBMS-Bearer-Service-List-RLC      MBMS-Bearer-Service-List-RLC,
    iE-Extensions                     ProtocolExtensionContainer { { MBMS-RLC-Sequence-Number-Information-List-ExtIEs } } OPTIONAL,
    ...
}

MBMS-RLC-Sequence-Number-Information-List-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

MBMS-Bearer-Service-List-RLC ::= SEQUENCE (SIZE (1..maxNrOfMBMSServices)) OF MBMS-Bearer-Service-List-RLCinfo

MBMS-Bearer-Service-List-RLCinfo ::= SEQUENCE {
    tmgi                               TMGI,
    time-Stamp                         Time-Stamp,
    iE-Extensions                     ProtocolExtensionContainer { { MBMS-Bearer-Service-List-RLCinfo-ExtIEs } } OPTIONAL,
    ...
}

MBMS-Bearer-Service-List-RLCinfo-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

MBSFN-Cluster-Identity ::= INTEGER (0..65535)

MCCH-Message-List ::= SEQUENCE (SIZE (1.. maxNrOfMCCHMessages)) OF L3-Information

MCCH-Configuration-Info ::= SEQUENCE {
    secondaryCCPCHSystemInformationMBMS Secondary-CCPCH-System-Information-MBMS,
    ie-Extensions                     ProtocolExtensionContainer { {MCCH-Configuration-Info-ExtIEs } } OPTIONAL,
    ...
}

```

```

}

MCCH-Configuration-Info-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

Secondary-CCPCH-System-Information-MBMS ::= BIT STRING

MBSFN-Scheduling-Transmission-Time-Interval-Info-List ::= SEQUENCE (SIZE (1.. maxNrOfMBMSL3)) OF MBSFN-Scheduling-Transmission-Time-Interval-Item

MBSFN-Scheduling-Transmission-Time-Interval-Item ::= SEQUENCE {
    tMGI TMGI,
    mbsfnSchedulingTransmissionTimeInterval MbsfnSchedulingTransmissionTimeInterval,
    ie-Extensions ProtocolExtensionContainer { { MBSFN-Scheduling-Transmission-Time-Interval-Item-ExtIEs } }
    OPTIONAL,
    ...
}

MBSFN-Scheduling-Transmission-Time-Interval-Item-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

MbsfnSchedulingTransmissionTimeInterval ::= ENUMERATED {tti4, tti8, tti16, tti32, tti64, tti128, tti256}

MeasurementFilterCoefficient ::= ENUMERATED{k0, k1, k2, k3, k4, k5, k6, k7, k8, k9, k11, k13, k15, k17, k19,...}
-- Measurement Filter Coefficient to be used for measurement

MeasurementID ::= INTEGER (0..1048575)

Measurement-Power-Offset ::= INTEGER(-12 .. 26)
-- Actual value = IE value * 0.5

MinimumSpreadingFactor ::= INTEGER (1..16)

MinimumSpreadingFactor768 ::= INTEGER (1..32)

MultipleURAsIndicator ::= ENUMERATED {
    multiple-URAs-exist,
    single-URA-exists
}

MaxAdjustmentStep ::= INTEGER(1..10)
-- Unit Slot

MeasurementChangeTime ::= INTEGER (1..6000,...)
-- The MeasurementChangeTime gives the MeasurementChangeTime
-- in number of 10 ms periods.
-- E.g. Value 6000 means 60000ms(1min)
-- Unit is ms, Step is 10 ms

```

```

MeasurementHysteresisTime ::= INTEGER (1..6000,...)
-- The MeasurementHysteresisTime gives the
-- MeasurementHysteresisTime in number of 10 ms periods.
-- E.g. Value 6000 means 60000ms(1min)
-- Unit is ms, Step is 10ms

MeasurementIncreaseDecreaseThreshold ::= CHOICE {
    sir                               SIR-Value-IncrDecrThres,
    sir-error                         SIR-Error-Value-IncrDecrThres,
    transmitted-code-power           Transmitted-Code-Power-Value-IncrDecrThres,
    rscp                              RSCP-Value-IncrDecrThres,
    round-trip-time                  Round-Trip-Time-IncrDecrThres,
    ...,
    extension-MeasurementIncreaseDecreaseThreshold  Extension-MeasurementIncreaseDecreaseThreshold
}

Extension-MeasurementIncreaseDecreaseThreshold ::= ProtocolIE-Single-Container {{ Extension-MeasurementIncreaseDecreaseThresholdIE }}

Extension-MeasurementIncreaseDecreaseThresholdIE RNSAP-PROTOCOL-IES ::= {
    { ID id-Load-Value-IncrDecrThres    CRITICALITY reject TYPE Load-Value-IncrDecrThres    PRESENCE mandatory }|
    { ID id-Transmitted-Carrier-Power-Value-IncrDecrThres    CRITICALITY reject TYPE Transmitted-Carrier-Power-Value-IncrDecrThres    PRESENCE
mandatory }|
    { ID id-Received-Total-Wideband-Power-Value-IncrDecrThres    CRITICALITY reject TYPE Received-Total-Wideband-Power-Value-IncrDecrThres
PRESENCE mandatory }|
    { ID id-UL-Timeslot-ISCP-Value-IncrDecrThres    CRITICALITY reject TYPE UL-Timeslot-ISCP-Value-IncrDecrThres    PRESENCE mandatory }|
    { ID id-RT-Load-Value-IncrDecrThres    CRITICALITY reject TYPE RT-Load-Value-IncrDecrThres    PRESENCE mandatory }|
    { ID id-NRT-Load-Information-Value-IncrDecrThres    CRITICALITY reject TYPE NRT-Load-Information-Value-IncrDecrThres    PRESENCE mandatory }|
    { ID id-UpPTSInterferenceValue    CRITICALITY reject TYPE UpPTSInterferenceValue    PRESENCE mandatory }
}

MeasurementRecoveryBehavior ::= NULL

MeasurementRecoveryReportingIndicator ::= NULL

MeasurementRecoverySupportIndicator ::= NULL

MeasurementThreshold ::= CHOICE {
    sir                               SIR-Value,
    sir-error                         SIR-Error-Value,
    transmitted-code-power           Transmitted-Code-Power-Value,
    rscp                              RSCP-Value,
    rx-timing-deviation              Rx-Timing-Deviation-Value,
    round-trip-time                  Round-Trip-Time-Value,
    ...,
    extension-MeasurementThreshold  Extension-MeasurementThreshold
}

Extension-MeasurementThreshold ::= ProtocolIE-Single-Container {{ Extension-MeasurementThresholdIE }}

Extension-MeasurementThresholdIE RNSAP-PROTOCOL-IES ::= {
    { ID id-TUTRANGPSMeasurementThresholdInformation    CRITICALITY reject TYPE TUTRANGPSMeasurementThresholdInformation    PRESENCE mandatory }|
    { ID id-SFNFSNMeasurementThresholdInformation    CRITICALITY reject TYPE SFNFSNMeasurementThresholdInformation    PRESENCE mandatory }|
    { ID id-Load-Value    CRITICALITY reject TYPE Load-Value    PRESENCE mandatory }
}

```

```

{ ID id-Transmitted-Carrier-Power-Value          CRITICALITY reject TYPE Transmitted-Carrier-Power-Value          PRESENCE mandatory } |
{ ID id-Received-Total-Wideband-Power-Value      CRITICALITY reject TYPE Received-Total-Wideband-Power-Value      PRESENCE mandatory } |
{ ID id-UL-Timeslot-ISCP-Value                   CRITICALITY reject TYPE UL-Timeslot-ISCP-Value                   PRESENCE mandatory } |
{ ID id-RT-Load-Value                            CRITICALITY reject TYPE RT-Load-Value                            PRESENCE mandatory } |
{ ID id-NRT-Load-Information-Value               CRITICALITY reject TYPE NRT-Load-Information-Value               PRESENCE mandatory } |
{ ID id-Rx-Timing-Deviation-Value-LCR            CRITICALITY reject TYPE Rx-Timing-Deviation-Value-LCR            PRESENCE mandatory } |
{ ID id-HS-SICH-Reception-Quality-Measurement-Value CRITICALITY reject TYPE HS-SICH-Reception-Quality-Measurement-Value PRESENCE mandatory } |
{ ID id-UpPTSInterferenceValue                   CRITICALITY reject TYPE UpPTSInterferenceValue                   PRESENCE mandatory } |
{ ID id-Rx-Timing-Deviation-Value-768            CRITICALITY reject TYPE Rx-Timing-Deviation-Value-768            PRESENCE mandatory } |
{ ID id-Rx-Timing-Deviation-Value-ext            CRITICALITY reject TYPE Rx-Timing-Deviation-Value-ext            PRESENCE mandatory } |
{ ID id-Extended-Round-Trip-Time-Value           CRITICALITY reject TYPE Extended-Round-Trip-Time-Value           PRESENCE mandatory } |
{ ID id-TUTRANGANSSMeasurementThresholdInformation CRITICALITY reject TYPE TUTRANGANSSMeasurementThresholdInformation PRESENCE mandatory } |
}

MidambleConfigurationBurstType1And3 ::=      ENUMERATED {v4, v8, v16}

MidambleConfigurationBurstType2 ::=      ENUMERATED {v3, v6}

MidambleConfigurationLCR ::=      ENUMERATED {v2, v4, v6, v8, v10, v12, v14, v16, ...}

MidambleShiftAndBurstType ::=      CHOICE {
  type1
    SEQUENCE {
      midambleConfigurationBurstType1And3 MidambleConfigurationBurstType1And3,
      midambleAllocationMode              CHOICE {
        defaultMidamble                NULL,
        commonMidamble                  NULL,
        ueSpecificMidamble              MidambleShiftLong,
        ...
      },
      ...
    },
  type2
    SEQUENCE {
      midambleConfigurationBurstType2     MidambleConfigurationBurstType2,
      midambleAllocationMode              CHOICE {
        defaultMidamble                NULL,
        commonMidamble                  NULL,
        ueSpecificMidamble              MidambleShiftShort,
        ...
      },
      ...
    },
  type3
    SEQUENCE {
      midambleConfigurationBurstType1And3 MidambleConfigurationBurstType1And3,
      midambleAllocationMode              CHOICE {
        defaultMidamble                NULL,
        ueSpecificMidamble              MidambleShiftLong,
        ...
      },
      ...
    },
  ...
}

MidambleShiftLong ::=      INTEGER (0..15)

```

```

MidambleShiftShort ::=                INTEGER (0..5)

MidambleShiftLCR ::= SEQUENCE {
    midambleAllocationMode             MidambleAllocationMode,
    midambleShift                       MidambleShiftLong           OPTIONAL,
    -- The IE shall be present if the Midamble Allocation Mode IE is set to "UE specific midamble".
    midambleConfigurationLCR           MidambleConfigurationLCR,
    iE-Extensions                       ProtocolExtensionContainer { {MidambleShiftLCR-ExtIEs} }   OPTIONAL,
    ...
}

MidambleAllocationMode ::= ENUMERATED {
    defaultMidamble,
    commonMidamble,
    ueSpecificMidamble,
    ...
}

MidambleShiftLCR-ExtIEs  RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

MidambleShiftAndBurstType768 ::=      CHOICE {
    type1                               SEQUENCE {
        midambleConfigurationBurstType1And3  MidambleConfigurationBurstType1And3,
        midambleAllocationMode               CHOICE {
            defaultMidamble                   NULL,
            commonMidamble                   NULL,
            ueSpecificMidamble               MidambleShiftLong,
            ...
        },
        ...
    },
    type2                               SEQUENCE {
        midambleConfigurationBurstType2-768  MidambleConfigurationBurstType2-768,
        midambleAllocationMode               CHOICE {
            defaultMidamble                   NULL,
            commonMidamble                   NULL,
            ueSpecificMidamble               MidambleShiftShort768,
            ...
        },
        ...
    },
    type3                               SEQUENCE {
        midambleConfigurationBurstType1And3  MidambleConfigurationBurstType1And3,
        midambleAllocationMode               CHOICE {
            defaultMidamble                   NULL,
            ueSpecificMidamble               MidambleShiftLong,
            ...
        },
        ...
    },
    ...
}

```

```
}  
MidambleConfigurationBurstType2-768 ::= ENUMERATED {v4, v8}  
MidambleShiftShort768 ::= INTEGER (0..7)  
MIMO-ActivationIndicator ::= NULL  
MIMO-InformationResponse ::= SEQUENCE {  
    mIMO-PilotConfiguration MIMO-PilotConfiguration,  
    mIMO-N-M-Ratio MIMO-N-M-Ratio,  
    iE-Extensions ProtocolExtensionContainer { { MIMO-InformationResponse-ExtIEs } } OPTIONAL,  
    ...  
}  
MIMO-InformationResponse-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {  
    ...  
}  
MIMO-Mode-Indicator ::= ENUMERATED {  
    activate,  
    deactivate  
}  
MIMO-N-M-Ratio ::= ENUMERATED {v1-2, v2-3, v3-4, v4-5, v5-6, v6-7, v7-8, v8-9, v9-10, v1-1,...}  
MIMO-PilotConfiguration ::= CHOICE {  
    primary-and-secondary-CPICH MIMO-S-CPICH-Channelisation-Code,  
    normal-and-diversity-primary-CPICH NULL,  
    ...  
}  
MIMO-S-CPICH-Channelisation-Code ::= INTEGER (0..255)  
MinUL-ChannelisationCodeLength ::= ENUMERATED {  
    v4,  
    v8,  
    v16,  
    v32,  
    v64,  
    v128,  
    v256  
}  
MinimumReducedE-DPDCH-GainFactor ::= ENUMERATED {m8-15, m11-15, m15-15, m21-15, m30-15, m42-15, m60-15, m84-15,...}  
ModifyPriorityQueue ::= CHOICE {  
    addPriorityQueue PriorityQueue-InfoItem-to-Add,  
    modifyPriorityQueue PriorityQueue-InfoItem-to-Modify,  
    deletePriorityQueue PriorityQueue-Id,  
    ...  
}
```

```

Modulation ::= ENUMERATED {
    qPSK,
    eightPSK,
    ...
}

Multiple-PLMN-List ::= SEQUENCE {
    pLMN-Identity          PLMN-Identity,
    list-Of-PLMNs         List-Of-PLMNs
    iE-Extensions         ProtocolExtensionContainer { { Multiple-PLMN-List-ExtIEs } } OPTIONAL,
    ...
}

Multiple-PLMN-List-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

MultiplexingPosition ::= ENUMERATED {
    fixed,
    flexible
}

MACHs-ResetIndicator ::= ENUMERATED{
    mACHs-NotReset
}

MultipleFreq-HSPDSCH-InformationList-ResponseTDDLCR ::= SEQUENCE (SIZE (1.. maxHSDPAFrequency-1)) OF MultipleFreq-HSPDSCH-InformationItem-ResponseTDDLCR
--Includes the 2nd through the max number of frequency repetitions

MultipleFreq-HSPDSCH-InformationItem-ResponseTDDLCR ::= SEQUENCE{
    hSSCCH-TDD-Specific-InfoList-Response-LCR          HSSCCH-TDD-Specific-InfoList-Response-LCR    OPTIONAL,
    hARQ-MemoryPartitioning                            HARQ-MemoryPartitioning                OPTIONAL,
    uARFCN                                              UARFCN,
    -- This is the UARFCN for the second and beyond Frequency repetition.
    iE-Extensions                                     ProtocolExtensionContainer { { MultipleFreq-HSPDSCH-InformationItem-ResponseTDDLCR-ExtIEs } }
    OPTIONAL,
    ...
}

MultipleFreq-HSPDSCH-InformationItem-ResponseTDDLCR-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

MIMO-SFMode-For-HSPDSCHDualStream ::= ENUMERATED {
    sF1,
    sF1SF16
}

-- N

NACC-Related-Data ::= SEQUENCE {

```



```

gERAN-SI-Type          GERAN-SI-Type,
iE-Extensions          ProtocolExtensionContainer { {NACC-Related-Data-ExtIEs} }    OPTIONAL,
...
}

NACC-Related-Data-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

Nack-Power-Offset ::= INTEGER (0..8,...)
-- According to mapping in ref. [21] subclause 4.2.1

NCC ::= BIT STRING (SIZE (3))

Neighbouring-UMTS-CellInformation ::= SEQUENCE (SIZE (1..maxNrOfNeighbouringRNCs)) OF ProtocolIE-Single-Container {{ Neighbouring-UMTS-CellInformationItemIE }}

Neighbouring-UMTS-CellInformationItemIE RNSAP-PROTOCOL-IES ::= {
    { ID id-Neighbouring-UMTS-CellInformationItem    CRITICALITY ignore    TYPE    Neighbouring-UMTS-CellInformationItem    PRESENCE mandatory }
}

Neighbouring-UMTS-CellInformationItem ::= SEQUENCE {
    rNC-ID                RNC-ID,
    cN-PS-DomainIdentifier CN-PS-DomainIdentifier    OPTIONAL,
    cN-CS-DomainIdentifier CN-CS-DomainIdentifier    OPTIONAL,
    neighbouring-FDD-CellInformation    Neighbouring-FDD-CellInformation    OPTIONAL,
    neighbouring-TDD-CellInformation    Neighbouring-TDD-CellInformation    OPTIONAL,
    iE-Extensions          ProtocolExtensionContainer { {Neighbouring-UMTS-CellInformationItem-ExtIEs} } OPTIONAL,
    ...
}

Neighbouring-UMTS-CellInformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-neighbouring-LCR-TDD-CellInformation    CRITICALITY ignore    EXTENSION    Neighbouring-LCR-TDD-CellInformation    PRESENCE optional }|
    { ID id-Extended-RNC-ID                CRITICALITY reject    EXTENSION    Extended-RNC-ID    PRESENCE optional },
    ...
}

Neighbouring-FDD-CellInformation ::= SEQUENCE ( SIZE (1..maxNrOfFDDNeighboursPerRNC,...)) OF Neighbouring-FDD-CellInformationItem

Neighbouring-FDD-CellInformationItem ::= SEQUENCE {
    c-ID                C-ID,
    uARFCNforNu         UARFCN,
    uARFCNforNd         UARFCN,
    frameOffset         FrameOffset    OPTIONAL,
    primaryScramblingCode    PrimaryScramblingCode,
    primaryCPICH-Power    PrimaryCPICH-Power    OPTIONAL,
    cellIndividualOffset    CellIndividualOffset    OPTIONAL,
    txDiversityIndicator    TxDiversityIndicator,
    sTTD-SupportIndicator    STTD-SupportIndicator    OPTIONAL,
    closedLoopModel1-SupportIndicator    ClosedLoopModel1-SupportIndicator    OPTIONAL,
    not-used-closedLoopMode2-SupportIndicator    NULL    OPTIONAL,
}

```

```

    iE-Extensions          ProtocolExtensionContainer { { Neighbouring-FDD-CellInformationItem-ExtIEs } } OPTIONAL,
    ...
}

Neighbouring-FDD-CellInformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-RestrictionStateIndicator          CRITICALITY ignore          EXTENSION RestrictionStateIndicator    PRESENCE optional }|
    { ID id-DPC-Mode-Change-SupportIndicator    CRITICALITY ignore          EXTENSION DPC-Mode-Change-SupportIndicator    PRESENCE optional }|
    { ID id-CoverageIndicator                  CRITICALITY ignore          EXTENSION CoverageIndicator              PRESENCE optional }|
    { ID id-AntennaColocationIndicator          CRITICALITY ignore          EXTENSION AntennaColocationIndicator        PRESENCE optional }|
    { ID id-HCS-Prio                           CRITICALITY ignore          EXTENSION HCS-Prio                       PRESENCE optional }|
    { ID id-CellCapabilityContainer-FDD         CRITICALITY ignore          EXTENSION CellCapabilityContainer-FDD       PRESENCE optional }|
    { ID id-SNA-Information                    CRITICALITY ignore          EXTENSION SNA-Information                 PRESENCE optional }|
    { ID id-FrequencyBandIndicator             CRITICALITY ignore          EXTENSION FrequencyBandIndicator          PRESENCE optional }|
    { ID id-Max-UE-DTX-Cycle                   CRITICALITY ignore          EXTENSION Max-UE-DTX-Cycle               PRESENCE conditional }|
    -- This IE shall be present if the the fifteenth bit Continuous Packet Connectivity DTX-DRX Support Indicator in the Cell Capability Container
    FDD IE is set to the value "1".
    { ID id-Multiple-PLMN-List                  CRITICALITY ignore          EXTENSION Multiple-PLMN-List             PRESENCE optional }|
    { ID id-Secondary-Serving-Cell-List        CRITICALITY ignore          EXTENSION Secondary-Serving-Cell-List     PRESENCE optional }|
    { ID id-CellCapabilityContainerExtension-FDD CRITICALITY ignore          EXTENSION CellCapabilityContainerExtension-FDD PRESENCE optional
},
    ...
}

NeighbouringFDDCellMeasurementInformation ::= SEQUENCE {
    uC-ID                UC-ID,
    uARFCN                UARFCN,
    primaryScramblingCode PrimaryScramblingCode,
    iE-Extensions        ProtocolExtensionContainer { { NeighbouringFDDCellMeasurementInformationItem-ExtIEs } } OPTIONAL,
    ...
}

NeighbouringFDDCellMeasurementInformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

Neighbouring-GSM-CellInformation ::= ProtocolIE-Single-Container {{ Neighbouring-GSM-CellInformationIE }}

Neighbouring-GSM-CellInformationIE RNSAP-PROTOCOL-IES ::= {
    { ID id-Neighbouring-GSM-CellInformation    CRITICALITY ignore    TYPE    Neighbouring-GSM-CellInformationIES    PRESENCE mandatory }
}

Neighbouring-GSM-CellInformationIES ::= SEQUENCE ( SIZE (1..maxNrOfGSMNeighboursPerRNC,...)) OF Neighbouring-GSM-CellInformationItem

Neighbouring-GSM-CellInformationItem ::= SEQUENCE {
    cGI                CGI,
    cellIndividualOffset CellIndividualOffset    OPTIONAL,
    bSIC                BSIC,
    band-Indicator      Band-Indicator,
    bCCH-ARFCN          BCCH-ARFCN,
    iE-Extensions        ProtocolExtensionContainer { { Neighbouring-GSM-CellInformationItem-ExtIEs } } OPTIONAL,
    ...
}

Neighbouring-GSM-CellInformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {

```

```

{ ID id-CoverageIndicator          CRITICALITY ignore      EXTENSION CoverageIndicator          PRESENCE optional } |
{ ID id-AntennaColocationIndicator CRITICALITY ignore  EXTENSION AntennaColocationIndicator PRESENCE optional } |
{ ID id-HCS-Prio                   CRITICALITY ignore  EXTENSION HCS-Prio                   PRESENCE optional } |
{ ID id-SNA-Information            CRITICALITY ignore  EXTENSION SNA-Information            PRESENCE optional } |
{ ID id-GERAN-Cell-Capability      CRITICALITY ignore  EXTENSION GERAN-Cell-Capability     PRESENCE optional } |
{ ID id-GERAN-Classmark           CRITICALITY ignore  EXTENSION GERAN-Classmark           PRESENCE optional } |
{ ID id-ExtendedGSMCellIndividualOffset CRITICALITY ignore  EXTENSION ExtendedGSMCellIndividualOffset PRESENCE optional },
...
}

```

Neighbouring-TDD-CellInformation ::= SEQUENCE ( SIZE (1..maxNrOfTDDNeighboursPerRNC,...)) OF Neighbouring-TDD-CellInformationItem

```

Neighbouring-TDD-CellInformationItem ::= SEQUENCE {
  c-ID                C-ID,
  uARFCNforNt        UARFCN,
  frameOffset        FrameOffset      OPTIONAL,
  cellParameterID    CellParameterID,
  syncCase           SyncCase,
  timeSlot           TimeSlot          OPTIONAL
  -- This IE shall be present if Sync Case = Case1 -- ,
  sCH-TimeSlot       SCH-TimeSlot      OPTIONAL
  -- This IE shall be present if Sync Case = Case2 -- ,
  sCTD-Indicator     SCTD-Indicator,
  cellIndividualOffset CellIndividualOffset OPTIONAL,
  dPCHConstantValue DPCHConstantValue OPTIONAL,
  pCCPCH-Power       PCCPCH-Power     OPTIONAL,
  iE-Extensions      ProtocolExtensionContainer { { Neighbouring-TDD-CellInformationItem-ExtIEs } } OPTIONAL,
  ...
}

```

```

Neighbouring-TDD-CellInformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-RestrictionStateIndicator          CRITICALITY ignore      EXTENSION RestrictionStateIndicator          PRESENCE optional } |
  { ID id-CoverageIndicator                  CRITICALITY ignore      EXTENSION CoverageIndicator                  PRESENCE optional } |
  { ID id-AntennaColocationIndicator         CRITICALITY ignore      EXTENSION AntennaColocationIndicator         PRESENCE optional } |
  { ID id-HCS-Prio                           CRITICALITY ignore      EXTENSION HCS-Prio                           PRESENCE optional } |
  { ID id-CellCapabilityContainer-TDD         CRITICALITY ignore      EXTENSION CellCapabilityContainer-TDD         PRESENCE optional } |
  { ID id-SNA-Information                    CRITICALITY ignore      EXTENSION SNA-Information                    PRESENCE optional } |
  { ID id-CellCapabilityContainer-TDD768     CRITICALITY ignore      EXTENSION CellCapabilityContainer-TDD768     PRESENCE optional } |
  { ID id-Multiple-PLMN-List                 CRITICALITY ignore      EXTENSION Multiple-PLMN-List                 PRESENCE optional },
  ...
}

```

```

NeighbouringTDDCellMeasurementInformation ::= SEQUENCE {
  uC-ID                UC-ID,
  uARFCN               UARFCN,
  cellParameterID      CellParameterID,
  timeSlot             TimeSlot          OPTIONAL,
  midambleShiftAndBurstType MidambleShiftAndBurstType OPTIONAL,
  iE-Extensions        ProtocolExtensionContainer { { NeighbouringTDDCellMeasurementInformationItem-ExtIEs } } OPTIONAL,
  ...
}

```

NeighbouringTDDCellMeasurementInformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {

...

```

}

NeighbouringTDDCellMeasurementInformationLCR ::= SEQUENCE {
    uC-ID                UC-ID,
    uARFCN                UARFCN,
    cellParameterID      CellParameterID,
    timeSlotLCR           TimeSlotLCR                OPTIONAL,
    midambleShiftLCR     MidambleShiftLCR           OPTIONAL,
    iE-Extensions        ProtocolExtensionContainer { { NeighbouringTDDCellMeasurementInformationLCRItem-ExtIEs } } OPTIONAL,
    ...
}

NeighbouringTDDCellMeasurementInformationLCRItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

NeighbouringTDDCellMeasurementInformation768 ::= SEQUENCE {
    uC-ID                UC-ID,
    uARFCN                UARFCN,
    cellParameterID      CellParameterID,
    timeSlot              TimeSlot                OPTIONAL,
    midambleShiftAndBurstType768 MidambleShiftAndBurstType768    OPTIONAL,
    iE-Extensions        ProtocolExtensionContainer { { NeighbouringTDDCellMeasurementInformationItem768-ExtIEs } } OPTIONAL,
    ...
}

NeighbouringTDDCellMeasurementInformationItem768-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

Neighbouring-LCR-TDD-CellInformation ::= SEQUENCE (SIZE (1.. maxNrOfLCRTDDNeighboursPerRNC,...)) OF Neighbouring-LCR-TDD-CellInformationItem

Neighbouring-LCR-TDD-CellInformationItem ::= SEQUENCE {
    c-ID                C-ID,
    uARFCNforNt         UARFCN,
    frameOffset         FrameOffset                OPTIONAL,
    cellParameterID     CellParameterID,
    sCTD-Indicator      SCTD-Indicator,
    cellIndividualOffset CellIndividualOffset    OPTIONAL,
    dPCHConstantValue   DPCHConstantValue    OPTIONAL,
    pCCPCH-Power        PCCPCH-Power            OPTIONAL,
    restrictionStateIndicator RestrictionStateIndicator    OPTIONAL,
    iE-Extensions        ProtocolExtensionContainer { { Neighbouring-LCR-TDD-CellInformationItem-ExtIEs } } OPTIONAL,
    ...
}

Neighbouring-LCR-TDD-CellInformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-CoverageIndicator          CRITICALITY ignore     EXTENSION CoverageIndicator          PRESENCE optional } |
    { ID id-AntennaColocationIndicator CRITICALITY ignore     EXTENSION AntennaColocationIndicator PRESENCE optional } |
    { ID id-HCS-Prio                   CRITICALITY ignore     EXTENSION HCS-Prio                   PRESENCE optional } |
    { ID id-CellCapabilityContainer-TDD-LCR CRITICALITY ignore     EXTENSION CellCapabilityContainer-TDD-LCR PRESENCE optional } |
    { ID id-SNA-Information             CRITICALITY ignore     EXTENSION SNA-Information             PRESENCE optional } |
    { ID id-Multiple-PLMN-List          CRITICALITY ignore     EXTENSION Multiple-PLMN-List          PRESENCE optional } ,
}

```

```

}
...
}

Neighbouring-E-UTRA-CellInformation ::= SEQUENCE ( SIZE (1..maxNrOfEUTRANeighboursPerRNC,...)) OF Neighbouring-E-UTRA-CellInformationItem

Neighbouring-E-UTRA-CellInformationItem ::= SEQUENCE {
    eCGI                ECGI,
    eARFCN-Information  EARFCN-Information,
    iE-Extensions       ProtocolExtensionContainer { { Neighbouring-E-UTRA-CellInformationItem-ExtIEs } } OPTIONAL,
    ...
}

Neighbouring-E-UTRA-CellInformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

NonCellSpecificTxDiversity ::= ENUMERATED {
    txDiversity,
    ...
}

NotProvidedCellList ::= SEQUENCE (SIZE (1..maxNrOfCells)) OF MBMSChannelTypeCellList

NrOfDLchannelisationcodes ::= INTEGER (1..8)

NrOfTransportBlocks ::= INTEGER (0..512)

NRT-Load-Information-Value-IncrDecrThres ::= INTEGER(0..3)

NRT-Load-Information-Value ::= INTEGER(0..3)

NRTLInformationValue ::= SEQUENCE {
    uplinkNRTLInformationValue    INTEGER(0..3),
    downlinkNRTLInformationValue  INTEGER(0..3)
}

N-E-UCCH ::= INTEGER (1..12)

N-E-UCCH-LCR ::= INTEGER (1..8)

Number-Of-Supported-Carriers ::= ENUMERATED {
    one-one-carrier,
    one-three-carrier,
    three-three-carrier,
    one-six-carrier,
    three-six-carrier,
    six-six-carrier,
    ...
}

NumHS-SCCH-Codes ::= INTEGER (1..maxNrOfHSSCCHCodes)

NoOfTargetCellHS-SCCH-Order ::= INTEGER (1..30)

```

```
NeedforIdleInterval ::= ENUMERATED {
    true,
    false
}

-- O

Out-of-Synchronization-Window ::= ENUMERATED {
    ms40,
    ms80,
    ms160,
    ms320,
    ms640,
    ...
}

OnModification ::= SEQUENCE {
    measurementThreshold MeasurementThreshold,
    iE-Extensions ProtocolExtensionContainer { {OnModification-ExtIEs} } OPTIONAL,
    ...
}

OnModification-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

OnModificationInformation ::= SEQUENCE {
    informationThreshold InformationThreshold OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { {OnModificationInformation-ExtIEs} } OPTIONAL,
    ...
}

OnModificationInformation-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- P

PagingCause ::= ENUMERATED {
    terminating-conversational-call,
    terminating-streaming-call,
    terminating-interactive-call,
    terminating-background-call,
    terminating-low-priority-signalling,
    ...,
    terminating-high-priority-signalling,
    terminating-cause-unknown
}

-- See in [16]

PagingRecordType ::= ENUMERATED {
```

```

    imsi-gsm-map,
    tmsi-gsm-map,
    p-tmsi-gsm-map,
    imsi-ds-41,
    tmsi-ds-41,
    ...
}
-- See in [16]

PartialReportingIndicator ::= ENUMERATED {
    partial-reporting-allowed
}

PayloadCRC-PresenceIndicator ::= ENUMERATED {
    crc-included,
    crc-not-included
}

PCCPCH-Power ::= INTEGER (-150..400,...)
-- PCCPCH-power = power * 10
-- If power <= -15 PCCPCH shall be set to -150
-- If power >= 40 PCCPCH shall be set to 400
-- Unit dBm, Range -15dBm .. +40 dBm, Step 0.1dBm

PCH-InformationList ::= SEQUENCE (SIZE(0..1)) OF PCH-InformationItem

PCH-InformationItem ::= SEQUENCE {
    transportFormatSet      TransportFormatSet,
    iE-Extensions           ProtocolExtensionContainer { { PCH-InformationItem-ExtIEs } } OPTIONAL,
    ...
}

PCH-InformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

PC-Preamble ::= INTEGER(0..7,...)

Periodic ::= SEQUENCE {
    reportPeriodicity      ReportPeriodicity,
    iE-Extensions          ProtocolExtensionContainer { { Periodic-ExtIEs } } OPTIONAL,
    ...
}

Periodic-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

PeriodicInformation ::= SEQUENCE {
    informationReportPeriodicity      InformationReportPeriodicity,
    iE-Extensions                     ProtocolExtensionContainer { { PeriodicInformation-ExtIEs } } OPTIONAL,
    ...
}

```

```
PeriodicInformation-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

Permanent-NAS-UE-Identity ::= CHOICE {
  imsi          IMSI,
  ...
}

Phase-Reference-Update-Indicator ::= ENUMERATED {
  phase-reference-needs-to-be-changed
}

PLCCHsequenceNumber ::= INTEGER (0..14)

PLMN-Identity ::= OCTET STRING (SIZE(3))

PowerAdjustmentType ::= ENUMERATED {
  none,
  common,
  individual
}

PowerOffset ::= INTEGER (0..24)

PowerOffsetForSecondaryCPICHforMIMO ::= INTEGER (-6..0)
-- Unit dB, Range -10dB .. 5dB, Step +1dB

PowerOffsetForSecondaryCPICHforMIMOREquestIndicator ::= NULL

PRC ::= INTEGER (-2047..2047)
--pseudo range correction; scaling factor 0.32 meters

PRCDeviation ::= ENUMERATED {
  prcd1,
  prcd2,
  prcd5,
  prcd10,
  ...
}

Pre-emptionCapability ::= ENUMERATED {
  shall-not-trigger-pre-emption,
  may-trigger-pre-emption
}

Pre-emptionVulnerability ::= ENUMERATED {
  not-pre-emptable,
  pre-emptable
}

PredictedSFNSFNDeviationLimit ::= INTEGER (1..256)
-- Unit chip, Step 1/16 chip, Range 1/16..16 chip
```



```

PredictedTUTRANGPSDeviationLimit ::= INTEGER (1..256)
-- Unit chip, Step 1/16 chip, Range 1/16..16 chip

PreferredFrequencyLayerInfo ::= SEQUENCE {
    defaultPreferredFrequency    UARFCN,
    additionalPreferredFrequency OPTIONAL,
    iE-Extensions                ProtocolExtensionContainer { { PreferredFrequencyLayerInfo-ExtIEs } } OPTIONAL,
    ...
}
PreferredFrequencyLayerInfo-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

PrimaryCPICH-Power                ::= INTEGER (-100..500)
-- step 0.1 (Range -10.0..50.0) Unit is dBm

PrimaryCPICH-EcNo                 ::= INTEGER (-30..30)

Primary-CPICH-Usage-For-Channel-Estimation ::= ENUMERATED {
    primary-CPICH-may-be-used,
    primary-CPICH-shall-not-be-used
}

PrimaryCCPCH-RSCP                 ::= INTEGER (0..91)
-- Mapping of Non Negative values according to mapping in [24]

PrimaryCCPCH-RSCP-Delta           ::= INTEGER (-5..-1,...)
-- Mapping of Negative values according to mapping in [24]

PrimaryScramblingCode             ::= INTEGER (0..511)

PriorityLevel                      ::= INTEGER (0..15)
-- 0 = spare, 1 = highest priority, ..14 = lowest priority and 15 = no priority

PriorityQueue-Id                  ::= INTEGER (0..maxNrOfPrioQueues-1)

PriorityQueue-InfoList            ::= SEQUENCE (SIZE (1..maxNrOfPrioQueues)) OF PriorityQueue-InfoItem

PriorityQueue-InfoItem ::= SEQUENCE {
    priorityQueue-Id                PriorityQueue-Id,
    associatedHSDSCH-MACdFlow        HSDSCH-MACdFlow-ID,
    schedulingPriorityIndicator      SchedulingPriorityIndicator,
    t1                               T1,
    discardTimer                    DiscardTimer                OPTIONAL,
    mAC-hsWindowSize                MAC-hsWindowSize,
    mAChsGuaranteedBitRate          MACHsGuaranteedBitRate    OPTIONAL,
    mACdPDU-Size-Index              MACdPDU-Size-IndexList,
    rLC-Mode                        RLC-Mode,
    iE-Extensions                   ProtocolExtensionContainer { { PriorityQueue-InfoItem-ExtIEs } } OPTIONAL,
    ...
}
PriorityQueue-InfoItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {

```

```
{ ID id-MaximumMACdPDU-SizeExtended CRITICALITY reject EXTENSION MAC-PDU-SizeExtended PRESENCE optional}|
{ ID id-DL-RLC-PDU-Size-Format CRITICALITY ignore EXTENSION DL-RLC-PDU-Size-Format PRESENCE optional},
...
}
```

PriorityQueue-InfoList-EnhancedFACH-PCH ::= SEQUENCE (SIZE (1..maxNrOfPrioQueues)) OF PriorityQueue-InfoItem-EnhancedFACH-PCH

```
PriorityQueue-InfoItem-EnhancedFACH-PCH ::= SEQUENCE {
  priorityQueue-Id          PriorityQueue-Id,
  schedulingPriorityIndicator SchedulingPriorityIndicator,
  t1                        T1,
  mAC-ehs-Reset-Timer      MAC-ehs-Reset-Timer,
  discardTimer              DiscardTimer OPTIONAL,
  mAC-hsWindowSize         MAC-hsWindowSize,
  maximum-MACdPDU-Size     MAC-PDU-SizeExtended,
  iE-Extensions            ProtocolExtensionContainer { { PriorityQueue-InfoItem-EnhancedFACH-PCH-ExtIEs } } OPTIONAL,
  ...
}
```

```
PriorityQueue-InfoItem-EnhancedFACH-PCH-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}
```

PriorityQueue-InfoList-to-Modify ::= SEQUENCE (SIZE (1..maxNrOfPrioQueues)) OF ModifyPriorityQueue

```
PriorityQueue-InfoItem-to-Add ::= SEQUENCE {
  priorityQueue-Id          PriorityQueue-Id,
  associatedHSDSCH-MACdFlow HSDSCH-MACdFlow-ID,
  schedulingPriorityIndicator SchedulingPriorityIndicator,
  t1                        T1,
  discardTimer              DiscardTimer OPTIONAL,
  mAC-hsWindowSize         MAC-hsWindowSize,
  mAChsGuaranteedBitRate   MACHsGuaranteedBitRate OPTIONAL,
  mACdPDU-Size-Index       MACdPDU-Size-IndexList,
  rLC-Mode                 RLC-Mode,
  iE-Extensions            ProtocolExtensionContainer { { PriorityQueue-InfoItem-to-Add-ExtIEs } } OPTIONAL,
  ...
}
```

```
PriorityQueue-InfoItem-to-Add-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
{ ID id-MaximumMACdPDU-SizeExtended CRITICALITY reject EXTENSION MAC-PDU-SizeExtended PRESENCE optional}|
{ ID id-DL-RLC-PDU-Size-Format CRITICALITY ignore EXTENSION DL-RLC-PDU-Size-Format PRESENCE optional},
...
}
```

```
PriorityQueue-InfoItem-to-Modify ::= SEQUENCE {
  priorityQueue-Id          PriorityQueue-Id,
  schedulingPriorityIndicator SchedulingPriorityIndicator OPTIONAL,
  t1                        T1 OPTIONAL,
  discardTimer              DiscardTimer OPTIONAL,
  mAC-hsWindowSize         MAC-hsWindowSize OPTIONAL,
  mAChsGuaranteedBitRate   MACHsGuaranteedBitRate OPTIONAL,
  mACdPDU-Size-Index-to-Modify MACdPDU-Size-IndexList-to-Modify OPTIONAL,
  iE-Extensions            ProtocolExtensionContainer { { PriorityQueue-InfoItem-to-Modify-ExtIEs } } OPTIONAL,
```

```

}
...
}
PriorityQueue-InfoItem-to-Modify-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-MaximumMACdPDU-SizeExtended    CRITICALITY reject    EXTENSION    MAC-PDU-SizeExtended    PRESENCE optional} |
  { ID id-DL-RLC-PDU-Size-Format        CRITICALITY ignore    EXTENSION    DL-RLC-PDU-Size-Format    PRESENCE optional},
  ...
}

PriorityQueue-InfoList-to-Modify-Unsynchronised ::= SEQUENCE (SIZE (0..maxNrOfPrioQueues)) OF PriorityQueue-InfoItem-to-Modify-Unsynchronised

PriorityQueue-InfoItem-to-Modify-Unsynchronised ::= SEQUENCE {
  priorityQueueId          PriorityQueue-Id,
  schedulingPriorityIndicator    SchedulingPriorityIndicator          OPTIONAL,
  discardTimer             DiscardTimer                          OPTIONAL,
  mACHsGuaranteedBitRate   MACHsGuaranteedBitRate          OPTIONAL,
  iE-Extensions            ProtocolExtensionContainer { { PriorityQueue-InfoItem-to-Modify-Unsynchronised-ExtIEs} }    OPTIONAL,
  ...
}

PriorityQueue-InfoItem-to-Modify-Unsynchronised-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

PropagationDelay          ::= INTEGER (0..255)

ProvidedInformation ::= SEQUENCE {
  mBMSChannelTypeInfo     MBMSChannelTypeInfo          OPTIONAL,
  mBMSPreferredFreqLayerInfo    MBMSPreferredFreqLayerInfo    OPTIONAL,
  iE-Extensions            ProtocolExtensionContainer { { ProvideInformation-ExtIEs} }    OPTIONAL,
  ...
}

ProvideInformation-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-UpPCH-InformationList-LCRTDD    CRITICALITY ignore    EXTENSION    UpPCH-InformationList-LCRTDD    PRESENCE optional},
  -- Applicable to 1.28Mcps TDD only
  ...
}

UpPCH-InformationList-LCRTDD ::= SEQUENCE (SIZE (0.. maxFrequencyinCell)) OF ProtocolIE-Single-Container {{ UpPCH-InformationItemIE-LCRTDD }}

UpPCH-InformationItemIE-LCRTDD RNSAP-PROTOCOL-IES ::= {
  { ID id-UpPCH-InformationItem-LCRTDD    CRITICALITY ignore    TYPE UpPCH-InformationItem-LCRTDD    PRESENCE mandatory},
  ...
}

UpPCH-InformationItem-LCRTDD ::= SEQUENCE {
  uARFCNforNt             UARFCN          OPTIONAL,
  uPPCHPositionLCR        UPPCHPositionLCR          OPTIONAL,
  iE-Extensions            ProtocolExtensionContainer { { UpPCH-InformationItem-LCRTDD-ExtIEs} }    OPTIONAL,
  ...
}

UpPCH-InformationItem-LCRTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {

```

```

}
...
}
PunctureLimit ::= INTEGER (0..15)
-- 0: 40%; 1: 44%; ... 14: 96%; 15: 100
-- 0 is not applicable for E-DPCH

PTMCellList ::= SEQUENCE (SIZE (1..maxNrOfCells)) OF MBMSChannelTypeCellList
PTPCellList ::= SEQUENCE (SIZE (1..maxNrOfCells)) OF MBMSChannelTypeCellList

-- Q
QE-Selector ::= ENUMERATED {
    selected,
    non-selected
}
Process-Memory-Size ::= ENUMERATED {
    hms800, hms1600, hms2400, hms3200, hms4000,
    hms4800, hms5600, hms6400, hms7200, hms8000,
    hms8800, hms9600, hms10400, hms11200, hms12000,
    hms12800, hms13600, hms14400, hms15200, hms16000,
    hms17600, hms19200, hms20800, hms22400, hms24000,
    hms25600, hms27200, hms28800, hms30400, hms32000,
    hms36000, hms40000, hms44000, hms48000, hms52000,
    hms56000, hms60000, hms64000, hms68000, hms72000,
    hms76000, hms80000, hms88000, hms96000, hms104000,
    hms112000, hms120000, hms128000, hms136000, hms144000,
    hms152000, hms160000, hms176000, hms192000, hms208000,
    hms224000, hms240000, hms256000, hms272000, hms288000,
    hms304000, ...}

-- R
RAC ::= OCTET STRING (SIZE(1))

RANAP-EnhancedRelocationInformationRequest ::= BIT STRING
RANAP-EnhancedRelocationInformationResponse ::= BIT STRING

RANAP-RelocationInformation ::= BIT STRING

Range-Correction-Rate ::= INTEGER (-127..127)
-- scaling factor 0.032 m/s

RateMatchingAttribute ::= INTEGER (1..maxRateMatching)

RB-Identity ::= INTEGER (0..31)

RB-Info ::= SEQUENCE (SIZE(1..maxNoOfRB)) OF RB-Identity

Received-Total-Wideband-Power-Value ::= Received-total-wide-band-power

```

```

Received-Total-Wideband-Power-Value-IncrDecrThres ::= INTEGER(0..620)
-- Unit dB Step 0.1dB
-- e.g. value 100 means 10dB

Reference-E-TFCI-Information ::= SEQUENCE (SIZE (1..maxNrOfRefETFCIs)) OF Reference-E-TFCI-Information-Item

Reference-E-TFCI-Information-Item ::= SEQUENCE {
    reference-E-TFCI          E-TFCI,
    -- The following IE shall be ignored if id-Ext-Reference-E-TFCI-PO is present in Reference-E-TFCI-Information-Item-ExtIEs
    reference-E-TFCI-PO      Reference-E-TFCI-PO,
    iE-Extensions           ProtocolExtensionContainer { { Reference-E-TFCI-Information-Item-ExtIEs} }    OPTIONAL,
    ...
}

Reference-E-TFCI-Information-Item-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    -- The following IE shall be present if the ref E-TFCI power offset to be signalled exceeds maxNrOfRefETFCI-PO-QUANTSTEPS
    { ID id-Ext-Reference-E-TFCI-PO    CRITICALITY reject    EXTENSION    Ext-Reference-E-TFCI-PO    PRESENCE optional},
    ...
}

Reference-E-TFCI-PO ::= INTEGER (0.. maxNrOfRefETFCI-PO-QUANTSTEPS)

RefTFCNumber ::= INTEGER (0..15)

Released-CN-Domain ::= CHOICE {
    pSDomain          NULL,
    cSDomain          NULL,
    pS-CSDomain       NULL,
    ...
}

RepetitionLength          ::= INTEGER (1..63)

RepetitionPeriod ::= ENUMERATED {
    v1,
    v2,
    v4,
    v8,
    v16,
    v32,
    v64
}

RepetitionNumber0 ::= INTEGER (0..255)

RepetitionNumber1 ::= INTEGER (1..256)

ReportCharacteristics ::= CHOICE {
    onDemand          NULL,
    periodic          Periodic,
    eventA            EventA,
    eventB            EventB,
}

```

```

eventC          EventC,
eventD          EventD,
eventE          EventE,
eventF          EventF,
...
extension-ReportCharacteristics  Extension-ReportCharacteristics
}

Extension-ReportCharacteristics ::= ProtocolIE-Single-Container {{ Extension-ReportCharacteristicsIE }}

Extension-ReportCharacteristicsIE RNSAP-PROTOCOL-IES ::= {
  { ID id-OnModification  CRITICALITY reject  TYPE OnModification      PRESENCE mandatory }
}

ReportPeriodicity ::= CHOICE {
  ten-msec          INTEGER (1..6000,...),
  -- The Report Periodicity gives the reporting periodicity in number of 10 ms periods.
  -- E.g. value 6000 means 60000ms (i.e. 1min)
  -- Unit ms, Step 10ms
  min              INTEGER (1..60,...),
  -- Unit min, Step 1min
  ...
}

RequestedDataValue ::= SEQUENCE {
  gA-AccessPointPositionwithAltitude  GA-AccessPointPositionwithOptionalAltitude  OPTIONAL,
  iPDLParameters                      IPDLParameters                      OPTIONAL,
  dGPSCorrections                     DGPSCorrections                     OPTIONAL,
  gPS-NavigationModel-and-TimeRecovery GPS-NavigationModel-and-TimeRecovery  OPTIONAL,
  gPS-Ionospheric-Model               GPS-Ionospheric-Model               OPTIONAL,
  gPS-UTC-Model                       GPS-UTC-Model                       OPTIONAL,
  gPS-Almanac                         GPS-Almanac                         OPTIONAL,
  gPS-RealTime-Integrity              GPS-RealTime-Integrity              OPTIONAL,
  gPS-RX-POS                          GPS-RX-POS                          OPTIONAL,
  sFNSFN-GA-AccessPointPosition       GA-AccessPointPositionwithOptionalAltitude  OPTIONAL,
  iE-Extensions                       ProtocolExtensionContainer { { RequestedDataValue-ExtIEs} }  OPTIONAL,
  ...
}

RequestedDataValue-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-Cell-Capacity-Class-Value  CRITICALITY ignore  EXTENSION Cell-Capacity-Class-Value  PRESENCE optional } |
  { ID id-NACC-Related-Data          CRITICALITY ignore  EXTENSION NACC-Related-Data          PRESENCE optional } |
  { ID id-MBMS-Bearer-Service-Full-Address  CRITICALITY ignore  EXTENSION MBMS-Bearer-Service-Full-Address  PRESENCE optional } |
  { ID id-Inter-Frequency-Cell-Information  CRITICALITY ignore  EXTENSION Inter-Frequency-Cell-Information  PRESENCE optional } |
  { ID id-GANSS-Common-Data           CRITICALITY ignore  EXTENSION GANSS-Common-Data           PRESENCE optional } |
  { ID id-GANSS-Generic-Data          CRITICALITY ignore  EXTENSION GANSS-Generic-Data          PRESENCE optional } |
  { ID id-Counting-Information         CRITICALITY ignore  EXTENSION Counting-Information         PRESENCE optional } |
  { ID id-Transmission-Mode-Information  CRITICALITY ignore  EXTENSION Transmission-Mode-Information  PRESENCE optional } |
  { ID id-MBMS-Neighbouring-Cell-Information  CRITICALITY ignore  EXTENSION MBMS-Neighbouring-Cell-Information  PRESENCE optional } |
  { ID id-RLC-Sequence-Number         CRITICALITY ignore  EXTENSION RLC-Sequence-Number         PRESENCE optional },
  ...
}

RequestedDataValueInformation ::= CHOICE {

```

```

    informationAvailable      InformationAvailable,
    informationNotAvailable   InformationNotAvailable
}

RestrictionStateIndicator ::= ENUMERATED {
    cellNotResevedForOperatorUse,
    cellResevedForOperatorUse,
    ...
}

RL-ID ::= INTEGER (0..31)

RL-Set-ID ::= INTEGER (0..31)

RL-Specific-DCH-Info ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF RL-Specific-DCH-Info-Item

RL-Specific-DCH-Info-Item ::= SEQUENCE {
    dCH-id          DCH-ID,
    bindingID       BindingID OPTIONAL,
    -- Shall be ignored if bearer establishment with ALCAP.
    transportLayerAddress TransportLayerAddress OPTIONAL,
    -- Shall be ignored if bearer establishment with ALCAP.
    iE-Extensions   ProtocolExtensionContainer { { RL-Specific-DCH-Info-Item-ExtIEs} } OPTIONAL,
    ...
}

RL-Specific-DCH-Info-Item-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-TransportBearerNotRequestedIndicator CRITICALITY ignore EXTENSION TransportBearerNotRequestedIndicator PRESENCE optional }, --
    FDD only
    ...
}

RL-Specific-EDCH-Information ::= SEQUENCE {
    rL-Specific-EDCH-Info RL-Specific-EDCH-Info,
    e-AGCH-PowerOffset    E-AGCH-PowerOffset OPTIONAL,
    e-RGCH-PowerOffset    E-RGCH-PowerOffset OPTIONAL,
    e-HICH-PowerOffset    E-HICH-PowerOffset OPTIONAL,
    iE-Extensions         ProtocolExtensionContainer { { RL-Specific-EDCH-Information-Item-ExtIEs} } OPTIONAL,
    ...
}

RL-Specific-EDCH-Information-Item-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-Specific-EDCH-Info ::= SEQUENCE (SIZE (1..maxNrOfEDCHMACdFlows)) OF RL-Specific-EDCH-InfoItem

RL-Specific-EDCH-InfoItem ::= SEQUENCE {
    eDCH-MACdFlow-ID      EDCH-MACdFlow-ID,
    bindingID             BindingID OPTIONAL,
    -- Shall be ignored if bearer establishment with ALCAP.
    transportLayerAddress TransportLayerAddress OPTIONAL,

```

```
-- Shall be ignored if bearer establishment with ALCAP.
iE-Extensions          ProtocolExtensionContainer { { RL-Specific-EDCH-Info-Item-ExtIEs } } OPTIONAL,
...
}

RL-Specific-EDCH-Info-Item-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-TransportBearerNotRequestedIndicator    CRITICALITY ignore  EXTENSION TransportBearerNotRequestedIndicator  PRESENCE optional }, --
  FDD only
  ...
}

RLC-Mode      ::= ENUMERATED {
  rLC-AM,
  rLC-UM,
  ...
}

DL-RLC-PDU-Size-Format ::= ENUMERATED {
  fixed-RLC-PDU-Size,
  flexible-RLC-PDU-Size,
  ...
}

RLC-Sequence-Number      ::= INTEGER (0..127)

RNC-ID                    ::= INTEGER (0..4095)

RNTI-Allocation-Indicator ::= ENUMERATED {
  true
}

Round-Trip-Time-IncrDecrThres ::= INTEGER(0..32766)

Round-Trip-Time-Value ::= INTEGER(0..32767)
-- According to mapping in [23]

RSCP-Value ::= INTEGER (0..127)
-- According to mapping in [24]

RSCP-Value-IncrDecrThres ::= INTEGER (0..126)

Received-total-wide-band-power      ::= INTEGER (0..621)
-- According to mapping in [23]

RT-Load-Value-IncrDecrThres ::= INTEGER(0..100)

RT-Load-Value ::= INTEGER(0..100)

RTLoadValue ::= SEQUENCE {
  uplinkRTLoadValue      INTEGER(0..100),
  downlinkRTLoadValue    INTEGER(0..100)
}

RxTimingDeviationForTA      ::= INTEGER (0..127)
-- As specified in [5], ch. 6.2.7.6
```



```

-- For 1.28Mcps TDD this IE must be set to 0.

RxTimingDeviationForTAext          ::= INTEGER (0..511)
-- As specified in [5] [3.84 Mcps TDD only]

RxTimingDeviationForTA768          ::= INTEGER (0.. 1023)
-- As specified in [5]

Rx-Timing-Deviation-Value ::= INTEGER (0..8191)
--According to mapping in [24] [3.84Mcps TDD only]

Rx-Timing-Deviation-Value-ext ::= INTEGER (0..32767)
--According to mapping in [24] [3.84Mcps TDD only]

Rx-Timing-Deviation-Value-LCR ::= INTEGER (0..511)
--According to mapping in [24] [1.28Mcps TDD only]

Rx-Timing-Deviation-Value-768 ::= INTEGER (0..65535)
--According to mapping in [24] [7.68Mcps TDD only]

RefBeta ::= INTEGER (-15..16)

-- S

SAC          ::= OCTET STRING (SIZE (2))

SAI ::= SEQUENCE {
    pLMN-Identity      PLMN-Identity,
    lAC                LAC,
    sAC                SAC,
    iE-Extensions     ProtocolExtensionContainer { {SAI-ExtIEs} } OPTIONAL
}

SAI-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

SAT-ID ::= INTEGER (0..63)

SCH-TimeSlot          ::= INTEGER (0..6)

ScaledAdjustmentRatio ::= INTEGER(0..100)
-- AdjustmentRatio = ScaledAdjustmentRatio / 100

SchedulingInformation ::= ENUMERATED {
    included,
    not-included
}

SecondaryServingCells ::= SEQUENCE (SIZE (1..maxNrOfHSDSCH-1)) OF SecondaryServingCellsItem

SecondaryServingCellsItem ::= SEQUENCE {
    secondaryC-ID      C-ID,

```

```

    numSecondaryHS-SCCH-Codes      NumHS-SCCH-Codes      OPTIONAL,
    sixtyfourQAM-UsageAllowedIndicator  SixtyfourQAM-UsageAllowedIndicator  OPTIONAL,
    iE-Extensions                  ProtocolExtensionContainer { { SecondaryServingCellsItem-ExtIEs } } OPTIONAL,
    ...
}

SecondaryServingCellsItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

Secondary-CCPCH-Info-TDD ::= SEQUENCE {
    dl-TFCS                      TFCS,
    tFCI-Coding                  tFCI-Coding,
    secondary-CCPCH-TDD-InformationList  Secondary-CCPCH-TDD-InformationList,
    fACH-InformationList        fACH-InformationList,
    pCH-InformationList         pCH-InformationList,
    iE-Extensions              ProtocolExtensionContainer { { Secondary-CCPCH-Info-TDD-ExtIEs } } OPTIONAL,
    ...
}

Secondary-CCPCH-Info-TDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

Secondary-CPICH-Information ::= SEQUENCE {
    dl-ScramblingCode           DL-ScramblingCode,
    fDD-DL-ChannelisationCodeNumber  FDD-DL-ChannelisationCodeNumber,
    iE-Extensions              ProtocolExtensionContainer { { Secondary-CPICH-Information-ExtIEs } } OPTIONAL,
    ...
}

Secondary-CPICH-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

Secondary-CPICH-Information-Change ::= CHOICE {
    new-secondary-CPICH        Secondary-CPICH-Information,
    secondary-CPICH-shall-not-be-used  NULL,
    ...
}

Secondary-LCR-CCPCH-Info-TDD ::= SEQUENCE {
    dl-TFCS                      TFCS,
    tFCI-Coding                  tFCI-Coding,
    secondary-LCR-CCPCH-TDD-InformationList  Secondary-LCR-CCPCH-TDD-InformationList,
    fACH-InformationList        fACH-InformationList,
    pCH-InformationList         pCH-InformationList,
    iE-Extensions              ProtocolExtensionContainer { { Secondary-LCR-CCPCH-Info-TDD-ExtIEs } } OPTIONAL,
    ...
}

Secondary-LCR-CCPCH-Info-TDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

}

Secondary-CCPCH-Info-TDD768 ::= SEQUENCE {
    dl-TFCS                TFCS,
    tFCI-Coding            tFCI-Coding,
    secondary-CCPCH-TDD-InformationList768 Secondary-CCPCH-TDD-InformationList768,
    fACH-InformationList  FACH-InformationList,
    pCH-InformationList   PCH-InformationList,
    iE-Extensions        ProtocolExtensionContainer { { Secondary-CCPCH-Info-TDD768-ExtIEs} } OPTIONAL,
    ...
}

Secondary-CCPCH-Info-TDD768-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

Secondary-CCPCH-TDD-InformationList ::= SEQUENCE (SIZE(0.. maxNrOfSCCPCHs)) OF Secondary-CCPCH-TDD-InformationItem

Secondary-CCPCH-TDD-InformationItem ::= SEQUENCE {
    timeSlot                TimeSlot,
    midambleShiftAndBurstType MidambleShiftAndBurstType,
    tFCI-Presence           tFCI-Presence,
    secondary-CCPCH-TDD-Code-Information Secondary-CCPCH-TDD-Code-Information,
    tDD-PhysicalChannelOffset TDD-PhysicalChannelOffset,
    repetitionLength        RepetitionLength,
    repetitionPeriod        RepetitionPeriod,
    iE-Extensions          ProtocolExtensionContainer { { Secondary-CCPCH-TDD-InformationItem-ExtIEs} } OPTIONAL,
    ...
}

Secondary-CCPCH-TDD-InformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

Secondary-LCR-CCPCH-TDD-InformationList ::= SEQUENCE (SIZE(0.. maxNrOfSCCPCHs)) OF Secondary-LCR-CCPCH-TDD-InformationItem

Secondary-LCR-CCPCH-TDD-InformationItem ::= SEQUENCE {
    timeSlotLCR            TimeSlotLCR,
    midambleShiftLCR       MidambleShiftLCR,
    tFCI-Presence           tFCI-Presence,
    secondary-LCR-CCPCH-TDD-Code-Information Secondary-LCR-CCPCH-TDD-Code-Information,
    tDD-PhysicalChannelOffset TDD-PhysicalChannelOffset,
    repetitionLength        RepetitionLength,
    repetitionPeriod        RepetitionPeriod,
    iE-Extensions          ProtocolExtensionContainer { { Secondary-LCR-CCPCH-TDD-InformationItem-ExtIEs} } OPTIONAL,
    ...
}

Secondary-LCR-CCPCH-TDD-InformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

Secondary-CCPCH-TDD-InformationList768 ::= SEQUENCE (SIZE(0.. maxNrOfSCCPCHs768)) OF Secondary-CCPCH-TDD-InformationItem768

```

```

Secondary-CCPCH-TDD-InformationItem768 ::= SEQUENCE {
    timeSlot                TimeSlot,
    midambleShiftAndBurstType768    MidambleShiftAndBurstType768,
    tFCI-Presence           TFCI-Presence,
    secondary-CCPCH-TDD-Code-Information768    Secondary-CCPCH-TDD-Code-Information768,
    tDD-PhysicalChannelOffset    TDD-PhysicalChannelOffset,
    repetitionLength           RepetitionLength,
    repetitionPeriod           RepetitionPeriod,
    iE-Extensions             ProtocolExtensionContainer { { Secondary-CCPCH-TDD-InformationItem768-ExtIEs } } OPTIONAL,
    ...
}

Secondary-CCPCH-TDD-InformationItem768-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

Secondary-CCPCH-TDD-Code-Information ::= SEQUENCE ( SIZE (1..maxNrOfSCCPCHs)) OF Secondary-CCPCH-TDD-Code-InformationItem

Secondary-CCPCH-TDD-Code-InformationItem ::= SEQUENCE {
    tDD-ChannelisationCode    TDD-ChannelisationCode,
    iE-Extensions             ProtocolExtensionContainer { {Secondary-CCPCH-TDD-Code-InformationItem-ExtIEs} } OPTIONAL,
    ...
}

Secondary-CCPCH-TDD-Code-InformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

Secondary-LCR-CCPCH-TDD-Code-Information ::= SEQUENCE ( SIZE (1..maxNrOfSCCPCHs)) OF Secondary-LCR-CCPCH-TDD-Code-InformationItem

Secondary-LCR-CCPCH-TDD-Code-InformationItem ::= SEQUENCE {
    tDD-ChannelisationCodeLCR    TDD-ChannelisationCodeLCR,
    s-CCPCH-TimeSlotFormat-LCR    TDD-DL-DPCH-TimeSlotFormat-LCR,
    iE-Extensions             ProtocolExtensionContainer { {Secondary-LCR-CCPCH-TDD-Code-InformationItem-ExtIEs} } OPTIONAL,
    ...
}

Secondary-LCR-CCPCH-TDD-Code-InformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

Secondary-CCPCH-TDD-Code-Information768 ::= SEQUENCE ( SIZE (1..maxNrOfSCCPCHs768)) OF Secondary-CCPCH-TDD-Code-InformationItem768

Secondary-CCPCH-TDD-Code-InformationItem768 ::= SEQUENCE {
    tDD-ChannelisationCode768    TDD-ChannelisationCode768,
    iE-Extensions             ProtocolExtensionContainer { {Secondary-CCPCH-TDD-Code-InformationItem768-ExtIEs} } OPTIONAL,
    ...
}

Secondary-CCPCH-TDD-Code-InformationItem768-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

Secondary-Serving-Cell-List ::= SEQUENCE {
    possible-Secondary-Serving-Cell-List
    iE-Extensions          ProtocolExtensionContainer { { Possible-Secondary-Serving-Cell-List,
                                                             Secondary-Serving-Cell-List-ExtIEs } } OPTIONAL,
    ...
}

Secondary-Serving-Cell-List-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

Possible-Secondary-Serving-Cell-List ::= SEQUENCE (SIZE (1..maxNrOfHSDSCH-1)) OF Possible-Secondary-Serving-Cell

Possible-Secondary-Serving-Cell ::= SEQUENCE {
    c-ID                    C-ID,
    iE-Extensions          ProtocolExtensionContainer { { Possible-Secondary-Serving-Cell-ExtIEs } } OPTIONAL,
    ...
}

Possible-Secondary-Serving-Cell-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

SecondInterleavingMode ::= ENUMERATED {
    frame-related,
    timeslot-related,
    ...
}

Seed ::= INTEGER (0..63)

Service-ID ::= OCTET STRING (SIZE (3))

SetsOfHS-SCCH-Codes ::= SEQUENCE (SIZE (1..maxNrOfHSDSCH)) OF SetsOfHS-SCCH-CodesItem

SetsOfHS-SCCH-CodesItem ::= SEQUENCE {
    hS-SCCH-PreconfiguredCodes          HS-SCCH-PreconfiguredCodes,
    hSDSCH-RNTI          HSDSCH-RNTI,
    hSPDSCH-and-HSSCCH-ScramblingCode    DL-ScramblingCode,
    sixtyfourQAM-DL-SupportIndicator      SixtyfourQAM-DL-SupportIndicator OPTIONAL,
    sixtyfourQAM-DL-UsageIndicator        SixtyfourQAM-DL-UsageIndicator OPTIONAL,
    hSDSCH-TBSizeTableIndicator           HSDSCH-TBSizeTableIndicator OPTIONAL,
    iE-Extensions          ProtocolExtensionContainer { { SetsOfHS-SCCH-CodesItem-ExtIEs } } OPTIONAL,
    ...
}

SetsOfHS-SCCH-CodesItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

SFN ::= INTEGER (0..4095)

SFNSFN-FDD ::= INTEGER(0..614399)

SFNSFN-TDD ::= INTEGER(0..40961)

```

```

SFNSFN-TDD768 ::= INTEGER(0..81923)

GA-AccessPointPositionwithOptionalAltitude ::= SEQUENCE {
    geographicalCoordinate      GeographicalCoordinate,
    altitudeAndDirection        GA-AltitudeAndDirection OPTIONAL,
    iE-Extensions                ProtocolExtensionContainer { { GA-AccessPointPositionwithOptionalAltitude-ExtIEs } } OPTIONAL,
    ...
}

GA-AccessPointPositionwithOptionalAltitude-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

SFNSFNChangeLimit ::= INTEGER (1..256)
-- Unit chip, Step 1/16 chip, Range 1/16..16 chip

SFNSFNDriftRate ::= INTEGER (-100..100)
-- Unit chip/s, Step 1/256 chip/s, Range -100/256..+100/256 chip/s

SFNSFNDriftRateQuality ::= INTEGER (0..100)
-- Unit chip/s, Step 1/256 chip/s, Range 0..100/256 chip/s

SFNSFNMeasurementThresholdInformation ::= SEQUENCE {
    sFNSFNChangeLimit          SFNSFNChangeLimit          OPTIONAL,
    predictedSFNSFNDeviationLimit PredictedSFNSFNDeviationLimit OPTIONAL,
    iE-Extensions                ProtocolExtensionContainer { { SFNSFNMeasurementThresholdInformation-ExtIEs } } OPTIONAL,
    ...
}

SFNSFNMeasurementThresholdInformation-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

SFNSFNMeasurementValueInformation ::= SEQUENCE {
    successfullNeighbouringCellSFNSFNObservedTimeDifferenceMeasurementInformation SEQUENCE (SIZE(1..maxNrOfMeasNCell)) OF
        SEQUENCE {
            uC-ID          UC-ID,
            sFNSFNValue    SFNSFNValue,
            sFNSFNQuality  SFNSFNQuality          OPTIONAL,
            sFNSFNDriftRate SFNSFNDriftRate,
            sFNSFNDriftRateQuality SFNSFNDriftRateQuality OPTIONAL,
            sFNSFNTimeStampInformation SFNSFNTimeStampInformation,
            iE-Extensions  ProtocolExtensionContainer { {
                SuccessfullNeighbouringCellSFNSFNObservedTimeDifferenceMeasurementInformationItem-ExtIEs } } OPTIONAL,
            ...
        },
    unsuccessfullNeighbouringCellSFNSFNObservedTimeDifferenceMeasurementInformation SEQUENCE (SIZE(0..maxNrOfMeasNCell-1)) OF
        SEQUENCE {
            uC-ID          UC-ID,
            iE-Extensions  ProtocolExtensionContainer { { UnsuccessfullNeighbouringCellSFNSFNObservedTimeDifferenceMeasurementInformationItem-
                ExtIEs } } OPTIONAL,
            ...
        },
    ...
}

```

```

    iE-Extensions      ProtocolExtensionContainer { { SFNSFNMeasurementValueInformationItem-ExtIEs} } OPTIONAL,
  }
  ...
}

SFNSFNMeasurementValueInformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

SuccessfulNeighbouringCellSFNSFNObservedTimeDifferenceMeasurementInformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

UnsuccessfulNeighbouringCellSFNSFNObservedTimeDifferenceMeasurementInformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

SFNSFNQuality ::= INTEGER (0..255)
-- Unit chip, Step 1/16 chip, Range 0.. 255/16 chip

SFNSFNTimeStampInformation ::= CHOICE {
  sFNSFNTimeStamp-FDD      SFN,
  sFNSFNTimeStamp-TDD      SFNSFNTimeStamp-TDD,
  ...
}

SFNSFNTimeStamp-TDD ::= SEQUENCE {
  sFN                      SFN,
  timeSlot                 TimeSlot,
  iE-Extensions           ProtocolExtensionContainer { { SFNSFNTimeStamp-ExtIEs} } OPTIONAL,
  ...
}

SFNSFNTimeStamp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

SFNSFNValue ::= CHOICE {
  sFNSFN-FDD              SFNSFN-FDD,
  sFNSFN-TDD              SFNSFN-TDD,      -- LCR & HCR TDD
  ...,
  sFNSFN-TDD768           SFNSFN-TDD768
}

SID ::= INTEGER (0..maxNrOfPDUIndexes-1)

SIR-Error-Value          ::= INTEGER (0..125)

```

```
SIR-Error-Value-IncrDecrThres ::= INTEGER (0..124)

SIR-Value ::= INTEGER (0..63)
-- According to mapping in [11]/[14]

SIR-Value-IncrDecrThres ::= INTEGER (0..62)

SixteenQAM-UL-Operation-Indicator ::= ENUMERATED {
    activate,
    deactivate
}

SixtyfourQAM-UsageAllowedIndicator ::= ENUMERATED {
    allowed,
    not-allowed
}

SixtyfourQAM-DL-SupportIndicator ::= ENUMERATED {
    sixtyfourQAM-DL-supported,
    sixtyfourQAM-DL-not-supported
}

SixtyfourQAM-DL-UsageIndicator ::= ENUMERATED {
    sixtyfourQAM-DL-used,
    sixtyfourQAM-DL-not-used
}

SignatureSequenceGroupIndex ::= INTEGER (0..19)

SNA-Information ::= SEQUENCE {
    pLMN-Identity PLMN-Identity,
    listOfSNAs ListOfSNAs OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { { SNA-Information-ExtIEs } } OPTIONAL,
    ...
}

SNA-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

ListOfSNAs ::= SEQUENCE (SIZE (1.. maxNrOfSNAs)) OF SNACode

SNACode ::= INTEGER (0..65535)

SpecialBurstScheduling ::= INTEGER (1..256)

S-RNTI ::= INTEGER (0..1048575)
-- From 0 to 2^20-1

S-RNTI-Group ::= SEQUENCE {
    sRNTI S-RNTI,
    sRNTI-BitMaskIndex ENUMERATED {
```



```

    b1,
    b2,
    b3,
    b4,
    b5,
    b6,
    b7,
    b8,
    b9,
    b10,
    b11,
    b12,
    b13,
    b14,
    b15,
    b16,
    b17,
    b18,
    b19,...
}
}

SRB-Delay ::= INTEGER(0..7,...)

SSDT-SupportIndicator ::= ENUMERATED {
    not-Used-sSDT-supported,
    sSDT-not-supported
}

STTD-SupportIndicator ::= ENUMERATED {
    sTTD-Supported,
    sTTD-not-Supported
}

Support-8PSK ::= ENUMERATED {
    v8PSK-Supported
}

Support-PLCCH ::= ENUMERATED {
    vPLCCH-Supported
}

SyncCase ::= INTEGER (1..2,...)

SynchronisationConfiguration ::= SEQUENCE {
    n-INSYNC-IND          INTEGER (1..256),
    n-OUTSYNC-IND        INTEGER (1..256),
    t-RLFFAILURE          INTEGER (0..255),
    -- Unit seconds, Range 0s .. 25.5s, Step 0.1s
    iE-Extensions        ProtocolExtensionContainer { { SynchronisationConfiguration-ExtIEs} } OPTIONAL,
    ...
}

```

```
SynchronisationConfiguration-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

SYNC-UL-ProcParameters ::= SEQUENCE {
  maxSYNC-UL-transmissions      ENUMERATED {v1, v2, v4, v8, ...},
  powerRampStep                 INTEGER (0..3, ...),
  ...
}

-- T

T1 ::= ENUMERATED {v10,v20,v30,v40,v50,v60,v70,v80,v90,v100,v120,v140,v160,v200,v300,v400,...}

TDD-AckNack-Power-Offset ::= INTEGER (-7..8,...)
-- Unit dB, Range -7dB .. +8dB, Step 1dB

TDD-ChannelisationCode          ::= ENUMERATED {
  chCode1div1,
  chCode2div1,
  chCode2div2,
  chCode4div1,
  chCode4div2,
  chCode4div3,
  chCode4div4,
  chCode8div1,
  chCode8div2,
  chCode8div3,
  chCode8div4,
  chCode8div5,
  chCode8div6,
  chCode8div7,
  chCode8div8,
  chCode16div1,
  chCode16div2,
  chCode16div3,
  chCode16div4,
  chCode16div5,
  chCode16div6,
  chCode16div7,
  chCode16div8,
  chCode16div9,
  chCode16div10,
  chCode16div11,
  chCode16div12,
  chCode16div13,
  chCode16div14,
  chCode16div15,
  chCode16div16,
  ...
}

TDD-ChannelisationCode768      ::= ENUMERATED {
```

chCode1div1,  
chCode2div1,  
chCode2div2,  
chCode4div1,  
chCode4div2,  
chCode4div3,  
chCode4div4,  
chCode8div1,  
chCode8div2,  
chCode8div3,  
chCode8div4,  
chCode8div5,  
chCode8div6,  
chCode8div7,  
chCode8div8,  
chCode16div1,  
chCode16div2,  
chCode16div3,  
chCode16div4,  
chCode16div5,  
chCode16div6,  
chCode16div7,  
chCode16div8,  
chCode16div9,  
chCode16div10,  
chCode16div11,  
chCode16div12,  
chCode16div13,  
chCode16div14,  
chCode16div15,  
chCode16div16,  
chCode32div1,  
chCode32div2,  
chCode32div3,  
chCode32div4,  
chCode32div5,  
chCode32div6,  
chCode32div7,  
chCode32div8,  
chCode32div9,  
chCode32div10,  
chCode32div11,  
chCode32div12,  
chCode32div13,  
chCode32div14,  
chCode32div15,  
chCode32div16,  
chCode32div17,  
chCode32div18,  
chCode32div19,  
chCode32div20,  
chCode32div21,  
chCode32div22,  
chCode32div23,

```

    chCode32div24,
    chCode32div25,
    chCode32div26,
    chCode32div27,
    chCode32div28,
    chCode32div29,
    chCode32div30,
    chCode32div31,
    chCode32div32,
    ...
}

TDD-ChannelisationCodeLCR ::= SEQUENCE {
    tDD-ChannelisationCode    TDD-ChannelisationCode,
    modulation                Modulation, -- Modulation options for 1.28Mcps TDD in contrast to 3.84Mcps TDD or 7.68Mcps TDD
    ...
}

TDD-DCHs-to-Modify ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF TDD-DCHs-to-ModifyItem

TDD-DCHs-to-ModifyItem ::= SEQUENCE {
    ul-FP-Mode                UL-FP-Mode    OPTIONAL,
    toAWS                     ToAWS        OPTIONAL,
    toAWE                     ToAWE        OPTIONAL,
    transportBearerRequestIndicator TransportBearerRequestIndicator,
    dCH-SpecificInformationList TDD-DCHs-to-ModifySpecificInformationList,
    iE-Extensions            ProtocolExtensionContainer { {TDD-DCHs-to-ModifyItem-ExtIEs} } OPTIONAL,
    ...
}

TDD-DCHs-to-ModifyItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-TnlQos                CRITICALITY ignore     EXTENSION TnlQos PRESENCE optional },
    ...
}

TDD-DCHs-to-ModifySpecificInformationList ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF TDD-DCHs-to-ModifySpecificItem

TDD-DCHs-to-ModifySpecificItem ::= SEQUENCE {
    dCH-ID                    DCH-ID,
    ul-CCTrCH-ID              CCTrCH-ID    OPTIONAL,
    dl-CCTrCH-ID              CCTrCH-ID    OPTIONAL,
    ul-TransportformatSet     TransportFormatSet OPTIONAL,
    dl-TransportformatSet     TransportFormatSet OPTIONAL,
    allocationRetentionPriority AllocationRetentionPriority OPTIONAL,
    frameHandlingPriority     FrameHandlingPriority OPTIONAL,
    iE-Extensions            ProtocolExtensionContainer { {TDD-DCHs-to-ModifySpecificItem-ExtIEs} } OPTIONAL,
    ...
}

TDD-DCHs-to-ModifySpecificItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-Guaranteed-Rate-Information CRITICALITY ignore EXTENSION Guaranteed-Rate-Information PRESENCE optional } |
    { ID id-TrafficClass                CRITICALITY ignore EXTENSION TrafficClass PRESENCE optional },
    ...
}

```

```

TDD-DL-Code-Information ::= SEQUENCE ( SIZE (1..maxNrOfDPCHs)) OF TDD-DL-Code-InformationItem

TDD-DL-Code-InformationItem ::= SEQUENCE {
    dPCH-ID                DPCH-ID,
    tDD-ChannelisationCode TDD-ChannelisationCode,
    iE-Extensions          ProtocolExtensionContainer { {TDD-DL-Code-InformationItem-ExtIEs} } OPTIONAL,
    ...
}

TDD-DL-Code-InformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

TDD-DL-Code-LCR-Information ::= SEQUENCE (SIZE (1..maxNrOfDPCHsLCR)) OF TDD-DL-Code-LCR-InformationItem

TDD-DL-Code-LCR-InformationItem ::= SEQUENCE {
    dPCH-ID                DPCH-ID,
    tdd-ChannelisationCodeLCR TDD-ChannelisationCodeLCR,
    tdd-DL-DPCH-TimeSlotFormat-LCR TDD-DL-DPCH-TimeSlotFormat-LCR,
    iE-Extensions          ProtocolExtensionContainer { { TDD-DL-Code-LCR-InformationItem-ExtIEs} } OPTIONAL,
    ...
}

TDD-DL-Code-LCR-InformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

TDD-DL-Code-Information768 ::= SEQUENCE ( SIZE (1..maxNrOfDPCHs768)) OF TDD-DL-Code-InformationItem768

TDD-DL-Code-InformationItem768 ::= SEQUENCE {
    dPCH-ID                DPCH-ID,
    tDD-ChannelisationCode768 TDD-ChannelisationCode768,
    iE-Extensions          ProtocolExtensionContainer { {TDD-DL-Code-InformationItem768-ExtIEs} } OPTIONAL,
    ...
}

TDD-DL-Code-InformationItem768-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

TDD-DL-DPCH-TimeSlotFormat-LCR ::= CHOICE {
    qPSK                QPSK-DL-DPCH-TimeSlotFormatTDD-LCR,
    eightPSK            EightPSK-DL-DPCH-TimeSlotFormatTDD-LCR,
    ...
}

QPSK-DL-DPCH-TimeSlotFormatTDD-LCR ::= INTEGER(0..24,...)

EightPSK-DL-DPCH-TimeSlotFormatTDD-LCR ::= INTEGER(0..24,...)

TDD-DPCHOffset ::= CHOICE {
    initialOffset      INTEGER (0..255),
    noinitialOffset    INTEGER (0..63)
}

```

```

}

TDD-PhysicalChannelOffset ::= INTEGER (0..63)

TDD-TPC-DownlinkStepSize ::= ENUMERATED {
    step-size1,
    step-size2,
    step-size3,
    ...
}

TDD-TPC-UplinkStepSize-LCR ::= ENUMERATED {
    step-size1,
    step-size2,
    step-size3,
    ...
}

TDD-UL-Code-Information ::= SEQUENCE ( SIZE (1..maxNrOfDPCHs)) OF TDD-UL-Code-InformationItem

TDD-UL-Code-InformationItem ::= SEQUENCE {
    dPCH-ID DPCH-ID,
    tDD-ChannelisationCode TDD-ChannelisationCode,
    iE-Extensions ProtocolExtensionContainer { {TDD-UL-Code-InformationItem-ExtIEs} } OPTIONAL,
    ...
}

TDD-UL-Code-InformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

TDD-UL-Code-LCR-Information ::= SEQUENCE (SIZE (1..maxNrOfDPCHsLCR)) OF TDD-UL-Code-LCR-InformationItem

TDD-UL-Code-LCR-InformationItem ::= SEQUENCE {
    dPCH-ID DPCH-ID,
    tdd-ChannelisationCodeLCR TDD-ChannelisationCodeLCR,
    tdd-UL-DPCH-TimeSlotFormat-LCR TDD-UL-DPCH-TimeSlotFormat-LCR,
    iE-Extensions ProtocolExtensionContainer { { TDD-UL-Code-LCR-InformationItem-ExtIEs} } OPTIONAL,
    ...
}

TDD-UL-Code-LCR-InformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

TDD-UL-Code-Information768 ::= SEQUENCE ( SIZE (1..maxNrOfDPCHs768)) OF TDD-UL-Code-InformationItem768

TDD-UL-Code-InformationItem768 ::= SEQUENCE {
    dPCH-ID DPCH-ID,
    tDD-ChannelisationCode768 TDD-ChannelisationCode768,
    iE-Extensions ProtocolExtensionContainer { {TDD-UL-Code-InformationItem768-ExtIEs} } OPTIONAL,
    ...
}

```

```
TDD-UL-Code-InformationItem768-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}
```

```
TDD-UL-DPCH-TimeSlotFormat-LCR ::= CHOICE {
  qPSK          QPSK-UL-DPCH-TimeSlotFormatTDD-LCR,
  eightPSK     EightPSK-UL-DPCH-TimeSlotFormatTDD-LCR,
  ...
}
```

```
QPSK-UL-DPCH-TimeSlotFormatTDD-LCR ::= INTEGER(0..69,...)
```

```
EightPSK-UL-DPCH-TimeSlotFormatTDD-LCR ::= INTEGER(0..24,...)
```

```
TFCI-Coding ::= ENUMERATED {
  v4,
  v8,
  v16,
  v32,
  ...
}
```

```
TFCI-Presence ::= ENUMERATED {
  present,
  not-present
}
```

```
TFCI-SignallingMode ::= ENUMERATED {
  normal,
  not-Used-split
}
```

-- The value "Not Used" shall not be used by the SRNC. The procedure shall be rejected by the DRNC if the value "Not Used" is received.

```
TGD          ::= INTEGER (0|15..269)
-- 0 = Undefined, only one transmission gap in the transmission gap pattern sequence
```

```
TGPRC       ::= INTEGER (0..511)
-- 0 = infinity
```

```
TGPSID      ::= INTEGER (1.. maxTGPS)
```

```
TGSN        ::= INTEGER (0..14)
```

```
TimeSlot    ::= INTEGER (0..14)
```

```
TimeSlotLCR ::= INTEGER (0..6)
```

```
Time-Stamp  ::= INTEGER (0..9999)
-- Unit: 10ms
```

```
TimingAdvanceApplied ::= ENUMERATED {
  yes,
```

```

    no
  }

SynchronisationIndicator ::= ENUMERATED {
  timingMaintainedSynchronisation,
  ...
}

TMGI ::= SEQUENCE {
  plmn-id      PLMN-Identity,
  service-id   Service-ID,
  iE-Extensions          ProtocolExtensionContainer { { TMGI-ExtIEs } } OPTIONAL,
  ...
}

TMGI-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

TnlQos ::= CHOICE {
  dsField          DsField,
  genericTrafficCategory   GenericTrafficCategory,
  ...
}

ToAWE ::= INTEGER (0..2559)

ToAWS ::= INTEGER (0..1279)

TraceDepth ::= ENUMERATED {
  minimum,
  medium,
  maximum,
  ...
}

TraceRecordingSessionReference ::= INTEGER (0..65535)

TraceReference ::= OCTET STRING (SIZE (2..3))

TrafficClass ::= ENUMERATED {
  conversational,
  streaming,
  interactive,
  background,
  ...
}

Transmission-Gap-Pattern-Sequence-Information ::= SEQUENCE (SIZE (1..maxTGPS)) OF
SEQUENCE {
  tGPSID      TGPSID,
  tGSN        TGSN,
  tGL1        GapLength,
  tGL2        GapLength OPTIONAL,
}

```



```

tGD          TGD,
tGPL1        GapDuration,
not-to-be-used-1  GapDuration OPTIONAL,
  -- This IE shall never be included in the SEQUENCE. If received it shall be ignored
uL-DL-mode   UL-DL-mode,
downlink-Compressed-Mode-Method  Downlink-Compressed-Mode-Method  OPTIONAL,
  -- This IE shall be present if the value of the UL/DL mode IE is "DL only" or "UL/DL"
uplink-Compressed-Mode-Method    Uplink-Compressed-Mode-Method    OPTIONAL,
  -- This IE shall be present if the value of the UL/DL mode IE is "UL only" or "UL/DL"
dL-FrameType  DL-FrameType,
delta-SIR1     DeltaSIR,
delta-SIR-after1  DeltaSIR,
delta-SIR2     DeltaSIR  OPTIONAL,
delta-SIR-after2  DeltaSIR  OPTIONAL,
iE-Extensions  ProtocolExtensionContainer { {Transmission-Gap-Pattern-Sequence-Information-ExtIEs} } OPTIONAL,
  ...
}

Transmission-Gap-Pattern-Sequence-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

Transmission-Gap-Pattern-Sequence-ScramblingCode-Information ::= ENUMERATED{
  code-change,
  no-code-change
}

Transmission-Gap-Pattern-Sequence-Status-List ::= SEQUENCE (SIZE (0..maxTGPS)) OF
  SEQUENCE {
    tGPSID      TGPSID,
    tGPRC       TGPRC,
    tGCFN       CFN,
    iE-Extensions  ProtocolExtensionContainer { { Transmission-Gap-Pattern-Sequence-Status-List-ExtIEs } } OPTIONAL,
    ...
  }

Transmission-Gap-Pattern-Sequence-Status-List-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

TransmissionMode ::=ENUMERATED {
  p-t-p,
  p-t-m,
  not-provided,
  ...
}

Transmission-Mode-Information ::= SEQUENCE ( SIZE (1..maxNrOfFDDNeighboursPerRNC,...)) OF Transmission-Mode-Information-List

Transmission-Mode-Information-List ::= SEQUENCE {
  c-ID          C-ID,
  transmissionMode  TransmissionMode,
  iE-Extensions  ProtocolExtensionContainer { { Transmission-Mode-Information-List-ExtIEs } } OPTIONAL,
  ...
}

```

```

}

Transmission-Mode-Information-List-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

TransmissionTimeIntervalDynamic ::= ENUMERATED {
  msec-10,
  msec-20,
  msec-40,
  msec-80,
  ...
}

TransmissionTimeIntervalSemiStatic ::= ENUMERATED {
  msec-10,
  msec-20,
  msec-40,
  msec-80,
  dynamic,
  ...
}

TransmitDiversityIndicator ::= ENUMERATED {
  active,
  inactive
}

Transmitted-Carrier-Power-Value ::= INTEGER(0..100)
-- according to mapping in [23] and [24]

Transmitted-Carrier-Power-Value-IncrDecrThres ::= INTEGER(0..100)
-- according to mapping in [23] and [24]

Transport-Block-Size-Index ::= INTEGER(1..maxNrOfHS-DSCHTBSs)

TUTRANGANSS ::= SEQUENCE {
  mS          INTEGER(0..16383),
  lS          INTEGER(0..4294967295)
}

TUTRANGANSSAccuracyClass ::= ENUMERATED {
  ganssAccuracy-class-A,
  ganssAccuracy-class-B,
  ganssAccuracy-class-C,
  ...
}

TUTRANGANSSMeasurementThresholdInformation ::= SEQUENCE {
  tUTRANGANSSChangeLimit          INTEGER(1..256)           OPTIONAL,
  predictedTUTRANGANSSDeviationLimit  INTEGER(1..256)       OPTIONAL,
  ie-Extensions                    ProtocolExtensionContainer { { TUTRANGANSSMeasurementThresholdInformation-ExtIEs } } OPTIONAL,
  ...
}

```

```

TUTRANGANSSMeasurementThresholdInformation-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

TUTRANGANSSMeasurementValueInformation ::= SEQUENCE {
    tUTRANGANSS                TUTRANGANSS,
    tUTRANGANSSQuality          INTEGER(0..255)                                OPTIONAL,
    tUTRANGANSSDriftRate        INTEGER(-50..50),
    tUTRANGANSSDriftRateQuality INTEGER(0..50)                                OPTIONAL,
    ie-Extensions               ProtocolExtensionContainer { { TUTRANGANSSMeasurementValueInformation-ExtIEs } } OPTIONAL,
    ...
}

TUTRANGANSSMeasurementValueInformation-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-GANSS-Time-ID          CRITICALITY ignore      EXTENSION GANSS-Time-ID      PRESENCE                optional},
    ...
}

TUTRANGPS ::= SEQUENCE {
    ms-part    INTEGER (0..16383),
    ls-part    INTEGER (0..4294967295)
}

TUTRANGPSChangeLimit ::= INTEGER (1..256)
-- Unit chip, Step 1/16 chip, Range 1/16..16 chip

TUTRANGPSDriftRate ::= INTEGER (-50..50)
-- Unit chip/s, Step 1/256 chip/s, Range -50/256..+50/256 chip/s

TUTRANGPSDriftRateQuality ::= INTEGER (0..50)
-- Unit chip/s, Step 1/256 chip/s, Range 0..50/256 chip/s

TUTRANGPSAccuracyClass ::= ENUMERATED {
    accuracy-class-A,
    accuracy-class-B,
    accuracy-class-C,
    ...
}

TUTRANGPSMeasurementThresholdInformation ::= SEQUENCE {
    tUTRANGPSChangeLimit          TUTRANGPSChangeLimit                OPTIONAL,
    predictedTUTRANGPSDeviationLimit PredictedTUTRANGPSDeviationLimit    OPTIONAL,
    ie-Extensions                 ProtocolExtensionContainer { { TUTRANGPSMeasurementThresholdInformation-ExtIEs } } OPTIONAL,
    ...
}

TUTRANGPSMeasurementThresholdInformation-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```
TUTRANGPSMeasurementValueInformation ::= SEQUENCE {
    tUTRANGPS                TUTRANGPS,
    tUTRANGPSQuality          TUTRANGPSQuality          OPTIONAL,
    tUTRANGPSDriftRate        TUTRANGPSDriftRate,
    tUTRANGPSDriftRateQuality TUTRANGPSDriftRateQuality OPTIONAL,
    iE-Extensions             ProtocolExtensionContainer { { TUTRANGPSMeasurementValueInformationItem-ExtIEs } } OPTIONAL,
    ...
}
```

```
TUTRANGPSMeasurementValueInformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

```
TUTRANGPSQuality ::= INTEGER (0..255)
-- Unit chip, Step 1/16 chip, Range 0.. 255/16 chip
```

```
TransportBearerID ::= INTEGER (0..4095)
```

```
TransportBearerRequestIndicator ::= ENUMERATED {
    bearer-requested,
    bearer-not-requested,
    ...
}
```

```
TransportBearerNotRequestedIndicator ::= ENUMERATED {
    transport-bearer-shall-not-be-established,
    transport-bearer-may-not-be-established
}
```

```
TransportBearerNotSetupIndicator ::= ENUMERATED {
    transport-bearer-not-setup
}
```

```
TransportBlockSize ::= INTEGER (0..5000)
-- Unit is bits
```

```
TransportFormatCombination-Beta ::= CHOICE {
    signalledGainFactors SEQUENCE {
        betaC          BetaCD,
        betaD          BetaCD,
        refTFCNumber   RefTFCNumber OPTIONAL,
        iE-Extensions  ProtocolExtensionContainer { { SignalledGainFactors-ExtIEs } } OPTIONAL,
        ...
    },
    refTFCNumber       RefTFCNumber,
    ...
}
```

```
SignalledGainFactors-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

```

TFCS ::= SEQUENCE {
    tFCSvalues          CHOICE {
        no-Split-in-TFCI          TFCS-TFCSList,
        not-Used-split-in-TFCI    NULL,
        -- This choice shall never be made by the SRNC and the DRNC shall consider the procedure as failed if it is received.
        ...
    },
    iE-Extensions      ProtocolExtensionContainer { { TFCS-ExtIEs } } OPTIONAL,
    ...
}

TFCS-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

TFCS-TFCSList ::= SEQUENCE (SIZE (1..maxNrOfTFCS)) OF
    SEQUENCE {
        cTFC              TFCS-CTFC,
        tFC-Beta          TransportFormatCombination-Beta OPTIONAL,
        -- The IE shall be present if the TFCS concerns a UL DPCH [FDD - or PRACH channel in FDD]
        iE-Extensions      ProtocolExtensionContainer { { TFCS-TFCSList-ExtIEs } } OPTIONAL,
        ...
    }

TFCS-TFCSList-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

TFCS-CTFC ::= CHOICE {
    ctfc2bit              INTEGER (0..3),
    ctfc4bit              INTEGER (0..15),
    ctfc6bit              INTEGER (0..63),
    ctfc8bit              INTEGER (0..255),
    ctfc12bit             INTEGER (0..4095),
    ctfc16bit             INTEGER (0..65535),
    ctfcmaxbit           INTEGER (0..maxCTFC)
}

TransportFormatSet ::= SEQUENCE {
    dynamicParts          TransportFormatSet-DynamicPartList,
    semi-staticPart       TransportFormatSet-Semi-staticPart,
    iE-Extensions         ProtocolExtensionContainer { {TransportFormatSet-ExtIEs} } OPTIONAL,
    ...
}

TransportFormatSet-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

TransportFormatSet-DynamicPartList ::= SEQUENCE (SIZE (1..maxNrOfTFs)) OF
    SEQUENCE {
        nrOfTransportBlocks      NrOfTransportBlocks,
        transportBlockSize       TransportBlockSize OPTIONAL
        -- This IE shall be present if nrOfTransportBlocks is greater than 0 --,

```

```

        mode                TransportFormatSet-ModeDP,
        iE-Extensions        ProtocolExtensionContainer { {TransportFormatSet-DynamicPartList-ExtIEs} } OPTIONAL,
        ...
    }

TransportFormatSet-DynamicPartList-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

TransportFormatSet-ModeDP ::= CHOICE {
    tdd                TDD-TransportFormatSet-ModeDP,
    notApplicable      NULL,
    ...
}

TDD-TransportFormatSet-ModeDP ::= SEQUENCE {
    transmissionTimeIntervalInformation    TransmissionTimeIntervalInformation    OPTIONAL,
    -- This IE shall be present if the "Transmission Time Interval" of the "Semi-static Transport Format Information" is "dynamic". Otherwise it is
    absent.
    iE-Extensions        ProtocolExtensionContainer { {TDD-TransportFormatSet-ModeDP-ExtIEs} } OPTIONAL,
    ...
}

TDD-TransportFormatSet-ModeDP-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

TransmissionTimeIntervalInformation ::= SEQUENCE (SIZE (1..maxTTI-Count)) OF
    SEQUENCE {
        transmissionTimeInterval    TransmissionTimeIntervalDynamic,
        iE-Extensions                ProtocolExtensionContainer { {TransmissionTimeIntervalInformation-ExtIEs} } OPTIONAL,
        ...
    }

TransmissionTimeIntervalInformation-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

Transmitted-Code-Power-Value ::= INTEGER (0..127)
-- According to mapping in [11]/[14]

Transmitted-Code-Power-Value-IncrDecrThres ::= INTEGER (0..112,...)

TransportFormatManagement ::= ENUMERATED {
    cell-based,
    ue-based,
    ...
}

TransportFormatSet-Semi-staticPart ::= SEQUENCE {
    transmissionTime                TransmissionTimeIntervalSemiStatic,
    channelCoding                    ChannelCodingType,
    codingRate                        CodingRate                OPTIONAL
    -- This IE shall be present if channelCoding is 'convolutional' or 'turbo' --,

```

```

    rateMatcingAttribute      RateMatchingAttribute,
    crc-Size                  CRC-Size,
    mode                       TransportFormatSet-ModeSSP,
    iE-Extensions              ProtocolExtensionContainer { {TransportFormatSet-Semi-staticPart-ExtIEs} } OPTIONAL,
    ...
}

TransportFormatSet-Semi-staticPart-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

TransportFormatSet-ModeSSP ::= CHOICE {
    tdd                        SecondInterleavingMode,
    notApplicable              NULL,
    ...
}

TransportLayerAddress         ::= BIT STRING (SIZE(1..160, ...))

TrCH-SrcStatisticsDescr      ::= ENUMERATED {
    speech,
    rRC,
    unknown,
    ...
}

TSN-Length ::= ENUMERATED {
    tsn-6bits,
    tsn-9bits
}

TSTD-Indicator ::= ENUMERATED {
    active,
    inactive
}

TSTD-Support-Indicator ::= ENUMERATED {
    tSTD-supported,
    tSTD-not-supported
}

TxDiversityIndicator        ::= ENUMERATED {
    true,
    false
}

TypeOfError ::= ENUMERATED {
    not-understood,
    missing,
    ...
}

-- U

```

```

UARFCN ::= INTEGER (0..16383,...)
-- Corresponds to: 0.0Hz..3276.6Mhz. See [7], [43]

UDRE ::= ENUMERATED {
    lessThan1,
    between1-and-4,
    between4-and-8,
    over8,
    ...
}

UE-Capabilities-Info ::= SEQUENCE {
    hSDSCH-Physical-Layer-Category    INTEGER (1..64,...),
    iE-Extensions                    ProtocolExtensionContainer { { UE-Capabilities-Info-ExtIEs } }    OPTIONAL,
    ...
}

UE-Capabilities-Info-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    {ID id-LCRTDD-uplink-Physical-Channel-Capability    CRITICALITY ignore    EXTENSION LCRTDD-Uplink-Physical-Channel-Capability
    PRESENCE optional}|
    {ID id-number-Of-Supported-Carriers                CRITICALITY reject    EXTENSION Number-Of-Supported-Carriers
    PRESENCE optional}|
    {ID id-MIMO-SFMode-Supported-For-HSPDSCHDualStream    CRITICALITY ignore    EXTENSION MIMO-SFMode-For-HSPDSCHDualStream
    PRESENCE optional}|
    {ID id-MultiCarrier-HSDSCH-Physical-Layer-Category    CRITICALITY ignore    EXTENSION LCRTDD-HSDSCH-Physical-Layer-Category    PRESENCE
    optional},
    ...
}

LCRTDD-HSDSCH-Physical-Layer-Category ::= INTEGER (1..64)

UE-DPCCH-burst1 ::= ENUMERATED {v1, v2, v5}
-- Unit subframe

UE-DPCCH-burst2 ::= ENUMERATED {v1, v2, v5}
-- Unit subframe

UE-DRX-Cycle ::= ENUMERATED {v4, v5, v8, v10, v16, v20}
-- Unit subframe

UE-DRX-Grant-Monitoring ::= BOOLEAN
-- true: applied, false: not applied

UE-DTX-Cycle1-2ms ::= ENUMERATED {v1, v4, v5, v8, v10, v16, v20}
-- Unit subframe

UE-DTX-Cycle1-10ms ::= ENUMERATED {v1, v5, v10, v20}
-- Unit subframe

UE-DTX-Cycle2-2ms ::= ENUMERATED {v4, v5, v8, v10, v16, v20, v32, v40, v64, v80, v128, v160}
-- Unit subframe

UE-DTX-Cycle2-10ms ::= ENUMERATED {v5, v10, v20, v40, v80, v160}
-- Unit subframe

```



```
UE-DTX-DRX-Offset ::= INTEGER (0..159)
  -- Unit subframe

UE-DTX-Long-Preamble ::= ENUMERATED {v2, v4, v15}
  -- Units of slots

UEIdentity ::= CHOICE {
  imsi      IMSI,
  imei      IMEI,
  imeisv    IMEISV,
  ...
}

UEMeasurementHysteresisTime ::= INTEGER (0..15)
  -- Unit dB
  -- Range 0..7.5 dB
  -- Step 0.5 dB

UEMeasurementParameterModAllow ::= ENUMERATED {
  parameterModificationAllowed,
  ...
}

UEMeasurementReportCharacteristics ::= CHOICE {
  periodic      UEMeasurementReportCharacteristicsPeriodic,
  event1h       UEMeasurementReportCharacteristicsEvent1h,
  event1l       UEMeasurementReportCharacteristicsEvent1l,
  event6a       UEMeasurementReportCharacteristicsEvent6a,
  event6b       UEMeasurementReportCharacteristicsEvent6b,
  event6c       UEMeasurementReportCharacteristicsEvent6c,
  event6d       UEMeasurementReportCharacteristicsEvent6d,
  ...,
  extension-ReportCharacteristics  UEMeasurementReportCharacteristics-Extension
}

UEMeasurementReportCharacteristicsEvent1h ::= SEQUENCE {
  uEMeasurementTreshold      UEMeasurementThreshold,
  uEMeasurementTimeToTrigger UEMeasurementTimeToTrigger,
  uEMeasurementHysteresisTime UEMeasurementHysteresisTime,
  iE-Extensions              ProtocolExtensionContainer { { UEMeasurementReportCharacteristicsEvent1h-ExtIEs } } OPTIONAL,
  ...
}

UEMeasurementReportCharacteristicsEvent1h-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

UEMeasurementReportCharacteristicsEvent1l ::= SEQUENCE {
  uEMeasurementTreshold      UEMeasurementThreshold,
  uEMeasurementTimeToTrigger UEMeasurementTimeToTrigger,
  uEMeasurementHysteresisTime UEMeasurementHysteresisTime,
```

```

    iE-Extensions          ProtocolExtensionContainer { { UEMeasurementReportCharacteristicsEvent1i-ExtIEs } } OPTIONAL,
    ...
}

UEMeasurementReportCharacteristicsEvent1i-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

UEMeasurementReportCharacteristicsEvent6a ::= SEQUENCE {
    uEMeasurementTreshold    UEMeasurementThreshold,
    uEMeasurementTimeToTrigger UEMeasurementTimeToTrigger,
    iE-Extensions          ProtocolExtensionContainer { { UEMeasurementReportCharacteristicsEvent6a-ExtIEs } } OPTIONAL,
    ...
}

UEMeasurementReportCharacteristicsEvent6a-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

UEMeasurementReportCharacteristicsEvent6b ::= SEQUENCE {
    uEMeasurementTreshold    UEMeasurementThreshold,
    uEMeasurementTimeToTrigger UEMeasurementTimeToTrigger,
    iE-Extensions          ProtocolExtensionContainer { { UEMeasurementReportCharacteristicsEvent6b-ExtIEs } } OPTIONAL,
    ...
}

UEMeasurementReportCharacteristicsEvent6b-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

UEMeasurementReportCharacteristicsEvent6c ::= SEQUENCE {
    uEMeasurementTimeToTrigger UEMeasurementTimeToTrigger,
    iE-Extensions          ProtocolExtensionContainer { { UEMeasurementReportCharacteristicsEvent6c-ExtIEs } } OPTIONAL,
    ...
}

UEMeasurementReportCharacteristicsEvent6c-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

UEMeasurementReportCharacteristicsEvent6d ::= SEQUENCE {
    uEMeasurementTimeToTrigger UEMeasurementTimeToTrigger,
    iE-Extensions          ProtocolExtensionContainer { { UEMeasurementReportCharacteristicsEvent6d-ExtIEs } } OPTIONAL,
    ...
}

UEMeasurementReportCharacteristicsEvent6d-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

UEMeasurementReportCharacteristicsPeriodic ::= SEQUENCE {
    amountofReporting    UEMeasurementReportCharacteristicsPeriodicAmountofReporting,
    reportingInterval    UEMeasurementReportCharacteristicsPeriodicReportingInterval,
    iE-Extensions          ProtocolExtensionContainer { {UEMeasurementReportCharacteristicsPeriodic-ExtIEs} } OPTIONAL,

```

```

    ...
}

UEMeasurementReportCharacteristicsPeriodicAmountofReporting ::= ENUMERATED {
    r1,
    r2,
    r4,
    r8,
    r16,
    r32,
    r64,
    rInfinity
}

UEMeasurementReportCharacteristicsPeriodicReportingInterval ::= ENUMERATED {
    r250,
    r500,
    r1000,
    r2000,
    r3000,
    r4000,
    r6000,
    r8000,
    r12000,
    r16000,
    r20000,
    r24000,
    r28000,
    r32000,
    r64000
}

UEMeasurementReportCharacteristicsPeriodic-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

UEMeasurementReportCharacteristics-Extension ::= ProtocolIE-Single-Container {{ UEMeasurementReportCharacteristics-ExtensionIE }}

UEMeasurementReportCharacteristics-ExtensionIE RNSAP-PROTOCOL-IES ::= {
    ...
}

UEMeasurementThreshold ::= CHOICE {
    timeslotISCP          UEMeasurementThresholdDLTimeslotISCP,
    uETransmitPower       UEMeasurementThresholdUETransmitPower,
    ...,
    extension-UEMeasurementThreshold  UEMeasurementThreshold-Extension
}

UEMeasurementThresholdDLTimeslotISCP ::= INTEGER(-115..-25)

UEMeasurementThresholdUETransmitPower ::= INTEGER(-50..33)

UEMeasurementThreshold-Extension ::= ProtocolIE-Single-Container {{ UEMeasurementThreshold-ExtensionIE }}

```

```
UEMeasurementThreshold-ExtensionIE RNSAP-PROTOCOL-IES ::= {
    ...
}

UEMeasurementTimeslotInfoHCR ::= SEQUENCE (SIZE (1..maxNrOfTS)) OF UEMeasurementTimeslotInfoHCR-IEs

UEMeasurementTimeslotInfoHCR-IEs ::= SEQUENCE {
    timeSlot                TimeSlot,
    burstType               UEMeasurementTimeslotInfoHCRBurstType,
    iE-Extensions           ProtocolExtensionContainer { { UEMeasurementTimeslotInfoHCR-IEs-ExtIEs} } OPTIONAL,
    ...
}

UEMeasurementTimeslotInfoHCRBurstType ::= ENUMERATED {
    type1,
    type2,
    type3,
    ...
}

UEMeasurementTimeslotInfoHCR-IEs-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

UEMeasurementTimeslotInfoLCR ::= SEQUENCE (SIZE (1..maxNrOfTsLCR)) OF UEMeasurementTimeslotInfoLCR-IEs

UEMeasurementTimeslotInfoLCR-IEs ::= SEQUENCE {
    timeSlot                TimeSlotLCR,
    iE-Extensions           ProtocolExtensionContainer { { UEMeasurementTimeslotInfoLCR-IEs-ExtIEs} } OPTIONAL,
    ...
}

UEMeasurementTimeslotInfoLCR-IEs-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

UEMeasurementTimeslotInfo768 ::= SEQUENCE (SIZE (1..maxNrOfTS)) OF UEMeasurementTimeslotInfo768-IEs

UEMeasurementTimeslotInfo768-IEs ::= SEQUENCE {
    timeSlot                TimeSlot,
    burstType               UEMeasurementTimeslotInfo768BurstType,
    iE-Extensions           ProtocolExtensionContainer { { UEMeasurementTimeslotInfo768-IEs-ExtIEs} } OPTIONAL,
    ...
}

UEMeasurementTimeslotInfo768BurstType ::= ENUMERATED {
    type1,
    type2,
    type3,
    ...
}
```

```

UEMeasurementTimeslotInfo768-IEs-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

UEMeasurementTimeToTrigger ::= ENUMERATED {
    r0,
    r10,
    r20,
    r40,
    r60,
    r80,
    r100,
    r120,
    r160,
    r200,
    r240,
    r320,
    r640,
    r1280,
    r2560,
    r5000
}

UEMeasurementType ::= ENUMERATED {
    primary-CCPCH-RSCP,
    dL-Timeslot-ISCP,
    uE-Transmitted-power,
    ...
}

UEMeasurementValue ::= CHOICE {
    uE-Transmitted-Power      UE-MeasurementValue-UE-Transmitted-Power,
    primary-CCPCH-RSCP        UE-MeasurementValue-Primary-CCPCH-RSCP,
    dL-Timeslot-ISCP          UE-MeasurementValue-DL-Timeslot-ISCP,
    ...,
    extension-UEMeasurementValue      UEMeasurementValue-Extension
}

UE-MeasurementValue-UE-Transmitted-Power ::= SEQUENCE {
    uEMeasurementTransmittedPowerListHCR      UEMeasurementValueTransmittedPowerListHCR    OPTIONAL,
    -- Mandatory for 3.84Mcps TDD, Not applicable for 1.28Mcps TDD or 7.68Mcps TDD
    uEMeasurementTransmittedPowerListLCR      UEMeasurementValueTransmittedPowerListLCR    OPTIONAL,
    -- Mandatory for 1.28Mcps TDD, Not applicable for 3.84Mcps TDD or 7.68Mcps TDD
    iE-Extensions                             ProtocolExtensionContainer { { UE-MeasurementValue-UE-Transmitted-Power-ExtIEs} }    OPTIONAL,
    ...
}

UE-MeasurementValue-UE-Transmitted-Power-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-UEMeasurementValueTransmittedPowerList768      CRITICALITY ignore    EXTENSION UEMeasurementValueTransmittedPowerList768
    PRESENCE optional },
    ...
}

UEMeasurementValueTransmittedPowerListHCR ::= SEQUENCE (SIZE (1..maxNrOfTS)) OF UEMeasurementValueTransmittedPowerListHCR-IEs

```

```

UEMeasurementValueTransmittedPowerListHCR-IEs ::= SEQUENCE {
    timeSlot                TimeSlot,
    uETransmitPower          INTEGER(0..104),
    -- mapping according to [24], values 0..20 not used
    iE-Extensions            ProtocolExtensionContainer { { UEMeasurementValueTransmittedPowerListHCR-IEs-ExtIEs } }
    OPTIONAL,
    ...
}

UEMeasurementValueTransmittedPowerListHCR-IEs-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

UEMeasurementValueTransmittedPowerListLCR ::= SEQUENCE (SIZE (1..maxNrOfTsLCR)) OF UEMeasurementValueTransmittedPowerListLCR-IEs

UEMeasurementValueTransmittedPowerListLCR-IEs ::= SEQUENCE {
    timeSlotLCR              TimeSlotLCR,
    uETransmitPower          INTEGER(0..104),
    -- mapping according to [24], values 0..20 not used
    iE-Extensions            ProtocolExtensionContainer { { UEMeasurementValueTransmittedPowerListLCR-IEs-ExtIEs } }
    OPTIONAL,
    ...
}

UEMeasurementValueTransmittedPowerListLCR-IEs-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

UEMeasurementValueTransmittedPowerList768 ::= SEQUENCE (SIZE (1..maxNrOfTs)) OF UEMeasurementValueTransmittedPowerList768-IEs

UEMeasurementValueTransmittedPowerList768-IEs ::= SEQUENCE {
    timeSlot                TimeSlot,
    uETransmitPower          INTEGER(0..104),
    -- mapping according to [24], values 0..20 not used
    iE-Extensions            ProtocolExtensionContainer { { UEMeasurementValueTransmittedPowerList768-IEs-ExtIEs } }
    OPTIONAL,
    ...
}

UEMeasurementValueTransmittedPowerList768-IEs-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

UE-MeasurementValue-Primary-CCPCH-RSCP ::= SEQUENCE {
    primaryCCPCH-RSCP        PrimaryCCPCH-RSCP                OPTIONAL,
    primaryCCPCH-RSCP-Delta  PrimaryCCPCH-RSCP-Delta          OPTIONAL,
    iE-Extensions            ProtocolExtensionContainer { { UE-MeasurementValue-Primary-CCPCH-RSCP-ExtIEs } }    OPTIONAL,
    ...
}

UE-MeasurementValue-Primary-CCPCH-RSCP-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

}

UE-MeasurementValue-DL-Timeslot-ISCP ::= SEQUENCE {
    uEMeasurementTimeslotISCPListHCR      UEMeasurementValueTimeslotISCPListHCR  OPTIONAL,
-- Mandatory for 3.84Mcps TDD, Not applicable for 1.28Mcps TDD or 7.68Mcps TDD
    uEMeasurementTimeslotISCPListLCR      UEMeasurementValueTimeslotISCPListLCR  OPTIONAL,
-- Mandatory for 1.28Mcps TDD, Not applicable for 3.84Mcps TDD or 7.68Mcps TDD
    iE-Extensions                        ProtocolExtensionContainer { { UE-MeasurementValue-DL-Timeslot-ISCP-ExtIEs} }  OPTIONAL,
    ...
}

UE-MeasurementValue-DL-Timeslot-ISCP-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-UEMeasurementValueTimeslotISCPList768          CRITICALITY ignore  EXTENSION UEMeasurementValueTimeslotISCPList768          PRESENCE
optional },
    ...
}

UEMeasurementValueTimeslotISCPListHCR ::= SEQUENCE (SIZE (1..maxNrOfTS)) OF UEMeasurementValueTimeslotISCPListHCR-IEs

UEMeasurementValueTimeslotISCPListHCR-IEs ::= SEQUENCE {
    timeSlot                TimeSlot,
    dL-TimeslotISCP         DL-TimeslotISCP,
    iE-Extensions           ProtocolExtensionContainer { { UEMeasurementValueTimeslotISCPListHCR-IEs-ExtIEs} }  OPTIONAL,
    ...
}

UEMeasurementValueTimeslotISCPListHCR-IEs-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

UEMeasurementValueTimeslotISCPListLCR ::= SEQUENCE (SIZE (1..maxNrOfTsLCR)) OF UEMeasurementValueTimeslotISCPListLCR-IEs

UEMeasurementValueTimeslotISCPListLCR-IEs ::= SEQUENCE {
    timeSlotLCR            TimeSlotLCR,
    dL-TimeslotISCP       DL-TimeslotISCP,
    iE-Extensions         ProtocolExtensionContainer { { UEMeasurementValueTimeslotISCPListLCR-IEs-ExtIEs} }  OPTIONAL,
    ...
}

UEMeasurementValueTimeslotISCPListLCR-IEs-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

UEMeasurementValueTimeslotISCPList768 ::= SEQUENCE (SIZE (1..maxNrOfTS)) OF UEMeasurementValueTimeslotISCPList768-IEs

UEMeasurementValueTimeslotISCPList768-IEs ::= SEQUENCE {
    timeSlot                TimeSlot,
    dL-TimeslotISCP         DL-TimeslotISCP,
    iE-Extensions           ProtocolExtensionContainer { { UEMeasurementValueTimeslotISCPList768-IEs-ExtIEs} }  OPTIONAL,
    ...
}

UEMeasurementValueTimeslotISCPList768-IEs-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

UEMeasurementValue-Extension ::= ProtocolIE-Single-Container {{ UEMeasurementValue-ExtensionIE }}

UEMeasurementValue-ExtensionIE RNSAP-PROTOCOL-IES ::= {
    ...
}

UEMeasurementValueInformation ::= CHOICE {
    measurementAvailable      UEMeasurementValueInformationAvailable,
    measurementnotAvailable   UEMeasurementValueInformationnotAvailable
}

UEMeasurementValueInformationAvailable ::= SEQUENCE {
    uEmeasurementValue        UEMeasurementValue,
    ie-Extensions             ProtocolExtensionContainer { { UEMeasurementValueInformationAvailableItem-ExtIEs} }    OPTIONAL,
    ...
}

UEMeasurementValueInformationAvailableItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

UEMeasurementValueInformationnotAvailable ::= NULL

UE-SupportIndicatorExtension ::= BIT STRING (SIZE (32))
-- First bit: Different HS-SCCH In Consecutive TTIs Support Indicator
-- Second bit: HS-SCCH orders in HS-SCCH-less Operation Support Indicator
-- Note that undefined bits are considered as a spare bit and spare bits shall be set to 0 by the transmitter and shall be ignored by the receiver.

UE-State ::= CHOICE {
    cell-fach-pch              Cell-Fach-Pch-State,
    ura-pch                    Ura-Pch-State,
    ...
}

Cell-Fach-Pch-State ::= SEQUENCE {
    d-RNTI                     D-RNTI,
    iE-Extensions              ProtocolExtensionContainer { { Cell-Fach-Pch-State-ExtIEs} }    OPTIONAL,
    ...
}

Cell-Fach-Pch-State-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

Ura-Pch-State ::= SEQUENCE {
    srnc-id                    RNC-ID,
    ura-id                     URA-ID,
    iE-Extensions              ProtocolExtensionContainer { { Ura-Pch-State-ExtIEs} }    OPTIONAL,
    ...
}

```



```

Ura-Pch-State-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-Extended-SRNC-ID          CRITICALITY reject  EXTENSION Extended-RNC-ID          PRESENCE optional },
  ...
}

UL-Delta-T2TP ::= INTEGER (0..6,...)

UL-DL-mode ::= ENUMERATED {
  ul-only,
  dl-only,
  both-ul-and-dl
}

UL-DPDCHIndicatorEDCH ::= ENUMERATED {
  uL-DPDCH-present,
  uL-DPDCH-not-present}

UL-Timeslot-Information ::= SEQUENCE ( SIZE (1..maxNrOfTS)) OF UL-Timeslot-InformationItem

UL-Timeslot-InformationItem ::= SEQUENCE {
  timeSlot          TimeSlot,
  midambleShiftAndBurstType  MidambleShiftAndBurstType,
  tFCI-Presence     TFCI-Presence,
  uL-Code-Information  TDD-UL-Code-Information,
  iE-Extensions     ProtocolExtensionContainer { {UL-Timeslot-InformationItem-ExtIEs} } OPTIONAL,
  ...
}

UL-Timeslot-InformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

UL-TimeslotLCR-Information ::= SEQUENCE (SIZE (1..maxNrOfULTsLCR)) OF UL-TimeslotLCR-InformationItem

UL-TimeslotLCR-InformationItem ::= SEQUENCE {
  timeSlotLCR          TimeSlotLCR,
  midambleShiftLCR     MidambleShiftLCR,
  tFCI-Presence        TFCI-Presence,
  uL-Code-LCR-InformationList  TDD-UL-Code-LCR-Information,
  iE-Extensions        ProtocolExtensionContainer { { UL-TimeslotLCR-InformationItem-ExtIEs} } OPTIONAL,
  ...
}

UL-TimeslotLCR-InformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-PLCCH-Information-UL-TimeslotLCR-Info  CRITICALITY ignore  EXTENSION PLCCHinformation  PRESENCE optional },
  ...
}

PLCCHinformation ::= SEQUENCE {
  tDD-ChannelisationCode  TDD-ChannelisationCode,
  timeSlotLCR             TimeSlotLCR,
  midambleShiftLCR        MidambleShiftLCR,
  sequenceNumber           PLCCHsequenceNumber,
  iE-Extensions            ProtocolExtensionContainer { { PLCCHinformation-ExtIEs} } OPTIONAL,
  ...
}

```

```

}

PLCCHinformation-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-Timeslot-Information768 ::= SEQUENCE ( SIZE (1..maxNrOfTS)) OF UL-Timeslot-InformationItem768

UL-Timeslot-InformationItem768 ::= SEQUENCE {
    timeSlot                TimeSlot,
    midambleShiftAndBurstType768    MidambleShiftAndBurstType768,
    tFCI-Presence            TFCI-Presence,
    uL-Code-Information768    TDD-UL-Code-Information768,
    iE-Extensions            ProtocolExtensionContainer { {UL-Timeslot-InformationItem768-ExtIEs} } OPTIONAL,
    ...
}

UL-Timeslot-InformationItem768-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-TimeSlot-ISCP-Info ::= SEQUENCE (SIZE (1..maxNrOfULTs)) OF UL-TimeSlot-ISCP-InfoItem

UL-TimeSlot-ISCP-InfoItem ::= SEQUENCE {
    timeSlot                TimeSlot,
    uL-TimeslotISCP          UL-TimeslotISCP,
    iE-Extensions            ProtocolExtensionContainer { { UL-TimeSlot-ISCP-InfoItem-ExtIEs} } OPTIONAL,
    ...
}

UL-TimeSlot-ISCP-InfoItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-TimeSlot-ISCP-LCR-Info ::= SEQUENCE (SIZE (1..maxNrOfULTsLCR)) OF UL-TimeSlot-ISCP-LCR-InfoItem

UL-TimeSlot-ISCP-LCR-InfoItem ::= SEQUENCE {
    timeSlotLCR              TimeSlotLCR,
    iSCP                      UL-Timeslot-ISCP-Value,
    iE-Extensions            ProtocolExtensionContainer { { UL-TimeSlot-ISCP-LCR-InfoItem-ExtIEs} } OPTIONAL,
    ...
}

UL-TimeSlot-ISCP-LCR-InfoItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-Timeslot-ISCP-Value ::= UL-TimeslotISCP

UL-Timeslot-ISCP-Value-IncrDecrThres ::= INTEGER(0..126)
-- Unit dB. Step 0.5dB
-- e.g. Value 100 means 50dB

UL-TimingAdvanceCtrl-LCR ::= SEQUENCE {

```

```

    sync-UL-codes-bitmap          BIT STRING (SIZE(8)),
    fPACH-info                    FPACH-Information,
    prxUpPCHdes                   INTEGER (-120 .. -58, ...),
    syncUL-procParameter          SYNC-UL-ProcParameters,
    mMax                           INTEGER (1..32),
    ...
}

Uplink-Compressed-Mode-Method ::= ENUMERATED {
    sFdiv2,
    higher-layer-scheduling,
    ...
}

UL-SIR ::= INTEGER (-82..173)
-- The UL-SIR gives the UL-SIR in number of 0.1 dB steps.
-- E.g. Value 173 means 17.3 dB
-- Unit dB. Step 0.1 dB.

UC-ID ::= SEQUENCE {
    rNC-ID          RNC-ID,
    c-ID            C-ID,
    iE-Extensions  ProtocolExtensionContainer { {UC-ID-ExtIEs} } OPTIONAL,
    ...
}

UC-ID-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-Extended-RNC-ID    CRITICALITY reject    EXTENSION    Extended-RNC-ID PRESENCE optional},
    ...
}

UL-DPCCH-SlotFormat ::= INTEGER (0..5,...)

UL-FP-Mode ::= ENUMERATED {
    normal,
    silent,
    ...
}

UL-PhysCH-SF-Variation ::= ENUMERATED {
    sf-variation-supported,
    sf-variation-not-supported
}

UL-ScramblingCode ::= SEQUENCE {
    ul-ScramblingCodeNumber    UL-ScramblingCodeNumber,
    ul-ScramblingCodeLength    UL-ScramblingCodeLength,
    iE-Extensions              ProtocolExtensionContainer { {UL-ScramblingCode-ExtIEs} } OPTIONAL
}

UL-ScramblingCode-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

UL-ScramblingCodeLength ::= ENUMERATED {
    short,
    long
}

UL-ScramblingCodeNumber ::= INTEGER (0..16777215)

UL-Synchronisation-Parameters-LCR ::= SEQUENCE {
    uL-Synchronisation-StepSize          UL-Synchronisation-StepSize,
    uL-Synchronisation-Frequency        UL-Synchronisation-Frequency,
    iE-Extensions                        ProtocolExtensionContainer { { UL-Synchronisation-Parameters-LCR-ExtIEs } }
    ...
}

UL-Synchronisation-Parameters-LCR-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-Synchronisation-StepSize ::= INTEGER (1..8)

UL-Synchronisation-Frequency ::= INTEGER (1..8)

UL-TimeslotISCP ::= INTEGER (0..127)
-- According to mapping in [14]

UPPCHPositionLCR ::= INTEGER (0..127)

UpPTSInterferenceValue ::= INTEGER (0..127,...)

Unidirectional-DCH-Indicator ::= ENUMERATED {
    downlink-DCH-only,
    uplink-DCH-only
}

URA-ID ::= INTEGER (0..65535)

URA-Information ::= SEQUENCE {
    uRA-ID                                URA-ID,
    multipleURAsIndicator                 MultipleURAsIndicator,
    rNCsWithCellsInTheAccessedURA-List  RNCsWithCellsInTheAccessedURA-List OPTIONAL,
    iE-Extensions                        ProtocolExtensionContainer { { URA-Information-ExtIEs } } OPTIONAL,
    ...
}

URA-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-Extended-RNC-ID                CRITICALITY reject EXTENSION Extended-RNC-ID          PRESENCE optional },
    ...
}

RNCsWithCellsInTheAccessedURA-List ::= SEQUENCE (SIZE (1..maxRNCinURA-1)) OF RNCsWithCellsInTheAccessedURA-Item

RNCsWithCellsInTheAccessedURA-Item ::= SEQUENCE {
    rNC-ID                                RNC-ID,
    iE-Extensions                        ProtocolExtensionContainer { { RNCsWithCellsInTheAccessedURA-Item-ExtIEs } } OPTIONAL,

```

```

}
...
}
RNCsWithCellsInTheAccessedURA-Item-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}
USCH-ID ::= INTEGER (0..255)
USCH-Information ::= SEQUENCE (SIZE (1..maxNoOfUSCHs)) OF USCH-InformationItem
USCH-InformationItem ::= SEQUENCE {
    uSCH-ID                USCH-ID,
    ul-CCTrCH-ID           CCTrCH-ID,
    trChSourceStatisticsDescriptor TrCH-SrcStatisticsDescr,
    transportFormatSet     TransportFormatSet,
    allocationRetentionPriority AllocationRetentionPriority,
    schedulingPriorityIndicator SchedulingPriorityIndicator,
    rb-Info                RB-Info,
    iE-Extensions          ProtocolExtensionContainer { {USCH-InformationItem-ExtIEs} } OPTIONAL,
    ...
}
USCH-InformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-TrafficClass          CRITICALITY ignore EXTENSION TrafficClass          PRESENCE mandatory }|
    { ID id-BindingID            CRITICALITY ignore EXTENSION BindingID PRESENCE optional }|
    -- Shall be ignored if bearer establishment with ALCAP.
    { ID id-TransportLayerAddress CRITICALITY ignore EXTENSION TransportLayerAddress PRESENCE optional }|
    -- Shall be ignored if bearer establishment with ALCAP.
    { ID id-TnlQos               CRITICALITY ignore EXTENSION TnlQos PRESENCE optional },
    ...
}
User-Plane-Congestion-Fields-Inclusion ::= ENUMERATED { shall-be-included }

-- V
-- W
-- X
-- Y
-- Z

END

```

### 9.3.5 Common Definitions

```

-- *****
--
-- Common definitions
--
-- *****

RNSAP-CommonDataTypes {
itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)

```

```

umts-Access (20) modules (3) rnsap (1) version1 (1) rnsap-CommonDataTypes (3) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

-- *****
--
-- Extension constants
--
-- *****

maxPrivateIEs                INTEGER ::= 65535
maxProtocolExtensions        INTEGER ::= 65535
maxProtocolIEs               INTEGER ::= 65535

-- *****
--
-- Common Data Types
--
-- *****

Criticality ::= ENUMERATED { reject, ignore, notify }

Presence ::= ENUMERATED { optional, conditional, mandatory }

PrivateIE-ID ::= CHOICE {
    local          INTEGER (0.. maxPrivateIEs),
    global         OBJECT IDENTIFIER
}

ProcedureCode ::= INTEGER (0..255)

ProcedureID ::= SEQUENCE {
    procedureCode ProcedureCode,
    ddMode        ENUMERATED { tdd, fdd, common, ... }
}

ProtocolIE-ID ::= INTEGER (0..maxProtocolIEs)

TransactionID ::= CHOICE {
    shortTransactionId INTEGER (0..127),
    longTransactionId  INTEGER (0..32767)
}

TriggeringMessage ::= ENUMERATED { initiating-message, successful-outcome, unsuccessful-outcome, outcome }

END

```

### 9.3.6 Constant Definitions

```

-- *****
--

```

```

-- Constant definitions
--
-- *****

RNSAP-Constants {
itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
umts-Access (20) modules (3) rnsap (1) version1 (1) rnsap-Constants (4) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

IMPORTS
    ProcedureCode,
    ProtocolIE-ID
FROM RNSAP-CommonDataTypes;

-- *****
--
-- Elementary Procedures
--
-- *****

id-commonTransportChannelResourcesInitialisation      ProcedureCode ::= 0
id-commonTransportChannelResourcesRelease             ProcedureCode ::= 1
id-compressedModeCommand                             ProcedureCode ::= 2
id-downlinkPowerControl                              ProcedureCode ::= 3
id-downlinkPowerTimeslotControl                      ProcedureCode ::= 4
id-downlinkSignallingTransfer                        ProcedureCode ::= 5
id-errorIndication                                   ProcedureCode ::= 6
id-dedicatedMeasurementFailure                       ProcedureCode ::= 7
id-dedicatedMeasurementInitiation                   ProcedureCode ::= 8
id-dedicatedMeasurementReporting                     ProcedureCode ::= 9
id-dedicatedMeasurementTermination                   ProcedureCode ::= 10
id-paging                                             ProcedureCode ::= 11
id-physicalChannelReconfiguration                    ProcedureCode ::= 12
id-privateMessage                                    ProcedureCode ::= 13
id-radioLinkAddition                                 ProcedureCode ::= 14
id-radioLinkCongestion                              ProcedureCode ::= 34
id-radioLinkDeletion                                 ProcedureCode ::= 15
id-radioLinkFailure                                  ProcedureCode ::= 16
id-radioLinkPreemption                              ProcedureCode ::= 17
id-radioLinkRestoration                             ProcedureCode ::= 18
id-radioLinkSetup                                    ProcedureCode ::= 19
id-relocationCommit                                  ProcedureCode ::= 20
id-synchronisedRadioLinkReconfigurationCancellation ProcedureCode ::= 21
id-synchronisedRadioLinkReconfigurationCommit        ProcedureCode ::= 22
id-synchronisedRadioLinkReconfigurationPreparation   ProcedureCode ::= 23
id-unsynchronisedRadioLinkReconfiguration            ProcedureCode ::= 24
id-uplinkSignallingTransfer                          ProcedureCode ::= 25
id-commonMeasurementFailure                          ProcedureCode ::= 26
id-commonMeasurementInitiation                       ProcedureCode ::= 27
id-commonMeasurementReporting                        ProcedureCode ::= 28
id-commonMeasurementTermination                      ProcedureCode ::= 29

```

```

id-informationExchangeFailure          ProcedureCode ::= 30
id-informationExchangeInitiation       ProcedureCode ::= 31
id-informationReporting                 ProcedureCode ::= 32
id-informationExchangeTermination      ProcedureCode ::= 33
id-reset                               ProcedureCode ::= 35
id-radioLinkActivation                 ProcedureCode ::= 36
id-gERANuplinkSignallingTransfer       ProcedureCode ::= 37
id-radioLinkParameterUpdate            ProcedureCode ::= 38
id-uEMeasurementFailure                 ProcedureCode ::= 39
id-uEMeasurementInitiation              ProcedureCode ::= 40
id-uEMeasurementReporting               ProcedureCode ::= 41
id-uEMeasurementTermination             ProcedureCode ::= 42
id-iurDeactivateTrace                  ProcedureCode ::= 43
id-iurInvokeTrace                       ProcedureCode ::= 44
id-mBMSAttach                           ProcedureCode ::= 45
id-mBMSDetach                           ProcedureCode ::= 46
id-directInformationTransfer            ProcedureCode ::= 48
id-enhancedRelocation                  ProcedureCode ::= 49
id-enhancedRelocationCancel             ProcedureCode ::= 50
id-enhancedRelocationSignallingTransfer ProcedureCode ::= 51
id-enhancedRelocationRelease            ProcedureCode ::= 52
id-mBSFNMCCHInformation                 ProcedureCode ::= 53

-- *****
--
-- Lists
--
-- *****

maxCellSIB11OrSIB12                    INTEGER ::= 32
maxCellsMeas                            INTEGER ::= 8
maxRateMatching                          INTEGER ::= 256
maxNoOfDSCHs                            INTEGER ::= 10
maxNoOfDSCHsLCR                          INTEGER ::= 10
maxNoOfRB                                 INTEGER ::= 32
maxNoOfUSCHs                             INTEGER ::= 10
maxNoOfUSCHsLCR                          INTEGER ::= 10
maxNrOfTFCs                              INTEGER ::= 1024
maxNrOfTFs                                INTEGER ::= 32
maxNrOfCCTrCHs                           INTEGER ::= 16
maxNrOfCCTrCHsLCR                         INTEGER ::= 16
maxNrOfDCHs                               INTEGER ::= 128
maxNrOfDL-Codes                           INTEGER ::= 8
maxNrOfDPCHs                              INTEGER ::= 240
maxNrOfDPCHsPerRL-1                       INTEGER ::= 239 -- maxNrOfCCTrCH*maxNrOfULTs-1
maxNrOfDPCHsLCR                           INTEGER ::= 240
maxNrOfDPCHsLCRPerRL-1                     INTEGER ::= 95 -- maxNrOfCCTrCH*maxNrOfULTsLCR-1
maxNrOfDPCHs768                            INTEGER ::= 480
maxNrOfDPCHs768PerRL-1                     INTEGER ::= 479
maxNrOfErrors                             INTEGER ::= 256
maxNrOfMACcshSDU-Length                   INTEGER ::= 16
maxNrOfMBMSServices                       INTEGER ::= 128
maxNrOfActiveMBMSServices                 INTEGER ::= 256
maxNrOfPoints                             INTEGER ::= 15

```



|                                |  |
|--------------------------------|--|
| maxNrOfRLs                     | INTEGER ::= 16                         |
| maxNrOfRLSets                  | INTEGER ::= maxNrOfRLs                 |
| maxNrOfRLSets-1                | INTEGER ::= 15 -- maxNrOfRLSets - 1    |
| maxNrOfRLs-1                   | INTEGER ::= 15 -- maxNrOfRLs - 1       |
| maxNrOfRLs-2                   | INTEGER ::= 14 -- maxNrOfRLs - 2       |
| maxNrOfUES                     | INTEGER ::= 4096                       |
| maxNrOfULTs                    | INTEGER ::= 15                         |
| maxNrOfULTsLCR                 | INTEGER ::= 6                          |
| maxNrOfDLTs                    | INTEGER ::= 15                         |
| maxNrOfDLTsLCR                 | INTEGER ::= 6                          |
| maxRNCinURA-1                  | INTEGER ::= 15                         |
| maxTTI-Count                   | INTEGER ::= 4                          |
| maxCTFC                        | INTEGER ::= 16777215                   |
| maxNrOfNeighbouringRNCs        | INTEGER ::= 10                         |
| maxNrOfFDDNeighboursPerRNC     | INTEGER ::= 256                        |
| maxNrOfGSMNeighboursPerRNC     | INTEGER ::= 256                        |
| maxNrOfTDDNeighboursPerRNC     | INTEGER ::= 256                        |
| maxNrOfFACHs                   | INTEGER ::= 8                          |
| maxNrOfLCRTDDNeighboursPerRNC  | INTEGER ::= 256                        |
| maxIBSEG                       | INTEGER ::= 16                         |
| maxNrOfSCCPCHs                 | INTEGER ::= 8                          |
| maxNrOfSCCPCHs768              | INTEGER ::= 16                         |
| maxTGPS                        | INTEGER ::= 6                          |
| maxNrOfTS                      | INTEGER ::= 15                         |
| maxNrOfLevels                  | INTEGER ::= 256                        |
| maxNrOfTsLCR                   | INTEGER ::= 6                          |
| maxNoSat                       | INTEGER ::= 16                         |
| maxNoGPSTypes                  | INTEGER ::= 8                          |
| maxNrOfMeasNCell               | INTEGER ::= 96                         |
| maxNrOfMeasNCell-1             | INTEGER ::= 95 -- maxNrOfMeasNCell - 1 |
| maxResetContext                | INTEGER ::= 250                        |
| maxResetContextGroup           | INTEGER ::= 32                         |
| maxNrOfHARQProc                | INTEGER ::= 8                          |
| maxNrOfHSSCCHCodes             | INTEGER ::= 4                          |
| maxNrOfHSSICHs                 | INTEGER ::= 4                          |
| maxNrOfHSSICHs-1               | INTEGER ::= 3                          |
| maxNrOfMACdFlows               | INTEGER ::= 8                          |
| maxNrOfMACdFlows-1             | INTEGER ::= 7 -- maxNrOfMACdFlows - 1  |
| maxNrOfMACdPDUSize             | INTEGER ::= 32                         |
| maxNrOfPDUIndexes              | INTEGER ::= 8                          |
| maxNrOfPDUIndexes-1            | INTEGER ::= 7 -- maxNrOfPDUIndexes - 1 |
| maxNrOfPrioQueues              | INTEGER ::= 8                          |
| maxNrOfPrioQueues-1            | INTEGER ::= 7 -- maxNrOfPrioQueues - 1 |
| maxNrOfSNAs                    | INTEGER ::= 65536                      |
| maxNrOfSatAlmanac-maxNoSat     | INTEGER ::= 16                         |
| maxNrOfGERANSI                 | INTEGER ::= 8                          |
| maxNrOfInterfaces              | INTEGER ::= 16                         |
| maxNrOfSigSeqERGHICH-1         | INTEGER ::= 39                         |
| maxNrOfCells                   | INTEGER ::= 65536                      |
| maxNrOfAddFreq                 | INTEGER ::= 8                          |
| maxNrOfCellsPerFreq            | INTEGER ::= 65536                      |
| maxNrOfEDCHMACdFlows-1         | INTEGER ::= 7                          |
| maxNrOfEDCH-HARQ-PO-QUANTSTEPS | INTEGER ::= 6                          |
| maxNrOfEDPCCH-PO-QUANTSTEPS    | INTEGER ::= 8                          |

```

maxNrOfEDCHHARQProcesses2msEDCH          INTEGER ::= 8
maxNrOfBits-MACe-PDU-non-scheduled        INTEGER ::= 19982
maxNrOfRefETFCTIs                         INTEGER ::= 8
maxNrOfRefETFCTI-PO-QUANTSTEPS            INTEGER ::= 29
maxNrOfEDCHMACdFlows                      INTEGER ::= 8
maxNoOfLogicalChannels                    INTEGER ::= 16 -- only maximum 15 can be used
maxNrOfRefBetas                           INTEGER ::= 8
maxNrOfEAGCHCodes                        INTEGER ::= 4
maxNrOfHS-DSCHTBSSs                      INTEGER ::= 90
maxNrOfHS-DSCHTBSSs-HS-SCCHless          INTEGER ::= 4
maxHS-PDSCHCodeNrComp-1                  INTEGER ::= 15
maxNrOfEHICHCodes                        INTEGER ::= 4
maxGANSSSat                              INTEGER ::= 64
maxNoGANS                                  INTEGER ::= 8
maxSgnType                                INTEGER ::= 8
maxNrOfBroadcastPLMNs                    INTEGER ::= 5
maxHSDPAFrequency                         INTEGER ::= 8
maxHSDPAFrequency-1                      INTEGER ::= 7
maxFrequencyinCell                       INTEGER ::= 12
maxFrequencyinCell-1                     INTEGER ::= 11
maxGANSSSatAlmanac                       INTEGER ::= 36
maxGANSSSClockMod                        INTEGER ::= 4
maxNrOfEDCHRLs                           INTEGER ::= 4
maxEARFCN                                 INTEGER ::= 65535
maxNrOfEUTRANeighboursPerRNC            INTEGER ::= 256
maxNrOfMCCHMessages                      INTEGER ::= 5
maxNrOfMBMSL3                             INTEGER ::= 64
maxNrOfEDCHMACdFlowsLCR                  INTEGER ::= 256
maxNrOfEDCHMACdFlowsLCR-1                INTEGER ::= 255
maxNrOfPreconfiguredNeighbours           INTEGER ::= 256
maxNrOfHSDSCH-1                           INTEGER ::= 32
maxNrOfHSDSCH                             INTEGER ::= 33
maxGANS-1                                 INTEGER ::= 7
maxLengthMBMSConcatServlists             INTEGER ::= 96
maxNoOfTBSSs-Mapping-HS-DSCH-SPS        INTEGER ::= 4
maxNoOfTBSSs-Mapping-HS-DSCH-SPS-1      INTEGER ::= 3
maxNoOfHS-DSCH-TBSSLCR                   INTEGER ::= 64
maxNoOfRepetition-Period-LCR             INTEGER ::= 4
maxNoOfRepetitionPeriod-SPS-LCR-1       INTEGER ::= 3
maxNoOf-HS-SICH-SPS                      INTEGER ::= 4
maxNoOf-HS-SICH-SPS-1                    INTEGER ::= 3
maxNoOfNon-HS-SCCH-Assosiated-HS-SICH    INTEGER ::= 4

```

```

-- *****
--
-- IEs
--
-- *****

```

|   |                       |
|---|-----------------------|
| id-AllowedQueueingTime                              | ProtocolIE-ID ::= 4   |
| id-Allowed-Rate-Information                         | ProtocolIE-ID ::= 42  |
| id-AntennaColocationIndicator                       | ProtocolIE-ID ::= 309 |
| id-BindingID  | ProtocolIE-ID ::= 5   |
| id-C-ID   | ProtocolIE-ID ::= 6   |
| id-C-RNTI   | ProtocolIE-ID ::= 7   |
| id-Cell-Capacity-Class-Value                        | ProtocolIE-ID ::= 303 |
| id-CFN  | ProtocolIE-ID ::= 8   |
| id-CN-CS-DomainIdentifier                           | ProtocolIE-ID ::= 9   |
| id-CN-PS-DomainIdentifier                           | ProtocolIE-ID ::= 10  |
| id-Cause  | ProtocolIE-ID ::= 11  |
| id-CoverageIndicator                                | ProtocolIE-ID ::= 310 |
| id-CriticalityDiagnostics                           | ProtocolIE-ID ::= 20  |
| id-ContextInfoItem-Reset                            | ProtocolIE-ID ::= 211 |
| id-ContextGroupInfoItem-Reset                       | ProtocolIE-ID ::= 515 |
| id-D-RNTI   | ProtocolIE-ID ::= 21  |
| id-D-RNTI-ReleaseIndication                         | ProtocolIE-ID ::= 22  |
| id-DCHs-to-Add-FDD                                  | ProtocolIE-ID ::= 26  |
| id-DCHs-to-Add-TDD                                  | ProtocolIE-ID ::= 27  |
| id-DCH-DeleteList-RL-ReconfPrepFDD                  | ProtocolIE-ID ::= 30  |
| id-DCH-DeleteList-RL-ReconfPrepTDD                  | ProtocolIE-ID ::= 31  |
| id-DCH-DeleteList-RL-ReconfRqstFDD                  | ProtocolIE-ID ::= 32  |
| id-DCH-DeleteList-RL-ReconfRqstTDD                  | ProtocolIE-ID ::= 33  |
| id-DCH-FDD-Information                              | ProtocolIE-ID ::= 34  |
| id-DCH-TDD-Information                              | ProtocolIE-ID ::= 35  |
| id-FDD-DCHs-to-Modify                               | ProtocolIE-ID ::= 39  |
| id-TDD-DCHs-to-Modify                               | ProtocolIE-ID ::= 40  |
| id-DCH-InformationResponse                          | ProtocolIE-ID ::= 43  |
| id-DCH-Rate-InformationItem-RL-CongestInd           | ProtocolIE-ID ::= 38  |
| id-DL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD    | ProtocolIE-ID ::= 44  |
| id-DL-CCTrCH-InformationListItem-RL-ReconfReadyTDD  | ProtocolIE-ID ::= 45  |
| id-DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD | ProtocolIE-ID ::= 46  |
| id-DL-CCTrCH-InformationItem-RL-SetupRqstTDD        | ProtocolIE-ID ::= 47  |
| id-DL-CCTrCH-InformationListItem-PhyChReconfRqstTDD | ProtocolIE-ID ::= 48  |
| id-DL-CCTrCH-InformationListItem-RL-AdditionRspTDD  | ProtocolIE-ID ::= 49  |
| id-DL-CCTrCH-InformationListItem-RL-SetupRspTDD     | ProtocolIE-ID ::= 50  |
| id-DL-CCTrCH-InformationAddList-RL-ReconfPrepTDD    | ProtocolIE-ID ::= 51  |
| id-DL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD | ProtocolIE-ID ::= 52  |
| id-DL-CCTrCH-InformationList-RL-SetupRqstTDD        | ProtocolIE-ID ::= 53  |
| id-FDD-DL-CodeInformation                           | ProtocolIE-ID ::= 54  |
| id-DL-DPCH-Information-RL-ReconfPrepFDD             | ProtocolIE-ID ::= 59  |
| id-DL-DPCH-Information-RL-SetupRqstFDD              | ProtocolIE-ID ::= 60  |
| id-DL-DPCH-Information-RL-ReconfRqstFDD             | ProtocolIE-ID ::= 61  |
| id-DL-DPCH-InformationItem-PhyChReconfRqstTDD       | ProtocolIE-ID ::= 62  |
| id-DL-DPCH-InformationItem-RL-AdditionRspTDD        | ProtocolIE-ID ::= 63  |
| id-DL-DPCH-InformationItem-RL-SetupRspTDD           | ProtocolIE-ID ::= 64  |
| id-DL-DPCH-TimingAdjustment                         | ProtocolIE-ID ::= 278 |
| id-DLReferencePower                                 | ProtocolIE-ID ::= 67  |
| id-DLReferencePowerList-DL-PC-Rqst                  | ProtocolIE-ID ::= 68  |
| id-DL-ReferencePowerInformation-DL-PC-Rqst          | ProtocolIE-ID ::= 69  |
| id-DPC-Mode   | ProtocolIE-ID ::= 12  |
| id-DRXCycleLengthCoefficient                        | ProtocolIE-ID ::= 70  |
| id-DedicatedMeasurementObjectType-DM-Fail-Ind       | ProtocolIE-ID ::= 470 |
| id-DedicatedMeasurementObjectType-DM-Fail           | ProtocolIE-ID ::= 471 |

|  |                       |
|--|-----------------------|
| id-DedicatedMeasurementObjectType-DM-Rprt            | ProtocolIE-ID ::= 71  |
| id-DedicatedMeasurementObjectType-DM-Rqst            | ProtocolIE-ID ::= 72  |
| id-DedicatedMeasurementObjectType-DM-Rsp             | ProtocolIE-ID ::= 73  |
| id-DedicatedMeasurementType                          | ProtocolIE-ID ::= 74  |
| id-FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspFDD | ProtocolIE-ID ::= 82  |
| id-FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspTDD | ProtocolIE-ID ::= 83  |
| id-Guaranteed-Rate-Information                       | ProtocolIE-ID ::= 41  |
| id-IMSI  | ProtocolIE-ID ::= 84  |
| id-HCS-Prio  | ProtocolIE-ID ::= 311 |
| id-L3-Information                                    | ProtocolIE-ID ::= 85  |
| id-AdjustmentPeriod                                  | ProtocolIE-ID ::= 90  |
| id-MaxAdjustmentStep                                 | ProtocolIE-ID ::= 91  |
| id-MeasurementFilterCoefficient                      | ProtocolIE-ID ::= 92  |
| id-MessageStructure                                  | ProtocolIE-ID ::= 57  |
| id-MeasurementID                                     | ProtocolIE-ID ::= 93  |
| id-Neighbouring-GSM-CellInformation                  | ProtocolIE-ID ::= 13  |
| id-Neighbouring-UMTS-CellInformationItem             | ProtocolIE-ID ::= 95  |
| id-NRT-Load-Information-Value                        | ProtocolIE-ID ::= 305 |
| id-NRT-Load-Information-Value-IncrDecrThres          | ProtocolIE-ID ::= 306 |
| id-PagingArea-PagingRqst                             | ProtocolIE-ID ::= 102 |
| id-FACH-FlowControlInformation                       | ProtocolIE-ID ::= 103 |
| id-PartialReportingIndicator                         | ProtocolIE-ID ::= 472 |
| id-Permanent-NAS-UE-Identity                         | ProtocolIE-ID ::= 17  |
| id-PowerAdjustmentType                               | ProtocolIE-ID ::= 107 |
| id-RANAP-RelocationInformation                       | ProtocolIE-ID ::= 109 |
| id-RL-Information-PhyChReconfRqstFDD                 | ProtocolIE-ID ::= 110 |
| id-RL-Information-PhyChReconfRqstTDD                 | ProtocolIE-ID ::= 111 |
| id-RL-Information-RL-AdditionRqstFDD                 | ProtocolIE-ID ::= 112 |
| id-RL-Information-RL-AdditionRqstTDD                 | ProtocolIE-ID ::= 113 |
| id-RL-Information-RL-DeletionRqst                    | ProtocolIE-ID ::= 114 |
| id-RL-Information-RL-FailureInd                      | ProtocolIE-ID ::= 115 |
| id-RL-Information-RL-ReconfPrepFDD                   | ProtocolIE-ID ::= 116 |
| id-RL-Information-RL-RestoreInd                      | ProtocolIE-ID ::= 117 |
| id-RL-Information-RL-SetupRqstFDD                    | ProtocolIE-ID ::= 118 |
| id-RL-Information-RL-SetupRqstTDD                    | ProtocolIE-ID ::= 119 |
| id-RL-InformationItem-RL-CongestInd                  | ProtocolIE-ID ::= 55  |
| id-RL-InformationItem-DM-Rprt                        | ProtocolIE-ID ::= 120 |
| id-RL-InformationItem-DM-Rqst                        | ProtocolIE-ID ::= 121 |
| id-RL-InformationItem-DM-Rsp                         | ProtocolIE-ID ::= 122 |
| id-RL-InformationItem-RL-PreemptRequiredInd          | ProtocolIE-ID ::= 2   |
| id-RL-InformationItem-RL-SetupRqstFDD                | ProtocolIE-ID ::= 123 |
| id-RL-InformationList-RL-CongestInd                  | ProtocolIE-ID ::= 56  |
| id-RL-InformationList-RL-AdditionRqstFDD             | ProtocolIE-ID ::= 124 |
| id-RL-InformationList-RL-DeletionRqst                | ProtocolIE-ID ::= 125 |
| id-RL-InformationList-RL-PreemptRequiredInd          | ProtocolIE-ID ::= 1   |
| id-RL-InformationList-RL-ReconfPrepFDD               | ProtocolIE-ID ::= 126 |
| id-RL-InformationResponse-RL-AdditionRspTDD          | ProtocolIE-ID ::= 127 |
| id-RL-InformationResponse-RL-ReconfReadyTDD          | ProtocolIE-ID ::= 128 |
| id-RL-InformationResponse-RL-SetupRspTDD             | ProtocolIE-ID ::= 129 |
| id-RL-InformationResponseItem-RL-AdditionRspFDD      | ProtocolIE-ID ::= 130 |
| id-RL-InformationResponseItem-RL-ReconfReadyFDD      | ProtocolIE-ID ::= 131 |
| id-RL-InformationResponseItem-RL-ReconfRspFDD        | ProtocolIE-ID ::= 132 |
| id-RL-InformationResponseItem-RL-SetupRspFDD         | ProtocolIE-ID ::= 133 |
| id-RL-InformationResponseList-RL-AdditionRspFDD      | ProtocolIE-ID ::= 134 |

|   |                       |
|---|-----------------------|
| id-RL-InformationResponseList-RL-ReconfReadyFDD             | ProtocolIE-ID ::= 135 |
| id-RL-InformationResponseList-RL-ReconfRspFDD               | ProtocolIE-ID ::= 136 |
| id-RL-InformationResponse-RL-ReconfRspTDD                   | ProtocolIE-ID ::= 28  |
| id-RL-InformationResponseList-RL-SetupRspFDD                | ProtocolIE-ID ::= 137 |
| id-RL-ReconfigurationFailure-RL-ReconfFail                  | ProtocolIE-ID ::= 141 |
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| id-DL-DPCH-Power-Information-RL-ReconfPrepFDD        | ProtocolIE-ID ::= 557 |
| id-F-DPCH-Information-RL-ReconfPrepFDD               | ProtocolIE-ID ::= 558 |
| id-F-DPCH-Information-RL-SetupRqstFDD                | ProtocolIE-ID ::= 559 |
| id-MBMS-Bearer-Service-List                          | ProtocolIE-ID ::= 560 |
| id-MBMS-Bearer-Service-List-InfEx-Rsp                | ProtocolIE-ID ::= 561 |
| id-Active-MBMS-Bearer-ServiceFDD                     | ProtocolIE-ID ::= 562 |
| id-Active-MBMS-Bearer-ServiceTDD                     | ProtocolIE-ID ::= 563 |
| id-Old-URA-ID  | ProtocolIE-ID ::= 564 |
| id-UE-State  | ProtocolIE-ID ::= 568 |
| id-URA-ID  | ProtocolIE-ID ::= 569 |
| id-HARQ-Preamble-Mode                                | ProtocolIE-ID ::= 571 |
| id-SynchronisationIndicator                          | ProtocolIE-ID ::= 572 |
| id-UL-DPDCHIndicatorEDCH                             | ProtocolIE-ID ::= 573 |
| id-EDPCH-Information                                 | ProtocolIE-ID ::= 574 |
| id-RL-Specific-EDCH-Information                      | ProtocolIE-ID ::= 575 |
| id-EDCH-RL-Indication                                | ProtocolIE-ID ::= 576 |
| id-EDCH-FDD-Information                              | ProtocolIE-ID ::= 577 |
| id-EDCH-RLSet-Id                                     | ProtocolIE-ID ::= 578 |
| id-Serving-EDCHRL-Id                                 | ProtocolIE-ID ::= 579 |
| id-EDCH-FDD-DL-ControlChannelInformation             | ProtocolIE-ID ::= 580 |
| id-EDCH-FDD-InformationResponse                      | ProtocolIE-ID ::= 581 |
| id-EDCH-MACdFlows-To-Add                             | ProtocolIE-ID ::= 582 |
| id-EDCH-FDD-Information-To-Modify                    | ProtocolIE-ID ::= 583 |
| id-EDCH-MACdFlows-To-Delete                          | ProtocolIE-ID ::= 584 |
| id-EDPCH-Information-RLReconfRequest-FDD             | ProtocolIE-ID ::= 585 |

|   |                       |
|---|-----------------------|
| id-EDCH-MacdFlowSpecificInformationList-RL-PreemptRequiredInd | ProtocolIE-ID ::= 586 |
| id-EDCH-MacdFlowSpecificInformationItem-RL-PreemptRequiredInd | ProtocolIE-ID ::= 587 |
| id-EDCH-MacdFlowSpecificInformationList-RL-CongestInd         | ProtocolIE-ID ::= 588 |
| id-EDCH-MacdFlowSpecificInformationItem-RL-CongestInd         | ProtocolIE-ID ::= 589 |
| id-MBMS-Bearer-Service-Full-Address                           | ProtocolIE-ID ::= 590 |
| id-Initial-DL-DPCH-TimingAdjustment                           | ProtocolIE-ID ::= 591 |
| id-Initial-DL-DPCH-TimingAdjustment-Allowed                   | ProtocolIE-ID ::= 592 |
| id-User-Plane-Congestion-Fields-Inclusion                     | ProtocolIE-ID ::= 593 |
| id-HARQ-Preamble-Mode-Activation-Indicator                    | ProtocolIE-ID ::= 594 |
| id-multiple-DedicatedMeasurementValueList-TDD-DM-Rsp          | ProtocolIE-ID ::= 595 |
| id-multiple-DedicatedMeasurementValueList-LCR-TDD-DM-Rsp      | ProtocolIE-ID ::= 596 |
| id-ProvidedInformation  | ProtocolIE-ID ::= 597 |
| id-Active-MBMS-Bearer-ServiceFDD-PFL                          | ProtocolIE-ID ::= 598 |
| id-Active-MBMS-Bearer-ServiceTDD-PFL                          | ProtocolIE-ID ::= 599 |
| id-FrequencyBandIndicator                                     | ProtocolIE-ID ::= 600 |
| id-Serving-cell-change-CFN                                    | ProtocolIE-ID ::= 601 |
| id-HS-DSCH-serving-cell-change-information                    | ProtocolIE-ID ::= 602 |
| id-HS-DSCH-serving-cell-change-informationResponse            | ProtocolIE-ID ::= 603 |
| id-E-DCH-Serving-cell-change-informationResponse              | ProtocolIE-ID ::= 604 |
| id-secondary-LCR-CCPCH-Info-TDD                               | ProtocolIE-ID ::= 605 |
| id-E-DCH-FDD-Update-Information                               | ProtocolIE-ID ::= 606 |
| id-Inter-Frequency-Cell-List                                  | ProtocolIE-ID ::= 607 |
| id-Inter-Frequency-Cell-Information                           | ProtocolIE-ID ::= 608 |
| id-multiple-HSSICHMeasurementValueList-TDD-DM-Rsp             | ProtocolIE-ID ::= 609 |
| id-TDD-Support-PLCCH  | ProtocolIE-ID ::= 610 |
| id-PLCCH-Information-UL-TimeslotLCR-Info                      | ProtocolIE-ID ::= 611 |
| id-PLCCH-Information-PhyChReconfRqstTDD                       | ProtocolIE-ID ::= 612 |
| id-TDD768-maxNrDLPhysicalChannelsTS                           | ProtocolIE-ID ::= 613 |
| id-RL-InformationResponse-RL-AdditionRspTDD768                | ProtocolIE-ID ::= 614 |
| id-UL-CCTrCH-InformationListIE-RL-AdditionRspTDD768           | ProtocolIE-ID ::= 615 |
| id-DL-CCTrCH-InformationListIE-RL-AdditionRspTDD768           | ProtocolIE-ID ::= 616 |
| id-UL-DPCH-InformationItem-RL-AdditionRspTDD768               | ProtocolIE-ID ::= 617 |
| id-DL-DPCH-InformationItem-RL-AdditionRspTDD768               | ProtocolIE-ID ::= 618 |
| id-UL-DPCH-InformationAddListIE-RL-ReconfReadyTDD768          | ProtocolIE-ID ::= 619 |
| id-UL-Timeslot-InformationModifyList-RL-ReconfReadyTDD768     | ProtocolIE-ID ::= 620 |
| id-DL-DPCH-InformationAddListIE-RL-ReconfReadyTDD768          | ProtocolIE-ID ::= 621 |
| id-DL-Timeslot-InformationModifyList-RL-ReconfReadyTDD768     | ProtocolIE-ID ::= 622 |
| id-secondary-CCPCH-Info-RL-ReconfReadyTDD768                  | ProtocolIE-ID ::= 623 |
| id-hSSCCH-TDD-Specific-InfoList-Response768                   | ProtocolIE-ID ::= 624 |
| id-hSPDSCH-TDD-Specific-InfoList-Response768                  | ProtocolIE-ID ::= 625 |
| id-HSPDSCH-Timeslot-InformationList-PhyChReconfRqstTDD768     | ProtocolIE-ID ::= 626 |
| id-UL-Timeslot-InformationList-PhyChReconfRqstTDD768          | ProtocolIE-ID ::= 627 |
| id-DL-Timeslot-InformationList-PhyChReconfRqstTDD768          | ProtocolIE-ID ::= 628 |
| id-CellCapabilityContainer-TDD768                             | ProtocolIE-ID ::= 629 |
| id-multiple-DedicatedMeasurementValueList-TDD768-DM-Rsp       | ProtocolIE-ID ::= 630 |
| id-neighbouringTDDCellMeasurementInformation768               | ProtocolIE-ID ::= 631 |
| id-UEMeasurementTimeslotInfo768                               | ProtocolIE-ID ::= 632 |
| id-Rx-Timing-Deviation-Value-768                              | ProtocolIE-ID ::= 633 |
| id-UEMeasurementValueTransmittedPowerList768                  | ProtocolIE-ID ::= 634 |
| id-UEMeasurementValueTimeslotISCPList768                      | ProtocolIE-ID ::= 635 |
| id-RL-InformationResponse-RL-SetupRspTDD768                   | ProtocolIE-ID ::= 636 |
| id-UL-CCTrCH-InformationListIE-RL-SetupRspTDD768              | ProtocolIE-ID ::= 637 |
| id-DL-CCTrCH-InformationListIE-RL-SetupRspTDD768              | ProtocolIE-ID ::= 638 |
| id-UL-DPCH-InformationItem-RL-SetupRspTDD768                  | ProtocolIE-ID ::= 639 |

|   |                       |
|---|-----------------------|
| id-DL-DPCH-InformationItem-RL-SetupRspTDD768                        | ProtocolIE-ID ::= 640 |
| id-TDD768-minimumSpreadingFactor-UL                                 | ProtocolIE-ID ::= 641 |
| id-TDD768-minimumSpreadingFactor-DL                                 | ProtocolIE-ID ::= 642 |
| id-TDD768-maxNrDLPhysicalchannels                                   | ProtocolIE-ID ::= 643 |
| id-DL-DPCH-InformationDeleteList768-RL-ReconfReadyTDD               | ProtocolIE-ID ::= 644 |
| id-DPCH-ID768-DM-Rsp  | ProtocolIE-ID ::= 645 |
| id-DPCH-ID768-DM-Rqst   | ProtocolIE-ID ::= 646 |
| id-DPCH-ID768-DM-Rprt   | ProtocolIE-ID ::= 647 |
| id-EDPCH-Information-RLAdditionReq-FDD                              | ProtocolIE-ID ::= 648 |
| id-HSDSCH-Configured-Indicator                                      | ProtocolIE-ID ::= 649 |
| id-RxTimingDeviationForTAext  | ProtocolIE-ID ::= 650 |
| id-RxTimingDeviationForTA768  | ProtocolIE-ID ::= 651 |
| id-Rx-Timing-Deviation-Value-ext                                    | ProtocolIE-ID ::= 652 |
| id-E-DCH-PowerOffset-for-SchedulingInfo                             | ProtocolIE-ID ::= 653 |
| id-TrCH-SrcStatisticsDescr  | ProtocolIE-ID ::= 654 |
| id-E-DCH-Information  | ProtocolIE-ID ::= 655 |
| id-E-DCH-Serving-RL-ID  | ProtocolIE-ID ::= 656 |
| id-E-DCH-Information-Reconfig                                       | ProtocolIE-ID ::= 657 |
| id-E-DCH-Information-Response                                       | ProtocolIE-ID ::= 658 |
| id-E-DCH-768-Information  | ProtocolIE-ID ::= 659 |
| id-E-DCH-768-Information-Reconfig                                   | ProtocolIE-ID ::= 660 |
| id-E-DCH-768-Information-Response                                   | ProtocolIE-ID ::= 661 |
| id-ExtendedPropagationDelay   | ProtocolIE-ID ::= 662 |
| id-Extended-Round-Trip-Time-Value                                   | ProtocolIE-ID ::= 663 |
| id-AlternativeFormatReportingIndicator                              | ProtocolIE-ID ::= 664 |
| id-DCH-Indicator-For-E-DCH-HSDPA-Operation                          | ProtocolIE-ID ::= 665 |
| id-E-RGCH-E-HICH-ChannelisationCodeValidityIndicator                | ProtocolIE-ID ::= 666 |
| id-E-DCH-Minimum-Set-E-TFCIVValidityIndicator                       | ProtocolIE-ID ::= 667 |
| id-Fast-Reconfiguration-Mode  | ProtocolIE-ID ::= 668 |
| id-Fast-Reconfiguration-Permission                                  | ProtocolIE-ID ::= 669 |
| id-Continuous-Packet-Connectivity-DTX-DRX-Information               | ProtocolIE-ID ::= 670 |
| id-Continuous-Packet-Connectivity-HS-SCCH-Less-Information          | ProtocolIE-ID ::= 671 |
| id-Continuous-Packet-Connectivity-HS-SCCH-Less-Information-Response | ProtocolIE-ID ::= 672 |
| id-CPC-Information  | ProtocolIE-ID ::= 673 |
| id-MIMO-InformationResponse   | ProtocolIE-ID ::= 675 |
| id-E-DCH-LCR-Information  | ProtocolIE-ID ::= 677 |
| id-E-DCH-LCR-Information-Reconfig                                   | ProtocolIE-ID ::= 678 |
| id-E-DCH-LCR-Information-Response                                   | ProtocolIE-ID ::= 679 |
| id-HS-PDSCH-Code-Change-Grant                                       | ProtocolIE-ID ::= 680 |
| id-HS-PDSCH-Code-Change-Indicator                                   | ProtocolIE-ID ::= 681 |
| id-Extended-SRNC-ID   | ProtocolIE-ID ::= 682 |
| id-Extended-RNC-ID  | ProtocolIE-ID ::= 683 |
| id-SixtyfourQAM-DL-SupportIndicator                                 | ProtocolIE-ID ::= 684 |
| id-Enhanced-FACH-Support-Indicator                                  | ProtocolIE-ID ::= 685 |
| id-Enhanced-FACH-Information-ResponseFDD                            | ProtocolIE-ID ::= 686 |
| id-HSDSCH-MACdPDUSizeFormat   | ProtocolIE-ID ::= 690 |
| id-MaximumMACdPDU-SizeExtended                                      | ProtocolIE-ID ::= 691 |
| id-F-DPCH-SlotFormat  | ProtocolIE-ID ::= 692 |
| id-F-DPCH-SlotFormatSupportRequest                                  | ProtocolIE-ID ::= 693 |
| id-eDCH-MACdFlow-Retransmission-Timer-LCR                           | ProtocolIE-ID ::= 694 |
| id-Max-UE-DTX-Cycle   | ProtocolIE-ID ::= 695 |
| id-GANSS-Common-Data  | ProtocolIE-ID ::= 699 |
| id-GANSS-Information  | ProtocolIE-ID ::= 700 |
| id-GANSS-Generic-Data   | ProtocolIE-ID ::= 701 |

|   |                       |
|---|-----------------------|
| id-TUTRANGANSSMeasurementThresholdInformation                       | ProtocolIE-ID ::= 702 |
| id-TUTRANGANSSMeasurementValueInformation                           | ProtocolIE-ID ::= 703 |
| id-Ext-Reference-E-TFCI-PO  | ProtocolIE-ID ::= 705 |
| id-Ext-Max-Bits-MACe-PDU-non-scheduled                              | ProtocolIE-ID ::= 706 |
| id-HARQ-MemoryPartitioningInfoExtForMIMO                            | ProtocolIE-ID ::= 707 |
| id-MIMO-ActivationIndicator   | ProtocolIE-ID ::= 708 |
| id-MIMO-Mode-Indicator  | ProtocolIE-ID ::= 709 |
| id-MIMO-N-M-Ratio   | ProtocolIE-ID ::= 710 |
| id-TransportBearerNotSetupIndicator                                 | ProtocolIE-ID ::= 711 |
| id-TransportBearerNotRequestedIndicator                             | ProtocolIE-ID ::= 712 |
| id-PowerControlGAP  | ProtocolIE-ID ::= 713 |
| id-UARFCNforNt  | ProtocolIE-ID ::= 714 |
| id-LCRTDD-uplink-Physical-Channel-Capability                        | ProtocolIE-ID ::= 715 |
| id-number-Of-Supported-Carriers                                     | ProtocolIE-ID ::= 716 |
| id-HSSICH-SIRTarget   | ProtocolIE-ID ::= 717 |
| id-HSSICH-TPC-StepSize  | ProtocolIE-ID ::= 718 |
| id-tSN-Length   | ProtocolIE-ID ::= 719 |
| id-HS-SICH-ID-Extension   | ProtocolIE-ID ::= 720 |
| id-HSSICH-Info-DM-Rqst-Extension                                    | ProtocolIE-ID ::= 721 |
| id-multipleFreq-HSPDSCH-InformationList-ResponseTDDLRC              | ProtocolIE-ID ::= 722 |
| id-multicarrier-number  | ProtocolIE-ID ::= 723 |
| id-UPPCHPositionLCR   | ProtocolIE-ID ::= 724 |
| id-UpPCH-InformationList-LCRTDD                                     | ProtocolIE-ID ::= 725 |
| id-UpPCH-InformationItem-LCRTDD                                     | ProtocolIE-ID ::= 726 |
| id-Multiple-PLMN-List   | ProtocolIE-ID ::= 727 |
| id-UE-Capabilities-Info   | ProtocolIE-ID ::= 728 |
| id-FrameOffset  | ProtocolIE-ID ::= 729 |
| id-ChipOffset   | ProtocolIE-ID ::= 730 |
| id-Enhanced-PCH-Capability  | ProtocolIE-ID ::= 731 |
| id-SixteenQAM-UL-Operation-Indicator                                | ProtocolIE-ID ::= 732 |
| id-E-TFCI-Boost-Information   | ProtocolIE-ID ::= 733 |
| id-SixtyfourQAM-UsageAllowedIndicator                               | ProtocolIE-ID ::= 734 |
| id-SixtyfourQAM-DL-UsageIndicator                                   | ProtocolIE-ID ::= 735 |
| id-Default-Serving-Grant-in-DTX-Cycle2                              | ProtocolIE-ID ::= 736 |
| id-E-DPDCH-PowerInterpolation                                       | ProtocolIE-ID ::= 737 |
| id-Extended-E-DCH-LCRTDD-PhysicalLayerCategory                      | ProtocolIE-ID ::= 738 |
| id-E-DCH-MACdPDUSizeFormat  | ProtocolIE-ID ::= 739 |
| id-Continuous-Packet-Connectivity-HS-SCCH-Less-Deactivate-Indicator | ProtocolIE-ID ::= 740 |
| id-E-DCH-DL-Control-Channel-Change-Information                      | ProtocolIE-ID ::= 741 |
| id-E-DCH-DL-Control-Channel-Grant-Information                       | ProtocolIE-ID ::= 742 |
| id-MaximumNumber-Of-Retransmission-For-SchedulingInfo-LCRTDD        | ProtocolIE-ID ::= 743 |
| id-E-DCH-RetransmissionTimer-For-SchedulingInfo-LCRTDD              | ProtocolIE-ID ::= 744 |
| id-E-PUCH-PowerControlGAP   | ProtocolIE-ID ::= 745 |
| id-HSDSCH-TBSizeTableIndicator                                      | ProtocolIE-ID ::= 746 |
| id-UE-with-enhanced-HS-SCCH-support-indicator                       | ProtocolIE-ID ::= 747 |
| id-DGANSS-Corrections-Req   | ProtocolIE-ID ::= 748 |
| id-E-AGCH-Table-Choice  | ProtocolIE-ID ::= 749 |
| id-RANAP-EnhancedRelocationInformationRequest                       | ProtocolIE-ID ::= 750 |
| id-RANAP-EnhancedRelocationInformationResponse                      | ProtocolIE-ID ::= 751 |
| id-Common-EDCH-MAC-d-Flow-Specific-InformationFDD                   | ProtocolIE-ID ::= 752 |
| id-Common-EDCH-Support-Indicator                                    | ProtocolIE-ID ::= 753 |
| id-E-RNTI   | ProtocolIE-ID ::= 754 |
| id-Released-CN-Domain   | ProtocolIE-ID ::= 755 |
| id-MBMS-Bearer-Service-in-MBMS-Cell-InfEx-Rqst                      | ProtocolIE-ID ::= 756 |

|   |                       |
|---|-----------------------|
| id-MBMS-Bearer-Service-in-MBMS-Cell-InfEx-Rsp               | ProtocolIE-ID ::= 757 |
| id-MBMS-Bearer-Service-in-MBMS-Cell-InfEx-Rprt              | ProtocolIE-ID ::= 758 |
| id-MBMS-Cell-InfEx-Rqst                                     | ProtocolIE-ID ::= 759 |
| id-MBMS-Cell-InfEx-Rsp                                      | ProtocolIE-ID ::= 760 |
| id-MBMS-Cell-InfEx-Rprt                                     | ProtocolIE-ID ::= 761 |
| id-Counting-Information                                     | ProtocolIE-ID ::= 762 |
| id-Transmission-Mode-Information                            | ProtocolIE-ID ::= 763 |
| id-MBMS-Neighbouring-Cell-Information                       | ProtocolIE-ID ::= 764 |
| id-MBMS-RLC-Sequence-Number-Information                     | ProtocolIE-ID ::= 765 |
| id-RLC-Sequence-Number                                      | ProtocolIE-ID ::= 766 |
| id-Neighbouring-E-UTRA-CellInformation                      | ProtocolIE-ID ::= 767 |
| id-MBSFN-Cluster-Identity                                   | ProtocolIE-ID ::= 769 |
| id-MCCH-Configuration-Info                                  | ProtocolIE-ID ::= 770 |
| id-MCCH-Message-List  | ProtocolIE-ID ::= 771 |
| id-MBSFN-Scheduling-Transmission-Time-Interval-Info-List    | ProtocolIE-ID ::= 772 |
| id-GANSS-Time-ID  | ProtocolIE-ID ::= 773 |
| id-GANSS-AddIonoModelReq                                    | ProtocolIE-ID ::= 774 |
| id-GANSS-EarthOrientParaReq                                 | ProtocolIE-ID ::= 775 |
| id-GANSS-AddNavigationModelsReq                             | ProtocolIE-ID ::= 776 |
| id-GANSS-AddUTCModelsReq                                    | ProtocolIE-ID ::= 777 |
| id-GANSS-AuxInfoReq   | ProtocolIE-ID ::= 778 |
| id-GANSS-SBAS-ID  | ProtocolIE-ID ::= 779 |
| id-GANSS-ID   | ProtocolIE-ID ::= 780 |
| id-GANSS-Additional-Ionospheric-Model                       | ProtocolIE-ID ::= 781 |
| id-GANSS-Earth-Orientation-Parameters                       | ProtocolIE-ID ::= 782 |
| id-GANSS-Additional-Time-Models                             | ProtocolIE-ID ::= 783 |
| id-GANSS-Additional-Navigation-Models                       | ProtocolIE-ID ::= 784 |
| id-GANSS-Additional-UTC-Models                              | ProtocolIE-ID ::= 785 |
| id-GANSS-Auxiliary-Information                              | ProtocolIE-ID ::= 786 |
| id-MinimumReducedE-DPDCH-GainFactor                         | ProtocolIE-ID ::= 787 |
| id-Enhanced-FACH-Information-ResponseLCR                    | ProtocolIE-ID ::= 788 |
| id-Common-EDCH-MAC-d-Flow-Specific-InformationLCR           | ProtocolIE-ID ::= 789 |
| id-HSDSCH-PreconfigurationSetup                             | ProtocolIE-ID ::= 790 |
| id-HSDSCH-PreconfigurationInfo                              | ProtocolIE-ID ::= 791 |
| id-NoOfTargetCellHS-SCCH-Order                              | ProtocolIE-ID ::= 792 |
| id-EnhancedHSServingCC-Abort                                | ProtocolIE-ID ::= 793 |
| id-Additional-HS-Cell-Information-RL-Setup                  | ProtocolIE-ID ::= 794 |
| id-Additional-HS-Cell-Information-Response                  | ProtocolIE-ID ::= 795 |
| id-Additional-HS-Cell-Information-RL-Addition               | ProtocolIE-ID ::= 796 |
| id-Additional-HS-Cell-Change-Information-Response           | ProtocolIE-ID ::= 797 |
| id-Additional-HS-Cell-Information-RL-Reconf-Prep            | ProtocolIE-ID ::= 798 |
| id-Additional-HS-Cell-Information-RL-Reconf-Req             | ProtocolIE-ID ::= 799 |
| id-Additional-HS-Cell-RL-Reconf-Response                    | ProtocolIE-ID ::= 800 |
| id-Additional-HS-Cell-Information-RL-Param-Upd              | ProtocolIE-ID ::= 801 |
| id-Secondary-Serving-Cell-List                              | ProtocolIE-ID ::= 802 |
| id-MultiCarrier-HSDSCH-Physical-Layer-Category              | ProtocolIE-ID ::= 803 |
| id-IdleIntervalInformation                                  | ProtocolIE-ID ::= 804 |
| id-NeedforIdleInterval                                      | ProtocolIE-ID ::= 805 |
| id-IdleIntervalConfigurationIndicator                       | ProtocolIE-ID ::= 806 |
| id-ContinuousPacketConnectivity-DRX-InformationLCR          | ProtocolIE-ID ::= 807 |
| id-ContinuousPacketConnectivity-DRX-Information-ResponseLCR | ProtocolIE-ID ::= 808 |
| id-E-AGCH-UE-Inactivity-Monitor-Threshold                   | ProtocolIE-ID ::= 809 |
| id-CPC-InformationLCR                                       | ProtocolIE-ID ::= 810 |
| id-E-DCH-Semi-PersistentScheduling-Information-LCR          | ProtocolIE-ID ::= 811 |

|  |                       |
|--|-----------------------|
| id-HS-DSCH-Semi-PersistentScheduling-Information-LCR         | ProtocolIE-ID ::= 812 |
| id-HS-DSCH-Semi-PersistentScheduling-Information-ResponseLCR | ProtocolIE-ID ::= 813 |
| id-E-DCH-Semi-PersistentScheduling-Information-ResponseLCR   | ProtocolIE-ID ::= 814 |
| id-MIMO-SFMode-For-HSPDSDualStream                           | ProtocolIE-ID ::= 815 |
| id-MIMO-SFMode-Supported-For-HSPDSDualStream                 | ProtocolIE-ID ::= 816 |
| id-MIMO-ReferenceSignal-InformationListLCR                   | ProtocolIE-ID ::= 817 |
| id-GANSS-alm-keplerianNAValmanac                             | ProtocolIE-ID ::= 818 |
| id-GANSS-alm-keplerianReducedAlmanac                         | ProtocolIE-ID ::= 819 |
| id-GANSS-alm-keplerianMidiAlmanac                            | ProtocolIE-ID ::= 820 |
| id-GANSS-alm-keplerianGLONASS                                | ProtocolIE-ID ::= 821 |
| id-GANSS-alm-ecefSBASAlmanac                                 | ProtocolIE-ID ::= 822 |
| id-DL-RLC-PDU-Size-Format                                    | ProtocolIE-ID ::= 823 |
| id-MACes-Maximum-Bitrate-LCR                                 | ProtocolIE-ID ::= 824 |
| id-power-offset-for-S-CPICH-for-MIMO                         | ProtocolIE-ID ::= 829 |
| id-power-offset-for-S-CPICH-for-MIMO-Request-Indicator       | ProtocolIE-ID ::= 830 |
| id-UE-SupportIndicatorExtension                              | ProtocolIE-ID ::= 831 |
| id-DiversityMode   | ProtocolIE-ID ::= 856 |
| id-TransmitDiversityIndicator                                | ProtocolIE-ID ::= 857 |
| id-NonCellSpecificTxDiversity                                | ProtocolIE-ID ::= 858 |
| id-CellCapabilityContainerExtension-FDD                      | ProtocolIE-ID ::= 859 |
| id-HSDSCH-Physical-Layer-Category                            | ProtocolIE-ID ::= 860 |
| id-E-RNTI-For-FACH   | ProtocolIE-ID ::= 861 |
| id-H-RNTI-For-FACH   | ProtocolIE-ID ::= 862 |
| id-RNTI-Allocation-Indicator                                 | ProtocolIE-ID ::= 863 |
| id-Out-of-Synchronization-Window                             | ProtocolIE-ID ::= 867 |

END

## 9.3.7 Container Definitions

```
-- *****
--
-- Container definitions
--
-- *****

RNSAP-Containers {
itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
umts-Access (20) modules (3) rnsap (1) version1 (1) rnsap-Containers (5) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

-- *****
--
-- IE parameter types from other modules.
--
-- *****

IMPORTS
    maxPrivateIEs,
    maxProtocolExtensions,
```

```

    maxProtocolIEs,
    Criticality,
    Presence,
    PrivateIE-ID,
    ProtocolIE-ID
FROM RNSAP-CommonDataTypes;

-- *****
--
-- Class Definition for Protocol IEs
--
-- *****

RNSAP-PROTOCOL-IES ::= CLASS {
    &id          ProtocolIE-ID          UNIQUE,
    &criticality Criticality,
    &Value,
    &presence    Presence
}
WITH SYNTAX {
    ID          &id
    CRITICALITY &criticality
    TYPE        &Value
    PRESENCE    &presence
}

-- *****
--
-- Class Definition for Protocol IEs
--
-- *****

RNSAP-PROTOCOL-IES-PAIR ::= CLASS {
    &id          ProtocolIE-ID          UNIQUE,
    &firstCriticality Criticality,
    &FirstValue,
    &secondCriticality Criticality,
    &SecondValue,
    &presence    Presence
}
WITH SYNTAX {
    ID          &id
    FIRST CRITICALITY &firstCriticality
    FIRST TYPE      &FirstValue
    SECOND CRITICALITY &secondCriticality
    SECOND TYPE     &SecondValue
    PRESENCE       &presence
}

-- *****
--
-- Class Definition for Protocol Extensions
--
-- *****

```



```

RNSAP-PROTOCOL-EXTENSION ::= CLASS {
    &id          ProtocolIE-ID          UNIQUE,
    &criticality Criticality,
    &Extension,
    &presence    Presence
}
WITH SYNTAX {
    ID          &id
    CRITICALITY &criticality
    EXTENSION   &Extension
    PRESENCE    &presence
}

-- *****
--
-- Class Definition for Private IEs
--
-- *****

RNSAP-PRIVATE-IES ::= CLASS {
    &id          PrivateIE-ID,
    &criticality Criticality,
    &Value,
    &presence    Presence
}
WITH SYNTAX {
    ID          &id
    CRITICALITY &criticality
    TYPE        &Value
    PRESENCE    &presence
}

-- *****
--
-- Container for Protocol IEs
--
-- *****

ProtocolIE-Container {RNSAP-PROTOCOL-IES : IEsSetParam} ::=
    SEQUENCE (SIZE (0..maxProtocolIEs)) OF
    ProtocolIE-Field {{IEsSetParam}}

ProtocolIE-Single-Container {RNSAP-PROTOCOL-IES : IEsSetParam} ::=
    ProtocolIE-Field {{IEsSetParam}}

ProtocolIE-Field {RNSAP-PROTOCOL-IES : IEsSetParam} ::= SEQUENCE {
    id          RNSAP-PROTOCOL-IES.&id          ({IEsSetParam}),
    criticality RNSAP-PROTOCOL-IES.&criticality  ({IEsSetParam}@id),
    value       RNSAP-PROTOCOL-IES.&Value      ({IEsSetParam}@id)
}

-- *****
--

```

```

-- Container for Protocol IE Pairs
--
-- *****

ProtocolIE-ContainerPair {RNSAP-PROTOCOL-IES-PAIR : IEsSetParam} ::=
  SEQUENCE (SIZE (0..maxProtocolIEs)) OF
    ProtocolIE-FieldPair {{IEsSetParam}}

ProtocolIE-FieldPair {RNSAP-PROTOCOL-IES-PAIR : IEsSetParam} ::= SEQUENCE {
  id          RNSAP-PROTOCOL-IES-PAIR.&id          ({IEsSetParam}),
  firstCriticality  RNSAP-PROTOCOL-IES-PAIR.&firstCriticality  ({IEsSetParam}{@id}),
  firstValue       RNSAP-PROTOCOL-IES-PAIR.&firstValue       ({IEsSetParam}{@id}),
  secondCriticality RNSAP-PROTOCOL-IES-PAIR.&secondCriticality ({IEsSetParam}{@id}),
  secondValue      RNSAP-PROTOCOL-IES-PAIR.&secondValue      ({IEsSetParam}{@id})
}

-- *****
--
-- Container Lists for Protocol IE Containers
--
-- *****

ProtocolIE-ContainerList {INTEGER : lowerBound, INTEGER : upperBound, RNSAP-PROTOCOL-IES : IEsSetParam} ::=
  SEQUENCE (SIZE (lowerBound..upperBound)) OF
    ProtocolIE-Container {{IEsSetParam}}

ProtocolIE-ContainerPairList {INTEGER : lowerBound, INTEGER : upperBound, RNSAP-PROTOCOL-IES-PAIR : IEsSetParam} ::=
  SEQUENCE (SIZE (lowerBound..upperBound)) OF
    ProtocolIE-ContainerPair {{IEsSetParam}}

-- *****
--
-- Container for Protocol Extensions
--
-- *****

ProtocolExtensionContainer {RNSAP-PROTOCOL-EXTENSION : ExtensionSetParam} ::=
  SEQUENCE (SIZE (1..maxProtocolExtensions)) OF
    ProtocolExtensionField {{ExtensionSetParam}}

ProtocolExtensionField {RNSAP-PROTOCOL-EXTENSION : ExtensionSetParam} ::= SEQUENCE {
  id          RNSAP-PROTOCOL-EXTENSION.&id          ({ExtensionSetParam}),
  criticality RNSAP-PROTOCOL-EXTENSION.&criticality  ({ExtensionSetParam}{@id}),
  extensionValue RNSAP-PROTOCOL-EXTENSION.&Extension  ({ExtensionSetParam}{@id})
}

-- *****
--
-- Container for Private IEs
--
-- *****

PrivateIE-Container {RNSAP-PRIVATE-IES : IEsSetParam} ::=
  SEQUENCE (SIZE (1..maxPrivateIEs)) OF

```

```
PrivateIE-Field {{IEsSetParam}}

PrivateIE-Field {RNSAP-PRIVATE-IES : IEsSetParam} ::= SEQUENCE {
  id          RNSAP-PRIVATE-IES.&id          ({IEsSetParam}),
  criticality RNSAP-PRIVATE-IES.&criticality  ({IEsSetParam}{@id}),
  value       RNSAP-PRIVATE-IES.&Value       ({IEsSetParam}{@id})
}

END
```

## 9.4 Message Transfer Syntax

RNSAP shall use the ASN.1 Basic Packed Encoding Rules (BASIC-PER) Aligned Variant as transfer syntax as specified in ref. [20].

## 9.5 Timers

$T_{\text{Preempt}}$

- Specifies the maximum time that a DRNS may wait for pre-emption of resources for establishment or reconfiguration of Radio Links.

$T_{\text{RELOCprep}}$

- Specifies the maximum time for the Enhanced Relocation procedure in the SRNC.

---

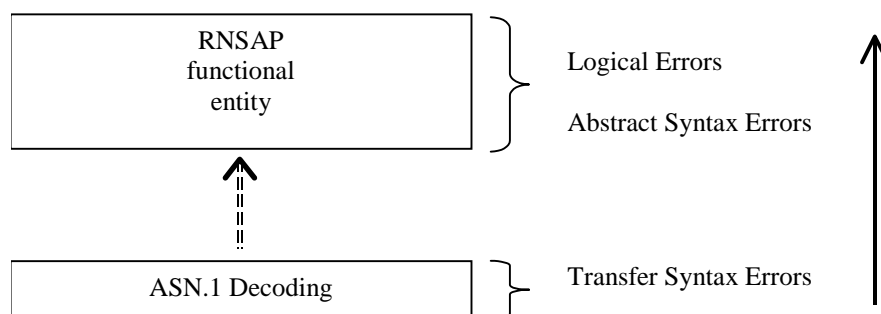
# 10 Handling of Unknown, Unforeseen and Erroneous Protocol Data

## 10.1 General

Protocol Error cases can be divided into three classes:

1. Transfer Syntax Error;
2. Abstract Syntax Error;
3. Logical Error.

Protocol errors can occur in the following functions within a receiving node.



**Figure 34: Protocol Errors in RNSAP**

The information stated in subclauses 10.2, 10.3 and 10.4, to be included in the message used when reporting an error, is what at minimum shall be included. Other optional information elements within the message may also be included, if available. This is also valid for the case when the reporting is done with a response message. The latter is an exception to what is stated in subclause 4.1.

## 10.2 Transfer Syntax Error

A Transfer Syntax Error occurs when the receiver is not able to decode the received physical message. Transfer syntax errors are always detected in the process of ASN.1 decoding. If a Transfer Syntax Error occurs, the receiver should initiate Error Indication procedure with appropriate cause value for the Transfer Syntax protocol error.

Examples for Transfer Syntax Errors are:

- Violation of value ranges in ASN.1 definition of messages. e.g.: If an IE has a defined value range of 0 to 10 (ASN.1: INTEGER (0..10)), and 12 will be received, then this will be treated as a transfer syntax error;
- Violation in list element constraints. e.g.: If a list is defined as containing 1 to 10 elements, and 12 elements will be received, then this case will be handled as a transfer syntax error;
- Missing mandatory elements in ASN.1 SEQUENCE definitions (as sent by the originator of the message);
- Wrong order of elements in ASN.1 SEQUENCE definitions (as sent by the originator of the message).

## 10.3 Abstract Syntax Error

### 10.3.1 General

An Abstract Syntax Error occurs when the receiving functional RNSAP entity:

1. Receives IEs or IE groups that cannot be understood (unknown IE id);
2. Receives IEs for which the logical range is violated (e.g.: ASN.1 definition: 0 to 15, the logical range is 0 to 10 (values 11 to 15 are undefined), and 12 will be received; this case will be handled as an abstract syntax error using criticality information sent by the originator of the message);
3. Does not receive IEs or IE groups but according to the specified presence of the concerned object, the IEs or IE groups should have been present in the received message;
4. Receives IEs or IE groups that are defined to be part of that message in wrong order or with too many occurrences of the same IE or IE group;
5. receives IEs or IE groups but according to the conditional presence of the concerned object and the specified condition, the IEs or IE groups should not have been present in the received message.

Cases 1 and 2 (not comprehended IE/IE group) are handled based on received Criticality information. Case 3 (missing IE/IE group) is handled based on Criticality information and Presence information for the missing IE/IE group specified in the version of the specification used by the receiver. Case 4 (IEs or IE groups in wrong order or with too many occurrences) and Case 5 (erroneously present conditional IEs or IE groups) result in rejecting the procedure.

If an Abstract Syntax Error occurs, the receiver shall read the remaining message and shall then for each detected Abstract Syntax Error that belong to cases 1-3 act according to the Criticality Information and Presence Information for the IE/IE group due to which Abstract Syntax Error occurred in accordance with subclauses 10.3.4 and 10.3.5. The handling of cases 4 and 5 is specified in subclause 10.3.6.

### 10.3.2 Criticality Information

In the RNSAP messages there is criticality information set for individual IEs and/or IE groups. This criticality information instructs the receiver how to act when receiving an IE or an IE group that is not comprehended, i.e. the entire item (IE or IE group) which is not (fully or partially) comprehended shall be treated in accordance with its own criticality information as specified in subclause 10.3.4.

In addition, the criticality information is used in case of the missing IE/IE group abstract syntax error (see subclause 10.3.5).

The receiving node shall take different actions depending on the value of the Criticality Information. The three possible values of the Criticality Information for an IE/IE group are:

1. Reject IE;
2. Ignore IE and Notify Sender;
3. Ignore IE.

The following rules restrict when a receiving entity may consider an IE, an IE group or an EP not comprehended (not implemented), and when action based on criticality information is applicable:

1. IE or IE group: When one new or modified IE or IE group is implemented for one EP from a standard version, then other new or modified IEs or IE groups specified for that EP in that standard version shall be considered comprehended by a receiving entity (some may still remain unsupported).
2. EP: The comprehension of different EPs within a standard version or between different standard versions is not mandated. Any EP that is not supported may be considered not comprehended, even if another EP from that standard version is comprehended, and action based on criticality shall be applied.

### 10.3.3 Presence Information

For many IEs/IE groups which are optional according to the ASN.1 transfer syntax, RNSAP specifies separately if the presence of these IEs/IE groups is optional or mandatory with respect to RNS application by means of the presence field of the concerned object of class RNSAP-PROTOCOL-IES, RNSAP-PROTOCOL-IES-PAIR, RNSAP-PROTOCOL-EXTENSION or RNSAP-PRIVATE-IES.

The presence field of the indicated classes supports three values:

1. Optional;
2. Conditional;
3. Mandatory.

If an IE/IE group is not included in a received message and the presence of the IE/IE group is mandatory or the presence is conditional and the condition is true according to the version of the specification used by the receiver, an abstract syntax error occurs due to a missing IE/IE group.

If an IE/IE group is included in a received message and the presence of the IE/IE group is conditional and the condition is false according to the version of the specification used by the receiver, an abstract syntax error occurs due to this erroneously present conditional IE/IE group.

### 10.3.4 Not Comprehended IE/IE Group

#### 10.3.4.1 Procedure ID

The receiving node shall treat the different types of received criticality information of the *Procedure ID* according to the following:

##### **Reject IE:**

- If a message is received with a *Procedure ID* marked with "*Reject IE*" which the receiving node does not comprehend, the receiving node shall reject the procedure using the Error Indication procedure.

##### **Ignore IE and Notify Sender:**

- If a message is received with a *Procedure ID* marked with "*Ignore IE and Notify Sender*" which the receiving node does not comprehend, the receiving node shall ignore the procedure and initiate the Error Indication procedure.

##### **Ignore IE:**

- If a message is received with a *Procedure ID* marked with "*Ignore IE*" which the receiving node does not comprehend, the receiving node shall ignore the procedure.

When using the Error Indication procedure to reject a procedure or to report an ignored procedure it shall include the *Procedure ID* IE, the *Triggering Message* IE, and the *Procedure Criticality* IE in the *Criticality Diagnostics* IE.

#### 10.3.4.1A Type of Message

When the receiving node cannot decode the *Type of Message* IE, the Error Indication procedure shall be initiated with an appropriate cause value.

### 10.3.4.2 IEs Other Than the Procedure ID and Type of Message

The receiving node shall treat the different types of received criticality information of an IE/IE group other than the *Procedure ID IE* and *Type of Message IE* according to the following:

#### Reject IE:

- If a message *initiating* a procedure is received containing one or more IEs/IE groups marked with "*Reject IE*" which the receiving node does not comprehend; none of the functional requests of the message shall be executed. The receiving node shall reject the procedure and report the rejection of one or more IEs/IE groups using the message normally used to report unsuccessful outcome of the procedure. In case the information received in the initiating message was insufficient to determine a value for all IEs that are required to be present in the message used to report the unsuccessful outcome of the procedure, the receiving node shall instead terminate the procedure and initiate the Error Indication procedure.
- If a message *initiating* a procedure that does not have a message to report unsuccessful outcome is received containing one or more IEs/IE groups marked with "*Reject IE*" which the receiving node does not comprehend, the receiving node shall terminate the procedure and initiate the Error Indication procedure.
- If a *response* message is received containing one or more IEs/IE groups marked with "*Reject IE*", that the receiving node does not comprehend, the receiving node shall consider the procedure as unsuccessfully terminated and initiate local error handling.

#### Ignore IE and Notify Sender:

- If a message *initiating* a procedure is received containing one or more IEs/IE groups marked with "*Ignore IE and Notify Sender*" which the receiving node does not comprehend, the receiving node shall ignore the content of the not comprehended IEs/IE groups, continue with the procedure as if the not comprehended IEs/IE groups were not received (except for the reporting) using the understood IEs/IE groups, and report in the response message of the procedure that one or more IEs/IE groups have been ignored. In case the information received in the initiating message was insufficient to determine a value for all IEs that are required to be present in the response message, the receiving node shall instead terminate the procedure and initiate the Error Indication procedure.
- If a message *initiating* a procedure that does not have a message to report the outcome of the procedure is received containing one or more IEs/IE groups marked with "*Ignore IE and Notify Sender*" which the receiving node does not comprehend, the receiving node shall ignore the content of the not comprehended IEs/IE groups, continue with the procedure as if the not comprehended IEs/IE groups were not received (except for the reporting) using the understood IEs/IE groups, and initiate the Error Indication procedure to report that one or more IEs/IE groups have been ignored.
- If a *response* message is received containing one or more IEs/IE groups marked with "*Ignore IE and Notify Sender*" which the receiving node does not comprehend, the receiving node shall ignore the content of the not comprehended IEs/IE groups, continue with the procedure as if the not comprehended IEs/IE groups were not received (except for the reporting) using the understood IEs/IE groups and initiate the Error Indication procedure.

#### Ignore IE:

- If a message *initiating* a procedure is received containing one or more IEs/IE groups marked with "*Ignore IE*" which the receiving node does not comprehend, the receiving node shall ignore the content of the not comprehended IEs/IE groups and continue with the procedure as if the not comprehended IEs/IE groups were not received using the understood IEs/IE groups.
- If a *response* message is received containing one or more IEs/IE groups marked with "*Ignore IE*" which the receiving node does not comprehend, the receiving node shall ignore the content of the not comprehended IEs/IE groups and continue with the procedure as if the not comprehended IEs/IE groups were not received using the understood IEs/IE groups.

When reporting not comprehended IEs/IE groups marked with "*Reject IE*" or "*Ignore IE and Notify Sender*" using a response message defined for the procedure, the *Information Element Criticality Diagnostics IE* shall be included in the *Criticality Diagnostics IE* for each reported IE/IE group. In the *Information Element Criticality Diagnostics IE* the *Repetition Number IE* shall be included and in addition, if the not comprehended IE/IE group is not at message hierarchy level 1 (top level; see annex C) also the *Message Structure IE* shall be included.

When reporting not comprehended IEs/IE groups marked with "*Reject IE*" or "*Ignore IE and Notify Sender*" using the Error Indication procedure, the *Procedure ID IE*, the *Triggering Message IE*, *Procedure Criticality IE*, the *Transaction ID IE*, and the *Information Element Criticality Diagnostics IE* shall be included in the *Criticality Diagnostics IE* for each reported IE/IE group. In the *Information Element Criticality Diagnostics IE* the *Repetition Number IE* shall be included and in addition, if the not comprehended IE/IE group is not at message hierarchy level 1 (top level; see annex C) also the *Message Structure IE* shall be included.

### 10.3.5 Missing IE or IE Group

The receiving node shall treat the missing IE/IE group according to the criticality information for the missing IE/IE group in the received message specified in the version of this specification used by the receiver:

#### Reject IE:

- If a received message *initiating* a procedure is missing one or more IEs/IE groups with specified criticality "*Reject IE*"; none of the functional requests of the message shall be executed. The receiving node shall reject the procedure and report the missing IEs/IE groups using the message normally used to report unsuccessful outcome of the procedure. In case the information received in the initiating message was insufficient to determine a value for all IEs that are required to be present in the message used to report the unsuccessful outcome of the procedure, the receiving node shall instead terminate the procedure and initiate the Error Indication procedure.
- If a received message *initiating* a procedure that does not have a message to report unsuccessful outcome is missing one or more IEs/IE groups with specified criticality "*Reject IE*", the receiving node shall terminate the procedure and initiate the Error Indication procedure.
- If a received *response* message is missing one or more IEs/IE groups with specified criticality "*Reject IE*", the receiving node shall consider the procedure as unsuccessfully terminated and initiate local error handling.

#### Ignore IE and Notify Sender:

- If a received message *initiating* a procedure is missing one or more IEs/IE groups with specified criticality "*Ignore IE and Notify Sender*", the receiving node shall ignore that those IEs are missing and continue with the procedure based on the other IEs/IE groups present in the message and report in the response message of the procedure that one or more IEs/IE groups were missing. In case the information received in the initiating message was insufficient to determine a value for all IEs that are required to be present in the response message, the receiving node shall instead terminate the procedure and initiate the Error Indication procedure.
- If a received message *initiating* a procedure that does not have a message to report the outcome of the procedure is missing one or more IEs/IE groups with specified criticality "*Ignore IE and Notify Sender*", the receiving node shall ignore that those IEs are missing and continue with the procedure based on the other IEs/IE groups present in the message and initiate the Error Indication procedure to report that one or more IEs/IE groups were missing.
- If a received *response* message is missing one or more IEs/IE groups with specified criticality "*Ignore IE and Notify Sender*", the receiving node shall ignore that those IEs are missing and continue with the procedure based on the other IEs/IE groups present in the message and initiate the Error Indication procedure to report that one or more IEs/IE groups were missing.

#### Ignore IE:

- If a received message *initiating* a procedure is missing one or more IEs/IE groups with specified criticality "*Ignore IE*", the receiving node shall ignore that those IEs are missing and continue with the procedure based on the other IEs/IE groups present in the message.
- If a received *response* message is missing one or more IEs/IE groups with specified criticality "*Ignore IE*", the receiving node shall ignore that those IEs/IE groups are missing and continue with the procedure based on the other IEs/IE groups present in the message.

When reporting missing IEs/IE groups with specified criticality "*Reject IE*" or "*Ignore IE and Notify Sender*" using a response message defined for the procedure, the *Information Element Criticality Diagnostics IE* shall be included in the *Criticality Diagnostics IE* for each reported IE/IE group. In the *Information Element Criticality Diagnostics IE* the *Repetition Number IE* shall be included and in addition, if the missing IE/IE group is not at message hierarchy level 1 (top level; see annex C) also the *Message Structure IE* shall be included.



When reporting missing IEs/IE groups with specified criticality "*Reject IE*" or "*Ignore IE and Notify Sender*" using the Error Indication procedure, the *Procedure ID IE*, the *Triggering Message IE*, *Procedure Criticality IE*, the *Transaction ID IE*, and the *Information Element Criticality Diagnostics IE* shall be included in the *Criticality Diagnostics IE* for each reported IE/IE group. In the *Information Element Criticality Diagnostics IE* the *Repetition Number IE* shall be included and in addition, if the missing IE/IE group is not at message hierarchy level 1 (top level; see annex C) also the *Message Structure IE* shall be included.

### 10.3.6 IEs or IE Groups Received in Wrong Order or With Too Many Occurrences or Erroneously Present

If a message with IEs or IE groups in wrong order or with too many occurrences is received or if IEs or IE groups with a conditional presence are present when the condition is not met (i.e. erroneously present), the receiving node shall behave according to the following:

- If a message *initiating* a procedure is received containing IEs or IE groups in wrong order or with too many occurrences or erroneously present, none of the functional requests of the message shall be executed. The receiving node shall reject the procedure and report the cause value "Abstract Syntax Error (Falsely Constructed Message)" using the message normally used to report unsuccessful outcome of the procedure. In case the information received in the initiating message was insufficient to determine a value for all IEs that are required to be present in the message used to report the unsuccessful outcome of the procedure, the receiving node shall instead terminate the procedure and initiate the Error Indication procedure.
- If a message *initiating* a procedure that does not have a message to report unsuccessful outcome is received containing IEs or IE groups in wrong order or with too many occurrences or erroneously present, the receiving node shall terminate the procedure and initiate the Error Indication procedure, and use cause value "Abstract Syntax Error (Falsely Constructed Message)".
- If a *response* message is received containing IEs or IE groups in wrong order or with too many occurrences or erroneously present, the receiving node consider the procedure as unsuccessfully terminated and initiate local error handling.

When determining the correct order only the IEs specified in the specification version used by the receiver shall be considered.

## 10.4 Logical Error

Logical error situations occur when a message is comprehended correctly, but the information contained within the message is not valid (i.e. semantic error), or describes a procedure which is not compatible with the state of the receiver. In these conditions, the following behaviour shall be performed (unless otherwise specified) as defined by the class of the elementary procedure, irrespective of the criticality information of the IEs/IE groups containing the erroneous values.

### Class 1:

Where the logical error occurs in a request message of a class 1 procedure, and the procedure has a message to report this unsuccessful outcome, this message shall be sent with an appropriate cause value. Typical cause values are:

### Protocol Causes:

1. Semantic Error;
2. Message not Compatible with Receiver State.

Where the logical error is contained in a request message of a class 1 procedure, and the procedure does not have a message to report this unsuccessful outcome, the procedure shall be terminated and the Error Indication procedure shall be initiated with an appropriate cause value. The *Procedure ID IE*, the *Triggering Message IE* and the *Transaction ID IE* within the *Criticality Diagnostics IE* shall then be included in order to identify the message containing the logical error.

Where the logical error exists in a response message of a class 1 procedure, the procedure shall be considered as unsuccessfully terminated and local error handling shall be initiated.

### Class 2:

Where the logical error occurs in a message of a class 2 procedure, the procedure shall be terminated and the Error Indication procedure shall be initiated with an appropriate cause value. The *Procedure ID* IE, the *Triggering Message* IE and the *Transaction ID* IE within the *Criticality Diagnostics* IE shall then be included in order to identify the message containing the logical error.

## 10.5 Exceptions

The error handling for all the cases described hereafter shall take precedence over any other error handling described in the other subclauses of clause 10.

- If any type of error (Transfer Syntax Error, Abstract Syntax Error or Logical Error) is detected in the ERROR INDICATION message, it shall not trigger the Error Indication procedure in the receiving Node but local error handling.
- In case a response message or ERROR INDICATION message needs to be returned, but the information necessary to determine the receiver of that message is missing, the procedure shall be considered as unsuccessfully terminated and local error handling shall be initiated.

If an error that terminates a procedure occurs, the returned cause value shall reflect the error that caused the termination of the procedure even if one or more abstract syntax errors with criticality "ignore and notify" have earlier occurred within the same procedure.

---

## Annex A (normative): Allocation and Pre-emption of Radio Links in the DRNS

### A.1 Deriving Allocation Information for a Radio Link

#### A.1.1 Establishment of a New Radio Link

The Allocation Information for a Radio Link in the case of establishment of a new Radio Link shall be derived as follows:

- The latest received *Allocation/Retention Priority* IE for each transport channel shall be used.

Note: The *Allocation/Retention Priority* IE for a transport channel may have been received in  
a) the procedure that establishes the first Radio Link for the UE in the DRNS or  
b) a procedure adding or modifying the transport channel.

- If the *Priority Level* IE in the *Allocation/Retention Priority* IE for all transport channels that are intended to use the Radio Link is set to "no priority", the pre-emption capability of the Radio Link shall be set to "shall not trigger pre-emption".
- If the *Priority Level* IE in the *Allocation/Retention Priority* IE for one or more of the transport channels that are intended to use the Radio Link is not set to "no priority", the allocation priority and the pre-emption capability of the Radio Link shall be set according to the following:
  - The transport channels that have the *Priority Level* IE in the *Allocation/Retention Priority* IE set to "no priority" shall be excluded when setting the allocation priority and pre-emption capability of a Radio Link.
  - The allocation priority for a Radio Link shall be set to highest priority level, given by the *Priority Level* IE in the *Allocation/Retention Priority* IE, for all non excluded transport channels that are intended to use the Radio Link.
  - If all non-excluded transport channels that are intended to use a Radio Link to be established have the pre-emption capability, given by the *Pre-emption Capability* IE in the *Allocation/Retention Priority* IE, set to "shall not trigger pre-emption", the pre-emption capability of the Radio Link shall be set to "shall not trigger pre-emption".  
If one or more non-excluded transport channels that are intended to use the Radio Link to be established have the value of the *Pre-emption Capability* IE in the *Allocation/Retention Priority* IE set to "may trigger pre-emption", the pre-emption capability of the Radio Link shall be set to "may trigger pre-emption".

The derived allocation priority and pre-emption capability are only valid during this allocation/retention process.

#### A.1.2 Modification of an Existing Radio Link

The Allocation Information for a Radio Link in the case of modification of a Radio Link (addition or modification of transport channels using the Radio Link) shall be derived as follows:

- The latest received *Allocation/Retention Priority* IE for each transport channel shall be used.

Note: The *Allocation/Retention Priority* IE for a transport channel may have been received in  
a) the procedure that establishes the first Radio Link for the UE in the DRNS,  
b) a previous procedure adding or modifying the transport channel, or  
c) the current procedure adding or modifying the transport channel.

- If the *Priority Level* IE in the *Allocation/Retention Priority* IE for all transport channels to be added or modified in the Radio Link is set to "no priority", the pre-emption capability of the Radio Link to be modified shall be set to "shall not trigger pre-emption".

- If the *Priority Level* IE in the *Allocation/Retention Priority* IE for one or more of the transport channels to be added or modified in the Radio Link is not set to "no priority", the allocation priority of and the pre-emption capability of the Radio Link to be modified shall be set according to the following:
  - The transport channels to be added or modified that have the *Priority Level* IE in the *Allocation/Retention Priority* IE set to "no priority" shall be excluded when setting the allocation priority and pre-emption capability of a Radio Link to be modified.
  - The allocation priority for a Radio Link to be modified shall be set to highest priority level, given by the *Priority Level* IE in the *Allocation/Retention Priority* IE, for all the non-excluded transport channels that are to be added or modified.
  - If all non-excluded transport channels that are to be added or modified in the Radio Link have the pre-emption capability, given by the *Pre-emption Capability* IE in the *Allocation/Retention Priority* IE, set to "shall not trigger pre-emption", the pre-emption capability of the Radio Link to be modified shall be set to "shall not trigger pre-emption".  
If one or more of the non-excluded transport channels to be added or modified in the Radio Link have the value of the *Pre-emption Capability* IE in the *Allocation/Retention Priority* IE set to "may trigger pre-emption", the pre-emption capability of the Radio Link to be modified shall be set to "may trigger pre-emption".

The derived allocation priority and pre-emption capability are only valid during this allocation/retention process.

---

## A.2 Deriving Retention Information for a Radio Link

The Retention Information for an existing Radio Link shall be derived as follows:

- The latest received *Allocation/Retention Priority* IE for each transport channel shall be used.
- Note: The *Allocation/Retention Priority* IE for a transport channel may have been received in
- a) the procedure that establishes the first Radio Link for the UE in the DRNS or
  - b) a procedure adding or modifying the transport channel.
- If the *Priority Level* IE in the *Allocation/Retention Priority* IE for one or more transport channels using the Radio Link is set to "no priority", the pre-emption vulnerability of the Radio Link shall be set to "not pre-emptable".
  - If the *Priority Level* IE in the *Allocation/Retention Priority* IE for all the transport channels using the Radio Link is not set to "no priority", the retention priority of the Radio Link and the pre-emption vulnerability of the Radio Link shall be set according to the following:
    - The retention priority for a Radio Link shall be set to highest priority level, given by the *Priority Level* IE in the *Allocation/Retention Priority* IE, for all transport channels that uses the Radio Link.
    - If all transport channels that uses the Radio Link have the pre-emption vulnerability, given by the *Pre-emption Vulnerability* IE in the *Allocation/Retention Priority* IE, set to "pre-emptable", the pre-emption vulnerability of the Radio Link shall be set to "pre-emptable".  
If one or more transport channels that uses the Radio Link have the value of the *Pre-emption Vulnerability* IE in the *Allocation/Retention Priority* IE set to "not pre-emptable", the pre-emption vulnerability of the Radio Link shall be set to "not pre-emptable".

The derived retention priority and pre-emption vulnerability are valid until they are changed, or until the Radio Link is deleted. When new transport channels are added to or deleted from the Radio Link or when existing transport channels are modified with regards to the *Allocation/Retention Priority* IE, the retention information shall be derived again according to above.

---

## A.3 The Allocation/Retention Process

The DRNS shall establish or modify the resources for a Radio Link according to:

- The value of the Allocation Information (allocation priority and pre-emption capability) of the Radio to be established or modified. The Allocation Information is derived according to clause A.1.
- The value of the Retention Information (retention priority and pre-emption vulnerability) of existing Radio Links. The Retention Information derived according to clause A.2.
- The resource situation in the DRNS.

Whilst the process and the extent of the pre-emption functionality is operator dependent, the pre-emption indicators (pre-emption capability and pre-emption vulnerability) shall be treated as follows:

- If the pre-emption capability for a Radio Link to be established or modified is set to "may trigger pre-emption" and the resource situation so requires, the DRNS may trigger the pre-emption process in clause A.4 to free resources for this allocation request.
- If the pre-emption capability for a Radio Link to be established or modified is set to "shall not trigger pre-emption", then this allocation request shall not trigger the pre-emption process in clause A.4.
- If the pre-emption vulnerability for an existing Radio Link is set to "pre-emptable", then this Radio Link shall be included in the pre-emption process in clause A.4.
- If the pre-emption vulnerability for an existing Radio Link is set to "not pre-emptable", then this Radio Link shall not be included in the pre-emption process in clause A.4.

---

## A.4 The Pre-emption Process

The pre-emption process shall only pre-empt Radio Links with lower retention priority than the allocation priority of the Radio Link to be established or modified. The Radio Links to be pre-empted shall be selected in ascending order of the retention priority.

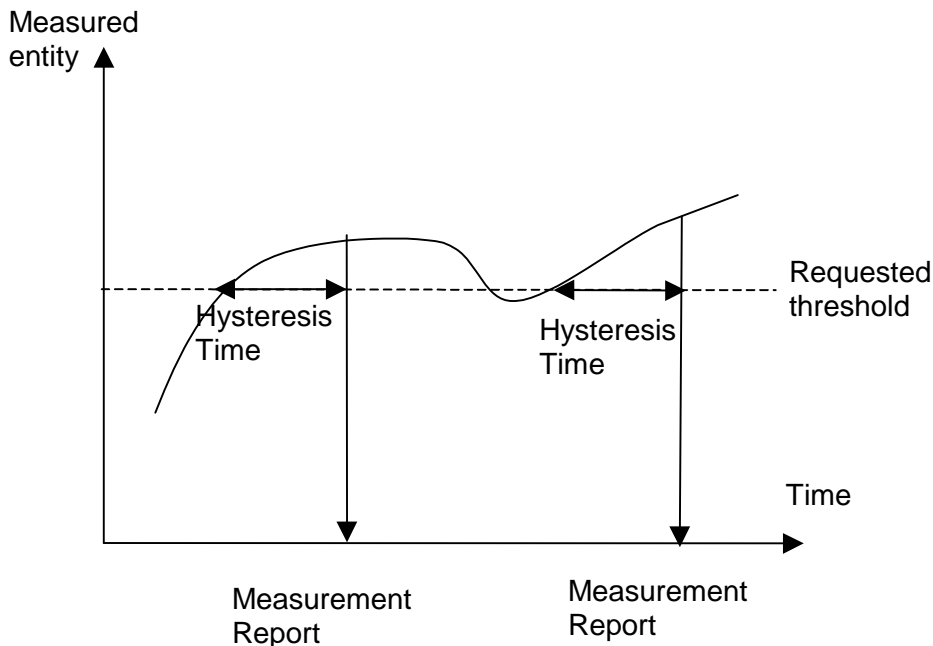
When the pre-emption process detects that one or more Radio Links have to be pre-empted to free resources for a Radio Link(s) to be established or modified, the DRNS shall initiate the Radio Link Pre-emption procedure for all the UE Contexts having Radio Links selected for pre-emption and start the  $T_{\text{Preempt}}$  timer.

When enough resources are freed to establish or modify the Radio Link(s) according to the request, the DRNS shall stop the  $T_{\text{Preempt}}$  timer and complete the procedure that triggered the pre-emption process in accordance with the "Successful Operation" subclause of the procedure.

If the  $T_{\text{Preempt}}$  timer expires, the DRNS shall reject the procedure that triggered the pre-emption process and complete the procedure in accordance with the "Unsuccessful Operation" subclause of the procedure.

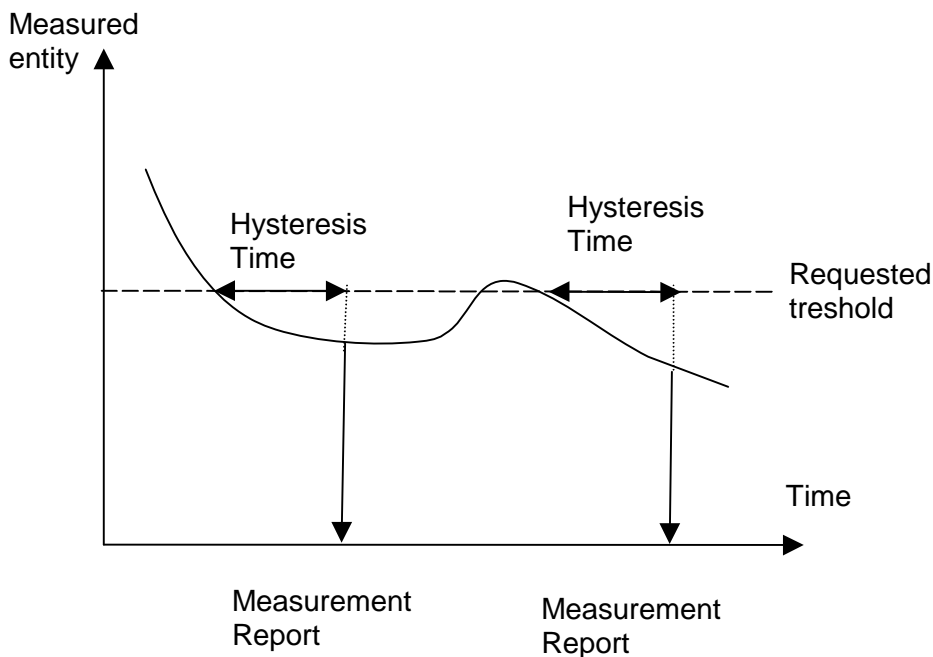
## Annex B (informative): Measurement Reporting

When the *Report Characteristics* IE is set to "Event A" (figure B.1), the Measurement Reporting procedure is initiated when the measured entity rises above the requested threshold and stays there for the requested hysteresis time. If no hysteresis time is given, the value zero shall be used for the hysteresis time.



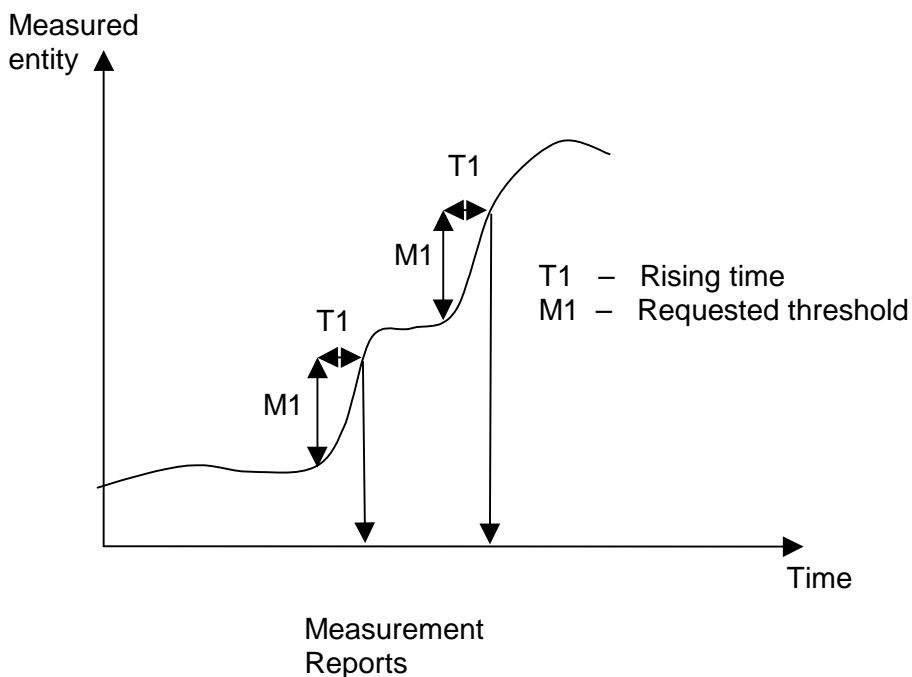
**Figure B.1: Event A reporting with Hysteresis Time specified**

When the *Report Characteristics* IE is set to "Event B" (figure B.2), the Measurement Reporting procedure is initiated when the measured entity falls below the requested threshold and stays there for the requested hysteresis time. If no hysteresis time is given, the value zero shall be used for the hysteresis time.



**Figure B.2: Event B reporting with Hysteresis Time specified**

When the *Report Characteristics* IE is set to "Event C" (figure B.3), the Measurement Reporting procedure is initiated always when the measured entity rises by an amount greater than the requested threshold within the requested time. The reporting in figure B.3 is initiated if the Rising Time T1 is less than the requested time.



**Figure B.3: Event C reporting**

When the *Report Characteristics* IE is set to "Event D" (figure B.4), the Measurement Reporting procedure is initiated always when the measured entity falls by an amount greater than the requested threshold within the requested time. The reporting in figure B.4 is initiated if the Falling Time T1 is less than the requested time.

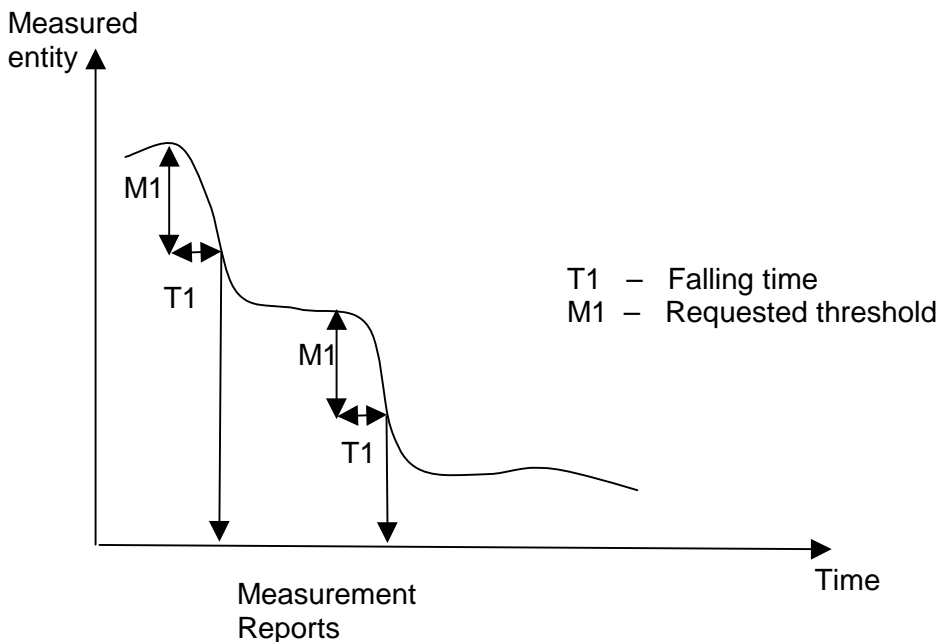


Figure B.4: Event D reporting

When the *Report Characteristics* IE is set to "Event E" (figure B.5), the Measurement Reporting procedure (Report A) is initiated always when the measured entity rises above the "Measurement Threshold 1" and stays there for the "Measurement Hysteresis Time" (T1 in figure B.5). If *Report Periodicity* IE is provided DRNS shall also initiate Measurement Reporting procedure periodically. The periodic reporting continues although the measured entity falls below the "Measurement Threshold 1" and is terminated by the Report B.

When the Report A conditions have been met and the measured entity falls below the "Measurement Threshold 2" and stays there for the "Measurement Hysteresis Time" (T1) the Measurement Reporting procedure (Report B) is initiated and the periodic reporting is terminated.

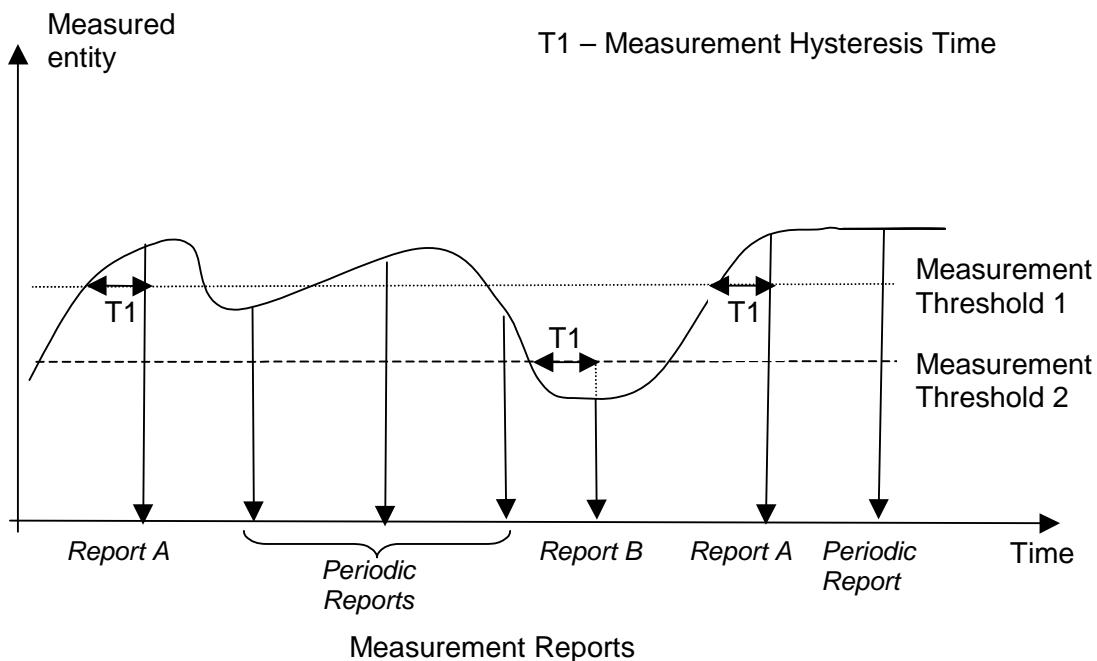
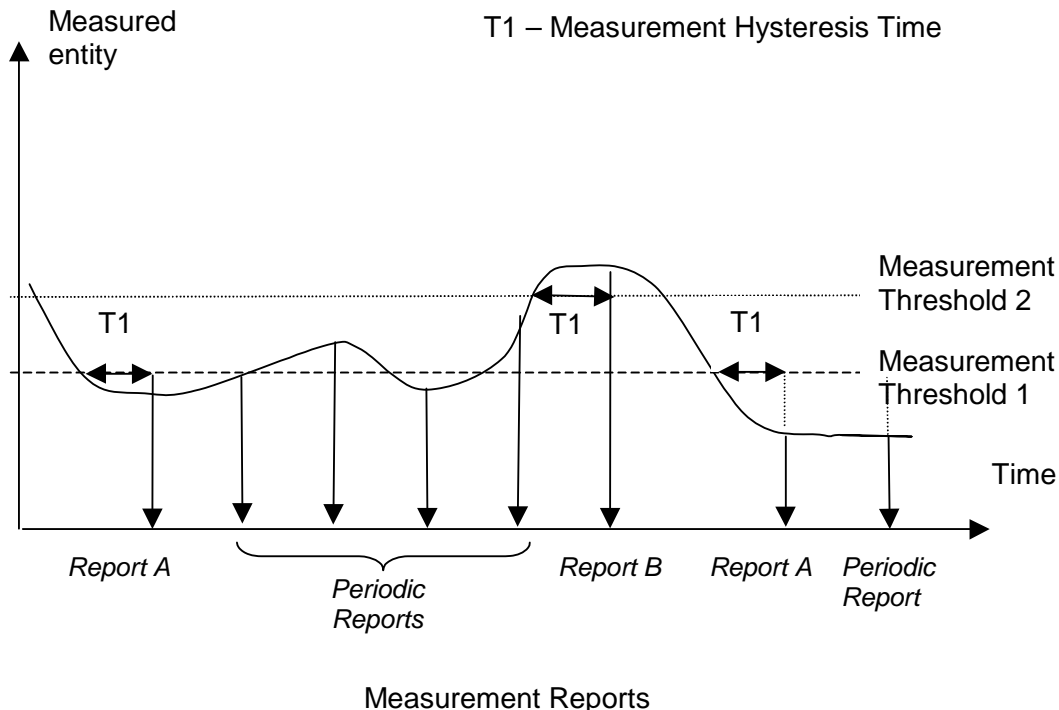


Figure B.5: Event E reporting with Hysteresis Time specified and Periodic Reporting requested



When the *Report Characteristics* IE is set to "Event F" (figure B.6), the Measurement Reporting procedure (Report A) is initiated always when the measured entity falls below the "Measurement Threshold 1" and stays there for the "Measurement Hysteresis Time" (T1 in figure B.6). If *Report Periodicity* IE is provided DRNS shall also initiate Measurement Reporting procedure periodically. The periodic reporting continues although the measured entity rises above the "Measurement Threshold 1" and is terminated by the Report B.

When the Report A conditions have been met and the measured entity rises above the "Measurement Threshold 2" and stays there for the "Measurement Hysteresis Time" (T1) Measurement Reporting procedure (Report B) is initiated and the periodic reporting is terminated.



**Figure B.6: Event F reporting with Hysteresis Time specified and Periodic Reporting requested**

## Annex C (informative): Guidelines for Usage of the Criticality Diagnostics IE

### C.1 EXAMPLE MESSAGE Layout

Assume the following message format:

| IE/Group Name  | Presence | Range     | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|----------------|----------|-----------|-----------------------|-----------------------|-------------|----------------------|
| Message Type   | M        |           |                       |                       | YES         | reject               |
| Transaction ID | M        |           |                       |                       | -           |                      |
| A              | M        |           |                       |                       | YES         | reject               |
| B              | M        |           |                       |                       | YES         | reject               |
| >E             |          | 1..<maxE> |                       |                       | EACH        | ignore               |
| >>F            |          | 1..<maxF> |                       |                       | -           |                      |
| >>>G           |          | 0..3, ... |                       |                       | EACH        | ignore               |
| >>H            |          | 1..<maxH> |                       |                       | EACH        | ignore               |
| >>>G           |          | 0..3, ... |                       |                       | EACH        | ignore and notify    |
| >>G            | M        |           |                       |                       | YES         | reject               |
| >>J            |          | 1..<maxJ> |                       |                       | -           |                      |
| >>>G           |          | 0..3, ... |                       |                       | EACH        | reject               |
| C              | M        |           |                       |                       | YES         | reject               |
| >K             |          | 1..<maxK> |                       |                       | EACH        | ignore and notify    |
| >>L            |          | 1..<maxL> |                       |                       | -           |                      |
| >>>M           | O        |           |                       |                       | -           |                      |
| D              | M        |           |                       |                       | YES         | reject               |

Note 1. The IEs F, J, and L do not have assigned criticality. The IEs F, J, and L are consequently realised as the ASN.1 type SEQUENCE OF of "ordinary" ASN.1 type, e.g. INTEGER. On the other hand, the repeatable IEs with assigned criticality are realised as the ASN.1 type SEQUENCE OF of an IE object, e.g. ProtocolIE-Single-Container.

For the corresponding ASN.1 layout, see subclause C.4.

## C.2 Example on a Received EXAMPLE MESSAGE

Assume further more that a received message based on the above tabular format is according to the figure below.

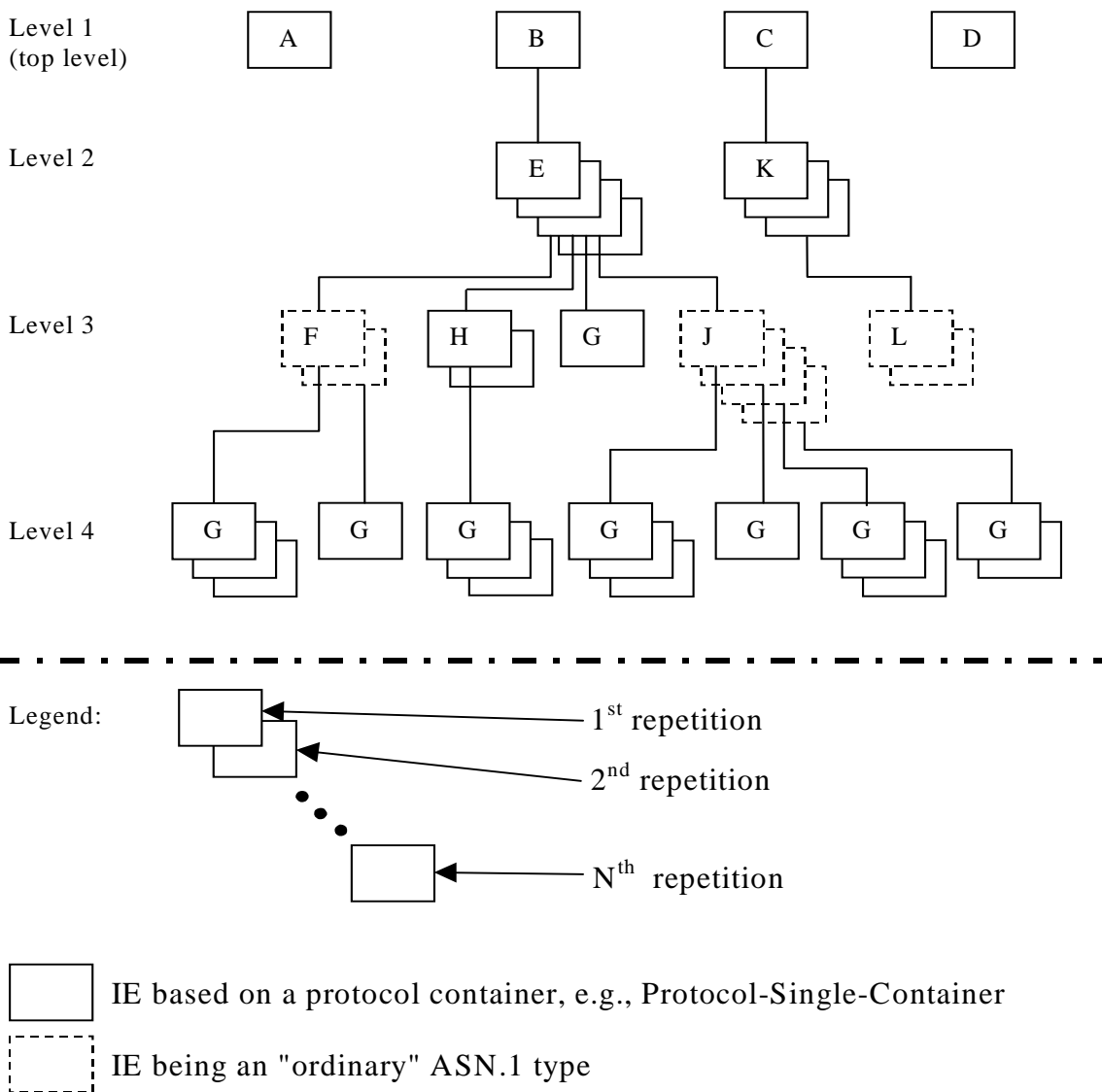
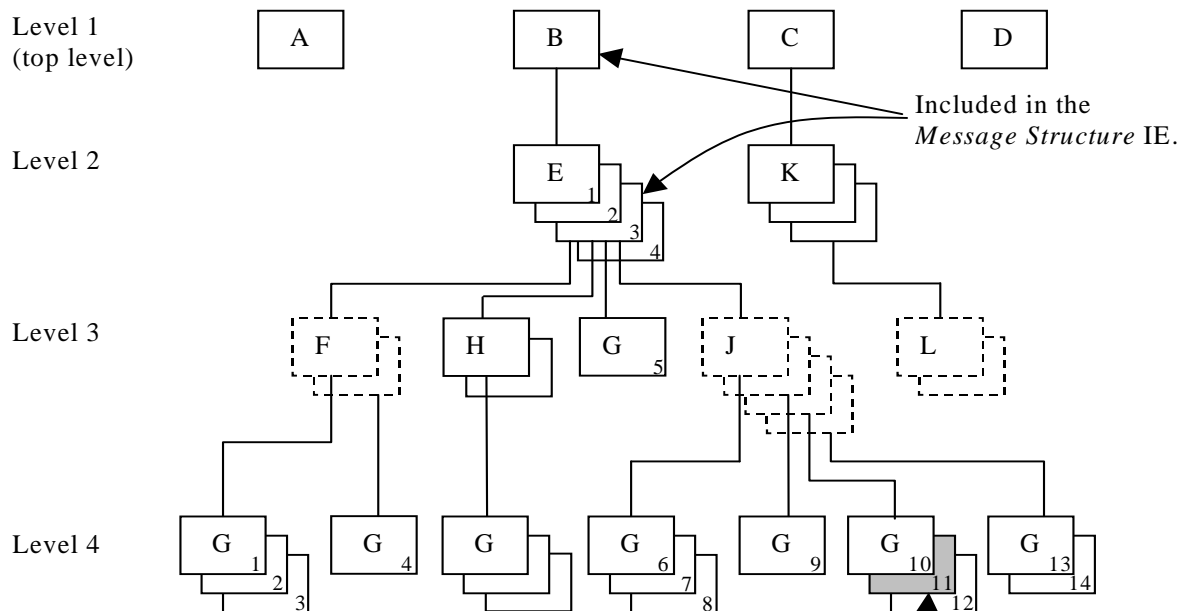


Figure C.1: Example of content of a received RNSAP message based on the EXAMPLE MESSAGE

### C.3 Content of Criticality Diagnostics

#### C.3.1 Example 1



Included in the *Information Element Criticality Diagnostics* IE:

- a) *IE ID* IE
- b) *Repetition Number* IE

**Figure C.2: Example of a received RNSAP message containing a not comprehended IE**

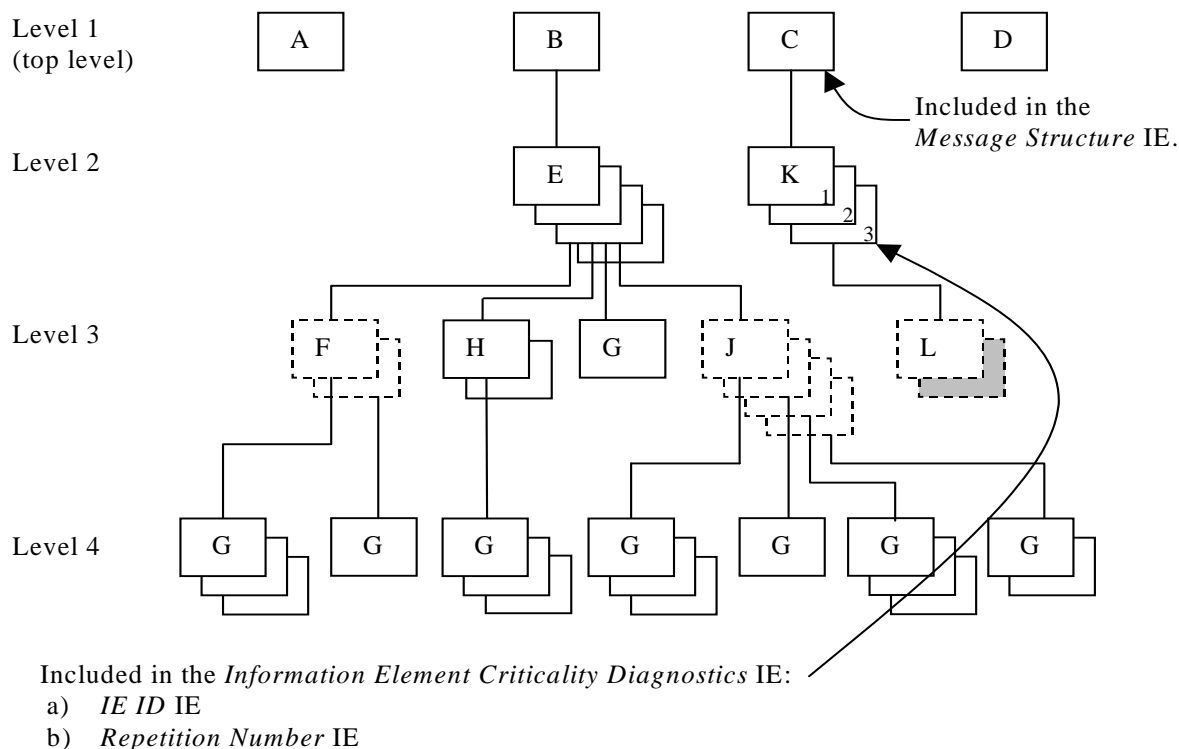
If there is an error within the instance marked as grey in the IE G in the IE J shown in the figure C.2 above, this will be reported within the *Information Element Criticality Diagnostics* IE within the *Criticality Diagnostics* IE as follows:

| IE name                                     | Value          | Comment   |
|---|----------------|---|
| IE Criticality                              | reject         | Criticality for IE on the reported level, i.e. level 4.   |
| IE ID                                       | id-G           | IE ID from the reported level, i.e. level 4.  |
| Repetition Number                           | 11             | Repetition number on the reported level, i.e. level 4.<br>(Since the IE E (level 2) is the lowest level included in the <i>Message Structure</i> IE this is the eleventh occurrence of IE G within the IE E (level 2).) |
| Type of Error                               | not understood |   |
| <i>Message Structure, first repetition</i>  |                |   |
| >IE ID                                      | id-B           | IE ID from level 1.   |
| <i>Message Structure, second repetition</i> |                |   |
| >IE ID                                      | id-E           | IE ID from the lowest level above the reported level, i.e. level 2.   |
| >Repetition Number                          | 3              | Repetition number from the lowest level above the reported level, i.e. level 2.   |

Note 2. The IE J on level 3 cannot be included in the *Message Structure* IE since they have no criticality of their own.

Note 3. The repetition number of the reported IE indicates the number of repetitions of IE G received up to the detected erroneous repetition, counting all occurrences of the IE G below the same instance of the previous level with assigned criticality (instance 3 of IE E on level 2).

### C.3.2 Example 2



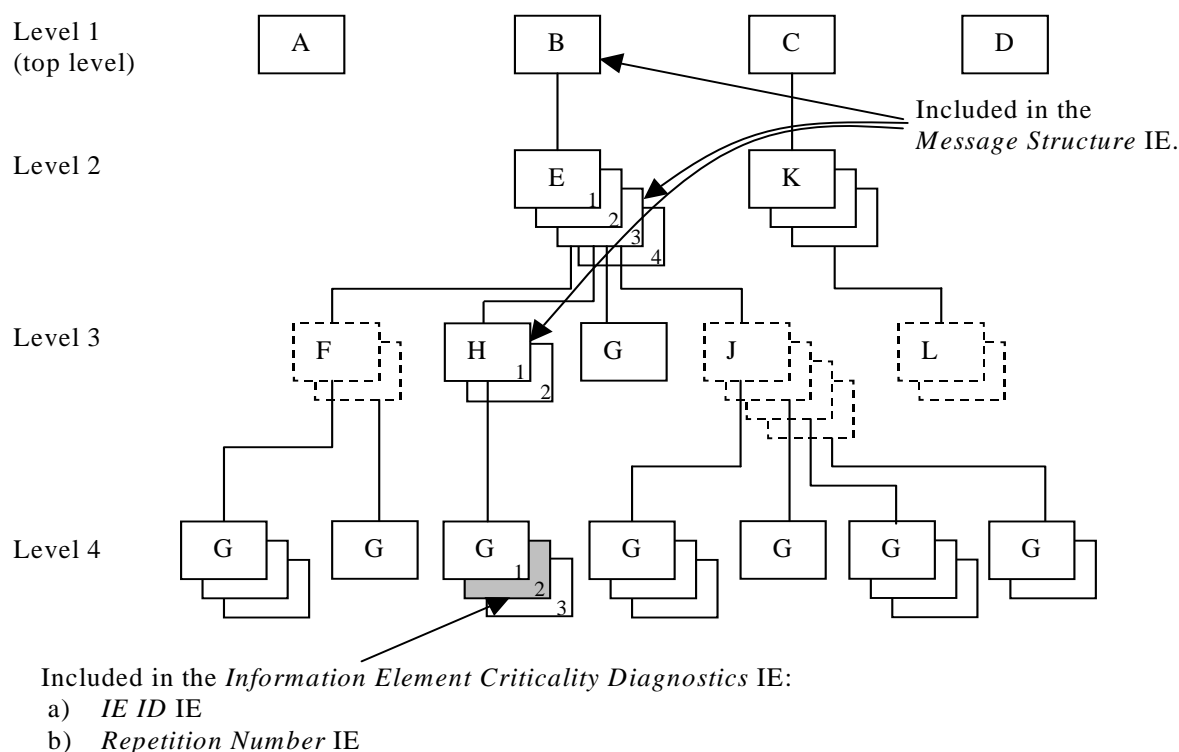
**Figure C.3: Example of a received RNSAP message containing a not comprehended IE**

If there is an error within the second instance (marked as grey) in the sequence (IE L in the tabular format) on level 3 below IE K in the structure shown in the figure C.3 above, this will be reported within the *Information Element Criticality Diagnostics* IE within the *Criticality Diagnostics* IE as follows:

| IE name                                    | Value             | Comment   |
|--|-------------------|---|
| IE Criticality                             | ignore and notify | Criticality for IE on the reported level, i.e. level 2.             |
| IE ID                                      | id-K              | IE ID from the reported level, i.e. level 2.                        |
| Repetition Number                          | 3                 | Repetition number on the reported level, i.e. level 2.              |
| Type of Error                              | not understood    |   |
| <i>Message Structure, first repetition</i> |                   |   |
| >IE ID                                     | id-C              | IE ID from the lowest level above the reported level, i.e. level 1. |

Note 4. The IE L on level 3 cannot be reported individually included in the *Message Structure* IE since it has no criticality of its own.

### C.3.3 Example 3



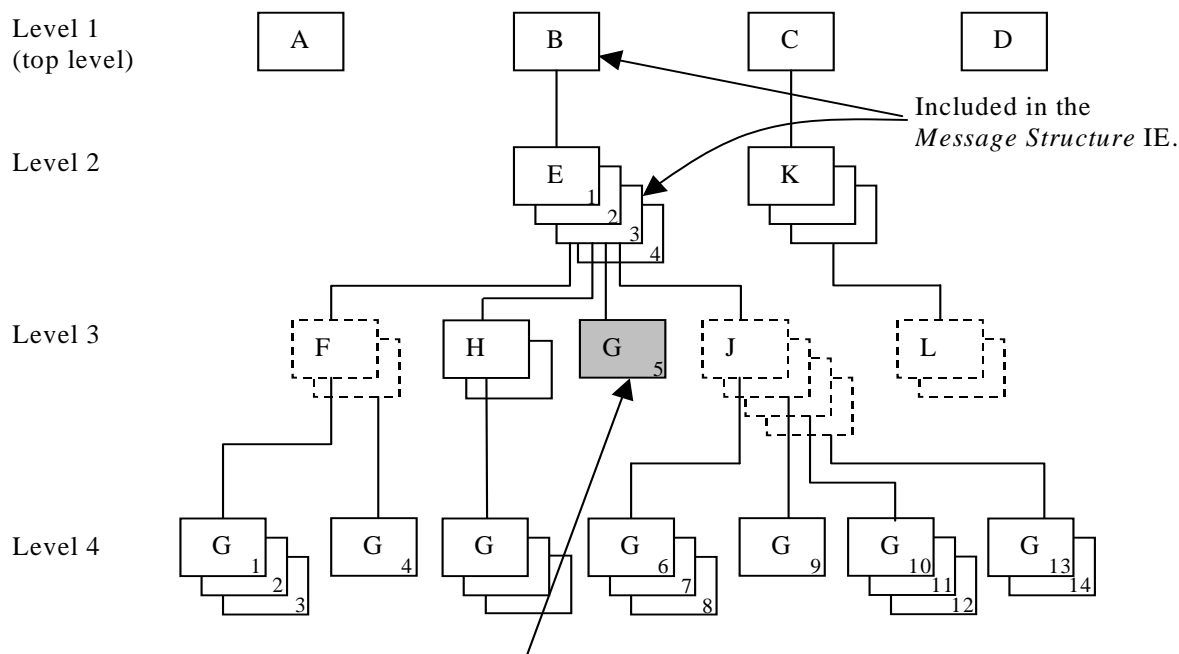
**Figure C.4: Example of a received RNSAP message containing a not comprehended IE**

If there is an error within the instance marked as grey in the IE G in the IE H shown in the figure C.4 above, this will be reported within the *Information Element Criticality Diagnostics* IE within the *Criticality Diagnostics* IE as follows:

| IE name                                     | Value             | Comment   |
|---|-------------------|---|
| IE Criticality                              | ignore and notify | Criticality for IE on the reported level, i.e. level 4.                         |
| IE ID                                       | id-G              | IE ID from the reported level, i.e. level 4.                                    |
| Repetition Number                           | 2                 | Repetition number on the reported level, i.e. level 4.                          |
| Type of Error                               | not understood    |   |
| <i>Message Structure, first repetition</i>  |                   |   |
| >IE ID                                      | id-B              | IE ID from level 1.   |
| <i>Message Structure, second repetition</i> |                   |   |
| >IE ID                                      | id-E              | IE ID from level 2.   |
| >Repetition Number                          | 3                 | Repetition number from level 2.   |
| <i>Message Structure, third repetition</i>  |                   |   |
| >IE ID                                      | id-H              | IE ID from the lowest level above the reported level, i.e. level 3.             |
| >Repetition Number                          | 1                 | Repetition number from the lowest level above the reported level, i.e. level 3. |

Note 5. The repetition number of level 4 indicates the number of repetitions of IE G received up to the detected erroneous repetition, counted below the same instance of the previous level with assigned criticality (instance 1 of IE H on level 3).

### C.3.4 Example 4



Included in the *Information Element Criticality Diagnostics* IE:

- a) *IE ID* IE
- b) *Repetition Number* IE

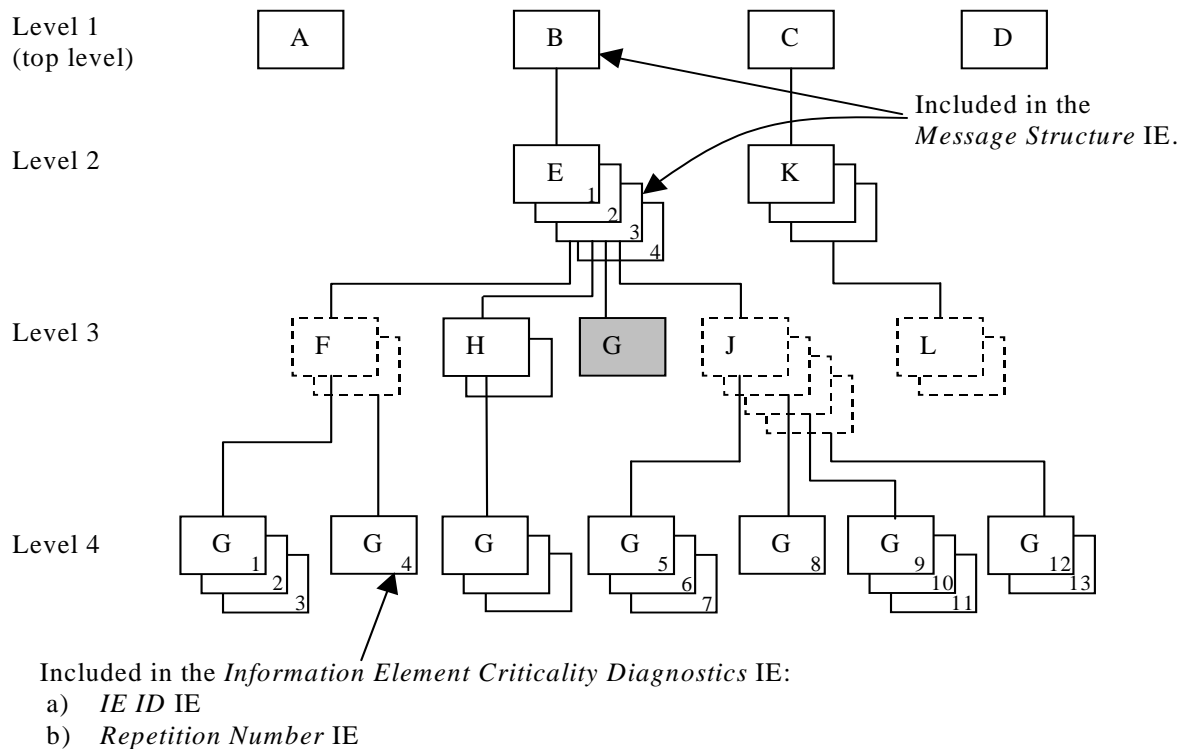
**Figure C.5: Example of a received RNSAP message containing a not comprehended IE**

If there is an error within the instance marked as grey in the IE G in the IE E shown in the figure C.5 above, this will be reported within the *Information Element Criticality Diagnostics* IE within the *Criticality Diagnostics* IE as follows:

| IE name                                     | Value          | Comment   |
|---|----------------|---|
| IE Criticality                              | reject         | Criticality for IE on the reported level, i.e. level 3.   |
| IE ID                                       | id-G           | IE ID from the reported level, i.e. level 3.  |
| Repetition Number                           | 5              | Repetition number on the reported level, i.e. level 3.<br>(Since the IE E (level 2) is the lowest level included in the <i>Message Structure</i> IE this is the fifth occurrence of IE G within the IE E (level 2). |
| Type of Error                               | not understood |   |
| <i>Message Structure, first repetition</i>  |                |   |
| >IE ID                                      | id-B           | IE ID from level 1.   |
| <i>Message Structure, second repetition</i> |                |   |
| >IE ID                                      | id-E           | IE ID from the lowest level above the reported level, i.e. level 2.   |
| >Repetition Number                          | 3              | Repetition number from the lowest level above the reported level, i.e. level 2.   |

Note 6. The repetition number of the reported IE indicates the number of repetitions of IE G received up to the detected erroneous repetition, counting all occurrences of the IE G below the same instance of the previous level with assigned criticality (instance 3 of IE E on level 2).

### C.3.5 Example 5



**Figure C.6: Example of a received RNSAP message with a missing IE**

If the instance marked as grey in the IE G in the IE E shown in the figure C.6 above, is missing this will be reported within the Information Element Criticality Diagnostics IE within the Criticality Diagnostics IE as follows:

| IE name                              | Value   | Comment   |
|--------------------------------------|---------|---|
| IE Criticality                       | reject  | Criticality for IE on the reported level, i.e. level 3.   |
| IE ID                                | id-G    | IE ID from the reported level, i.e. level 3.  |
| Repetition Number                    | 4       | Repetition number up to the missing IE on the reported level, i.e. level 3. (Since the IE E (level 2) is the lowest level included in the Message Structure IE there have been four occurrences of IE G within the IE E (level 2) up to the missing occurrence. |
| Type of Error                        | missing |   |
| Message Structure, first repetition  |         |   |
| >IE ID                               | id-B    | IE ID from level 1.   |
| Message Structure, second repetition |         |   |
| >IE ID                               | id-E    | IE ID from the lowest level above the reported level, i.e. level 2.   |
| >Repetition Number                   | 3       | Repetition number from the lowest level above the reported level, i.e. level 2.   |

Note 7. The repetition number of the reported IE indicates the number of repetitions of IE G received up to but not including the missing occurrence, counting all occurrences of the IE G below the same instance of the previous level with assigned criticality (instance 3 of IE E on level 2).

## C.4 ASN.1 of EXAMPLE MESSAGE

```

ExampleMessage ::= SEQUENCE {
    ProtocolIEs          ProtocolIE-Container          {{ExampleMessage-IEs}},
    ProtocolExtensions  ProtocolExtensionContainer  {{ExampleMessage-Extensions}} OPTIONAL,
    ...
}

ExampleMessage-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-A CRITICALITY reject TYPE A PRESENCE mandatory} |

```



```

    { ID id-B    CRITICALITY reject  TYPE B  PRESENCE mandatory } |
    { ID id-C    CRITICALITY reject  TYPE C  PRESENCE mandatory } |
    { ID id-D    CRITICALITY reject  TYPE D  PRESENCE mandatory } ,
    ...
}

B ::= SEQUENCE {
    e          E-List,
    iE-Extensions  ProtocolExtensionContainer { {B-ExtIEs} }  OPTIONAL,
    ...
}

B-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

E-List ::= SEQUENCE (SIZE (1..maxE)) OF ProtocolIE-Single-Container { {E-IEs} }

E-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-E    CRITICALITY ignore  TYPE E  PRESENCE mandatory }
}

E ::= SEQUENCE {
    f          F-List,
    h          H-List,
    g          G-List1,
    j          J-List,
    iE-Extensions  ProtocolExtensionContainer { {E-ExtIEs} }  OPTIONAL,
    ...
}

E-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

F-List ::= SEQUENCE (SIZE (1..maxF)) OF F

F ::= SEQUENCE {
    g          G-List2 OPTIONAL,
    iE-Extensions  ProtocolExtensionContainer { {F-ExtIEs} }  OPTIONAL,
    ...
}

F-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

G-List2 ::= SEQUENCE (SIZE (1..3, ...)) OF ProtocolIE-Single-Container { {G2-IEs} }

G2-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-G    CRITICALITY ignore  TYPE G  PRESENCE mandatory }
}

H-List ::= SEQUENCE (SIZE (1..maxH)) OF ProtocolIE-Single-Container { {H-IEs} }

H-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-H    CRITICALITY ignore  TYPE H  PRESENCE mandatory }
}

H ::= SEQUENCE {
    g          G-List3 OPTIONAL,
    iE-Extensions  ProtocolExtensionContainer { {H-ExtIEs} }  OPTIONAL,
    ...
}

H-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

G-List3 ::= SEQUENCE (SIZE (1..3, ...)) OF ProtocolIE-Single-Container { {G3-IEs} }

G3-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-G    CRITICALITY notify  TYPE G  PRESENCE mandatory }
}

G-List1 ::= ProtocolIE-Single-Container { {G1-IEs} }

G1-IEs RNSAP-PROTOCOL-IES ::= {

```

```

    { ID id-G    CRITICALITY reject  TYPE G  PRESENCE mandatory }
}

J-List ::= SEQUENCE (SIZE (1..maxJ)) OF J

J ::= SEQUENCE {
    g                G-List4 OPTIONAL,
    iE-Extensions    ProtocolExtensionContainer { {J-ExtIEs} } OPTIONAL,
    ...
}

J-ExtIEs    RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

G-List4 ::= SEQUENCE (SIZE (1..3, ...)) OF ProtocolIE-Single-Container { {G4-IEs} }

G4-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-G    CRITICALITY reject  TYPE G  PRESENCE mandatory }
}

C ::= SEQUENCE {
    k                K-List,
    iE-Extensions    ProtocolExtensionContainer { {C-ExtIEs} } OPTIONAL,
    ...
}

C-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

K-List ::= SEQUENCE (SIZE (1..maxK)) OF ProtocolIE-Single-Container { {K-IEs} }

K-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-K    CRITICALITY notify  TYPE K  PRESENCE mandatory }
}

K ::= SEQUENCE {
    l                L-List,
    iE-Extensions    ProtocolExtensionContainer { {K-ExtIEs} } OPTIONAL,
    ...
}

K-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

L-List ::= SEQUENCE (SIZE (1..maxL)) OF L

L ::= SEQUENCE {
    m                M OPTIONAL,
    iE-Extensions    ProtocolExtensionContainer { {L-ExtIEs} } OPTIONAL,
    ...
}

L-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

ExampleMessage-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

---

## Annex D (normative): DRNS Behaviour at SRNC or RNSAP Signalling Bearer Failure

This annex describes the DRNC actions in the event of SRNC or RNSAP Signalling Bearer failure when all or some of the UE Contexts related to the SRNC need to be removed in DRNC.

### D.1 Detection of SRNC or RNSAP Signalling Bearer/Connection Failure

Termination of all or some of the UE Contexts in DRNC which are related to an SRNC may be triggered due to failure of SRNC, RNSAP Signalling Bearer or the Iur signalling connection of an UE(s).

#### D.1.1 Termination of all UE Contexts Related to a Specific SRNC

Termination of all UE Contexts in DRNC which are related to a specific SRNC is triggered if the RNSAP Signalling Bearer failure is detected by the RNSAP according to the procedure described in the sub-clause 4.5.1.5.1 of TS 25.420. By "all" UE Contexts, it means all UEs having dedicated and/or common channel resources.

#### D.1.2 Termination of Specific UE Context

Termination of a specific UE Context in DRNC is triggered for an UE which has dedicated transport channel resources according to the procedure described in the sub-clause 4.5.1.5.2 of TS 25.420.

### D.2 DRNC Actions at UE Context Termination

When termination of the UE Context is required, the DRNC shall remove any common and/or dedicated radio resources related to the UE Context. The DRNC shall also initiate release of the dedicated or common user plane resources that were involved in these UE contexts. In addition, if it is possible the DRNC shall release the RRC connection.

## Annex E (informative): Change History

| TSG #   | TSG Doc.  | CR   | Rev | Subject/Comment   | New   |
|---------|-----------|------|-----|---|-------|
| 03/2008 | -         | -    | -   | Release 8 version created based on v7.8.0   | 8.0.0 |
| 39      | RP-080083 | 1354 | 1   | Introduction of Improved L2 for Uplink  | 8.0.0 |
| 40      | RP-080307 | 1358 |     | Introduction of LCR TDD 64QAM in RNSAP  | 8.1.0 |
| 40      | RP-080404 | 1360 | 2   | Mechanism for Scheduling Information transmission on MAC-e PDU alone for 1.28 Mcps TDD in EUL         | 8.1.0 |
| 40      | RP-080295 | 1366 | 1   | Extended power control gap for E-PUCH in LCR TDD  | 8.1.0 |
| 40      | RP-080296 | 1368 | 1   | Support of octet aligned HS-DSCH transport block sizes for non-64QAM                                  | 8.1.0 |
| 40      | RP-080299 | 1371 | 2   | RL Parameter Update for E-DCH FDD DL Control Channel Information                                      | 8.1.0 |
| 40      | RP-080298 | 1373 | 1   | Clarification on Transport Bearer Not Requested Indicator   | 8.1.0 |
| 40      | RP-080298 | 1376 |     | ASN.1 and tabular misalignment  | 8.1.0 |
| 40      | RP-080298 | 1380 |     | Power Control Gap IE handling   | 8.1.0 |
| 40      | RP-080294 | 1383 | 1   | Use of UL DPDCH Indicator For E-DCH Operation IE for unsynchronised RL reconfiguration                | 8.1.0 |
| 40      | RP-080300 | 1385 | 1   | GANSS Corrections   | 8.1.0 |
| 40      | RP-080308 | 1386 |     | introduction of feature indicator   | 8.1.0 |
| 41      | RP-080581 | 1387 |     | Introduction of flexible E-DCH MAC-d PDU size indicator   | 8.2.0 |
| 41      | RP-080577 | 1391 |     | DRX-DTX and F-DPCH  | 8.2.0 |
| 41      | RP-080578 | 1396 |     | Description of Priority Queue ID for Enhanced Cell_FACH   | 8.2.0 |
| 41      | RP-080579 | 1398 |     | Correction of SixtyfourQAM-DL-UsageIndicator  | 8.2.0 |
| 41      | RP-080589 | 1399 | 1   | Introduction of Enhanced Relocation   | 8.2.0 |
| 41      | RP-080587 | 1400 | 2   | Introduction of Enhanced Uplink in Cell_FACH  | 8.2.0 |
| 41      | RP-080576 | 1403 | 2   | Addition of 16QAM AG table choice IE  | 8.2.0 |
| 41      | RP-080576 | 1405 | 1   | Adding abnormal conditions to Continuous Packet Connectivity  | 8.2.0 |
| 42      | RP-080852 | 1408 | 1   | Support for additional navigation satellite systems in RNSAP  | 8.3.0 |
| 42      | RP-080849 | 1410 | 2   | Enable to dynamically control the MBMS services in MBSFN  | 8.3.0 |
| 42      | RP-080856 | 1413 | 1   | Correction on the range of E-DCH MAC-d Flow Specific Information                                      | 8.3.0 |
| 42      | RP-080838 | 1415 | 1   | Indication of E-DPCCH Power Boosting capability   | 8.3.0 |
| 42      | RP-080842 | 1416 |     | Indication of Combination of 64QAM and MIMO   | 8.3.0 |
| 42      | RP-080850 | 1418 | 2   | Introduction of the Enhanced CELL_FACH, CELL_PCH, URA_PCH state for 1.28Mcps TDD                      | 8.3.0 |
| 42      | RP-080849 | 1419 | 2   | Introduction of MBMS Improved Solution  | 8.3.0 |
| 42      | RP-080858 | 1420 |     | Correction on procedural text for Enhanced Uplink in Cell_FACH  | 8.3.0 |
| 42      | RP-080848 | 1421 | 1   | Inter-RAT Mobility to/from E-UTRAN  | 8.3.0 |
| 42      | RP-080840 | 1422 |     | Cause values for Enhanced Relocation  | 8.3.0 |
| 42      | RP-080838 | 1424 |     | Correction on Usage for Transport Bearer Not Requested Indicator                                      | 8.3.0 |
| 42      | RP-080856 | 1427 |     | Fixing Typo in 5.1 RNSAP Procedure Modules  | 8.3.0 |
| 42      | RP-080851 | 1428 | 2   | Introduction of HS-DSCH Serving Cell Change Enhancements  | 8.3.0 |
| 42      | RP-080853 | 1429 | 1   | Introduction of Dual Carrier  | 8.3.0 |
| 42      | RP-080841 | 1430 |     | Correction of tabular format for IE Priority Queue Information for Enhanced FACH/PCH                  | 8.3.0 |
| 42      | RP-080855 | 1431 | 1   | Improved EUL power control at UE power limitation   | 8.3.0 |
| 42      | RP-080838 | 1434 |     | Correction of power control gap for 1.28Mcps TDD  | 8.3.0 |
| 43      | RP-090075 | 1436 | 2   | Addition of MBR Parameter for 1.28Mcps TDD Enhanced Uplink  | 8.4.0 |
| 43      | RP-090092 | 1437 | 2   | Introduction of Continuous Packet Connectivity in RNSAP for LCR TDD                                   | 8.4.0 |
| 43      | RP-090074 | 1439 | 2   | Addition of Multi-carrier HS-DSCH physical layer category for 1.28Mcps TDD                            | 8.4.0 |
| 43      | RP-090246 | 1440 | 1   | RNSAP Support of measurements on E-UTRAN  | 8.4.0 |
| 43      | RP-090072 | 1442 |     | Addition of MAC-hs Reset Indicator IE into RADIO LINK ADDITION FAILURE message                        | 8.4.0 |
| 43      | RP-090074 | 1446 | 1   | Addition of DCH Indicator For E-DCH-HSDPA Operation IE into RADIO LINK CONGESTION INDICATION message  | 8.4.0 |
| 43      | RP-090072 | 1452 |     | Addition of F-DPCH Slot Format IE in RADIO LINK SETUP FAILURE and RADIO LINK ADDITION FAILURE message | 8.4.0 |
| 43      | RP-090072 | 1453 |     | Clarification of the relation between HS-SCCH less HS-PDSCH second code and first code                | 8.4.0 |
| 43      | RP-090078 | 1455 | 1   | Various GANSS Corrections to RNSAP  | 8.4.0 |
| 43      | RP-090095 | 1457 |     | RNSAP Dual Carrier corrections  | 8.4.0 |
| 43      | RP-090076 | 1458 |     | Minor corrections of RNSAP before freezing  | 8.4.0 |
| 43      | RP-090078 | 1459 | 1   | Correction of MBMS improvements   | 8.4.0 |
| 43      | RP-090075 | 1461 | 3   | Indication of MBMS capability over Iur interface  | 8.4.0 |
| 43      | RP-090094 | 1465 | 1   | Introduction of MIMO for 1.28Mcps TDD   | 8.4.0 |
| 43      | RP-090076 | 1466 |     | Correction on MBSFN MCCH Information message  | 8.4.0 |
| 43      | RP-090073 | 1468 |     | ASN.1 Correction on Transport Bearer Not Requested Indicator in RL Specific E-DCH Information         | 8.4.0 |
| 43      | RP-090077 | 1469 |     | Clarification for Enhanced Relocation and Cancel procedure  | 8.4.0 |
| 43      | RP-090079 | 1472 | 2   | Information for Fixed and Flexible RLC PDU size   | 8.4.0 |
| 43      | RP-090073 | 1476 |     | Correction of erroneous IE reference  | 8.4.0 |

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| 43         | RP-090095 | 1478 | 1 | Some Corrections for Dual Carrier HSDPA  | 8.4.0 |
| 43         | RP-090077 | 1479 |   | Corrections related to enhanced HS-DSCH serving cell change  | 8.4.0 |
| 43         | RP-090260 | 1480 |   | RNSAP Dual Carrier corrections, alignment with NBAP  | 8.4.0 |
| March 2009 | -         | -    | - | Minor corrections before freezing  | 8.4.1 |
| 44         | RP-090633 | 1498 |   | Correction of indentation  | 8.5.0 |
| 44         | RP-090638 | 1481 | 2 | Addition of Causes for Enhanced Relocation Failure   | 8.5.0 |
| 44         | RP-090638 | 1484 | 1 | Further abnormal conditions for IP Transport Option  | 8.5.0 |
| 44         | RP-090638 | 1485 |   | Partial Failure for DC-HSDPA   | 8.5.0 |
| 44         | RP-090638 | 1486 | 3 | Corrections of CPC DRX configuration for 1.28Mcps TDD  | 8.5.0 |
| 44         | RP-090631 | 1490 | 1 | Clarification of E-AGCH Table Choice   | 8.5.0 |
| 44         | RP-090631 | 1492 | 1 | Addition of Max UE DTX Cycle into UPLINK SIGNALLING TRANSFER INDICATION message                            | 8.5.0 |
| 44         | RP-090635 | 1493 |   | Clarification on Uplink L2 improvement   | 8.5.0 |
| 44         | RP-090634 | 1495 | 1 | Removal of HS-PDSCH Code Change indicator IE from RADIO LINK PARAMETER UPDATE INDICATION message           | 8.5.0 |
| 44         | RP-090633 | 1499 | 1 | Include a general HS-SCCH support indicator  | 8.5.0 |
| 44         | RP-090634 | 1500 |   | Correction of tabular for INFORMATION REPORT message   | 8.5.0 |
| 44         | RP-090630 | 1505 | 1 | Correction of the value range of MAC PDU Size Extended IE in RNSAP   | 8.5.0 |
| 44         | RP-090635 | 1506 |   | Addition of description for Fixed and Flexible RLC PDU operation for TDD                                   | 8.5.0 |
| 44         | RP-090635 | 1507 | 1 | Early Enhanced Relocation Cancel   | 8.5.0 |
| 44         | RP-090578 | 1509 |   | Correction of MIMO Information Response IE   | 8.5.0 |
| 45         | RP-090771 | 1511 |   | Correction of ASN.1 for CPC for 1.28Mcps TDD   | 8.6.0 |
| 45         | RP-090770 | 1515 | 1 | Correction on E-DCH FDD Information abnormal condition in radio link reconfiguration procedure             | 8.6.0 |
| 45         | RP-090770 | 1516 | 2 | Addition of <i>HS-DSCH TB Size Table Indicator</i> related context at serving HS-DSCH RL change            | 8.6.0 |
| 45         | RP-090770 | 1517 | 1 | Addition of abnormal condition for HS-DSCH/E-DCH in RL Addition procedure                                  | 8.6.0 |
| 45         | RP-090769 | 1530 | 1 | SixtyfourQAM DL Support Indicator  | 8.6.0 |
| 45         | RP-090770 | 1532 |   | Enhanced HS-SCCH support optional in Rel8  | 8.6.0 |
| 45         | RP-090770 | 1533 |   | Addition of cause SixtyfourQAM DL and MIMO Combined not supported in RL reconfiguration procedure          | 8.6.0 |
| 45         | RP-090770 | 1534 |   | Correction for procedural text for MBMS Bearer Service List IE   | 8.6.0 |
| 45         | RP-090770 | 1535 | 1 | Inclusion of <i>UE Support Indicator Extension</i> IE into RL handling                                     | 8.6.0 |
| 45         | RP-090847 | 1539 |   | Rel-8 RNSAP Support for Signaling of S-CPICH power offset and DL Control Channel TX Diversity for MIMO UEs | 8.6.0 |
| 46         | RP-091182 | 1543 | 1 | Correction of abnormal conditions for Dual cell HS-DSCH in RL Addition procedure                           | 8.7.0 |
| 46         | RP-091180 | 1550 |   | Clarification of the meaning of BIT STRING type IEs for SPS operation for 1.28Mcps TDD                     | 8.7.0 |
| 46         | RP-091181 | 1557 | 1 | MAC-e Reset Indicator for MAC-i Reset  | 8.7.0 |
| 46         | RP-091182 | 1559 |   | Further Corrections for DC-HSDPA   | 8.7.0 |
| 46         | RP-091179 | 1562 |   | Wrong ref in tabular   | 8.7.0 |
| 46         | RP-091179 | 1566 | 2 | STTD is cell specific in Dual-Cell HSDPA   | 8.7.0 |
| 46         | RP-091179 | 1572 |   | Correction on IE "E-AGCH Table Choice"   | 8.7.0 |
| 47         | RP-100215 | 1575 |   | Addition of HS-DSCH physical layer category over lur   | 8.8.0 |
| 47         | RP-100215 | 1578 |   | Allow reconfiguration of some IEs in RL Addition procedure   | 8.8.0 |
| 47         | RP-100219 | 1580 |   | Correction of DC-HSDPA Capability Report in lur  | 8.8.0 |
| 47         | RP-100219 | 1582 | 1 | E-RNTI Allocation for UE moves to Cell_FACH from Cell_DCH  | 8.8.0 |
| 47         | RP-100218 | 1583 |   | Correction for the description of E-DCH serving radio link IE for E-DCH semi-persistent operation          | 8.8.0 |
| 47         | RP-100215 | 1585 |   | Combining E-DCH Radio Links within the RLS   | 8.8.0 |
| 47         | RP-100217 | 1590 | 3 | Correction to state transition of Enhanced CELL_FACH UE for LCR TDD  | 8.8.0 |
| 47         | RP-100218 | 1595 | 1 | Synchronization detection window configuration in CPC for 1.28 Mcps TDD                                    | 8.8.0 |
| 47         | RP-100216 | 1600 | 1 | Correction for Procedural Text on E-RNTI Allocation at E-DCH Serving Cell Change                           | 8.8.0 |
| 47         | RP-100199 | 1603 |   | Indication of Precoding Weight Set Restriction preference  | 8.8.0 |

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## History

| <b>Document history</b> |               |             |
|-------------------------|---------------|-------------|
| V8.1.0                  | November 2008 | Publication |
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