

ETSI TS 125 423 V6.13.0 (2007-03)

Technical Specification

**Universal Mobile Telecommunications System (UMTS);
UTRAN Iur interface Radio Network Subsystem
Application Part (RNSAP) signalling
(3GPP TS 25.423 version 6.13.0 Release 6)**



Reference

RTS/TSGR-0325423v6d0

Keywords

UMTS

ETSI

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Sous-Préfecture de Grasse (06) N° 7803/88

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Foreword

This Technical Specification (TS) has been produced by the 3rd 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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- x the first digit:
 - 1 presented to TSG for information;
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- y the second digit is incremented for all changes of substance, i.e. technical enhancements, corrections, updates, etc.
- z the third digit is incremented when editorial only changes have been incorporated in the document.

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.

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*.

- [1] 3GPP TS 23.003: "Numbering, addressing and identification".
- [2] 3GPP TS 25.413: "UTRAN Iu Interface RANAP Signalling".
- [3] 3GPP TS 25.426: "UTRAN Iur and Iub Interface Data Transport & Transport Layer Signalling for DCH Data Streams".
- [4] 3GPP TS 25.427: "UTRAN Iur and Iub Interface User Plane Protocols for DCH Data Streams".
- [5] 3GPP TS 25.435: "UTRAN Iub interface User Plane Protocols for Common Transport Channel Data Streams".
- [6] 3GPP TS 25.104: "UTRA (BS) FDD; Radio transmission and Reception".
- [7] 3GPP TS 25.105: "UTRA (BS) TDD; Radio Transmission and Reception".
- [8] 3GPP TS 25.211: "Physical Channels and Mapping of Transport Channels onto Physical Channels (FDD)".
- [9] 3GPP TS 25.212: "Multiplexing and Channel Coding (FDD)".
- [10] 3GPP TS 25.214: "Physical Layer Procedures (FDD)".
- [11] 3GPP TS 25.215: "Physical Layer – Measurements (FDD)".
- [12] 3GPP TS 25.221: "Physical Channels and Mapping of Transport Channels onto Physical Channels (TDD)".
- [13] 3GPP TS 25.223: "Spreading and Modulation (TDD)".
- [14] 3GPP TS 25.225: "Physical Layer – Measurements (TDD)".
- [15] 3GPP TS 25.304: "UE Procedures in Idle Mode"
- [16] 3GPP TS 25.331: "RRC Protocol Specification".
- [17] 3GPP TS 25.402: "Synchronisation in UTRAN, Stage 2".
- [18] ITU-T Recommendation X.680 (07/2002): "Information technology - Abstract Syntax Notation One (ASN.1): Specification of basic notation".
- [19] ITU-T Recommendation X.681 (07/2002): "Information technology - Abstract Syntax Notation One (ASN.1): Information object specification".

- [20] ITU-T Recommendation X.691 (07/2002): "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)".
- [21] 3GPP TS 25.213: "Spreading and modulation (FDD)".
- [22] 3GPP TS 25.224: "Physical Layer Procedures (TDD)".
- [23] 3GPP TS 25.133: "Requirements for support of Radio Resource management (FDD)".
- [24] 3GPP TS 25.123: "Requirements for support of Radio Resource management (TDD)".
- [25] 3GPP TS 23.032: "Universal Graphical Area Description (GAD)".
- [26] 3GPP TS 25.302: "Services Provided by the Physical Layer".
- [27] 3GPP TS 25.213: "Spreading and modulation (FDD)".
- [28] 3GPP TR 25.921: "Guidelines and Principles for Protocol Description and Error Handling".
- [29] GSM TS 05.05: "Digital cellular telecommunications system (Phase 2+); Radio transmission and reception".
- [30] ICD-GPS-200: "Navstar GPS Space Segment/Navigation User Interface".
- [31] RTCM-SC104: "RTCM Recommended Standards for Differential GNSS Service (v.2.2)".
- [32] 3GPP TS 25.425: "UTRAN Iur and Iub Interface User Plane Protocols for Common Transport Channel data streams".
- [33] IETF RFC 2460 "Internet Protocol, Version 6 (IPv6) Specification".
- [34] IETF RFC 768 "User Datagram Protocol", (8/1980)
- [35] 3GPP TS 25.424: " UTRAN Iur Interface Data Transport & Transport Signalling for Common Transport Channel Data Streams".
- [36] 3GPP TS 44.118: "Mobile radio interface layer 3 specification; Radio Resource Control (RRC) Protocol Iu mode".
- [37] 3GPP TR 43.930: "Iur-g interface; Stage 2".
- [38] 3GPP TS 48.008: "Mobile-services Switching Centre - Base Station System (MSC - BSS) interface; Layer 3 specification".
- [39] 3GPP TS 43.051: "GSM/EGDE Radio Access Network; Overall description - Stage 2".
- [40] 3GPP TS 25.401: "UTRAN Overall Description".
- [41] 3GPP TS 25.321: "MAC protocol specification".
- [42] 3GPP TS 25.306: "UE Radio Access capabilities".
- [43] 3GPP TS 25.101: " User Equipment (UE) radio transmission and reception (FDD)".
- [44] IETF RFC 2474 "Definition of the Differentiated Services Field (DS Field) in the IPv4 and IPv6 Headers".
- [45] IETF RFC 2475 "An Architecture for Differentiated Services".
- [46] 3GPP TS 25.222: "Multiplexing and Channel Coding (TDD)".
- [47] 3GPP TS 44.060: "General Packet Radio Service (GPRS); Mobile Station (MS) - Base Station System (BSS) interface; Radio Link Control/Medium Access Control (RLC/MAC) protocol".
- [48] 3GPP TS 32.421: "Subscriber and equipment trace: Trace concepts and requirements".
- [49] 3GPP TS 32.422: "Subscriber and equipment trace: Trace control and Configuration Management".

- [50] 3GPP TS 25.346: "Introduction of the Multimedia Broadcast Multicast Service (MBMS) in the Radio Access Network (Stage-2) ".
- [51] 3GPP TS 23.246: "Multimedia Broadcast Multicast Service; Architecture and Functional Description".
- [52] 3GPP TS 25.309: "FDD Enhanced Uplink; Overall description; Stage 2".3Definitions, Symbols and Abbreviations

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. 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].

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 |
| 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-DCH | Enhanced UL DCH |
| EDSCHPC | Enhanced Downlink Shared Channel Power Control |
| EP | Elementary Procedure |
| FACH | Forward Access Channel |
| FDD | Frequency Division Duplex |
| F-DPCH | Fractional DPCH |

| | |
|-----------|--|
| FN | Frame Number |
| FP | Frame Protocol |
| GERAN | GSM EDGE Radio Access Network |
| GA | Geographical Area |
| GAI | Geographical Area Identifier |
| GPS | Global Positioning System |
| GRA | GERAN Registration Area |
| GSM | Global System Mobile |
| HSDPA | High Speed Downlink Packet Access |
| HW | Hardware |
| IB | Information Block |
| 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 |
| MS | Mobile Station |
| 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 |
| Pos | Position or Positioning |
| PRACH | Physical Random Access Channel |
| PTP | Point To Point |
| PTM | Point To Multipoint |
| PS | Packet Switched |
| QE | Quality Estimate |
| 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 |
| 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 |
| UTRA | Universal Terrestrial Radio Access |
| UTRAN | Universal Terrestrial Radio Access Network |

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 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 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.
- [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 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.

| | |
|----------------|--|
| 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 <i>Italic font</i> followed by the abbreviation "IE", e.g. <i>Transport Format Set IE</i> . |
| 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)". |

5 RNSAP Services

5.1 RNSAP Procedure Modules

The Iur interface RNSAP procedures are divided into four 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] and HS-DSCH 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] and HS-DSCH 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 DCH procedure related to a certain UE.

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.

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.
- Direct Information Transfer. This function allows an RNC to transfer information to another RNC.

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

| Function | Elementary Procedure(s) |
|---|--|
| MBMS UE Linking/De-linking | a) Common Transport Channel Resources Initiation b) Radio Link Setup c) Downlink Signalling Transfer d) MBMS Attach e) MBMS Detach |
| MBMS Channel Type Indication | a) Direct Information Transfer b) Uplink Signalling Transfer c) Radio Link Setup d) Radio Link Addition e) Common Transport Channel Resources Initiation |
| MBMS Preferred Frequency Layer Indication | a) Direct Information Transfer b) Radio Link Setup d) Radio Link Addition |
| MBMS URA Linking/De-linking | a) Downlink Signalling Transfer b) MBMS Attach c) MBMS Detach |
| Direct Information Transfer | a) Direct Information Transfer |

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 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 b) Common Measurement Reporting c) Common Measurement Termination d) Common Measurement Failure |
| Information Exchange | a) Information Exchange Initiation b) Information Reporting c) Information Exchange Termination 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.

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 |

Table 3: Class 2 Elementary Procedures

| Elementary Procedure | Initiating Message |
|--|---|
| 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 |

| Elementary Procedure | Initiating Message |
|--|--|
| 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 |

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

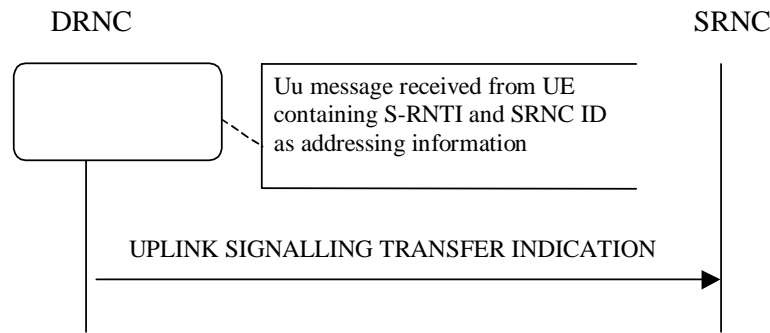


Figure 1: Uplink Signalling Transfer procedure, Successful Operation

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. 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*] 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].

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.]

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]).

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

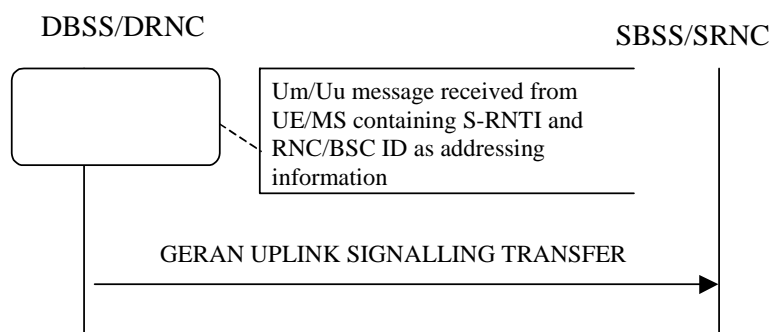


Figure 1A: GERAN Uplink Signalling Transfer procedure, Successful Operation

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.

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 accordingly.

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 lur-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.

8.3 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

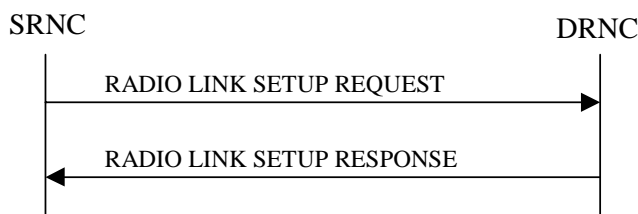


Figure 5: Radio Link Setup procedure: Successful Operation

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.

[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 - 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] 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.
- 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 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.
- 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].
- [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*] 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 IE*] [1.28 Mcps TDD - *HS-PDSCH Timeslot Specific Information LCR 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.]

[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-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 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 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.]
- [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 *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 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 - 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 - 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 is 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 *Maximum Number of DL Physical Channels per Timeslot* 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.]

[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 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 - 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.]

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 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 a requested E-DCH, include in the *E-DCH FDD Information Response* IE in the RADIO LINK SETUP RESPONSE 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 - 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, 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 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 - 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].

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 δP_{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] 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 - 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 - 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* and/or the *Cell Capability Container TDD LCR IE* if the DRNC is aware that the neighbouring cell supports any functionality listed in 9.2.2.D, 9.2.3.1a and 9.2.3.1b.
- 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 StateIndicator IE* may be absent. The DRNC shall include in the RADIO LINK SETUP RESPONSE message the *Restriction StateIndicator 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 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.

[1.28Mcps TDD - Uplink Synchronisation Parameters LCR]:

[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 - 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.]

MBMS Handling:

If the *MBMS Bearer Service List* IE is included in the RADIO LINK SETUP REQUEST message, the DRNC shall 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.

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.

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.

[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 - 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.]

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 - 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 related 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 all RLs having a common generation of E-RGCH information with another RL, or are candidates for a common generation of E-RGCH related information with another RL, when this DRNS would contain the E-DCH serving RL, the DRNS shall assign to each RL the same value for the *E-DCH RL Set ID* IE which uniquely identifies these RLs as members of the same E-DCH RL Set within the UE Context.]

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.

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

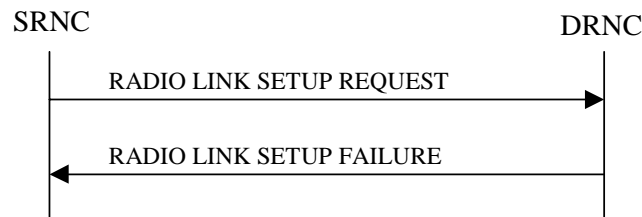


Figure 6: Radio Link Setup procedure: Unsuccessful Operation

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 and the *HS-DSCH FDD Information Response* IE in the RADIO LINK SETUP FAILURE message.]

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;
- [FDD – E-DCH not supported];
- F-DPCH 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 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 DRNC 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 included in the *RL Information* IE for a specific RL and the *Diversity Control Field* IE is set to "Must", 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 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.

[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.]

[FDD - If the RADIO LINK SETUP REQUEST message contains information which would configure a HS-DSCH Radio Link, 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 SETUP FAILURE message.]

[FDD - If the RADIO LINK SETUP REQUEST message contains information which would configure an E-DCH Radio Link, 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 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.]

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

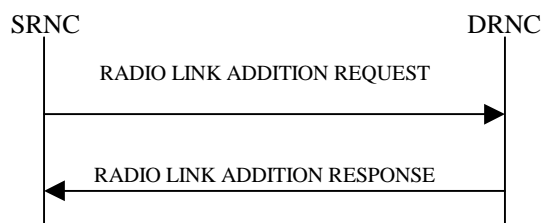


Figure 7: Radio Link Addition procedure: Successful Operation

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.]

[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.]

[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.]

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 - 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.]

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, 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 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.]

[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.

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 is present the DRNS shall activate/deactivate the Transmit Diversity for each new Radio Link in accordance with the *Transmit Diversity Indicator* IE using the diversity mode of the existing Radio Link(s).]

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 - 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 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 - 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 δP_{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* and/or the *Cell Capability Container TDD LCR IE* if the DRNC is aware that the neighbouring cell supports any functionality listed in 9.2.2.D, 9.2.3.1a and 9.2.3.1b.
- 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 *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 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.

[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 - 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.]

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.

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.

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.]

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 - 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 related 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 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 all RLs having a common generation of E-RGCH information with another RL, or are candidates for a common generation of E-RGCH information with another RL, when this DRNS would contain the E-DCH serving RL, the DRNS shall assign to each RL the same value for the *E-DCH RL Set ID* IE which uniquely identifies these RLs as members of the same E-DCH RL Set within the UE Context.]

[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.]
- [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.]

[FDD - HS-DSCH Setup 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 DRNC shall include the *HARQ Memory Partitioning IE* in the *HS-DSCH FDD Information Response IE* in the RADIO LINK ADDITION RESPONSE message.]
- [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.]
- [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 - 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].]
- [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 - 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 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 - 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 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 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 REQUEST 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 *E-DCH Serving Cell Change 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 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 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 the RADIO LINK ADDITION REQUEST message includes an *E-DPCH Information IE*, the DRNS shall use the new parameters for the related resource allocation operations]

[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 - E-DCH Setup:]

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

- [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 *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.]
- [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.]

[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 - 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.]
- [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 - 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].]

- [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.]

[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*] in the *HS-DSCH TDD Information Response IE* in the RADIO LINK ADDITION RESPONSE message.]

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].]

8.3.2.3 Unsuccessful Operation

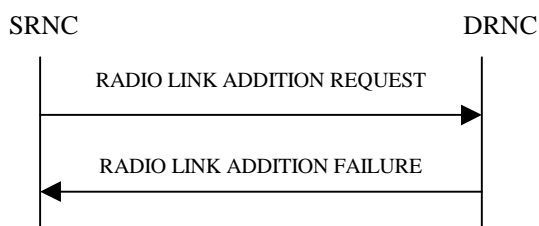


Figure 8: Radio Link Addition procedure: Unsuccessful Operation

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 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.]

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.
- F-DPCH not supported.
- [FDD – E-DCH 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 included in the *RL Information* IE for a specific RL and the *Diversity Control Field* IE is set to "Must", 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 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.]

[FDD - If the RADIO LINK ADDITION REQUEST message contains information which would configure a HS-DSCH Radio Link, 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 information which would configure an E-DCH Radio Link, 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.]

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

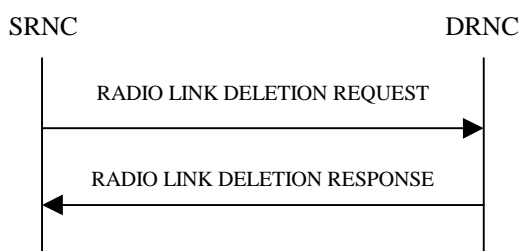


Figure 9: Radio Link Deletion procedure, Successful Operation

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.]

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

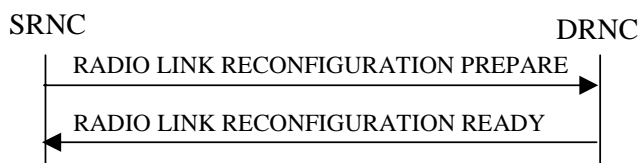


Figure 10: Synchronised Radio Link Reconfiguration Preparation procedure, Successful Operation

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 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.]
- 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, the DRNS shall configure the concerned UE Context to use F-DPCH in the downlink in the new configuration.]

[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-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.]

[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*,] [3.84Mcps TDD - *DL Timeslot Information IE*,] [1.28Mcps TDD - *DL Timeslot Information LCR IE*,] [3.84Mcps TDD - *Midamble Shift And Burst Type IE*,] [1.28Mcps TDD - *Midamble Shift LCR IE*,] *TFCI Presence IE*, [3.84Mcps TDD - *TDD Channelisation Code IE*,] [1.28Mcps TDD - and/or *TDD Channelisation Code LCR 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 CCH To Modify* IEs includes any *TPC CCH ID* IEs, the DRNS shall apply these as the new values, otherwise the previous values specified for this CCH are still applicable.]
- [1.28Mcps TDD - If the *UL CCH 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 CCH 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.]

[TDD - UL/DL CCH Addition]

[TDD - If the RADIO LINK RECONFIGURATION PREPARE message includes any *UL CCH To Add* IEs or *DL CCH To Add* IEs, the DRNS shall include this CCH 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] [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 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 CCH To Add* IE, the DRNS shall set the TPC step size of that CCH to that value, otherwise the DRNS shall use the same value as the lowest numbered DL CCH in the current configuration.]

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

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

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

[TDD - UL/DL CCH Deletion]

[TDD - If the RADIO LINK RECONFIGURATION PREPARE message includes any *UL CCH To Delete* IEs or *DL CCH To Delete* IEs, the DRNS shall remove this CCH 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, at the CFN in the RADIO LINK RECONFIGURATION COMMIT message, 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/h 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 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.]

[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.]

[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.]
- [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.
- 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 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.
- 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].
- [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] 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.]

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.
- 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*] 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*] 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 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.

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 a new transport bearer was requested with the *Transport Bearer Request Indicator IE*, 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 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.
- 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 *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.]
- [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] 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 Node B 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.]

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.
- 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 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.
- The DRNC may include the *HARQ Memory Partitioning* IE in the RADIO LINK RECONFIGURATION READY message.

[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 - For all RLs having a common generation of E-RGCH information with another RL, or are candidates for a common generation of E-RGCH information with another RL, when this DRNS would contain the E-DCH serving RL, the DRNS shall assign to each RL the same value for the *E-DCH RL Set ID* IE, included in the

RADIO LINK RECONFIGURATION READY message, to uniquely identify these RLs as members of the same E-DCH RL Set within the UE Context.]

- [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.]
- [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-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 – 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 - 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 *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 *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 *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 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 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 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-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 Reset is performed in the UE for sending the HARQ Failure Indication.]

[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 *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.]
- [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* 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 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 - 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.]

[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.]

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,] 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, HS-DSCH MAC-d flow [FDD - or E-DCH MAC-d flow] being added, or any Transport Channel, HS-DSCH MAC-d flow [FDD - 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, HS-DSCH MAC-d flow [FDD - or E-DCH MAC-d flow] being added, or any Transport Channel, HS-DSCH MAC-d flow [FDD - or E-DCH MAC-d flow] 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 for only one of the DCHs in the set of co-ordinated DCHs.

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.

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 δP_{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 - 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 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 - 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 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.]

[TDD - If the [3.84Mcps 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

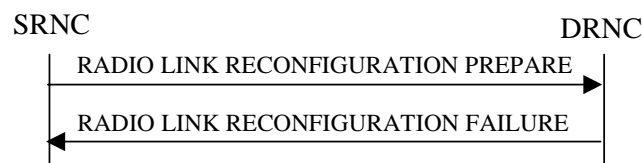


Figure 11: Synchronised Radio Link Reconfiguration Preparation procedure, Unsuccessful Operation

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*.

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;
- [FDD – E-DCH not supported];
- F-DPCH 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.

[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 or *E-DPCCH Power Offset* 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.]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message contains information which would configure a HS-DSCH Radio Link, 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 information which would configure an E-DCH Radio Link, 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.]

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 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 *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 modification for which a new transport bearer was requested and established, the switch to the new transport bearer shall also take place at the indicated CFN. The detailed frame protocol handling during transport bearer replacement is described in [4], subclause 5.10.1 and in [32], subclause 5.3.1.

[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 *CFN* IE. 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 CFN, the DRNS 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

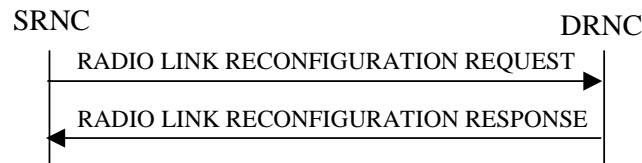


Figure 14: Unsynchronised Radio Link Reconfiguration procedure, Successful Operation

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 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 *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 *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 contains a *DCH Specific Info* IE which 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 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 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 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.]

[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 CTrCH 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 CTrCH Deletion]

[TDD - If the RADIO LINK RECONFIGURATION REQUEST message includes any *UL CTrCH Information To Delete* IEs or *DL CTrCH Information To Delete* IEs, the DRNS shall not include the referenced CTrCH 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 - 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.]

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.
- 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 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.
- 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].

- [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] 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.]
- [FDD - The DRNC shall include the *Measurement Power Offset* IE in the *HS-DSCH Information Response* IE in the RADIO LINK RECONFIGURATION RESPONSE message.]

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.
- 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] 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*] 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.

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 a new transport bearer was requested with the *Transport Bearer Request Indicator IE*, 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 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.
- 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.]

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 the RADIO LINK RECONFIGURATION REQUEST message includes the *Traffic Class* IE in the *HS-DSCH MAC-d Flows To Add* 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 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 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 *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 - 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 - For all RLs having a common generation of E-RGCH information with another RL, or are candidates for a common generation of E-RGCH information with another RL, when this DRNS would contain the E-DCH serving RL, the DRNS shall assign to each RL the same value for the *E-DCH RL Set ID* IE, included in the RADIO LINK RECONFIGURATION RESPONSE message, to uniquely identify these RLs as members of the same E-DCH RL Set within the UE Context.]
- [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.]
- [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-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 – 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 - 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 *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 the RADIO LINK RECONFIGURATION REQUEST message includes the *Data Description Indicator* IE, the DRNS 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 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 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 - 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 *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.]
- [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.]

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], 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, HS-DSCH MAC-d flow [FDD - or E-DCH 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.

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, HS-DSCH MAC-d flow [FDD - or E-DCH MAC-d] flow being added, or any Transport Channel, HS-DSCH MAC-d flow [FDD - or E-DCH MAC-d flow] 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.

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 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 in the *DCH Information Response* IE in the RADIO LINK RECONFIGURATION RESPONSE message for only one of the combined Radio Links.

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 δP_{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 - 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* 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

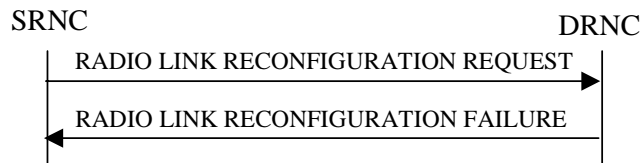


Figure 15: Unsynchronised Radio Link Reconfiguration procedure, Unsuccessful Operation

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 Unsynchronised Radio Link Reconfiguration procedure as having failed.

If the requested Unsynchronised 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.

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;
- [FDD – E-DCH not supported].

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 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-DPCCCH Power Offset* IE, *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.]

[FDD - If the RADIO LINK RECONFIGURATION REQUEST message contains information which would configure a HS-DSCH Radio Link, 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 information which would configure an E-DCH Radio Link, 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.]

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

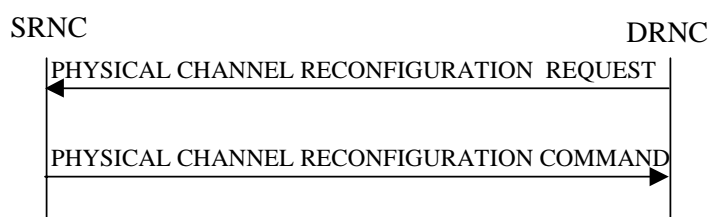


Figure 16: Physical Channel Reconfiguration procedure, Successful Operation

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*], *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*,] *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.]

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

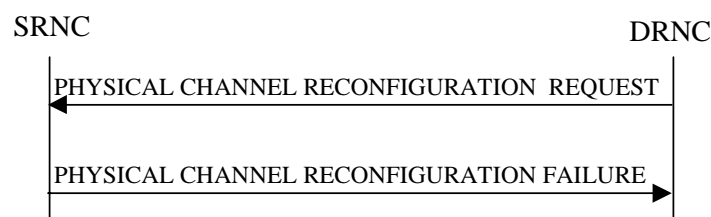


Figure 17: Physical Channel Reconfiguration procedure, Unsuccessful Operation

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

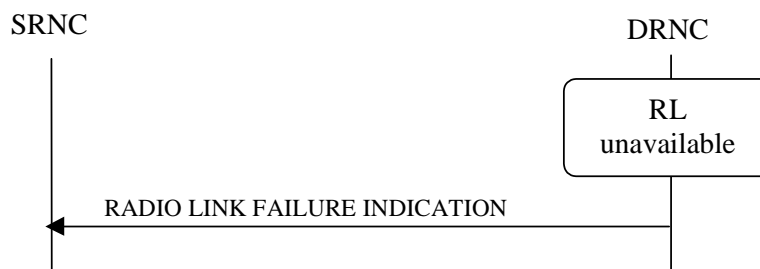


Figure 18: Radio Link Failure procedure, Successful Operation

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 - The algorithm in ref. [10] shall use the minimum value of the parameters N_INSYNCR_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

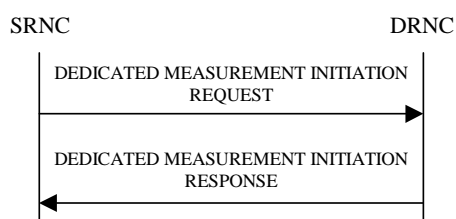


Figure 20: Dedicated Measurement Initiation procedure, Successful Operation

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 is provided within the RL Information, the measurement request shall apply for the requested physical channel individually. If no *DPCH ID* 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 *DPCH ID* 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.]

8.3.11.3 Unsuccessful Operation

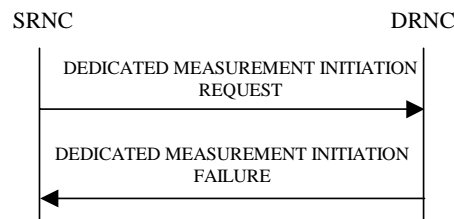


Figure 21: Dedicated Measurement Initiation procedure, Unsuccessful Operation

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 Demand | Periodic | Event A | Event B | Event C | Event D | Event E | Event F | On Modification |
| 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 | | | | | | | |

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

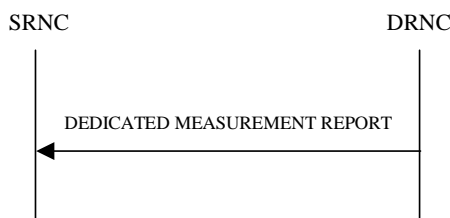


Figure 22: Dedicated Measurement Reporting procedure, Successful Operation

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 *DPCH ID* 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.]

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

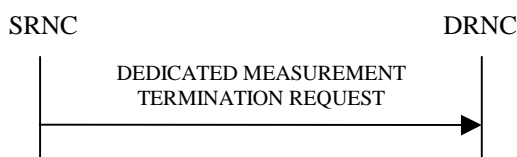


Figure 23: Dedicated Measurement Termination procedure, Successful Operation

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

-

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 - *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

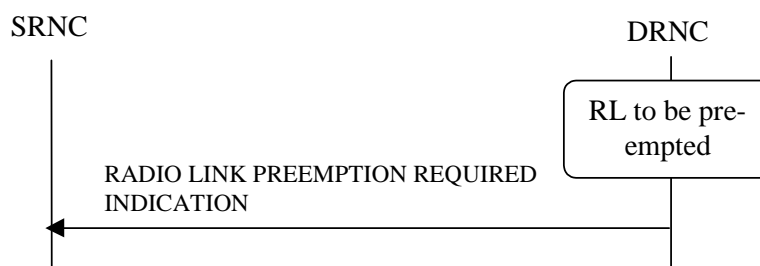


Figure 26B: Radio Link Pre-emption procedure, Successful Operation

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.

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 is 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 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 – 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*.]

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

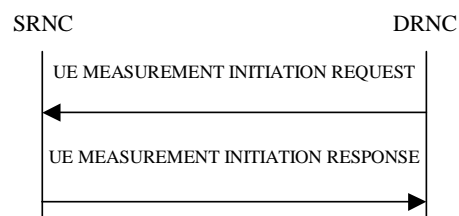


Figure 26F: UE Measurement Initiation procedure, Successful Operation

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.]

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

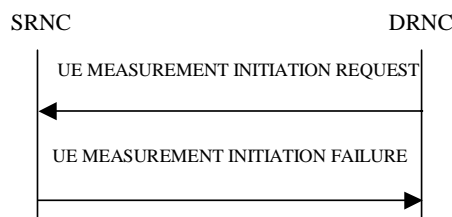


Figure 26G: UE Measurement Initiation procedure, Unsuccessful Operation

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

-

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

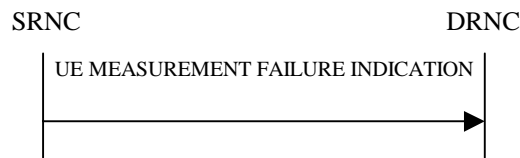


Figure 26J: UE Measurement Failure procedure, Successful Operation

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

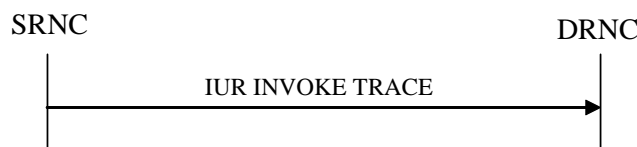


Figure 26K: Iur Invoke Trace procedure, Successful Operation

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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8.4 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

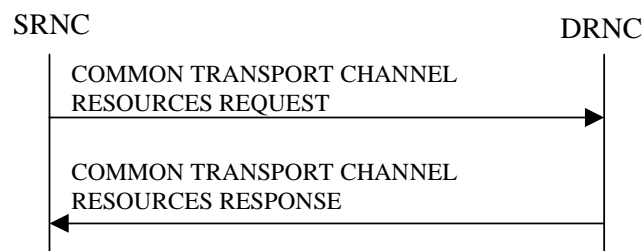


Figure 27: Common Transport Channel Resources Initialisation procedure, Successful Operation

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 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 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.

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 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.

8.4.1.3 Unsuccessful Operation

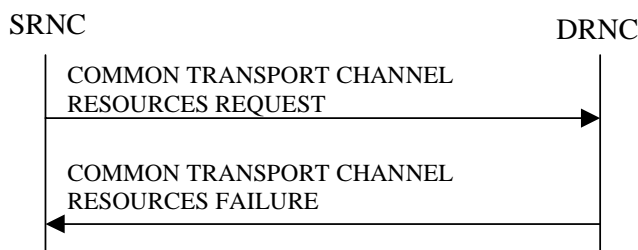


Figure 28: Common Transport Channel Resources Initialisation procedure, Unsuccessful Operation

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.

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 resources allocated for the UE.

8.4.2.3 Abnormal Conditions

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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

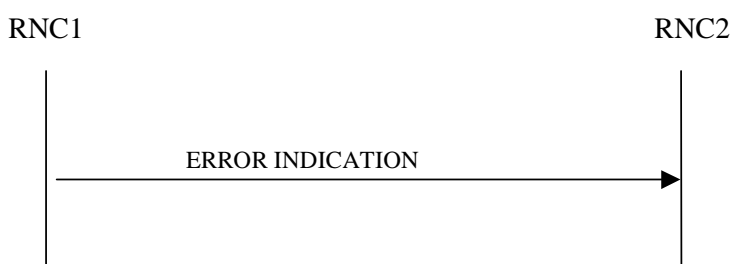


Figure 30: Error Indication procedure, Successful Operation

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 RNC₁/BSS₁ and RNC₂/BSS₂ shall use the error indication procedure as specified in section 8.5.1.2.

8.5.1.3 Abnormal Conditions

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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 RNC₁ and the RNC to which the request is sent is referred to as RNC₂.

This procedure uses the signalling bearer connection for the relevant Distant RNC Context.

8.5.2.2 Successful Operation

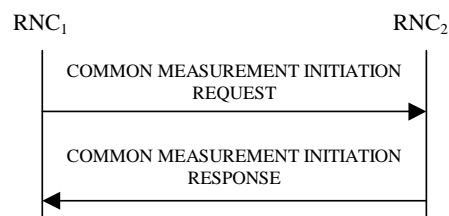


Figure 30A: Common Measurement Initiation procedure, Successful Operation

The procedure is initiated with a COMMON MEASUREMENT INITIATION REQUEST message sent from the RNC₁ to the RNC₂.

Upon receipt, the RNC₂ 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 - *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 RNC₂ 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 RNC₂ 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 RNC₂ 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 RNC₂ 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 RNC₂ 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", "transmitted carrier power", "received total wide band power", or "UL timeslot ISCP" the RNC₂ shall initiate measurements on the measured object identified by the *Reference Cell Identifier IE*.

If the *Common Measurement Type IE* is set to "RT load", the RNC₂ 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 RNC₂ shall report the result of both uplink and downlink measurements.

If the *Common Measurement Type IE* is set to "NRT load Information", the RNC₂ 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 RNC₂ 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 RNC₂ 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 RNC₂ 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 RNC₂ 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 RNC₂ 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 RNC₂ shall use the value zero for the hysteresis time.

If the *Report Characteristics IE* is set to "Event B", the RNC₂ 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 RNC₂ shall use the value zero for the hysteresis time.

If the *Report Characteristics* IE is set to "Event C", the RNC₂ 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 RNC₂ 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 RNC₂ 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 RNC₂ 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 RNC₂ 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 RNC₂ 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 RNC₂ 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 RNC₂ shall use the value of the *Measurement Threshold 1* IE instead. If the *Measurement Hysteresis Time* IE is not included, the RNC₂ 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 RNC₂ 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 RNC₂ 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 RNC₂ 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 RNC₂ shall use the value of the *Measurement Threshold 1* IE instead. If the *Measurement Hysteresis Time* IE is not included, the RNC₂ 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 RNC₂ 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 RNC₂ 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_{UTRAN-GPS} Change Limit* IE is included in the *T_{UTRAN-GPS} Measurement Threshold Information* IE, the RNC₂ shall calculate the change of T_{UTRAN-GPS} value (F_n) each time a new measurement result is received after point C in the measurement model [25]. The RNC₂ 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-GPS} Change Limit* IE. The change of T_{UTRAN-GPS} value (F_n) is calculated according to the following:

$$F_n = 0 \text{ for } n = 0$$

$$F_n = (M_n - M_{n-1}) \bmod 37158912000000 - ((SFN_n - SFN_{n-1}) \bmod 4096) * 10 * 3.84 * 10^3 * 16 + F_{n-1} \text{ for } n > 0$$

F_n is the change of the T_{UTRAN-GPS} 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_n is the latest measurement result received after point C in the measurement model [25], measured at SFN_n.

M_{n-1} is the previous measurement result received after point C in the measurement model [25], measured at SFN_{n-1}.

M_1 is the first measurement result received after point C in the measurement model [25], after first Common Measurement Reporting at initiation or after the last event was triggered.

M_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.

- If the *Predicted $T_{UTRAN-GPS}$ Deviation Limit* IE is included in the *$T_{UTRAN-GPS}$ Measurement Threshold Information* IE, the RNC₂ shall update the P_n and F each time a new measurement result is received after point C in the measurement model [25]. The RNC₂ shall initiate the Common Measurement Reporting procedure and set n equal to zero when F_n rises above the threshold indicated by the *Predicted $T_{UTRAN-GPS}$ Deviation Limit* IE. The P_n and F_n are calculated according to the following:

$$P_n = b \quad \text{for } n=0$$

$$P_n = ((a/16) * ((SFN_n - SFN_{n-1}) \bmod 4096) / 100 + ((SFN_n - SFN_{n-1}) \bmod 4096) * 10 * 3.84 * 10^3 * 16 + P_{n-1}) \bmod 37158912000000 \quad \text{for } n > 0$$

$$F_n = \min((M_n - P_n) \bmod 37158912000000, (P_n - M_n) \bmod 37158912000000) \quad \text{for } n > 0$$

P_n is the predicted $T_{UTRAN-GPS}$ 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 $T_{UTRAN-GPS}$ Drift Rate value.

b is the last reported $T_{UTRAN-GPS}$ value.

F_n is the deviation of the last measurement result from the predicted $T_{UTRAN-GPS}$ value (P_n) when n measurements have been received after the 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 [25], measured at SFN_n .

M_1 is the first measurement result received after point C in the measurement model [25], after first Common Measurement Reporting at initiation or after the last event was triggered.

The $T_{UTRAN-GPS}$ Drift Rate is determined by the RNS₂ 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 RNC₂ shall calculate the change of SFN-SFN value (F_n) each time a new measurement result is received after point C in the measurement model [25]. The RNC₂ 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:

$$F_n = 0 \quad \text{for } n=0$$

$$[FDD - F_n = (M_n - a) \bmod 614400 \quad \text{for } n > 0]$$

$$[TDD - F_n = (M_n - a) \bmod 40960 \quad \text{for } n > 0]$$

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 [25], measured at SFN_n .

M_1 is the first measurement result received after point C in the measurement model [25], 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 RNC₂ shall each time a new measurement result is received after point C in the measurement model [25], update the P_n and F_n . The RNC₂ 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:

$$P_n = b \quad \text{for } n=0$$

$$[\text{FDD} - P_n = ((a/16) * ((SFN_n - SFN_{n-1}) \bmod 4096) / 100 + P_{n-1}) \bmod 614400 \quad \text{for } n > 0]$$

$$[\text{FDD} - F_n = \min((M_n - P_n) \bmod 614400, (P_n - M_n) \bmod 614400) \quad \text{for } n > 0]$$

$$[\text{TDD} - P_n = ((a/16) * (15 * (SFN_n - SFN_{n-1}) \bmod 4096 + (TS_n - TS_{n-1})) / 1500 + P_{n-1}) \bmod 40960 \quad \text{for } n > 0]$$

$$[\text{TDD} - F_n = \min((M_n - P_n) \bmod 40960, (P_n - M_n) \bmod 40960) \quad \text{for } n > 0]$$

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 [25], measured at the [TDD - the Time Slot TS_n of] the Frame SFN_n .

M_1 is the first measurement result received after point C in the measurement model [25], after first Common Measurement Reporting at initiation or after the last event was triggered.

The SFN-SFN Drift Rate is determined by the RNS_2 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_2 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_2 shall terminate the measurement locally without reporting this to RNC_1 .

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_2 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_2 shall use the *UTRAN GPS Timing Measurement Minimum Accuracy Class* IE included in the *Report Characteristics* IE according to the following:

- If the *UTRAN GPS Timing Measurement Minimum Accuracy Class* IE indicates "Class A", then the concerned RNC_2 shall perform the measurement with the highest supported accuracy within the accuracy classes A, B or C.
- If the *UTRAN GPS Timing Measurement Minimum Accuracy Class* IE indicates the "Class B", then the concerned RNC_2 shall perform the measurements with the highest supported accuracy within the accuracy classes B and C.
- If the *UTRAN GPS Timing Measurement Minimum Accuracy Class* IE indicates "Class C", then the concerned RNC_2 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_2 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.

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 RNC₂ 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 RNC₂ 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".
- 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 RNC₂ 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 RNC₂ shall report all the available measurements in the *Successful Neighbouring cell SFN-SFN Observed Time Difference Measurement Information* IE, and the RNC₂ 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 RNC₂ 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 RNC₂ shall include in the *T_{UTRAN-GPS} Measurement Value Information* IE the *T_{UTRAN-GPS} Quality* IE and the *T_{UTRAN-GPS} 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 RNC₁ to the BSS₂ or from the BSS₁ to the RNC₂/BSS₂.

Upon receipt, the RNC₂/BSS₂ 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 RNC₂/BSS₂ 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 RNC₂/BSS₂ 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 RNC₂/BSS₂ 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 RNC₂/BSS₂ was able to initiate the measurement requested by RNC₁/BSS₁ 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

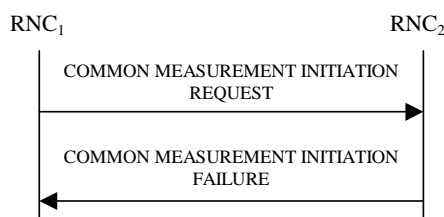


Figure 30B: Common Measurement Initiation procedure, Unsuccessful Operation

If the requested measurement cannot be initiated, the RNC₂ 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 RNC₂ shall reject the procedure using the COMMON MEASUREMENT INITIATION FAILURE message.

If the COMMON MEASUREMENT INITIATION REQUEST message contains the *T_{UTRAN-GPS} 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 RNC₂ 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_{UTRAN-GPS Measurement Minimum Accuracy Class}* IE in the *Common Measurement Accuracy* IE is not included in the COMMON MEASUREMENT INITIATION REQUEST message, the RNC₂ shall reject the Common Measurement Initiation procedure using the COMMON MEASUREMENT INITIATION FAILURE message.

If the *Common Measurement Type* IE is not set to "UTRAN GPS Timing of Cell Frames for UE Positioning" and the *Common Measurement Accuracy* IE is included in the COMMON MEASUREMENT INITIATION REQUEST message, the RNC₂ 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 RNC₂ 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 RNC₂ 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 RNC₂ 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 | |

[TDD - If the Common Measurement Type requires the Time Slot Information but the [3.84Mcps TDD - *Time Slot* IE] [1.28Mcps TDD – *Time Slot LCR* IE] is not provided in the COMMON MEASUREMENT INITIATION REQUEST message the RNS₂ 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 RNS₂ 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 lur and lur-g interfaces

| Common Measurement Type | Interface | |
|---|-----------|-------|
| | lur | lur-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 |

If the RNC₂ receives from the BSS₁ a COMMON MEASUREMENT INITIATION REQUEST message in which a measurement, which is not applicable on the lur-g interface, is requested, the RNC₂ shall reject the Common Measurement Initiation procedure.

If the BSS₂ receives from the BSS₁ / RNC₁ a COMMON MEASUREMENT INITIATION REQUEST message in which a measurement, which is not applicable on the lur-g interface, is requested, the BSS₂ shall reject the Common Measurement Initiation procedure.

If the RNC₂ receives from the BSS₁ a COMMON MEASUREMENT INITIATION REQUEST message in which the *SFN reporting indicator* IE is set to "FN Reporting Required", the RNC₂ shall ignore that IE.

If the BSS₂ receives from the BSS₁ / RNC₁ a COMMON MEASUREMENT INITIATION REQUEST message in which the *SFN reporting indicator* IE is set to "FN Reporting Required", the BSS₂ 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 RNC₂/BSS₂ shall reject the Common Measurement Initiation procedure.

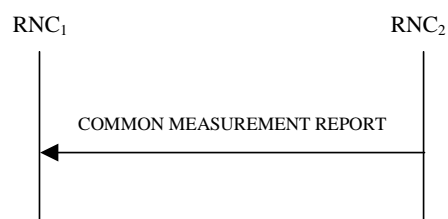
8.5.3 Common Measurement Reporting

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 RNC₂ 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 RNC₁ 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 RNC₂ was configured to perform the Measurement Recovery Behavior, the RNC₂ shall indicate Measurement Available to the RNC₁ 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 RNC₂ shall include the *SFN-SFN Quality* IE and the *SFN-SFN Drift Rate Quality* IE if available.

If the Common Measurement Type provided by RNC₁ when initiating the measurement with the Common Measurement Initiation procedure was "UTRAN GPS Timing of Cell Frames for UE Positioning", then the RNC₂ shall include in the *T_{UTRAN-GPS} Measurement Value Information* IE the *T_{UTRAN-GPS} Quality* IE and the *T_{UTRAN-GPS} 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 RNC₂/BSS₂ 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 RNC₁/BSS₁ when initiating the measurement with the Common Measurement Initiation procedure.

If the Common measurement type provided by RNC₁ when initiating the measurement with the Common Measurement Initiation procedure was "SFN-SFN Observed Time Difference", then RNC₂ 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 RNC₁ 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 RNC₂ 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, RNC₂ shall terminate reporting of common measurements corresponding to the received *Measurement ID* IE.

8.5.4.2.1 Successful Operation for lur-g

The RNC₁/BSS₁ and RNC₂/BSS₂ 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 RNC₂ to RNC₁ to inform the RNC₁ that a previously requested measurement can no longer be reported. RNC₂ has locally terminated the indicated measurement. The RNC₂ 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 lur-g

The RNC₁/BSS₁ and RNC₂/BSS₂ 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

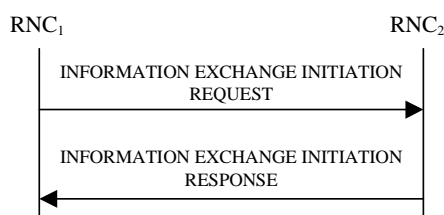


Figure 30F: Information Exchange Initiation procedure, Successful Operation

The procedure is initiated with an INFORMATION EXCHANGE INITIATION REQUEST message sent from RNC₁ to RNC₂.

Upon receipt, the RNC₂ 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 RNC₂ 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.

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 RNC₂ shall report the requested information immediately.

If the *Information Report Characteristics* IE is set to "Periodic", the RNC₂ 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 RNC₂ 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 RNC₂ shall initiate the Information Reporting procedure when the requested information becomes available. The RNC₂ 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 RNC₂ 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 RNC₂ 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 RNC₂ 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 RNC₂ 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 RNC₂ 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 RNC₂ 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 RNC₂ 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 RNC₂ 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 RNC₂ shall report the result of both uplink and downlink cell capacity information.
- If any of the above *Information Type* IEs becomes temporarily unavailable, the RNC₂ 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 RNC₂ shall initiate the Information Reporting procedure for this specific Information.
- If the *Information Type* IE is set to "NACC related data", the RNC₂ 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 RNC₂ 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.

Response message:

If the RNC₂ is able to determine the information requested by the RNC₁, 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 "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.

8.5.6.2.1 Successful Operation for lur-g

The procedure is initiated with an INFORMATION EXCHANGE INITIATION REQUEST message sent from BSS₁ to BSS₂/RNC₂ or by RNC₁ to BSS₂.

Upon receipt, the BSS₂/RNC₂ 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 lur-g:

If the *Information Type Item* IE is set to "Cell Capacity Class", the RNC₂/BSS₂ 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

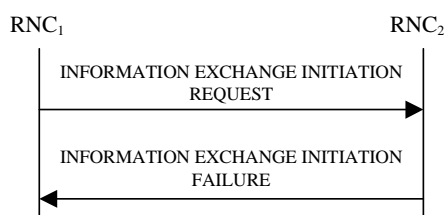


Figure 30G: Information Exchange Initiation procedure, Unsuccessful Operation

If the requested Information Type received in the *Information Type* IE indicates a type of information that RNC₂ cannot provide, the RNC₂ shall reject the Information Exchange Initiation procedure.

If the requested information provision cannot be accessed, the RNC₂ 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 RNC₂ 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 set to "NACC related data" the RNC₂ 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 RNC₂ 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 RNC₂ 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 |

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 | |

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 RNC₂ 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 RNC₁ 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 lur-g

The RNC₁/BSS₁ and RNC₂/BSS₂ 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 RNC₂ shall terminate the information exchange corresponding to the *Information Exchange ID* IE provided by the RNC₁ when initiating the information exchange with the Information Exchange Initiation procedure.

8.5.8.2.1 Successful Operation for lur-g

The RNC₁/BSS₁ and RNC₂/BSS₂ 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

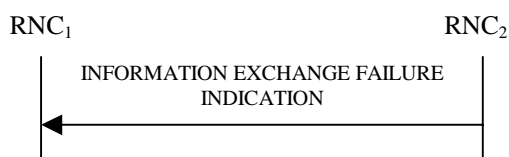


Figure 30J: Information Exchange Failure procedure, Successful Operation

This procedure is initiated with a INFORMATION EXCHANGE FAILURE INDICATION message, sent from the RNC₂ to the RNC₁, to inform the RNC₁ that information previously requested by the Information Exchange Initiation procedure can no longer be reported. The RNC₂ shall include in the INFORMATION EXCHANGE FAILURE INDICATION message the *Information Exchange ID* IE set to the same value provided by the RNC₁ when initiating the information exchange with the Information Exchange Initiation procedure, and the RNC₂ 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 RNC₁/BSS₁ and RNC₂/BSS₂ 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 RNC₁ and RNC₂ in the event of an abnormal failure.

The procedure uses connectionless signalling.

8.5.10.2 Successful Operation

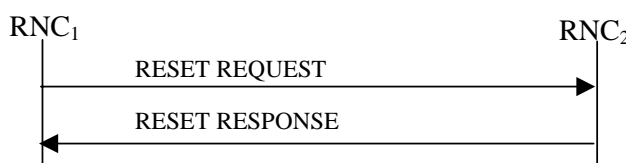


Figure 30K: Reset procedure, Successful Operation

The procedure is initiated with a RESET REQUEST message sent from the RNC₁ to the RNC₂.

If the *Reset Indicator* IE is set to "Context", then:

- For all indicated UE Contexts identified by the *S-RNTI* IE, the RNC₂ 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 RNC₂ shall take actions according to Annex D.2.
- For all indicated UE Contexts identified by the *D-RNTI* IE, the RNC₂ in the role of SRNC, shall remove the information related to the RNC₁ 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 RNC₂ 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 RNC₂ shall take actions according to Annex D.2.

If the *Reset Indicator* IE is set to "All Contexts", then the RNC₂ shall:

- In the role of DRNC, remove all the UE Contexts for which the RNC₁ is the SRNC and all the radio resources allocated for these UE Contexts. In addition, the RNC₂ shall take actions according to Annex D.2.
- In the role of SRNC, remove the information related to the RNC₁ 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 RNC₂ has removed information related to the RNC₁, the RNC₂ 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 RNC₂ shall return the RESET RESPONSE message to the RNC₁.

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

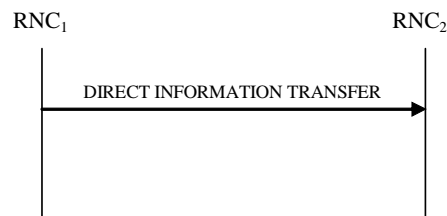


Figure 30L: Direct Information Transfer procedure, Successful Operation

The procedure is initiated with an DIRECT INFORMATION TRANSFER message sent from RNC₁ to RNC₂.

If the initiating RNC of this procedure is RNC₁, RNC₁ 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 RNC₁ is in the DRNC role for some UEs whose UE Link contains the concerned MBMS bearer service and whose SRNC is RNC₂ and if the channel type is determined by the RNC₁ for certain cells in the DRNS, the procedure shall be initiated by the RNC₁ to the RNC₂. In this case, the RNC₁ 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 RNC₁ is in the DRNC role for some UEs whose UE Link contains the concerned MBMS bearer service and whose SRNC is RNC₂, then the RNC₁ may initiate this procedure to indicate channel type change for the MBMS bearer service in certain cells. In this case, the RNC₁ shall include in the *Provided Information IE* the *Channel Type Information IE* in the DIRECT INFORMATION TRANSFER message.

The RNC₁ 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 RNC₁ 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 RNC₂ and if the preferred frequency layer is determined by the RNC₁ for certain cells that host at least one of these CELL_DCH UEs whose SRNC is RNC₂, the procedure shall be initiated by the RNC₁ to the RNC₂. In this case, the RNC₁ 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 RNC₁ that host at least one of these CELL_DCH UEs whose SRNC is RNC₂ 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

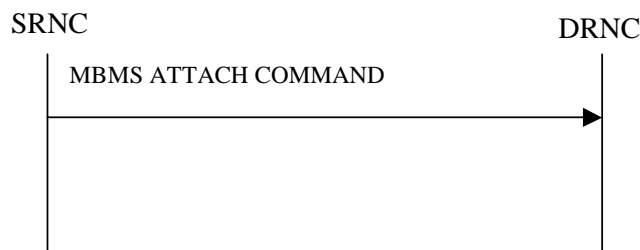


Figure 31: MBMS Attach procedure, Successful Operation

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

-

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

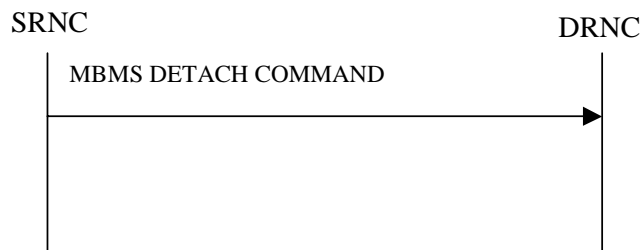


Figure 32: MBMS Detach procedure, Successful Operation

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:

| | |
|----------|--|
| M | IEs marked as Mandatory (M) shall always be included in the message. |
| O | IEs marked as Optional (O) may or may not be included in the message. |
| C | 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. |
| YES | Criticality information is applied. 'YES' is usable only for non-repeatable information elements. |
| GLOBAL | The information element and all its repetitions together have one common criticality information. 'GLOBAL' is usable only for repeatable information elements. |
| EACH | 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 9.2.1.50 | | 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 |
| UL DPCH Information | | 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 DPCCH Slot Format | M | | 9.2.2.52 | | – | |
| >Uplink SIR Target | O | | Uplink SIR 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 | C-EDCHInfo | | 9.2.2.52A | | YES | reject |
| DL DPCH Information | | 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 | | – | |
| >Power Offset Information | | 1 | | | – | |
| >>PO1 | M | | Power Offset 9.2.2.30 | Power offset for the TFCI bits. | – | |
| >>PO2 | M | | Power Offset 9.2.2.30 | Power offset for the TPC bits. | – | |
| >>PO3 | M | | Power Offset 9.2.2.30 | Power offset for the pilot bits. | – | |
| >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 | | – | |
| DCH Information | M | | DCH FDD Information 9.2.2.4A | | YES | reject |
| RL Information | | 1...<maxn oofRLs> | | | 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 | | – | |

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|---|--------------------|--|--------------------------------------|--------------------------------|-------------|----------------------|
| >Propagation Delay | O | | 9.2.2.33 | | – | |
| >Diversity Control Field | C – NotFirstRL | | 9.2.1.20 | | – | |
| >Initial DL TX Power | O | | DL Power 9.2.1.21A | | – | |
| >Primary CPICH Ec/No | O | | 9.2.2.32 | | – | |
| >Not Used | O | | NULL | | – | |
| >Transmit Diversity Indicator | C – Diversity mode | | 9.2.2.48 | | – | |
| >Enhanced Primary CPICH Ec/No | O | | 9.2.2.13I | | 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 |
| 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 9.2.2.19a | | YES | reject |
| HS-PDSCH RL ID | C – InfoHSDSCH | | RL ID 9.2.1.49 | | YES | reject |
| MBMS Bearer Service List | | $0 \dots < \max_{n \text{ of MBMS}} >$ | | | GLOBAL | notify |
| >TMGI | M | | 9.2.1.80 | | – | |
| E-DPCH Information | | $0..1$ | | | 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 | | – | |
| E-DCH FDD Information | C-EDCHInfo | | 9.2.2.4B | | YES | reject |
| Serving E-DCH RL | O | | 9.2.2.38C | | YES | reject |
| F-DPCH Information | | $0..1$ | | | YES | reject |
| >Power Offset Information | | 1 | | | – | |
| >>PO2 | M | | Power Offset 9.2.2.30 | Power offset for the TPC bits. | – | |
| >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 | | – | |
| Initial DL DPCH Timing | O | | 9.2.2.21b | | YES | ignore |

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|---|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| Adjustment Allowed | | | | | | |
| DCH Indicator For E-DCH-HSDPA Operation | O | | 9.2.2.67 | | YES | reject |

| 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. |

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 9.2.1.50 | | YES | reject |
| S-RNTI | M | | 9.2.1.53 | | YES | reject |
| D-RNTI | O | | 9.2.1.24 | | YES | reject |
| UL Physical Channel Information | | 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 |
| DL Physical Channel Information | | 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 |
| Allowed Queuing Time | O | | 9.2.1.2 | | YES | reject |
| UL CCTrCH Information | | 0..<maxno of CCTrCHs> | | 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 | YES | reject |
| DL CCTrCH Information | | 0..<maxno of CCTrCHs> | | 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 | | – | |
| >TPC CCTrCH List | | 0..<maxno CCTrCHs> | | List of uplink CCTrCH which provide TPC | – | |
| >>TPC CCTrCH ID | M | | CCTrCH ID 9.2.3.2 | | – | |
| DCH Information | O | | DCH TDD Information | | YES | reject |

| | | | | | | |
|--|-----------------------|----------------------|--|--|--------|--------|
| DSCH Information | O | | 9.2.3.2A DSCH TDD Information 9.2.3.3a | | YES | reject |
| USCH Information | O | | 9.2.3.15 | | YES | reject |
| RL Information | | 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 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. | 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 |
| 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 - InfoHSDS CH | | RL ID 9.2.1.49 | | YES | reject |
| PDSCH-RL-ID | O | | RL ID 9.2.1.49 | | YES | ignore |
| MBMS Bearer Service List | | 0..<maxno ofMBMS> | | | GLOBAL | notify |
| >TMGI | M | | 9.2.1.80 | | – | |

| 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 |
| RL Information Response | | <i>1..<maxno ofRLs></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 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 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 | | – | |
| >Maximum DL TX Power | M | | DL Power 9.2.1.21A | | – | |
| >Minimum DL TX Power | M | | DL Power 9.2.1.21A | | – | |
| >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] | – | |
| >Primary CPICH Power | M | | 9.2.1.44 | | – | |
| >Not Used | O | | NULL | | – | |

| 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 | | – | |
| >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 | | <i>0..<maxno ofActiveMBMS></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 | | – | |
| >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 |
| Uplink SIR Target | O | | Uplink SIR 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 FDD Information Response 9.2.2.19b | | YES | ignore |

| 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. |

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 |
| RL Information Response | | 0..1 | | Mandatory for 3.84Mcps TDD , not applicable to 1.28Mcps 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 | | – | |
| >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 TDD | O | | 9.2.3.7B | | – | |
| >UL CCTrCH Information | | 0..<maxno of CCTrCHs> | | For DCH | GLOBAL | ignore |
| >>CCTrCH ID | M | | 9.2.3.2 | | – | |
| >>UL DPCH Information | | 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 9.2.1.69 | | YES | ignore |
| >DL CCTrCH Information | | 0..<maxno of CCTrCHs> | | For DCH | GLOBAL | ignore |
| >>CCTrCH ID | M | | 9.2.3.2 | | – | |
| >>DL DPCH Information | | 0..1 | | | YES | ignore |
| >>>Repetition Period | M | | 9.2.3.7 | | – | |

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|--------------------------------------|----------|----------------------|-----------------------|--|-------------|----------------------|
| >>>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 |
| >DSCH Information Response | | 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 | | – | |
| >USCH Information Response | | 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 |
| Uplink SIR Target | M | | Uplink SIR 9.2.1.69 | | YES | ignore |
| Criticality Diagnostics | O | | 9.2.1.13 | | YES | ignore |
| RL Information Response LCR | | 0..1 | | Mandatory for 1.28Mcps TDD, not applicable to 1.28Mcps 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 LCR | M | | 9.2.3.13H | | – | |
| >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 | | – | |

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|-------------------------------------|----------|---------------------------|------------------------------------|-------------------------------|-------------|----------------------|
| >Minimum DL TX Power | M | | 9.2.1.21A 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 | | – | |
| >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 | | – | |
| >UL CCTrCH Information LCR | | 0..<maxno of CCTrCHs LCR> | | For DCH | GLOBAL | ignore |
| >>CCTrCH ID | M | | 9.2.3.2 | | – | |
| >>UL DPCH Information LCR | | 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 LCR | M | | 9.2.3.13G | | – | |
| >>Uplink SIR Target CCTrCH | O | | Uplink SIR 9.2.1.69 | | YES | ignore |
| >DL CCTrCH Information LCR | | 0..<maxno of CCTrCHs LCR> | | For DCH | GLOBAL | ignore |
| >>CCTrCH ID | M | | 9.2.3.2 | | – | |
| >>DL DPCH Information LCR | | 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 LCR | M | | 9.2.3.2E | | | |
| >>>TSTD Indicator | M | | 9.2.3.13E | | – | |
| >DCH Information Response | O | | 9.2.1.16A | | YES | ignore |
| >DSCH Information Response LCR | | 0 .. <maxno of DSCHs LCR> | | | 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 | | – | |
| >USCH Information Response LCR | | 0 .. <maxno of USCHs LCR> | | | 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 | | – | |

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|--|----------|---------------------------------------|--|-----------------------|-------------|----------------------|
| >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 |
| 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 |
| Active MBMS Bearer Service List | | <i>0..<maxno ofActiveM BMS></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 | | – | |

| 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. |
| <i>maxnoofUSCHs</i> | Maximum number of USCHs for one UE for 3.84Mcps TDD. |
| <i>maxnoofCCTrCHs</i> | Maximum number of CCTrCH 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. |

9.1.5 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 | | – | |
| >>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 | | – | |
| >>>Maximum DL TX Power | M | | DL Power 9.2.1.21A | | – | |
| >>>Minimum DL TX | M | | DL Power | | – | |

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|---|----------|--------------------------------------|--|-------------------------------|-------------|----------------------|
| 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 | | <i>0..<maxno ofActiveMBMS></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 | | – | |
| >>>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 |
| >>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 |
| Uplink SIR Target | O | | Uplink SIR 9.2.1.69 | | YES | ignore |
| Criticality Diagnostics | O | | 9.2.1.13 | | YES | ignore |

| 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. |

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 | | – | |
| 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 9.2.1.69 | | YES | reject |
| RL Information | | <i>1..<maxn oofRLs- 1></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 9.2.1.21A | Power on DPCH or on F-DPCH | YES | ignore |
| >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 |
| >RL specific E-DCH 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 |
| Active Pattern Sequence Information | O | | 9.2.2A | Either all the already active Transmissio n Gap Sequence(s) are addressed (Transmissio n Gap Pattern sequence shall overlap with the existing one) or none of the transmission gap sequences is 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 Adjustment Allowed | O | | 9.2.2.21b | | YES | ignore |
| HS-DSCH Serving Cell Change Information | O | | 9.2.2.19f | | YES | reject |
| Serving Cell Change CFN | O | | CFN 9.2.1.9 | | YES | reject |
| E-DPCH Information | | <i>0..1</i> | | | YES | reject |
| >Maximum Set of E- | M | | 9.2.2.24e | | – | |

| | | | | | | |
|-----------------------------------|----------------|--|-----------|--|-----|--------|
| DPDCHs | | | | | | |
| >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 |
| E-DCH FDD Information | C- EDCHInfo | | 9.2.2.4B | | YES | reject |

| 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. |

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 | | – | |
| RL Information | | 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 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 |
| >UL Synchronisation Parameters LCR | | 0..1 | | Mandatory for 1.28Mcps TDD. Not Applicable to 3.84Mcps 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 |
| Permanent NAS UE Identity | O | | 9.2.1.73 | | YES | ignore |
| UL CCTrCH Information | | 0..<maxno of CCTrCHs > | | | 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 | – | |
| DL CCTrCH Information | | 0..<maxno of CCTrCHs > | | | 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 |

| 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 | | – | |
| RL Information Response | | <i>1..<maxnoof RLS-1></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 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 9.2.1.69 | | – | |
| >Maximum 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 | | – | |
| >Maximum DL TX Power | M | | DL Power 9.2.1.21A | | – | |
| >Minimum DL TX Power | M | | DL Power 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 |
| >Active MBMS Bearer | | <i>0..<maxnoof</i> | | | GLOBAL | ignore |

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|--|----------|-------------------|--|-----------------------|-------------|----------------------|
| Service List | | <i>ActiveMBMS</i> | | | | |
| >>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 9.2.2.9.A | | 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 |

| 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. |

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 | | – | |
| RL Information Response | | 0..1 | | Mandatory for 3.84Mcps TDD, not applicable to 1.28Mcps 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 | | – | |
| >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 | | – | |
| >UL CCTrCH Information | | 0..<maxnoof CCTrCHs> | | For DCH | GLOBAL | ignore |
| >>CCTrCH ID | M | | 9.2.3.2 | | – | |
| >>UL DPCH Information | | 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 | | – | |
| >DL CCTrCH Information | | 0..<maxnoof CCTrCHs> | | For DCH | GLOBAL | ignore |
| >>CCTrCH ID | M | | 9.2.3.2 | | – | |
| >>DL DPCH Information | | 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 |

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|--------------------------------------|----------|-------------------------|------------------------|--|-------------|----------------------|
| >DCH Information | | 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 | | – | |
| >DSCH Information Response | | 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 <i>Diversity Indication</i> | O | | | | – | |
| >>> <i>Non Combining</i> | | | | | – | |
| >>>>Binding ID | O | | 9.2.1.3 | | – | |
| >>>>Transport Layer Address | O | | 9.2.1.62 | | – | |
| >USCH Information Response | | 0 .. <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 |
| Criticality Diagnostics | O | | 9.2.1.13 | | YES | ignore |
| RL Information Response LCR | | 0..1 | | Mandatory for 1.28Mcps TDD, not applicable to 3.84Mcps 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 LCR | M | | 9.2.3.13H | | – | |
| >Maximum Uplink SIR | M | | Uplink SIR 9.2.1.69 | | – | |
| >Minimum Uplink SIR | M | | Uplink SIR | | – | |

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|--|----------|--------------------------------------|-----------------------|-----------------------|-------------|----------------------|
| | | | 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 9.2.1.21A | | – | |
| >Minimum DL TX Power | M | | DL Power 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 | | – | |
| >UL CcTrCH Information LCR | | <i>0..<maxnoof CcTrCHsLCR></i> | | For DCH | GLOBAL | ignore |
| >>CcTrCH ID | M | | 9.2.3.2 | | – | |
| >>UL DPCH Information LCR | | <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 | | – | |
| >DL CcTrCH Information LCR | | <i>0..<maxnoof CcTrCHsLCR></i> | | For DCH | GLOBAL | ignore |
| >>CcTrCH ID | M | | 9.2.3.2 | | – | |
| >>DL DPCH Information LCR | | <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 | | – | |
| >DSCH Information Response LCR | | <i>0 .. <maxnoof DSCHsLCR></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 | | – | |
| >USCH Information Response LCR | | <i>0 .. <maxnoof USCHsLCR></i> | | | 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 | | – | |

| 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 | | – | |
| >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 |
| Active MBMS Bearer Service List | | <i>0..<maxnoof ActiveMBMS></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 | | – | |
| HS-DSCH Information Response | O | | HS-DSCH TDD Information Response 9.2.3.3ab | | YES | ignore |
| HS-DSCH-RNTI | O | | 9.2.1.30P | | YES | ignore |

| Range Bound | Explanation |
|--------------------------|---|
| <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 Cause Level | M | | | | YES | ignore |
| >General | | | | | – | |
| >>Cause | M | | 9.2.1.5 | | – | |
| >RL Specific | | | | | – | |
| >>Unsuccessful RL Information Response | | 1..<maxnoof RLS-1> | | | EACH | ignore |
| >>>RL ID | M | | 9.2.1.49 | | – | |
| >>>Cause | M | | 9.2.1.5 | | – | |
| >>>Successful RL Information Response | | 0..<maxnoof 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 9.2.2.14A | | YES | ignore |
| >>>CHOICE Diversity Indication | M | | | | – | |
| >>>>Combining | | | | | – | |
| >>>>>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 |
| >>>>>Non Combining | | | | | – | |
| >>>>>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 9.2.1.69 | | – | |
| >>>Maximum 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 | | – | |
| >>>Maximum DL TX Power | M | | DL Power 9.2.1.21A | | – | |
| >>>Minimum DL TX Power | M | | DL Power 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 | | 0..<maxnoof ActiveMBMS> | | | 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 9.2.2.9.A | | 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 |

| 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. |

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 |
| UL DPCH Information | | 0..1 | | | YES | reject |
| >UL Scrambling Code | O | | 9.2.2.53 | | – | |
| >UL SIR Target | O | | Uplink SIR 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 |
| DL DPCH Information | | 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 | | – | |
| >DL DPCH Power Information | | 0..1 | | | YES | reject |
| >>Power Offset Information | | 1 | | | – | |
| >>>PO1 | M | | Power Offset 9.2.2.30 | Power offset for the TFCI bits | – | |
| >>>PO2 | M | | Power Offset 9.2.2.30 | Power offset for the TPC bits | – | |
| >>>PO3 | M | | Power Offset 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 9.2.2.13C | | YES | reject |
| DCHs To Add | O | | DCH FDD Information 9.2.2.4A | | YES | reject |
| DCHs To Delete | | 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 | | – | |
| RL Information | | <i>0..<maxnoof RLs></i> | | | 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 |
| E-DPCH Information | | 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 | | – | |
| 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 | | 9.2.2.4MA | | YES | reject |
| Serving E-DCH RL | O | | 9.2.2.38C | | YES | reject |

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|-----------------------------|----------|-------|--------------------------|--------------------------------|-------------|----------------------|
| F-DPCH Information | | 0..1 | | | YES | reject |
| >Power Offset Information | | 1 | | | – | |
| >>PO2 | M | | Power Offset 9.2.2.30 | Power offset for the TPC bits. | – | |
| >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 | | – | |

| 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". |

| Range bound | Explanation |
|--------------------|----------------------------------|
| <i>maxnoofDCHs</i> | Maximum number of DCHs for a UE. |
| <i>maxnoofRLs</i> | Maximum number of RLs for a 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 |
| UL CCTrCH To Add | | <i>0..<maxno of CCTrCHs></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 9.2.1.69 | Mandatory for 1.28Mcps TDD; not applicable to 3.84Mcps TDD | YES | reject |
| >TDD TPC Uplink Step Size | O | | 9.2.3.10a | Mandatory for 1.28Mcps TDD, not applicable to 3.84Mcps TDD | YES | reject |
| UL CCTrCH To Modify | | <i>0..<maxno of CCTrCHs></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 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 |
| UL CCTrCH to Delete | | <i>0..<maxno of CCTrCHs></i> | | | EACH | notify |
| >CCTrCH ID | M | | 9.2.3.2 | | – | |
| DL CCTrCH To Add | | <i>0..<maxno of CCTrCHs></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 | | – | |
| >TPC CCTrCH List | | <i>0..<maxno CCTrCHs></i> | | List of uplink CCTrCH which provide TPC | – | |
| >>TPC CCTrCH ID | M | | CCTrCH ID 9.2.3.2 | | – | |
| >TDD TPC Downlink Step Size | O | | 9.2.3.10 | | YES | reject |
| DL CCTrCH To Modify | | <i>0..<maxno of CCTrCHs></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 | | – | |

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|-------------------------------------|----------|-----------------------------------|----------------------------------|--|-------------|----------------------|
| >Puncture Limit | O | | 9.2.1.46 | | – | |
| >TPC CCTrCH List | | <i>0..<maxno ofCCTrCHs></i> | | List of uplink CCTrCH which provide TPC | – | |
| >>TPC CCTrCH ID | M | | CCTrCH ID 9.2.3.2 | | – | |
| >TDD TPC Downlink Step Size | O | | 9.2.3.10 | | YES | reject |
| DL CCTrCH to Delete | | <i>0..<maxno ofCCTrCHs></i> | | | EACH | notify |
| >CCTrCH ID | M | | 9.2.3.2 | | – | |
| DCHs To Modify | O | | TDD DCHs To Modify 9.2.3.8B | | YES | reject |
| DCHs To Add | O | | DCH TDD Information 9.2.3.2A | | YES | reject |
| DCHs to Delete | | <i>0..<maxno ofDCHs></i> | | | GLOBAL | reject |
| >DCH ID | M | | 9.2.1.16 | | – | |
| DSCHs To Modify | | <i>0..<maxno ofDSCHs></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 |
| DSCHs To Add | O | | DSCH TDD Information 9.2.3.3a | | YES | reject |
| DSCHs to Delete | | <i>0..<maxno ofDSCHs></i> | | | GLOBAL | reject |
| >DSCH ID | M | | 9.2.3.3ae | | – | |
| USCHs To Modify | | <i>0..<maxno ofUSCHs></i> | | | GLOBAL | reject |
| >USCH ID | M | | 9.2.3.14 | | – | |

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|-------------------------------------|----------|---------------------------------|--|--|-------------|----------------------|
| >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 | | – | |
| >TNL QoS | O | | 9.2.1.56A | | YES | ignore |
| >RB Info | | <i>0..<maxno ofRB></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 |
| USCHs To Add | O | | USCH Information 9.2.3.15 | | YES | reject |
| USCHs to Delete | | <i>0..<maxno ofUSCHs></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 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 |
| UL Synchronisation | | <i>0..1</i> | | Mandatory | YES | ignore |

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|-----------------------------------|----------|----------------------------|-----------------------|---|-------------|----------------------|
| Parameters LCR | | | | for 1.28Mcps TDD. Not Applicable to 3.84Mcps TDD. | | |
| >Uplink Synchronisation Step Size | M | | 9.2.3.13J | | – | |
| >Uplink Synchronisation Frequency | M | | 9.2.3.13I | | – | |
| RL Information | | <i>0..<maxno ofRLs.</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 |

| Range bound | Explanation |
|-----------------------|-------------------------------------|
| <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 | | – | |
| RL Information Response | | <i>0..<maxno ofRLs></i> | | | EACH | ignore |
| >RL ID | M | | 9.2.1.49 | | – | |
| >Maximum Uplink SIR | O | | Uplink SIR 9.2.1.69 | | – | |
| >Minimum Uplink SIR | O | | Uplink SIR 9.2.1.69 | | – | |
| >Maximum DL TX Power | O | | DL Power 9.2.1.21A | | – | |
| >Minimum DL TX Power | O | | DL Power 9.2.1.21A | | – | |
| >Not Used | O | | NULL | | – | |
| >DL Code Information | O | | FDD DL Code Information 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 9.2.2.35 | | YES | ignore |
| >E-DCH FDD DL Control Channel Information | O | | 9.2.2.4D | | 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 9.2.2.19b | | YES | ignore |
| MAC-hs Reset Indicator | O | | 9.2.1.34B | | YES | ignore |

| Range bound | Explanation |
|-------------------|---------------------------------|
| <i>maxnoofRLs</i> | Maximum number of RLs for a 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 | | – | |
| RL Information Response | | <i>0..<maxnoof RLs></i> | | See Note 1 below | YES | ignore |
| >RL ID | M | | 9.2.1.49 | | – | |
| >Maximum Uplink SIR | O | | Uplink SIR 9.2.1.69 | | – | |
| >Minimum Uplink SIR | O | | Uplink SIR 9.2.1.69 | | – | |
| >Maximum DL TX Power | O | | DL Power 9.2.1.21A | | – | |
| >Minimum DL TX Power | O | | DL Power 9.2.1.21A | | – | |
| >Secondary CCPCH Info TDD | O | | 9.2.3.7B | Applicable to 3.84Mcps TDD only | – | |
| >UL CCTrCH Information | | <i>0..<maxnoof CCTrCHs></i> | | For DCH | GLOBAL | ignore |
| >>CCTrCH ID | M | | 9.2.3.2 | | – | |
| >>UL DPCH to be Added | | <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 | | – | |
| >>UL DPCH to be Modified | | <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 | | – | |
| >>>UL Timeslot Information | | <i>0..<maxnoO fTS></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 | | – | |
| >>>>UL Code Information | | <i>0..<maxnoO fDPCHs></i> | | | – | |
| >>>>>DPCH ID | M | | 9.2.3.3 | | – | |
| >>>>>TDD Channelisation Code | O | | 9.2.3.8 | | – | |
| >>>>UL Timeslot Information LCR | | <i>0..<maxnoO fTSLCR></i> | | 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 | | – | |

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|--|----------|------------------------------------|-----------------------|---------------------------------|-------------|----------------------|
| >>>>UL Code Information LCR | | <i>0..<maxnoOf fDPCHLCR></i> | | | 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 DPCH to be Deleted | | <i>0..<maxnoof DPCHs></i> | | | GLOBAL | ignore |
| >>>DPCH ID | M | | 9.2.3.3 | | – | |
| >>UL DPCH to be Added LCR | | <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 | | – | |
| >>>UL Timeslot Information LCR | M | | 9.2.3.13G | | – | |
| >DL CCTrCH Information | | <i>0..<maxnoof CCTrCHs></i> | | For DCH | GLOBAL | ignore |
| >>CCTrCH ID | M | | 9.2.3.2 | | – | |
| >>DL DPCH to be Added | | <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 | | – | |
| >>>DL Timeslot Information | M | | 9.2.3.2C | | – | |
| >>DL DPCH to be Modified | | <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 | | – | |
| >>>DL Timeslot Information | | <i>0..<maxnoOf fTS></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 | | – | |
| >>>>DL Code Information | | <i>0..<maxnoOf fDPCHs></i> | | | – | |
| >>>>DPCH ID | M | | 9.2.3.3 | | – | |
| >>>>TDD Channelisation Code | O | | 9.2.3.8 | | – | |
| >>>DL Timeslot Information LCR | | <i>0..<maxnoOf fTSLCR></i> | | 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 | | <i>0..<maxnoOf fDPCHLCR></i> | | | GLOBAL | ignore |
| >>>>DPCH ID | M | | 9.2.3.3 | | – | |
| >>>>TDD Channelisation | O | | 9.2.3.8a | | – | |

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|---------------------------------------|----------|----------------------|-----------------------|--|-------------|----------------------|
| Code LCR | | | | | | |
| >>>> 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 DPCH to be Deleted | | 0..<maxnoof DPCHs> | | | GLOBAL | ignore |
| >>>DPCH ID | M | | 9.2.3.3 | | – | |
| >>DL 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 | | – | |
| >>>DL Timeslot Information LCR | M | | 9.2.3.2E | | – | |
| >>CCTrCH Maximum DL TX Power | O | | DL Power 9.2.1.21A | Maximum allowed power on DPCH Applicable to 3.84Mcps TDD only | YES | ignore |
| >>CCTrCH Minimum DL TX Power | O | | DL Power 9.2.1.21A | Minimum allowed power on DPCH Applicable to 3.84Mcps TDD only | YES | ignore |
| >DCH Information Response | O | | 9.2.1.16A | | YES | ignore |
| >DSCH to be Added or Modified | | 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 | | – | |
| >>Binding ID | O | | 9.2.1.3 | | – | |
| >>Transport Layer Address | O | | 9.2.1.62 | | – | |
| >USCH to be Added or Modified | | 0 .. <maxnoof USCHs> | | | 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 | | – | |
| >Uplink Timing Advance Control LCR | O | | 9.2.3.13K | Applicable to 1.28Mcps TDD only | YES | ignore |
| >Secondary CCPCH Info | 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 | | |
| 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 |

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. |
| <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 |

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 |

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 | | – | |
| Criticality Diagnostics | O | | 9.2.1.13 | | YES | ignore |

| 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 |
| UL DPCH Information | | 0..1 | | | YES | reject |
| >TFCS | O | | 9.2.1.63 | TFCS for the UL. | – | |
| DL DPCH Information | | 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 |
| DCHs To Delete | | 0..<maxno ofDCHs> | | | GLOBAL | reject |
| >DCH ID | M | | 9.2.1.16 | | – | |
| Transmission Gap Pattern Sequence Information | O | | 9.2.2.47A | | YES | reject |
| RL Information | | 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 |
| E-DPCH Information | | 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 | | – | |
| 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 | | 9.2.2.4MA | | YES | reject |
| Serving E-DCH RL | O | | 9.2.2.38C | | YES | reject |

| Range Bound | Explanation |
|--------------------|------------------------------------|
| <i>maxnoofDCHs</i> | Maximum number of DCHs for one UE. |
| <i>maxnoofRLs</i> | Maximum number of RLs for a 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 |
| UL CCTrCH Information To Modify | | 0..<maxnoof CCTrCHs> | | | EACH | notify |
| >CCTrCH ID | M | | 9.2.3.2 | | – | |
| >TFCS | O | | 9.2.1.63 | | – | |
| >UL SIR Target | O | | Uplink SIR 9.2.1.69 | Applicable to 1.28Mcps TDD only | YES | reject |
| UL CCTrCH Information to Delete | | 0..<maxnoof CCTrCHs> | | | EACH | notify |
| >CCTrCH ID | M | | 9.2.3.2 | | – | |
| DL CCTrCH Information To Modify | | 0..<maxnoof CCTrCHs> | | | EACH | notify |
| >CCTrCH ID | M | | 9.2.3.2 | | – | |
| >TFCS | O | | 9.2.1.63 | | – | |
| DL CCTrCH Information to Delete | | 0..<maxnoof CCTrCHs> | | | EACH | notify |
| >CCTrCH ID | M | | 9.2.3.2 | | – | |
| DCHs To Modify | O | | TDD DCHs To Modify 9.2.3.8B | | YES | reject |
| DCHs To Add | O | | DCH TDD Information 9.2.3.2A | | YES | reject |
| DCHs to Delete | | 0..<maxnoof DCHs> | | | GLOBAL | reject |
| >DCH ID | M | | 9.2.1.16 | | – | |
| RL Information | | 0..<maxnoof RLs> | | | YES | ignore |
| >RL ID | M | | 9.2.1.49 | | – | |
| >RL Specific DCH Information | O | | 9.2.1.49A | | – | |
| UL Synchronisation Parameters LCR | | 0..1 | | Mandatory for 1.28Mcps TDD. Not Applicable to 3.84Mcps 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 TDD Information 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 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 |

| 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 | | – | |
| RL Information Response | | <i>0..<maxno ofRLs></i> | | | EACH | ignore |
| >RL ID | M | | 9.2.1.49 | | – | |
| >Maximum Uplink SIR | O | | Uplink SIR 9.2.1.69 | | – | |
| >Minimum Uplink SIR | O | | Uplink SIR 9.2.1.69 | | – | |
| >Maximum DL TX Power | O | | DL Power 9.2.1.21A | | – | |
| >Minimum DL TX Power | O | | DL Power 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 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 9.2.2.35 | | YES | ignore |
| >E-DCH FDD DL Control Channel Information | O | | 9.2.2.4D | | 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 9.2.2.19b | | YES | ignore |
| MAC-hs Reset Indicator | O | | 9.2.1.34B | | YES | ignore |

| Range Bound | Explanation |
|-------------------|---------------------------------|
| <i>maxnoofRLs</i> | Maximum number of RLs for a 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 | | – | |
| RL Information Response | | <i>0..<maxno ofRLs></i> | | See note 1 below | YES | ignore |
| >RL ID | M | | 9.2.1.49 | | – | |
| >Maximum Uplink SIR | O | | Uplink SIR 9.2.1.69 | | – | |
| >Minimum Uplink SIR | O | | Uplink SIR 9.2.1.69 | | – | |
| >Maximum DL TX Power | O | | DL Power 9.2.1.21A | | – | |
| >Minimum DL TX Power | O | | DL Power 9.2.1.21A | | – | |
| >DCH Information Response | O | | 9.2.1.16A | | YES | ignore |
| >DL CCTrCH Information | | <i>0..<maxno ofCCTrCHs></i> | | For DCH | GLOBAL | ignore |
| >>CCTrCH ID | M | | 9.2.3.2 | | – | |
| >>DL DPCH To Modify LCR | | <i>0..1</i> | | Applicable to 1.28Mcps TDD only | YES | ignore |
| >>>DL Timeslot Information LCR | | <i>0..<maxno ofTSLCR></i> | | | – | |
| >>>>Time Slot LCR | M | | 9.2.3.12a | | – | |
| >>>>Maximum DL TX Power | O | | DL Power 9.2.1.21A | Maximum allowed power on DPCH | – | |
| >>>>Minimum DL TX Power | O | | DL Power 9.2.1.21A | Minimum allowed power on DPCH | – | |
| >>CCTrCH Maximum DL TX Power | O | | DL Power 9.2.1.21A | Maximum allowed power on DPCH Applicable to 3.84Mcps TDD only | YES | ignore |
| >>CCTrCH Minimum DL TX Power | O | | DL Power 9.2.1.21A | Minimum allowed power on DPCH Applicable to 3.84Mcps 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 9.2.3.3ab | | YES | ignore |
| MAC-hs Reset Indicator | O | | 9.2.1.34B | | 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>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 |
| > <i>RL</i> | | | | | – | |
| >> RL Information | | 1 .. < <i>maxnoofRLs</i> > | | | EACH | ignore |
| >>>RL ID | M | | 9.2.1.49 | | – | |
| >>>Cause | M | | 9.2.1.5 | | – | |
| > <i>RLS</i> | | | | FDD only | – | |
| >> RL Set Information | | 1 .. < <i>maxnoofRL Sets</i> > | | | EACH | ignore |
| >>>RL Set ID | M | | 9.2.2.35 | | – | |
| >>>Cause | M | | 9.2.1.5 | | – | |
| > <i>CCTrCH</i> | | | | TDD only | – | |
| >>RL ID | M | | 9.2.1.49 | | – | |
| >> CCTrCH List | | 1..< <i>maxnoCCTrCHs</i> > | | | 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>maxnoofRL Sets</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 .. <maxno ofRLs> | | | EACH | ignore |
| >>>RL ID | M | | 9.2.1.49 | | – | |
| >RLS | | | | FDD only | – | |
| >>RL Set Information | | 1 .. <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 O Individual | | 9.2.2.23 | | YES | ignore |
| Adjustment Period | C-Common O Individual | | 9.2.2.B | | YES | ignore |
| Adjustment Ratio | C-Common 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 | | – | |
| RL Information | | 1 | | | YES | reject |
| >RL ID | M | | 9.2.1.49 | | – | |
| >DL Code Information | M | | FDD DL Code Information 9.2.2.14A | | YES | notify |

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 | | – | |
| RL Information | | 1 | | | YES | reject |
| >RL ID | M | | 9.2.1.49 | | – | |
| >UL CCTrCH Information | | 0.. <maxnoof CCTrCHs> | | | GLOBAL | reject |
| >>CCTrCH ID | M | | 9.2.3.2 | | – | |
| >>UL DPCH Information | | 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 | | – | |
| >>>UL Timeslot Information | | 0..<maxno OfTS> | | 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 | | – | |
| >>>>UL Code Information | O | | TDD UL Code Information 9.2.3.10A | | – | |
| >>>UL 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 | | – | |
| >>>>UL Code Information LCR | O | | TDD UL Code Information LCR 9.2.3.10B | | – | |
| >DL CCTrCH Information | | 0..<maxno ofCCTrCH s> | | | GLOBAL | reject |
| >>CCTrCH ID | M | | 9.2.3.2 | | – | |
| >>DL DPCH Information | | 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 | | – | |
| >>>DL Timeslot Information | | 0..<maxno OfTS> | | 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 | O | | TDD DL Code Information 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 9.2.3.8D | | – | |
| >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 | | – | |

| Range bound | Explanation |
|-----------------------|--|
| <i>maxnoofCCTrCHs</i> | Maximum number of CCTrCHs for a UE. |
| <i>maxnoofTS</i> | Maximum number of Timeslots for a UE for 3.84Mcps TDD. |
| <i>maxnoofTSLCR</i> | Maximum number of Timeslots for a UE for 1.28Mcps TDD. |
| <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. |

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 |
| Active MBMS Bearer Service List | | <i>0..<max noofActiveMBMS ></i> | | | GLOBAL | ignore |
| >TMGI | M | | 9.2.1.80 | | – | |
| >Transmission Mode | M | | 9.2.1.81 | | – | |
| Inter-frequency Cell List | | <i>0..<max CellsMeasured></i> | | | GLOBAL | ignore |
| >DL UARFCN | M | | UARFCN 9.2.1.66 | | – | |
| >UL UARFCN | O | | UARFCN 9.2.1.66 | | – | |
| >Primary Scrambling Code | M | | 9.2.1.45 | | – | |

| 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 |
| Active MBMS Bearer Service List | | $0..<max\ noofActiveMBMS >$ | | | GLOBAL | ignore |
| >TMGI | M | | 9.2.1.80 | | – | |
| >Transmission Mode | M | | 9.2.1.81 | | – | |

| Range bound | Explanation |
|---------------------|---|
| $maxnoofActiveMBMS$ | 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 |
| MBMS Bearer Service List | | <i>0..<maxno of MBMS></i> | | | GLOBAL | ignore |
| >TMGI | M | | 9.2.1.80 | | – | |
| Old URA-ID | O | | URA-ID 9.2.1.70 | | YES | ignore |
| SRNC-ID | C-URA | | RNC-ID 9.2.1.50 | | 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>maxno of MBMS</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> | | | | | – | |
| >>URA-ID | M | | 9.2.1.70 | May be a GRA-ID. | – | |
| > <i>Cell</i> | | | | UTRAN only | – | |
| >>C-ID | M | | 9.2.1.6 | | – | |
| SRNC-ID | M | | RNC-ID 9.2.1.50 | May be a BSC-ID. | 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 |
| CN Originated Page to Connected Mode UE | | 0..1 | | | YES | ignore |
| >Paging Cause | M | | 9.2.1.41E | | – | |
| >CN Domain Type | M | | 9.2.1.11A | | – | |
| >Paging Record Type | M | | 9.2.1.41F | | – | |

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 |
| > <i>RL</i> | | | | | – | |
| >> RL Information | | 1..<maxn oofRLs> | | | EACH | reject |
| >>>RL-ID | M | | 9.2.1.49 | | – | |
| >>>DPCH ID | O | | 9.2.3.3 | TDD only | – | |
| >>> HS-SICH Information | | 0..<maxn oofHSSI CHs> | | TDD only | GLOBAL | reject |
| >>>>HS-SICH ID | M | | 9.2.3.3ad | | – | |
| > <i>RLS</i> | | | | FDD only | – | |
| >> RL Set Information | | 1..<maxn oofRLSets> | | | EACH | reject |
| >>>RL-Set-ID | M | | 9.2.2.35 | | – | |
| > <i>ALL RL</i> | | | NULL | | – | |
| > <i>ALL RLS</i> | | | 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 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 |

| 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 | – | |
| >>>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 | | – | |
| >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 Measurement Value | M | | 9.2.1.19 | | – | |
| >>>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 |

| 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 |

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.

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 | | | | | – | |
| >>Unsuccessful RL Information | | 1..<maxno ofRLs> | | | EACH | ignore |
| >>>RL ID | M | | 9.2.1.49 | | – | |
| >>>Individual Cause | O | | Cause 9.2.1.5 | | – | |
| >>Successful RL Information | | 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 | – | |
| >>Unsuccessful RL Set Information | | 1..<maxno ofRLSets> | | | EACH | ignore |
| >>>RL Set ID | M | | 9.2.2.35 | | – | |
| >>>Individual Cause | O | | Cause 9.2.1.5 | | – | |
| >>Successful RL Set Information | | 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 | – | |
| >>>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 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 |

| 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. |

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.

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 |
| MBMS Bearer Service List | | <i>0..<max noofMBMS></i> | | | GLOBAL | notify |
| >TMGI | M | | 9.2.1. 80 | | – | |

| 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 |
| FACH Info for UE Selected S-CCPCH | | 1 | | | YES | ignore |
| >FACH Flow Control Information | M | | 9.2.1.26C | | 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 |
| Active MBMS Bearer Service List | | 0..<maxnoofActiveMBMS> | | | GLOBAL | ignore |
| >TMGI | M | | 9.2.1.80 | | – | |
| >Transmission Mode | M | | 9.2.1.81 | | – | |

| Range bound | Explanation |
|--------------------------|---|
| <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 |
| FACH Info for UE Selected S-CCPCHs | | 1 | | | YES | ignore |
| >FACH Flow Control Information | M | | 9.2.1.26C | | 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 |
| Active MBMS Bearer Service List | | 0..<maxnoofActiveMBMS> | | | GLOBAL | ignore |
| >TMGI | M | | 9.2.1.80 | | – | |
| >Transmission Mode | M | | 9.2.1.81 | | – | |

| 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, 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 | 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 | | – | |
| RL Information | | 0..<maxno ofRLs> | | | EACH | ignore |
| >RL ID | M | | 9.2.1.49 | | – | |
| >E-DCH MAC-d Flow Specific Information | | 0..<maxno ofEDCHMACdFlows > | | | EACH | ignore |
| >>E-DCH MAC-d Flow ID | M | | 9.2.2.4MB | | – | |
| HS-DSCH MAC-d Flow Specific Information | | 0..<maxno ofMACdFlows> | | | 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 |
| RL Information | | 1..<maxno ofRLs> | | | EACH | ignore |
| >RL ID | M | | 9.2.1.49 | | – | |
| >DCH Rate Information | | 1..<maxno ofDCHs> | | | EACH | ignore |
| >>DCH ID | M | | 9.2.1.16 | | – | |
| >>Allowed Rate Information | O | | 9.2.1.2A | | – | |
| >E-DCH MAC-d Flow Specific Information | | 0..<maxno ofEDCHMACdFlows > | | | EACH | ignore |
| >>E-DCH MAC-d Flow ID | M | | 9.2.2.4MB | | – | |

| 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 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 |
| 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 | | YES | reject |

| | | | | | | |
|-------------------------------|---|--|-----------|------------|-----|--------|
| | | | 9.2.1.28A | | | |
| 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 |

| 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 |
| <i>>Cell</i> | | | | | – | |
| <i>>>Common Measurement value</i> | 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 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 |
| Measurement Recovery Reporting Indicator | 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 | | – | |
| Information Type | M | | 9.2.1.31E | | YES | reject |
| Information Report Characteristics | M | | 9.2.1.31C | | YES | reject |

| Range bound | Explanation |
|-------------|--|
| maxnoofMBMS | Maximum number of MBMS bearer services that a UE can join. |

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 | | – | |
| Criticality Diagnostics | O | | 9.2.1.13 | | YES | ignore |

| Range bound | Explanation |
|-------------|--|
| maxnoofMBMS | Maximum number of MBMS bearer services that a UE can join. |

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 |
| > <i>Cell</i> | | | | | – | |
| >>Requested Data Value Information | M | | 9.2.1.48B | | – | |

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 | YES | reject |
| CHOICE <i>Reset Indicator</i> | M | | | | YES | reject |
| > <i>Context</i> | | | | | – | |
| >> Context Information | | 1..< <i>maxResetContext</i> > | | | EACH | reject |
| >>>CHOICE <i>Context Type</i> | M | | | | – | |
| >>>>SRNTI | | | | | – | |
| >>>>>S-RNTI | M | | 9.2.1.53 | | – | |
| >>>>>DRNTI | | | | | – | |
| >>>>>D-RNTI | M | | 9.2.1.24 | | – | |
| > <i>All Contexts</i> | | | NULL | | – | |
| > <i>Context Group</i> | | | | | – | |
| >> Context Group Information | | 1..< <i>maxResetContextGroups</i> > | | | EACH | reject |
| >>>S-RNTI Group | M | | 9.2.1.53a | | – | |

| 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 | YES | ignore |
| Criticality Diagnostics | O | | 9.2.1.13 | | YES | ignore |

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 | | – | |
| Delayed activation Information | | 1..< <i>maxnoofRLs</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 | | - | |
| Delayed activation Information | | <i>1..<maxnoofRLs></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 |
| RL Information | | <i>0..<maxnoofRLs></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 |

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 |
| 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 |
| List Of Interfaces To Trace | | <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 | | – | |
| MBMS Bearer Service List | | 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 9.2.1.50 | | – | |
| >>URA-ID | M | | 9.2.1.70 | | – | |

| 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 | | – | |
| MBMS Bearer Service List | | 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 9.2.1.50 | | – | |
| >>URA-ID | M | | 9.2.1.70 | | – | |

| 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 | YES | ignore |
| Provided Information | M | | 9.2.1.85 | | YES | ignore |

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. Usage: Value "0" means "Spare"; It shall be treated as a logical error if received. Values between 1 and 14 are ordered in decreasing order of priority, '1' being the highest and '14' the lowest. 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, "2": TFI 1, "3": TFI 2, ... |
| Allowed DL Rate | O | | INTEGER(1..maxTFcount) | "1": TFI 0, "2": TFI 1, "3": TFI 2, ... |

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.. $2^{15}-1$) | 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,...) | |

9.2.1.3 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 <i>Cause Group</i> | M | | | |
| > <i>Radio Network Layer</i> | | | | |
| >>Radio Network Layer Cause | M | | 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/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 with Current Measurements, UE not Capable to Implement Measurement, F-DPCH not supported, E-DCH not supported) | |
| > <i>Transport Layer</i> | | | | |
| >>Transport Layer Cause | M | | ENUMERATED (Transport Resource Unavailable, Unspecified, ...) | |
| > <i>Protocol</i> | | | | |
| >>Protocol Cause | M | | 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),...) | |
| >Misc | | | | |
| >>Miscellaneous Cause | M | | ENUMERATED (Control Processing Overload, Hardware Failure, O&M Intervention, Not enough User Plane Processing Resources, Unspecified,...) | |

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 |
| 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 |
| CM not Supported | The concerned cell(s) do not support Compressed Mode |
| Common Transport Channel Type not Supported | The concerned cell(s) do not support the RACH and/or FACH Common Transport Channel Type |
| 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 |
| 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 not supported | The concerned cell(s) do not support E-DCH |
| F-DPCH not supported | The concerned cell(s) do not support the Fractional DPCH |
| 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 |
| 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 Level not Supported | A DL power level was requested which the concerned cell(s) do not support |
| Power Balancing status not compatible | The power balancing status in the SRNC is not compatible with that of the DRNC. |
| RL Timing Adjustment not Supported | The concerned cell(s) do not support adjustments of the RL timing |
| 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 |
| Requested Configuration not | The concerned cell(s) do not support the requested configuration i.e. |

| | |
|---|---|
| Supported | 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 |
| RL Already Activated/ Allocated | The DRNS has already allocated an RL with the requested RL ID for this UE Context |
| Synchronisation Failure | Loss of UL Uu synchronisation |
| 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 |
| 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 |

| Transport Network Layer cause | Meaning |
|--------------------------------------|---|
| Transport resource unavailable | The required transport resources are not available |
| Unspecified | Sent when none of the above cause values applies but still the cause is Transport Network Layer related |

| Protocol cause | Meaning |
|---|---|
| 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 |

| Miscellaneous cause | Meaning |
|--|--|
| 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 |
|---|----------|-------------------------|--|---|
| Cell GAI Geographical Co-ordinates | | 1 .. <maxnoofPoints> | | |
| >Latitude Sign | M | | ENUMERATED(North, South) | |
| >Degrees of Latitude | M | | INTEGER(0..2 ²³ -1) | The IE value (N) is derived by this formula: N ≤ 2 ²³ X / 90 < N+1 X being the latitude in degree (0°.. 90°) |
| >Degrees of Longitude | M | | INTEGER(-2 ²³ ..2 ²³ -1) | The IE value (N) is derived by this formula: N ≤ 2 ²⁴ X / 360 < N+1 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 |
|--|----------|-------|-----------------------|---|
| <i>CHOICE Cell GAI Additional Shapes</i> | | | | |
| >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 |
|----------------|----------|-------|-----------------------|--|
| LAI | | 1 | | |
| >PLMN Identity | M | | OCTET STRING (3) | <ul style="list-style-type: none"> - digits 0 to 9, two digits per octet, - each digit encoded 0000 to 1001, - 1111 used as filler - bit 4 to 1 of octet n encoding digit 2n-1 - bit 8 to 5 of octet n encoding digit 2n -The PLMN Identity consists of 3 digits from MCC followed by either -a filler plus 2 digits from MNC (in case of 2 digit MNC) or -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) | |

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 -19 -> -9.5dB ... +20 -> +10dB |

9.2.1.8 Cell Parameter ID

The Cell Parameter ID identifies unambiguously the [3.84 Mcps 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, - each digit encoded 0000 to 1001, - 1111 used as filler - bit 4 to 1 of octet n encoding digit 2n-1 - bit 8 to 5 of octet n encoding digit 2n -The PLMN Identity consists of 3 digits from MCC followed by either -a filler plus 2 digits from MNC (in case of 2 digit MNC) or -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, - each digit encoded 0000 to 1001, - 1111 used as filler - bit 4 to 1 of octet n encoding digit 2n-1 - bit 8 to 5 of octet n encoding digit 2n -The PLMN Identity consists of 3 digits from MCC followed by either -a filler plus 2 digits from MNC (in case of 2 digit MNC) or -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 | | | |
| > <i>T_{UTRAN-GPS} Measurement Accuracy Class</i> | | | | |
| >> <i>T_{UTRAN-GPS} Measurement Accuracy Class</i> | M | | <i>T_{UTRAN-GPS} Accuracy Class</i> 9.2.1.59B | |

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) | UL timeslot ISCP shall only be used by TDD. For measurements, which are requested on the Iur-g interface, only load, RT Load and NRT Load information are used. "UpPTS interference" is used by 1.28Mcps TDD only |

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 | | | | – | |
| > <i>T_{UTRAN-GPS} 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 | – | |
| >>SFN-SFN <i>Measurement Value Information</i> | M | | 9.2.1.52C | | – | |
| > <i>Load Value</i> | | | | | – | |
| >>Load Value | M | | 9.2.1.33A | | – | |
| > <i>Transmitted Carrier Power Value</i> | | | | UTRAN only | – | |
| >>Transmitted <i>Carrier Power Value</i> | M | | Transmitted Carrier Power 9.2.1.59A | | – | |
| > <i>Received Total Wide Band Power Value</i> | | | | UTRAN only | – | |
| >>Received Total <i>Wide Band Power Value</i> | M | | Received Total Wide Band Power 9.2.2.35A | | – | |
| > <i>UL Timeslot ISCP Value</i> | | | | TDD Only | – | |
| >>UL Timeslot <i>ISCP Value</i> | M | | UL Timeslot ISCP 9.2.3.13A | | – | |
| > <i>Additional Common Measurement Values</i> | | | | | – | |
| >> <i>RT Load Value</i> | | | | | – | |
| >>>RT Load <i>Value</i> | M | | 9.2.1.50B | | YES | ignore |
| >> <i>NRT Load Information Value</i> | | | | | – | |
| >>>NRT Load <i>Information Value</i> | M | | 9.2.1.41I | | YES | ignore |
| >> <i>UpPTS interference</i> | | | | 1.28Mcps TDD Only | | |
| >>>UpPTS <i>interference Value</i> | M | | INTEGER (0..127,...) | According to mapping in [24] | | |

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 <i>Value</i> | 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 | | - | |
| Information Element Criticality Diagnostics | | <i>0..<maximum number of errors></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"> in case of a not understood IE: The number of occurrences of the reported IE up to and including the not understood occurrence in case of a missing IE: The number of occurrences up to but not including the missing occurrence. 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: $\sum_{i=1}^I (L_i - 1)P_i$ 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 (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 |
|---------------------------------|----------|-------------------|-----------------------|---|-------------|----------------------|
| DCH Information Response | | 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 |

| 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) | RSCP and HS-SICH Receptions Quality are used by TDD only, Rx Timing Deviation is used by 3.84 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. |

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] 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 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 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 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] | – | |

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 Measurement Value | M | | 9.2.1.19 | | – | |
| >>CFN | O | | 9.2.1.9 | Dedicated Measurement Time 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> | | | | |
| >>>> Activation CFN | M | | CFN 9.2.1.7 | |
| >>> <i>Unsynchronised</i> | | | NULL | |
| >> Initial DL TX Power | M | | DL Power 9.2.1.21 | |
| >> First RLS Indicator | O | | 9.2.2.16A | FDD Only |
| >> Propagation Delay | O | | 9.2.2.35 | FDD Only |
| > <i>Deactivate</i> | | | | |
| >> CHOICE <i>Deactivation type</i> | M | | | |
| >>> <i>Synchronised</i> | | | | |
| >>>> Deactivation CFN | M | | CFN 9.2.1.7 | |
| >>> <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 |
| Satellite DGPS Corrections Information | | 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 $\leq 1.0\text{m}$, $1.0\text{m} < \text{UDRE} \leq 4.0\text{m}$, $4.0\text{m} < \text{UDRE} \leq 8.0\text{m}$, $8.0\text{m} < \text{UDRE}, \dots$) | 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 Unit dB Range -35.0 .. +15.0 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 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..2 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 |
|--------------------------------------|----------|------------------------------|--|-----------------------|-------------|----------------------|
| FACH Flow Control Information | | 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.) 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 ¹⁶ -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 ²³ -1) | The IE value (N) is derived by this formula: $N \leq 2^{23} \times X / 90 < N+1$ X being the latitude in degree (0°.. 90°) |
| Degrees Of Longitude | M | | INTEGER(-2 ²³ ..2 ²³ -1) | The IE value (N) is derived by this formula: $N \leq 2^{24} \times X / 360 < N+1$ 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. The first bit: A/Gb mode. The second bit: Iu mode. 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 |
|--------------------------|----------|---------------------|-----------------------|---|
| GERAN System Info | | 1..<maxNrOfGERANSI> | | |
| >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 _a | M | | BIT STRING(8) | |
| Satellite Almanac Information | M | <i>1..<maxNoOfSatAlmanac></i> | | See Note 1. |
| >DataID | M | | INTEGER (0..3) | |
| >SatID | M | | SAT ID 9.2.1.50A | |
| >e | M | | BIT STRING(16) | |
| >t _{oa} | M | | BIT STRING(8) | |
| >δ _i | M | | BIT STRING(16) | |
| >OMEGADOT | M | | BIT STRING(16) | |
| >SV Health | M | | BIT STRING(8) | |
| >A ^{1/2} | M | | BIT STRING(24) | |
| >OMEGA ₀ | M | | BIT STRING(24) | |
| >M ₀ | M | | BIT STRING(24) | |
| >ω | M | | BIT STRING(24) | |
| >af ₀ | M | | BIT STRING(11) | |
| >af ₁ | M | | BIT STRING(11) | |
| SV Global Health | O | | BIT STRING(364) | |

| Range Bound | Explanation |
|--------------------------|--|
| <i>maxNoOfSatAlmanac</i> | Maximum number of satellite almanacs for which information can be provided |

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.

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 |
|---------------|----------|-------|-----------------------|-----------------------|
| α_0 | M | | BIT STRING(8) | |
| α_1 | M | | BIT STRING(8) | |
| α_2 | M | | BIT STRING(8) | |
| α_3 | M | | BIT STRING(8) | |
| β_0 | M | | BIT STRING(8) | |
| β_1 | M | | BIT STRING(8) | |
| β_2 | M | | BIT STRING(8) | |
| β_3 | M | | BIT 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 |
|--------------------------------|----------|----------------------------|-----------------------|---|
| Navigation Message 1to3 | | <i>1..<maxNoSat></i> | | |
| >Transmission TOW | M | | INTEGER0..1048575) | Time of the Week when the message is broadcast. |
| >SatID | M | | SAT ID 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 _{GD} | M | | BIT STRING(8) | |
| >t _{oc} | M | | BIT STRING(16) | |
| >af ₂ | M | | BIT STRING(8) | |
| >af ₁ | M | | BIT STRING(16) | |
| >af ₀ | M | | BIT STRING(22) | |
| >C _{rs} | M | | BIT STRING(16) | |
| >Δn | M | | BIT STRING(16) | |
| >M ₀ | M | | BIT STRING(32) | |
| >C _{uc} | M | | BIT STRING(16) | |
| >e | M | | BIT STRING(32) | |
| >C _{us} | M | | BIT STRING(16) | |
| >(A) ^{1/2} | M | | BIT STRING(32) | |
| >t _{oe} | M | | BIT STRING(16) | |
| >Fit Interval Flag | M | | BIT STRING(1) | |
| >AODO | M | | BIT STRING(5) | |
| >C _{ic} | M | | BIT STRING(16) | |
| >OMEGA ₀ | M | | BIT STRING(32) | |
| >C _{is} | M | | BIT STRING(16) | |
| >i ₀ | M | | BIT STRING(32) | |
| >C _{rc} | M | | BIT STRING(16) | |

| | | | | |
|------------------|---|--|-------------------|--|
| > ω | M | | BIT STRING(32) | |
| >OMEGAdot | 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 |
|---------------------------------------|----------|----------------------------|-----------------------|-----------------------|
| CHOICE <i>Bad Satellites Presence</i> | M | | | |
| > <i>Bad Satellites</i> | | | | |
| >> Satellite Information | | <i>1..<maxNoSat></i> | | |
| >>>BadSatID | M | | SAT ID 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 STRING(24) | |
| A ₀ | M | | BIT STRING(32) | |
| t _{ot} | M | | BIT STRING(8) | |
| Δt _{LS} | M | | BIT STRING(8) | |
| WN _t | M | | BIT STRING(8) | |
| WN _{LSF} | M | | BIT STRING(8) | |
| DN | M | | BIT STRING(8) | |
| Δt _{LSF} | M | | BIT 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. .maxTFcount) | "1": TFI 0, "2": TFI 1, "3": TFI 2, ... |
| Guaranteed DL Rate | O | | INTEGER(1. .maxTFcount) | "1": TFI 0, "2": TFI 1, "3": TFI 2, ... |

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 (0..7) | 0=Lowest Priority, ... 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 | | <i>0..<maxnoofMACdFlows></i> | | | – | |
| >HS-DSCH MAC-d Flow ID | M | | 9.2.1.30O | | – | |
| >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. | – | |
| Priority Queue Information | | <i>0..<maxnoofPriorityQueues></i> | | | – | |
| >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 | | 9.2.3.71 | For TDD only | – | |
| HARQ Preamble Mode | O | | 9.2.2.57 | 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 |
|--|----------|---|-----------------------------|-----------------------|
| HS-DSCH Initial Capacity Allocation | | <i>1..<maxnoofPriorityQueues></i> | | |
| >Scheduling Priority Indicator | M | | 9.2.1.51A | |
| >Maximum MAC-d PDU Size | M | | MAC-d PDU Size 9.2.1.34A | |
| >HS-DSCH Initial Window Size | M | | 9.2.1.30Nb | |

| Range Bound | Explanation |
|------------------------------|-----------------------------------|
| <i>maxnoofPriorityQueues</i> | Maximum number of Priority Queues |

9.2.1.30Nb HS-DSCH Initial Window Size

Indicates the initial number of MAC-d PDUs 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 |

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 |
|--|----------|--|------------------------------------|--|
| HS-DSCH MAC-d Flow Specific Information | | <i>1..<maxno ofMACdFlows></i> | | |
| >HS-DSCH MAC-d Flow ID | M | | 9.2.1.30O | |
| >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. |
| Priority Queue Information | | <i>1..<maxno ofPrioQueues></i> | | |
| >Priority Queue ID | M | | 9.2.1.45A | |
| >Associated HS-DSCH MAC-d Flow | M | | HS-DSCH MAC-d Flow ID 9.2.1.30O | 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 | |
| >MAC-d PDU Size Index | | <i>1..<maxno ofMACdPDUindexes></i> | | |
| >>SID | M | | 9.2.1.52D | |
| >>MAC-d PDU Size | M | | 9.2.1.34A | |
| >RLC Mode | M | | 9.2.1.48D | |

| 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 |

9.2.1.30OB 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 Reference | Semantics Description |
|--------------------------------------|----------|-------------------------------------|-----------------------|-----------------------|
| HS-DSCH MAC-d Flows To Delete | | <i>1..<maxno ofMACdFlows></i> | | |
| >HS-DSCH MAC-d Flow ID | M | | 9.2.1.30O | |

| Range Bound | Explanation |
|-------------------------|---------------------------------------|
| <i>maxnoofMACdFlows</i> | Maximum number of HS-DSCH MAC-d flows |

9.2.1.30Oa 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 Reference | Semantics Description |
|---------------------------------|----------|-------|-----------------------|-----------------------|
| HS-DSCH Physical Layer 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 (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 |
|--|----------|--|---------------------------------|---|-------------|----------------------|
| HS-DSCH MAC-d Flow Specific Information | | <i>0..<maxn oofMACd Flows></i> | | | – | |
| >HS-DSCH MAC-d Flow ID | M | | 9.2.1.30O | | – | |
| >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. | – | |
| Priority Queue Information | | <i>0..<maxn oofPrioQ ueues></i> | | | – | |
| >CHOICE <i>Priority Queue</i> | M | | | | – | |
| >> <i>Add Priority Queue</i> | | | | | – | |
| >>>Priority Queue ID | M | | 9.2.1.45A | | – | |
| >>>Associated HS-DSCH MAC-d Flow | M | | HS-DSCH MAC-d Flow ID 9.2.1.30O | 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 | | <i>1..<maxn oofMACd PDUinde xes></i> | | | – | |
| >>>>SID | M | | 9.2.1.52D | | – | |
| >>>>MAC-d PDU Size | M | | 9.2.1.34A | | – | |
| >>>>RLC Mode | M | | 9.2.1.48D | | – | |
| >> <i>Modify Priority Queue</i> | | | | | – | |
| >>>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 | | – | |

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|--|----------|------------------------------|-----------------------|---|-------------|----------------------|
| >>>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 | | $0..<maxnoofMACdPDUindexes>$ | | | – | |
| >>>>SID | M | | 9.2.1.52D | | – | |
| >>>>MAC-d PDU Size | M | | 9.2.1.34A | | – | |
| >>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 | – | |
| 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 | | 9.2.3.7l | For TDD only | – | |
| HARQ Preamble Mode | O | | 9.2.2.57 | For FDD only | YES | ignore |

| Range bound | Explanation |
|-------------------------|--|
| $maxnoofMACdFlows$ | Maximum number of MAC-d flows. |
| $maxnoofPrioQueues$ | Maximum number of Priority Queues. |
| $maxnoofMACdPDUindexes$ | 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"> - hexadecimal digits 0 to F, two hexadecimal digits per octet, - each hexadecimal digit encoded 0000 to 1111, - 1111 used as filler for bits 8 to 5 of last octet - bit 4 to 1 of octet n encoding digit 2n-1 - bit 8 to 5 of octet n encoding digit 2n <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"> - hexadecimal digits 0 to F, two hexadecimal digits per octet, - each hexadecimal digit encoded 0000 to 1111, - 1111 used as filler for bits 8 to 5 of last octet - bit 4 to 1 of octet n encoding digit 2n-1 - bit 8 to 5 of octet n encoding digit 2n <p>Number of hexadecimal digits shall be 16.</p> |

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)) | <ul style="list-style-type: none"> -Decimal digits coded in BCD -'1111' used as filler -bit 4 to 1 of octet n is encoding digit 2n-1 -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 ²⁰ -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 | - | |

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 |
|------------------------|----------|----------------------|--|--|
| 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) | For information exchange on the Iur-g interface, only the Cell Capacity Class is used. |
| GPS Information | C-GPS | 1..<maxnoofGPSTypes> | | |
| >GPS Information Item | | | ENUMERATED (GPS Navigation Model and Time Recovery, GPS Ionospheric Model, GPS UTC Model, GPS Almanac, GPS Real-Time Integrity, ...) | |

| Condition | Explanation |
|-----------|--|
| GPS | This IE shall be present if the <i>Information Type Item</i> IE indicates "GPS Information". |

| Range Bound | Explanation |
|------------------------|--|
| <i>maxnoofGPSTypes</i> | Maximum number of GPS Information Types supported in one Information Exchange. |

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 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 |
|---|----------|---------------------------|-----------------------|--|
| SIB11 | | 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..<maxCellSIB11 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 | |
| SIB12 | | 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..<maxCellSIB11 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>maxCellSIB11OrSIB12</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,...) | |

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).

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|----------------------------|----------|-------|--|-----------------------|
| MAC-hs Guaranteed Bit Rate | | | INTEGER (0..2 ²⁴ -1, ...) | 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 And N kBytes = N*1024 Bytes. 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,...) | |

9.2.1.35 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 Range: 10..60000 ms 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 Range: 10..60000 ms 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 ²⁰ -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 <i>Measurement Increase/Decrease Threshold</i> | M | | | | - | |
| > <i>SIR</i> | | | | | - | |
| >> <i>SIR</i> | M | | INTEGER(0..62) | 0: 0 dB 1: 0.5 dB 2: 1 dB ... 62: 31dB | - | |
| > <i>SIR Error</i> | | | | FDD Only | - | |
| >> <i>SIR Error</i> | M | | INTEGER(0..124) | 0: 0 dB 1: 0.5 dB 2: 1 dB ... 124: 62 dB | - | |
| > <i>Transmitted Code Power</i> | | | | | - | |
| >> <i>Transmitted Code Power</i> | M | | INTEGER(0..112 ,...) | 0: 0 dB 1: 0.5 dB 2: 1 dB ... 112: 56 dB | - | |
| > <i>RSCP</i> | | | | TDD Only | - | |
| >> <i>RSCP</i> | M | | INTEGER(0..126) | 0: 0 dB 1: 0.5 dB 2: 1 dB ... 126: 63 dB | - | |
| > <i>Round Trip Time</i> | | | | FDD Only | - | |
| >> <i>Round Trip Time</i> | M | | INTEGER(0..327 66) | 0: 0 chips 1: 0.0625 chips 2: 0.1250 chips ... 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 1: 0.1dB 2: 0.2dB ... 620: 62dB | YES | reject |
| >> <i>UL Timeslot ISCP</i> | | | | TDD Only | - | |
| >>> <i>UL Timeslot ISCP</i> | | | INTEGER(0..126) | 0: 0dB 1: 0.5dB 2: 1dB ... 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 <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_{UTRAN-GPS} Measurement Threshold Information</i> | | | | | - | |
| >>> <i>T_{UTRAN-GPS} 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 |

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 |
|--------------------------|----------|--------------------|-----------------------|--|-------------|----------------------|
| Message structure | | 1..<maxnooflevels> | | The first repetition of the <i>Message Structure IE</i> corresponds to the top level of the message. The last repetition of the <i>Message Structure IE</i> 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 IE</i> 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. 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 |
|---------------------|----------|-------|--|--|
| Procedure ID | | 1 | | |
| >Procedure Code | M | | INTEGER (0..255) | "0" = Common Transport Channel Resources Initialisation "1" = Common Transport Channel Resources Release "2" = Compressed Mode Command "3" = Downlink Power Control "4" = Downlink Power Timeslot Control "5" = Downlink Signalling Transfer "6" = Error Indication "7" = Dedicated Measurement Failure "8" = Dedicated Measurement Initiation "9" = Dedicated Measurement Reporting "10" = Dedicated Measurement Termination "11" = Paging "12" = Physical Channel Reconfiguration "14" = Radio Link Addition "15" = Radio Link Deletion "16" = Radio Link Failure "17" = Radio Link Preemption "18" = Radio Link Restoration "19" = Radio Link Setup "20" = Relocation Commit "21" = Synchronised Radio Link Reconfiguration Cancellation "22" = Synchronised Radio Link Reconfiguration Commit "23" = Synchronised Radio Link Reconfiguration Preparation "24" = UnSynchronised Radio Link Reconfiguration "25" = Uplink Signalling Transfer "26" = Common Measurement Failure "27" = Common Measurement Initiation "28" = Common Measurement Reporting "29" = Common Measurement Termination "30" = Information Exchange Failure "31" = Information Exchange Initiation "32" = Information Reporting "33" = Information Exchange Termination "34" = Radio Link Congestion "35" = Reset "36" = Radio Link Activation '37' = GERAN Uplink Signalling Transfer "38" = Radio Link Parameter Update "39" = UE Measurement Failure "40" = UE Measurement Initiation "41" = UE Measurement Reporting "42" = UE Measurement Termination "43" = lur Deactivate Trace "44" = lur Invoke Trace "45" = MBMS Attach '46' = MBMS Detach '48' = Direct Information Transfer |
| >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 URA Exists) | |

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 |
|---|----------|------------------------------|-----------------------|-----------------------|-------------|----------------------|
| Neighbouring UMTS Cell Information | | 1..<maxnoofneighbouringRNCs> | | | EACH | ignore |
| >RNC-ID | M | | 9.2.1.50 | | – | |
| >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 |

| 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 a neighbouring cells to a cell in the DRNC.

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|--|----------|--|-----------------------|-------------------------------|-------------|----------------------|
| Neighbouring FDD Cell Information | | <i>1..<max noofFDD neighbours></i> | | | – | |
| >C-ID | M | | 9.2.1.6 | | – | |
| >UL UARFCN | M | | UARFCN 9.2.1.66 | Corresponds to Nu in ref. [6] | – | |
| >DL UARFCN | M | | UARFCN 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 |

| Range bound | Explanation |
|-----------------------------|---|
| <i>maxnoofFDDneighbours</i> | Maximum number of neighbouring FDD cell for one cell. |

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 |
|--|----------|---|---|--|-------------|----------------------|
| Neighbouring GSM Cell Information | | <i>1..<max noofGS Mneighb ours></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, - each digit encoded 0000 to 1001, - 1111 used as filler - bit 4 to 1 of octet n encoding digit 2n-1 - bit 8 to 5 of octet n encoding digit 2n -The PLMN Identity consists of 3 digits from MCC followed by either -a filler plus 2 digits from MNC (in case of 2 digit MNC) or -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 a) –10dB if the <i>Extended GSM Cell Individual Offset</i> IE is < -10dB and 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 cells that are a neighbouring cells to a cell in the DRNC.

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|--|----------|--|-----------------------|-------------------------------|-------------|----------------------|
| Neighbouring TDD Cell Information | | <i>1..<maxnoofTDDneighbours></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 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 |
| > SNA Information | O | | 9.2.1.52Ca | | 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 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 | |

9.2.1.41E 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: 0: low: The Uplink NRT load is low. 1: medium: The Uplink NRT load is medium. 2: high: Uplink NRT load is high. Probability to admit a new user is low. 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: 0: low: The Downlink NRT load is low. 1: medium: The Downlink NRT load is medium. 2: high: Downlink NRT load is high. Probability to admit a new user is low. 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, Step size 0.1 dB. -15.0 shall indicate $P_{\leq} -15\text{dBm}$ +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 Unit dBm Range -10.0..+50.0 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.

| 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 (0..15) | 0: 40% 1: 44 % ... 14: 96% 15: 100% (no puncturing) [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. | – | |
| >Event F | | | | | – | |
| >>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. | – | |
| >Additional Report Characteristics | | | | | – | |
| >>On Modification | | | | | – | |
| >>> On Modification | | 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 Range: 10..60000 ms Step: 10 ms |
| > <i>minute</i> | | | | |
| >>Report Periodicity Value | M | | INTEGER (1..60,...) | Unit: min Range: 1..60 min 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 |

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 |
|------------------------------------|----------|--------------------|-----------------------|--|-------------|----------------------|
| RL Specific DCH Information | | 1..<maxno of DCHs> | | | – | |
| >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. | – | |

| 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 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: 0=Lowest Priority ... 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, - each digit encoded 0000 to 1001, - 1111 used as filler - bit 4 to 1 of octet n encoding digit 2n-1 - bit 8 to 5 of octet n encoding digit 2n -The PLMN Identity consists of 3 digits from MCC followed by either -a filler plus 2 digits from MNC (in case of 2 digit MNC) or -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. 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. 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 |
|--|----------|---------------------------------------|-----------------------|---|
| Successful Neighbouring cell SFN-SFN Observed Time Difference Measurement Information | | <i>1..<maxnoofMeasN Cell></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 | |
| Unsuccessful Neighbouring cell SFN-SFN Observed Time Difference Measurement Information | | <i>0..<maxnoofMeasN Cell-1></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, - each digit encoded 0000 to 1001, - 1111 used as filler - bit 4 to 1 of octet n encoding digit 2n-1 - bit 8 to 5 of octet n encoding digit 2n -The PLMN Identity consists of 3 digits from MCC followed by either -a filler plus 2 digits from MNC (in case of 2 digit MNC) or -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 ²⁰ -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 (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 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 (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. 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. 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 _{UTRAN-GPS} | | 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 _{UTRAN-GPS} Quality | O | | INTEGER(0..255) | Indicates the standard deviation (std) of the T _{UTRAN-GPS} measurements in 1/16 chip. $T_{UTRAN-GPS} \text{ Quality} = \sqrt{E[(x-\mu)^2]}$ = std of reported T _{UTRAN-GPS} Value, where x is the reported T _{UTRAN-GPS} Value and $\mu = E[x]$ is the expectation value of x. |
| T _{UTRAN-GPS} Drift Rate | M | | INTEGER(-50..50) | Indicates the T _{UTRAN-GPS} 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 _{UTRAN-GPS} Drift Rate Quality | O | | INTEGER(0..50) | Indicates the standard deviation (std) of the T _{UTRAN-GPS} 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 _{UTRAN-GPS} Drift Rate, where x is the reported T _{UTRAN-GPS} 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 STRING(1..1 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 <i>TFCS Values</i> | M | | | |
| > <i>Always Used</i> | | | | This choice is always made. |
| >> TFCS | | 1.. <i>maxnoofTFCS</i> > | | The first instance of the parameter corresponds to TFCI zero, the second to 1 and so on. [TDD - The first entry (for TFCI 0) should be ignored by the receiver.] |
| >>>CTFC | M | | 9.2.1.14A | |
| >>>CHOICE <i>Gain Factors</i> | C- PhysChan | | | |
| >>>> <i>Signalled Gain Factors</i> | | | | |
| >>>>>Gain Factor β_C | M | | INTEGER(0..15) | [FDD - For UL DPCCH or control part of PRACH ref. [21].] [TDD - β for UL DPCH mapping in accordance to [13].] |
| >>>>>Gain Factor β_D | M | | INTEGER(0..15) | [FDD - For UL DPDCH or data part of PRACH ref. [21].] [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 |
| >>>>> <i>Computed Gain Factors</i> | | | | |
| >>>>>Reference TFC nr | M | | INTEGER(0..15) | Indicates the reference TFC to be used to calculate the gain factors for this TFC |
| > <i>Not Used</i> | | | 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 |
|--------------------|--|
| <i>maxnoofTFCS</i> | 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 2nd *Interleaving Mode* IE.]

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description |
|---|--------------|--------------------|---|---|
| Dynamic Transport Format Information | | $1..<maxTFcount>$ | | 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 |
| Semi-static Transport Format Information | | 1 | | |
| >Transmission Time Interval | M | | ENUMERATED (10, 20, 40, 80, dynamic, ...) | Unit: msec Value "dynamic" for TDD only. 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 nd 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. "RRC" = Statistics of the data corresponds to RRC signalling "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 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 $r = 10 \times (1.1^{k-1})$ |
| Uncertainty semi-minor | M | | INTEGER(0..127) | The uncertainty "r" is derived from the "uncertainty code" k by $r = 10 \times (1.1^{k-1})$ |
| 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 Unit dB Range -8.2..+17.3 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 ²³ -1) | The IE value (N) is derived by this formula: $N \leq 2^{23} X / 90 < N+1$ X being the latitude in degree (0°.. 90°) |
| Degrees of Longitude | M | | INTEGER(-2 ²³ ..2 ²³ -1) | The IE value (N) is derived by this formula: $N \leq 2^{24} X / 360 < N+1$ 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 |
|--|----------|----------------------|-----------------------|--|
| URA ID | M | | 9.2.1.70 | |
| Multiple URAs Indicator | M | | 9.2.1.41 | |
| RNCs with Cells in the Accessed URA | | 0 .. <maxRNCinURA-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 | |

| 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 | |
| C-ID | M | | 9.2.1.6 | |

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 a neighbouring cells to a cell in the DRNC.

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|--|----------|---|-----------------------|-------------------------------|-------------|----------------------|
| Neighbouring TDD Cell Information LCR | | <i>1..<maxno ofLCRTDD neighbours></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 |

| 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> | | | | |
| > <i>IMSI</i> | | | | |
| >> <i>IMSI</i> | 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 | | | | |
| >>SFN-SFN | M | | INTEGER(0..40961) | 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 ED(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) | <ul style="list-style-type: none"> - digits 0 to 9, two digits per octet, - each digit encoded 0000 to 1001, - 1111 used as filler - bit 4 to 1 of octet n encoding digit 2n-1 - bit 8 to 5 of octet n encoding digit 2n -The PLMN Identity consists of 3 digits from MCC followed by either -a filler plus 2 digits from MNC (in case of 2 digit MNC) or -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. PTM: The MBMS data is transmitted through point to multipoint channel. 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 |
|--|----------|-------|-----------------------|-----------------------|
| MBMS Channel Type Information | O | | 9.2.1.86 | |
| MBMS Preferred Frequency Layer Information | O | | 9.2.1.87 | |

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 | |
| PTM Cell List | | 0..<maxnoofCells> | | |
| >C-ID | M | | 9.2.1.6 | |
| >Affected UE Information for MBMS | | 0..<maxnoofUEs> | | |
| >>S-RNTI | M | | 9.2.1.53 | |
| PTP Cell List | | 0.. <maxnoofCells> | | |
| >C-ID | M | | 9.2.1.6 | |
| >Affected UE Information for MBMS | | 0..<maxnoofUEs> | | |
| >>S-RNTI | M | | 9.2.1.53 | |
| Not Provided Cell List | | 0.. <maxnoofCells> | | |
| >C-ID | M | | 9.2.1.6 | |
| >Affected UE Information for MBMS | | 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 | |
| Preferred Frequency Layer Information | | | | |
| >Default Preferred Frequency | M | | UARFCN 9.2.1.66 | |
| >Additional Preferred Frequency | | 0..< <i>maxnoofAddFreq</i> > | | Preferred frequencies different from default preferred frequency |
| >>DL UARFCN | M | | UARFCN 9.2.1.66 | |
| >>>Corresponding Cells | | 1..< <i>maxnoofCellsPerFreq</i> > | | |
| >>>>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. |

9.2.2 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 | |
| Transmission Gap Pattern Sequence Status | | 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 (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 (0 .. 100) | The Adjustment Ratio is given with a granularity of 0.01 0 -> 0.00 1 -> 0.01 ... 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 (Bundling, No 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 twelfth 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>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: Offset1 = slot(j+1)mod15 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 |
|-------------------------------------|----------|-------------------|-----------------------|-----------------------|-------------|----------------------|
| DCH FDD Information | | 1..<maxno ofDCHs> | | | – | |
| >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 | | – | |
| >DCH Specific Info | | 1..<maxno ofDCHs> | | | – | |
| >>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 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 | | 9.2.2.4MH | | | |
| E-DCH Reference Power Offset | O | | 9.2.2.4MI | | | |

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 |
|---|----------|--|---|---|
| E-DCH MAC-d Flow Specific Information Response | | <i>1..<maxnoof EDCHMACd Flows></i> | | |
| >E-DCH MAC-d Flow ID | M | | 9.2.2.4MB | 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 | |
| HARQ Process Allocation For 2ms Scheduled Transmission Grant | O | | HARQ Process Allocation for 2ms TTI 9.2.2.4O | |

| Range bound | Explanation |
|-----------------------------|--------------------------------------|
| <i>maxnoofEDCHMACdFlows</i> | 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 9.2.2.4MF | | | |
| Secondary E-RNTI | O | | E-RNTI 9.2.2.4MF | | | |
| 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 |

| 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 |
|--|----------|--|---|-----------------------|-------------|----------------------|
| E-DCH MAC-d Flow Specific Information | | <i>1..<maxno ofEDCHMACdFlows></i> | | | | |
| >E-DCH MAC-d Flow ID | M | | 9.2.2.4MB | | | |
| >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 | | 9.2.2.24f | | | |
| >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 | | 9.2.2.4M | | | |
| > CHOICE <i>E-DCH grant type</i> | O | | | | | |
| >> <i>E-DCH Non-Scheduled Transmission Grant</i> | | | | | | |
| >>> <i>Maximum Number of Bits per MAC-e PDU for Non-scheduled Transmission</i> | M | | 9.2.2.4N | | | |
| >>>HARQ Process Allocation For 2ms Non-Scheduled Transmission Grant | O | | HARQ Process Allocation for 2ms TTI 9.2.2.4O | | | |
| >> <i>E-DCH Scheduled Transmission Grant</i> | | | NULL | | | |
| >Bundling Mode Indicator | O | | 9.2.2.4Ca | | | |
| >E-DCH Logical Channel To Add | O | | E-DCH Logical Channel Information 9.2.2.4MD | | | |
| >E-DCH Logical Channel To Modify | | | 9.2.2.4ME | | | |
| >E-DCH Logical Channel To Delete | | <i>0..<maxnooflogicalchannels></i> | | | | |
| >>Logical Channel ID | M | | 9.2.2.21D | | | |
| HARQ Process Allocation For 2ms Scheduled Transmission Grant | O | | HARQ Process Allocation for 2ms TTI 9.2.2.4O | | | |
| E-DCH Maximum Bitrate | O | | 9.2.2.4MG | | | |
| E-DCH Processing Overload Level | O | | 9.2.2.4MH | | | |
| E-DCH Reference Power Offset | O | | 9.2.2.4MI | | | |
| MAC-e Reset Indicator | O | | 9.2.2.21F | | | |

| Range bound | Explanation |
|-------------------------------|--------------------------------------|
| <i>maxnoofEDCHMACdFlows</i> | Maximum number of E-DCH MAC-d flows. |
| <i>maxnooflogicalchannels</i> | Maximum number of Logical Channels |

9.2.2.4G 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 and the Reference E-TFCIs.

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|-------------------------------------|----------|--------------------------------------|-----------------------|---|-------------|----------------------|
| E-TFCI Table Index | M | | INTEGER (0..1,...) | 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]. | | |
| Reference E-TFCI Information | | <i>1..<maxno ofRefETF CIs></i> | | | | |
| >Reference E-TFCI | M | | INTEGER (0..127) | | | |
| >Reference E-TFCI Power Offset | M | | 9.2.2.4P | | | |

| | | | | | | |
|---|---|--|----------|--|-----|--------|
| 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 |
|---|---|--|----------|--|-----|--------|

| Range Bound | Explanation |
|--------------------------|---|
| <i>maxnoofRefETF CIs</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 β_{ec} as defined in [10], whereas β_{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 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 (0..62) | |

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 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 is 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 (8) | The first Bit corresponds to E-DCH MAC-d flow 0, the second bit corresponds to E-DCH MAC-d flow 1, etc. |

9.2.2.4MA 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 |
|------------------------------------|----------|-----------------------------------|-----------------------|-----------------------|
| E-DCH MAC-d Flows To Delete | | $1..<maxno\ of\ EDCHM\ ACdFlows>$ | | |
| >E-DCH MAC-d Flow ID | M | | 9.2.2.4MB | |

| Range Bound | Explanation |
|------------------------|-------------------------------------|
| $maxnoofEDCHMACdFlows$ | Maximum number of E-DCH MAC-d flows |

9.2.2.4MB 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 (0.. <i>maxnoofEDCHMACdFlows</i> -1) | |

| Range Bound | Explanation |
|-----------------------------|-------------------------------------|
| <i>maxnoofEDCHMACdFlows</i> | Maximum number of E-DCH MAC-d flows |

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 |
|--|----------|--|---|--|-------------|----------------------|
| E-DCH MAC-d Flow Specific Information | | <i>1..<maxnoofEDCHMACdFlows></i> | | | | |
| >E-DCH MAC-d Flow ID | M | | 9.2.2.4MB | | | |
| >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 | | 9.2.2.24f | | | |
| >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 | | 9.2.2.4M | | | |
| >CHOICE <i>E-DCH grant type</i> | M | | | | | |
| >> <i>E-DCH Non-Scheduled Transmission Grant</i> | | | | | | |
| >>> <i>Maximum Number of Bits per MAC-e PDU for Non-scheduled Transmission</i> | M | | 9.2.2.4N | | | |
| >>>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. | | |
| >> <i>E-DCH Scheduled Transmission Grant</i> | | | NULL | | | |
| >Bundling Mode Indicator | O | | 9.2.2.Ca | | | |
| >E-DCH Logical Channel Information | M | | 9.2.2.4MD | | | |

| Range bound | Explanation |
|-----------------------------|--------------------------------------|
| <i>maxnoofEDCHMACdFlows</i> | Maximum number of E-DCH MAC-d flows. |

9.2.2.4MD 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 |
|--|----------|---|-----------------------|--|
| E-DCH Logical Channel Information | | <i>1..<maxno oflogicalchannels></i> | | |
| >Logical Channel ID | M | | 9.2.2.21D | |
| >Scheduling Priority Indicator | M | | 9.2.1.51A | |
| >Scheduling Information | M | | 9.2.2.36A | |
| >MAC-es Guaranteed Bit Rate | O | | 9.2.2.21E | |
| >E-DCH DDI Value | M | | 9.2.2.4KA | 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 |
| >MAC-d PDU Size List | | <i>1..<maxnoofMACdPDUSize></i> | | |
| >>MAC-d PDU Size | M | | 9.2.1.34A | |

| Range Bound | Explanation |
|-------------------------------|---|
| <i>maxnooflogicalchannels</i> | Maximum number of logical channels |
| <i>maxnoofMACdPDUSize</i> | Maximum number of MAC-d PDU size per Logical Channels |

9.2.2.4ME 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 |
|--|----------|---|-----------------------|--|
| E-DCH Logical Channel Information | | <i>1..<maxno oflogicalchannels></i> | | |
| >Logical Channel ID | M | | 9.2.2.21D | |
| >Scheduling Priority Indicator | O | | 9.2.1.51A | |
| >Scheduling Information | O | | 9.2.2.36A | |
| >MAC-es Guaranteed Bit Rate | O | | 9.2.2.21E | |
| >E-DCH DDI Value | O | | 9.2.2.4KA | 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 |
| >MAC-d PDU Size List | | <i>0..<maxnoofMACdPDUSize></i> | | |
| >>MAC-d PDU Size | M | | 9.2.1.34A | |

| Range Bound | Explanation |
|-------------------------------|---|
| <i>maxnooflogicalchannels</i> | Maximum number of logical channels |
| <i>maxnoofMACdPDUSize</i> | Maximum number of MAC-d PDU size per Logical Channels |

9.2.2.4MF 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 (0..65535) | |

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,...) | Bitrate on transport block level. Unit is kbits per second. |

9.2.2.4MH 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. 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. |

9.2.2.4MI 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. |

9.2.2.4N 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 PDU per E-DCH MAC-d flow configured for non-scheduled transmissions.

| 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. 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].

| 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 |

9.2.2.5 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 | – | |
| DL Reference Power Information | C-Individual | <i>1..<maxnoof RLS></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 | – | |
| Individual DL Reference Power Information | | <i>0..<maxnoof RLS></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 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 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 |
|-------------------------------------|----------|--------------------------------|-----------------------|-----------------------|-------------|----------------------|
| FDD DCHs To Modify | | <i>1..<maxno ofDCHs></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 | | – | |
| >DCH Specific Info | | <i>1..<maxno ofDCHs></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/Io 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 |
|--|----------|----------------------------|-----------------------|-----------------------|-------------|----------------------|
| FDD DL Code Information | | 1.. <maxnoof DLCodes | | | – | |
| >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 |
|----------------|---|
| maxnoofDLCodes | 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 | | – | |
| UE Capabilities Information | | 1 | | | – | |
| >HS-DSCH Physical Layer Category | M | | 9.2.1.300a | | – | |
| >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 |

| 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. |

9.2.2.19b 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 |
|---|----------|--|-----------------------------|---|-------------|----------------------|
| HS-DSCH MAC-d Flow Specific Information Response | | <i>0..<maxnoofMACdFlows></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 | | – | |
| HS-SCCH Specific Information Response | | <i>0..<maxnoofHSSCCHcodes></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 | | – | |
| CHOICE <i>HARQ Memory Partitioning</i> | O | | | | – | |
| > <i>Implicit</i> | | | | | – | |
| >>Number of Processes | M | | INTEGER (1..8,...) | 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 | | <i>1..<maxnoofHARQprocesses></i> | | 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 | | 9.2.1.45B | See [16] | – | |
| User Plane Congestion Fields Inclusion | O | | 9.2.1.70C | | YES | ignore |
| HARQ Preamble Mode Activation Indicator | O | | 9.2.2.58 | | YES | ignore |

| Range bound | Explanation |
|-----------------------------|-----------------------------------|
| <i>maxnoofMACdFlows</i> | Maximum number of MAC-d flows. |
| <i>maxnoofHSSCCHcodes</i> | Maximum number of HS-SCCH codes. |
| <i>maxnoofHARQprocesses</i> | Maximum number of HARQ processes. |

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 | | – | |

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]. |

9.2.2.19 d 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.

| 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 |
|---|----------|--|---|-----------------------|
| E-DCH MAC-d Flow Specific Update Information | | <i>0..<maxnoofEDCHMACdFlows></i> | | |
| >E-DCH MAC-d Flow ID | M | | 9.2.2.4MB | |
| >HARQ Process Allocation For 2ms Non-Scheduled Transmission Grant | O | | HARQ Process Allocation for 2ms TTI 9.2.2.4O | |
| HARQ Process Allocation For 2ms Scheduled Transmission Grant | O | | HARQ Process Allocation for 2ms TTI 9.2.2.4O | |

| Range bound | Explanation |
|-----------------------------|--------------------------------------|
| <i>maxnoofEDCHMACdFlows</i> | Maximum number of E-DCH MAC-d flows. |

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 |
|---------------------|----------|-------|--------------------------------------|-----------------------|
| HS-PDSCH RL ID | M | | RL ID 9.2.1.49 | |
| HS-DSCH Information | O | | HS-DSCH FDD Information 9.2.2.19a | |

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 |
|------------------------------------|----------|-------|-----------------------|-----------------------|
| <i>CHOICE Serving Cell Change</i> | | | | |
| > <i>Successful</i> | | | | |
| >>HS-DSCH FDD Information Response | M | | 9.2.2.19b | |
| >>HS-DSCH-RNTI | M | | 9.2.1.30P | |
| > <i>Unsuccessful</i> | | | | |
| >>Cause | M | | 9.2.1.5 | |

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 |
|---|----------|------------------|-----------------------|-----------------------|
| CHOICE <i>Serving Cell Change</i> | | | | |
| > <i>Successful</i> | | | | |
| >>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 | |
| > <i>Unsuccessful</i> | | | | |
| >>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 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) | | |

9.2.2.21E 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.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|----------------------------|----------|-------|--------------------------------------|-----------------------|
| MAC-es Guaranteed Bit Rate | | | INTEGER (0..2 ²⁴ -1, ...) | Unit: bit/s |

9.2.2.21F MAC-e Reset Indicator

Indicates the MAC-e Reset is performed in UE.

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description |
|-----------------------|----------|-------|--------------------------|-----------------------|
| MAC-e Reset Indicator | | | ENUMERATED (MAC-e Reset) | |

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,...) | 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 Range: -6..13dB 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,...) | |

9.2.2.24f 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) | |

9.2.2.24A 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 (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 (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 or relative to the Reference F-DPCH TX Power in case the UE Context is configured to use F-DPCH in the downlink.

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description |
|---------------|----------|-------|-----------------------|--|
| Power Offset | | | INTEGER(0..24) | Unit dB, Step 0.25 dB, 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(-30..+30) | Unit dB, step 1 dB 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 (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.

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description |
|-------------------|----------|-------|-----------------------|---|
| Propagation Delay | | | INTEGER(0..255) | Unit: Chips. Step: 3 chips. 0=0 chips, 1=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 |
|--------------------------------------|----------|--|-----------------------|--|
| RL Specific E-DCH Information | | <i>1..<maxnoofEDCHMACdFlows></i> | | |
| >E-DCH MAC-d Flow ID | M | | 9.2.2.4MB | |
| >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. |
| 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 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) | |

9.2.2.37 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 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 SSdT Cell Identity

Void.

9.2.2.40A SSdT Cell Identity for EDSCHPC

Void.

9.2.2.41 SSdT Cell Identity Length

Void.

9.2.2.42 SSdT Indication

Void.

9.2.2.43 SSDD Support Indicator

The possibility to use SSDD Support Indicator has been removed.

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description |
|------------------------|----------|-------|---|--|
| SSDD Support Indicator | | | ENUMERATED(Not Used, SSDD not supported). | The <i>SSDD 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 (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 |
|--|----------|--------------|--|--|
| Transmission Gap Pattern Sequence Information | | 1..<maxTGPS> | | |
| >TGPSI Identifier | M | | INTEGER(1..<MaxTGPS>) | Transmission Gap Pattern Sequence Identifier 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 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 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) 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,. Step 0.1 dB, Range 0-3dB |
| >DeltaSIR2 | O | | INTEGER (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) When omitted, DeltaSIR2 = DeltaSIR1. Step 0.1 dB, Range 0-3dB |
| >DeltaSIRafter2 | O | | INTEGER (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. When omitted, DeltaSIRafter2 = DeltaSIRafter1. 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,...) | |

9.2.2.52A UL DPDCH Indicator for E-DCH operation

This IE indicated whether the requested configuration actually contain 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 "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 DPCH except when F-DPCH is configured.

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description |
|---------------------|----------|-------|-----------------------|--|
| E-AGCH Power Offset | | | INTEGER (0...255,...) | Unit: dB Range: -32 .. +31.75 dB Step: 0.25 dB |

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 DPCH except when F-DPCH is configured.

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description |
|---------------------|----------|-------|-----------------------|--|
| E-RGCH Power Offset | | | INTEGER (0...255,...) | Unit: dB Range: -32 .. +31.75 dB 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 DPCH except when F-DPCH is configured.

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description |
|---------------------|----------|-------|--------------------------|--|
| E-HICH Power Offset | | | INTEGER (0...255,...) | Unit: dB Range: -32 .. +31.75 dB 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 (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 (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. "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 (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 (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 (E-DCH Minimum Set E-TFCI not valid) | |

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 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. The second bit: HS-DSCH Support Indicator. The third bit: DSCH 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. The second bit: HS-DSCH Support Indicator. The third bit: DSCH 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 |
|-------------------------------------|------------|-------------------|-----------------------|--------------------------------------|-------------|----------------------|
| DCH Information | | 1..<maxno ofDCHs> | | | – | |
| >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 | | – | |
| >DCH Specific Info | | 1..<maxno ofDCHs> | | | – | |
| >>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 |
|-------------|------------------------------------|
| maxnoofDCHs | 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.

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|--------------------------------|----------|------------------------------|-------------------------------------|-----------------------|-------------|----------------------|
| DL Timeslot Information | | <i>1..<maxno ofTS></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 | | – | |
| >DL Code Information | M | | TDD DL Code Information 9.2.3.8C | | – | |

| Range bound | Explanation |
|-------------------|---------------------------------------|
| <i>maxnoofTSs</i> | 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 |
|-------------------------------|----------|--------------------------------|-----------------------|-----------------------|-------------|----------------------|
| DL Time Slot ISCP Info | | <i>1..<maxno ofDLts></i> | | | – | |
| >Time Slot | M | | 9.2.1.56 | | – | |
| >DL Timeslot ISCP | M | | 9.2.3.12 | | – | |

| Range bound | Explanation |
|--------------------|--|
| <i>maxnoofDLts</i> | 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 |
|------------------------------------|----------|-------------------------------------|---|-------------------------------|-------------|----------------------|
| DL Timeslot Information LCR | | <i>1 .. <maxnoof DLtsLCR></i> | | | – | |
| >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 Code Information LCR 9.2.3.8D | | – | |
| >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 |

| 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 |
|-----------------------------------|----------|--------------------------------|-----------------------|-----------------------|-------------|----------------------|
| DL Time Slot ISCP Info LCR | | 1 .. < <i>maxnoofULtsLCR</i> > | | | – | |
| >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 (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 |
|------------------------------------|----------|---------------------------------|-----------------------|--|-------------|----------------------|
| DSCH TDD Information | | <i>1..<maxno ofDSCHs></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 |

| 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 |
|--|----------|-------|-----------------------|-----------------------|
| HS-DSCH MAC-d Flows Information | M | | 9.2.1.300A | |
| UE Capabilities Information | | 1 | | |
| >HS-DSCH Physical Layer Category | M | | 9.2.1.300a | |
| MAC-hs Reordering Buffer Size for RLC-UM | M | | 9.2.1.34Ab | |
| TDD ACK NACK Power Offset | M | | 9.2.3.7I | |

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 |
|--|----------|--|---------------------------------|---|-------------|----------------------|
| HS-DSCH MAC-d Flow Specific Information Response | | <i>0..<maxno ofMACdFlows></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 | | – | |
| HS-SCCH Specific Information Response | | <i>0..<maxno ofHSSCC Hcodes></i> | | Not applicable to 1.28 Mcps 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 | | – | |
| >HS-SICH Information | | 1 | | | – | |
| >>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 | | – | |
| HS-SCCH Specific Information Response LCR | | <i>0..<maxno ofHSSCC Hcodes></i> | | Not applicable to 3.84 Mcps 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 | | – | |
| >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 | | – | |
| HS-PDSCH Timeslot Specific Information Response | | <i>0..<maxno ofDLts></i> | | Not Applicable to 1.28Mcps TDD. | GLOBAL | reject |
| >Time Slot | M | | 9.2.1.56 | | – | |
| >Midamble Shift And Burst Type | M | | 9.2.3.4 | | – | |
| HS-PDSCH Timeslot Specific Information Response LCR | | <i>0..<maxno ofDLtsLCR ></i> | | Not Applicable to 3.84Mcps TDD. | GLOBAL | reject |
| >Time Slot LCR | M | | 9.2.3.12a | | – | |
| >Midamble Shift LCR | M | | 9.2.3.4C | | – | |
| CHOICE HARQ Memory Partitioning | O | | | | – | |
| >Implicit | | | | | – | |
| >>Number of Processes | M | | INTEGER (1..8) | For HARQ process IDs going from 0 to 'Number of | – | |

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|--|----------|----------------------------|-----------------------|--|-------------|----------------------|
| | | | | Processes' – 1 the Total number of soft channel bits [42] is partitioned equally between all HARQ processes according to the rules in [16]. | | |
| >Explicit | | | | | – | |
| >>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 | | 9.2.1.45B | See [16] | – | |
| User Plane Congestion Fields Inclusion | O | | 9.2.1.70C | | YES | ignore |

| 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>maxnoofHARQprocesses</i> | Maximum number of HARQ processes. |

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 | | 9.2.3.7I | | – | |

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) | |

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 |
|--------------------------------------|----------|------------------------------|---|-----------------------|-------------|----------------------|
| DSCH Flow Control Information | | 1..16 | | | – | |
| >DSCH 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 | | – | |
| >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) | |

9.2.3.3A Maximum Number of Timeslots

Defines the maximum number of timeslots the UE has the capability of receiving or transmitting. [3.84Mcps 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 – 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].

| 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].

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description |
|-------------------|----------|-------|----------------------------------|-----------------------|
| Repetition Period | | | ENUMERATED (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 (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 | | – | |
| Secondary CCPCH | | <i>0..<maxno of SCCPC Hs></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 | | – | |
| FACH | | <i>0..maxno of FACHs</i> | | | – | |
| > TFS | M | | 9.2.1.64 | For the DL. | – | |
| PCH | | <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. |

9.2.3.7C 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 |
|---|----------|------------------------------------|-----------------------|-----------------------|-------------|----------------------|
| Secondary CCPCH TDD Code Information | | <i>1..<maxno OfSCCPC Hs></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 | | – | |
| Secondary CCPCH | | <i>0..<maxno ofSCCPCHs></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 | | – | |
| FACH | | <i>0..<maxno ofFACHs></i> | | | – | |
| > TFS | M | | 9.2.1.64 | For the DL. | – | |
| PCH | | <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 |
|---|----------|-----------------------------------|--|-----------------------|-------------|----------------------|
| Secondary CCPCH TDD Code Information | | <i>1..<maxno ofSCCPCHs></i> | | | – | |
| >TDD Channelisation Code LCR | M | | 9.2.3.8a | | – | |
| >SCCPCH Time Slot Format LCR | M | | TDD DL DPCH Time Slot Format LCR 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 Range: -7..+8 dB 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 (1/1), (2/1), (2/2), (4/1), .. (4/4), (8/1), .. (8/8), (16/1), .. (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 ED((1/1), (2/1), (2/2), (4/1),...(4/4), (8/1), .. (8/8), (16/1).. (16/16) ,...) | |
| Modulation | M | | ENUMERATED ED(QPSK, 8PSK, ...) | Modulation options for 1.28Mcps TDD in contrast to 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 |
|-------------------------------------|----------|--------------------------------|-----------------------|---------------------------------------|-------------|----------------------|
| TDD DCHs To Modify | | <i>1..<maxno ofDCHs></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 | | – | |
| >DCH Specific Info | | <i>1..<maxno ofDCHs></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 | | – | |
| >>Traffic Class | O | | 9.2.1.58A | | YES | ignore |
| >>Guaranteed Rate Information | O | | 9.2.1.30M | | 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 |
|--------------------------------|----------|----------------------------------|-----------------------|-----------------------|-------------|----------------------|
| TDD DL Code Information | | <i>1..<maxno OfDPCHs ></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 |
|------------------------------------|----------|--------------------------------------|-----------------------|-----------------------|-------------|----------------------|
| TDD DL Code Information LCR | | 1 .. < <i>maxnoOfDPCHLCR</i> > | | | – | |
| >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 (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 |
|--------------------------------|----------|---------------------|-----------------------|-----------------------|-------------|----------------------|
| TDD UL Code Information | | 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 |
|------------------------------------|----------|-------------------------|-----------------------|-----------------------|-------------|----------------------|
| TDD UL Code Information LCR | | 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 Time Slot Format LCR | M | | INTEGER (0..69,...) | |
| > <i>8PSK</i> | | | | |
| >>8PSK TDD UL DPCH Time Slot Format LCR | M | | INTEGER (0..24,...) | |

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 | | | ENUMERATE 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(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 (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 | | | ENUMERAT ED(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 |
|--------------------------------|----------|-----------------------------|--------------------------------------|-----------------------|-------------|----------------------|
| UL Timeslot Information | | <i>1..<maxnoOfTS></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 9.2.3.10A | | – | |

| Range bound | Explanation |
|-------------------|---------------------------------------|
| <i>maxnoofTSs</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 |
|-------------------------------|----------|------------------------|-----------------------|-----------------------|-------------|----------------------|
| UL Time Slot ISCP Info | | 1 .. <maxnoof ULts> | | | – | |
| >Time Slot | M | | 9.2.1.56 | | – | |
| >UL Timeslot ISCP | M | | 9.2.3.13A | | – | |

| Range bound | Explanation |
|-------------|---|
| maxnoofULts | 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 Range: 0..7.5 dB 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 (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 |
|---|----------|-------|--|--|
| CHOICE <i>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 |
|--|----------|----------------|---------------------------------------|-----------------------|
| UE Measurement Timeslot Information | | 1..<maxnoOfTS> | | |
| >Time Slot | M | | 9.2.1.56 | |
| >Burst Type | M | | ENUMERATED(Type1, Type 2, Type 3,...) | |

| Range bound | Explanation |
|-------------|--|
| maxnoOfTSs | 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 |
|---|----------|----------------------|-----------------------|-----------------------|
| UE Measurement Time Slot Information LCR | | 1 .. <maxnoOfTSLCR > | | |
| >Time Slot LCR | M | | 9.2.3.12a | |

| Range bound | Explanation |
|--------------|---|
| maxnoOfTSLCR | 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, 240, 320, 640, 1280, 2560, 5000) | Time in ms. |

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 |
| >>>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 |
| >>>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 |
| >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 |
| >>>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 |
| >>>Time Slot LCR | M | | 9.2.3.12a | |
| >>>Timeslot ISCP | M | | 9.2.3.12 | |

| Range bound | Explanation |
|--------------|--|
| maxnoOfTS | Maximum number of Timeslots for a UE for 3.84Mcps TDD. |
| maxnoofTSLCR | 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 |
|------------------------------------|----------|-----------------------------------|--|-----------------------|-------------|----------------------|
| UL Timeslot Information LCR | | 1 .. < <i>maxnoofULtsLCR</i> > | | | – | |
| >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 9.2.3.10B | | | |

| 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 |
|-------------------------------|----------|-----------------------------------|-----------------------|-----------------------|-------------|----------------------|
| UL Time Slot ISCP Info | | 1 .. < <i>maxnoofULtsLCR</i> > | | | – | |
| >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. |
| FPACH info | | 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. Unit: dBm Step size: 1 |
| SYNC UL procedure parameters | | 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 |
|------------------------------------|----------|---------------------|-----------------------|--|-------------|----------------------|
| USCH Information | | 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 | | – | |
| >BLER | M | | 9.2.1.4 | | | |
| >RB Info | | 1..<maxnoofRBs> | | 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. |

9.3 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,
    InformationExchangeFailureIndication,
    InformationExchangeInitiationFailure,
    InformationExchangeInitiationRequest,
    InformationExchangeInitiationResponse,
    InformationExchangeTerminationRequest,
    InformationReport,
    IurDeactivateTrace,
    IurInvokeTrace,
    MBMSAttachCommand,
    MBMSDetachCommand,
    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-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-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                 |
}

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
}

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
}

}

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,  
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,  
CellCapabilityContainer-TDD,  
CellCapabilityContainer-TDD-LCR,  
CellParameterID,  
CellPortionID,  
ChipOffset,  
CommonMeasurementAccuracy,  
CommonMeasurementType,  
CommonMeasurementValue,  
CommonMeasurementValueInformation,  
CommonTransportChannelResourcesInitialisationNotRequired,  
CongestionCause,  
CoverageIndicator,  
CriticalityDiagnostics,  
D-RNTI,  
D-RNTI-ReleaseIndication,  
DCH-FDD-Information,  
DCH-ID,  
DCH-Indicator-For-E-DCH-HSDPA-Operation,
```

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-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,
SchedulingPriorityIndicator,

Enhanced-PrimaryCPICH-EcNo,
FACH-FlowControlInformation,
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-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,
MaxNrOfUL-DPCHs,
MaxNrTimeslots,
MaxNrULPhysicalchannels,
MACes-Guaranteed-Bitrate,
MaxNr-Retransmissions-EDCH,
Max-Set-E-DPDCHs,
MeasurementFilterCoefficient,
MeasurementID,
MeasurementRecoveryBehavior,
MeasurementRecoveryReportingIndicator,
MeasurementRecoverySupportIndicator,

MBMS-Bearer-Service-List,
MidambleAllocationMode,
MidambleShiftAndBurstType,
MidambleShiftLCR,
MinimumSpreadingFactor,
MinUL-ChannelisationCodeLength,
MultiplexingPosition,
NeighbouringFDDCellMeasurementInformation,
NeighbouringTDDCellMeasurementInformation,
Neighbouring-GSM-CellInformation,
Neighbouring-UMTS-CellInformation,
NeighbouringTDDCellMeasurementInformationLCR,
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-RelocationInformation,
RB-Info,
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,
S-RNTI,
S-RNTI-Group,
SCH-TimeSlot,
SAI,
SFN,
Secondary-CCPCH-Info-TDD,
Secondary-CPICH-Information,
Secondary-CPICH-Information-Change,

Secondary-LCR-CCPCH-Info-TDD,
SNA-Information,
SpecialBurstScheduling,
SSDT-SupportIndicator,
STTD-SupportIndicator,
AdjustmentPeriod,
ScaledAdjustmentRatio,
MaxAdjustmentStep,
SRB-Delay,
Support-8PSK,
SyncCase,
SynchronisationConfiguration,
TDD-ChannelisationCode,
TDD-DCHs-to-Modify,
TDD-DL-Code-Information,
TDD-DPCHOffset,
TDD-PhysicalChannelOffset,
TDD-TPC-DownlinkStepSize,
TDD-ChannelisationCodeLCR,
TDD-DL-Code-LCR-Information,
TDD-UL-Code-Information,
TDD-UL-Code-LCR-Information,
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,
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-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  
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,  
maxNrOfDPCHsPerRL-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 ,
maxNrOfEDCHMACdFlows ,
maxNrOfHSSICHs ,
maxNrOfHSSICHs-1 ,
maxNrOfActiveMBMSServices ,
maxNrOfMBMSServices ,
maxNrOfSigSeqERGHICH-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-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-CellCapabilityContainer-TDD ,
id-CellCapabilityContainer-TDD-LCR ,
id-CellPortionID ,
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-CongestionCause,
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-Serving-cell-change-CFN,
id-E-DCH-Serving-cell-change-informationResponse,
id-Enhanced-PrimaryCPICH-EcNo,
id-FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspFDD,
id-FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspTDD,
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-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-MBMS-Bearer-Service-List,
id-MBMS-Bearer-Service-List-InfEx-Rsp,
id-MeasurementFilterCoefficient,
id-MeasurementID,
id-MeasurementRecoveryBehavior,
id-MeasurementRecoveryReportingIndicator,
id-MeasurementRecoverySupportIndicator,
id-Multiple-RL-InformationResponse-RL-ReconfReadyTDD,
id-NACC-Related-Data,
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-PowerAdjustmentType,

id-PrimCCPCH-RSCP-DL-PC-RqstTDD,
id-Primary-CPICH-Usage-For-Channel-Estimation,
id-PropagationDelay,
id-ProvidedInformation,
id-RANAP-RelocationInformation,
id-ResetIndicator,
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-SFN,
id-SFNReportingIndicator,
id-SNA-Information,
id-SRNC-ID,
id-STTD-SupportIndicator,
id-SuccessfulRL-InformationResponse-RL-AdditionFailureFDD,
id-SuccessfulRL-InformationResponse-RL-SetupFailureFDD,
id-TDD-maxNrDLPhysicalchannels,
id-TDD-Support-8PSK,
id-timeSlot-ISCP,
id-TimeSlot-RL-SetupRspTDD,
id-TnlQos,
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-DPCHIndicatorEDCH,
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-ISCP-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-ISCP-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,


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id-DL-Timeslot-LCR-InformationList-PhyChReconfRqstTDD,
id-timeSlot-ISCP-LCR-List-DL-PC-Rqst-TDD,
id-TSTD-Support-Indicator-RL-SetupRqstTDD,
id-PrimaryCCPCH-RSCP-RL-ReconfPrepTDD,
id-DL-TimeSlot-ISCP-Info-RL-ReconfPrepTDD,
id-DL-Timeslot-ISCP-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

FROM RNSAP-Constants;

-- *****
--
-- RADIO LINK SETUP REQUEST FDD
--
-- *****

RadioLinkSetupRequestFDD ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{RadioLinkSetupRequestFDD-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{RadioLinkSetupRequestFDD-Extensions}}
    ...
}
OPTIONAL,

```

```

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 conditional },
  -- This IE shall be present if E-DPCH Information IE is present.
  ...
}

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-ForTFICI-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 },
  ...
}

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 },
  ...
}

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 } }
  ...
}

F-DPCH-Information-RL-SetupRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

PowerOffsetInformation-F-DPCH-RL-SetupRqstFDD ::= SEQUENCE {
  po2-ForTPC-Bits            PowerOffset,
  iE-Extensions               ProtocolExtensionContainer { { PowerOffsetInformation-F-DPCH-RL-SetupRqstFDD-ExtIEs } }
  ...
}

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}}
  ...
}

```

```

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
mandatory } |
  { ID id-DL-Physical-Channel-Information-RL-SetupRqstTDD CRITICALITY reject  TYPE DL-Physical-Channel-Information-RL-SetupRqstTDD PRESENCE
mandatory } |
  { 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
  ...
}

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
  ...
}

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
    ...
}

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 only
    IE-Extensions              ProtocolExtensionContainer { {RL-Information-RL-SetupRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

RL-Information-RL-SetupRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  optional { ID id-DL-Timeslot-ISCP-LCR-Information-RL-SetupRqstTDD CRITICALITY reject EXTENSION DL-TimeSlot-ISCP-LCR-Information PRESENCE optional }|
  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
  { ID id-PrimaryCCPCH-RSCP-Delta CRITICALITY ignore EXTENSION PrimaryCCPCH-RSCP-Delta 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}, ...
}

-- *****
--
-- 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,
  closedloopoptimingadjustmentmode Closedloopoptimingadjustmentmode 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
},
    ...
}

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 },
    ...
}

-- *****
--
-- RADIO LINK SETUP RESPONSE TDD
--
-- *****

RadioLinkSetupResponseTDD ::= SEQUENCE {
    protocolIEs                ProtocolIE-Container    {{RadioLinkSetupResponseTDD-IEs}},
    protocolExtensions          ProtocolExtensionContainer {{RadioLinkSetupResponseTDD-Extensions}}
    ...
}

RadioLinkSetupResponseTDD-IEs RNSAP-PROTOCOL-IES ::= {

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    { 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. --
    ...
}

UL-CCTrCHInformationList-RL-SetupRspTDD ::= ProtocolIE-Single-Container {{UL-CCTrCHInformationListIEs-RL-SetupRspTDD}}

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```

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},
  ...
}

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
  ...
}

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 {
  cCTrCH-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 CTrCH-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-Timeslot-LCR-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 ::= {
    ...
}

-- *****
--
-- 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 },
    ...
}

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 ::= {
    ...
}

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,
  maxUL-SIR                           UL-SIR,
  minUL-SIR                           UL-SIR,
  closedlooptimingadjustmentmode      Closedlooptimingadjustmentmode  OPTIONAL,
  maximumAllowedULTxPower             MaximumAllowedULTxPower,
  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
  },
  ...
}

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}}          OPTIONAL,
  ...
}

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 ::= {
    ...
}

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 } |
    optional } |
    { ID id-SynchronisationIndicator  CRITICALITY ignore  EXTENSION SynchronisationIndicator  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 } |
}

```

```

        { 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
}|
        { ID id-EDPCH-Information                CRITICALITY reject EXTENSION EDPCH-Information-RLAdditionReq-FDD                PRESENCE
optional }|
        { ID id-EDCH-FDD-Information                CRITICALITY reject EXTENSION EDCH-FDD-Information                PRESENCE
optional },
        -- This IE shall be present if E-DPCH Information is present
        ...
}

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
    ...
}

-- *****
--
-- RADIO LINK ADDITION REQUEST TDD
--
-- *****

RadioLinkAdditionRequestTDD ::= SEQUENCE {
    protocolIEs                ProtocolIE-Container {{RadioLinkAdditionRequestTDD-IEs}},
    protocolExtensions                ProtocolExtensionContainer {{RadioLinkAdditionRequestTDD-Extensions}}                OPTIONAL,
    ...
}

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,

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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
  { ID id-PrimaryCCPCH-RSCP-Delta          CRITICALITY ignore      EXTENSION   PrimaryCCPCH-RSCP-Delta          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 },
  ...
}

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 ::= {
  ...
}

```

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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,
}

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received-total-wide-band-power Received-total-wide-band-power,
not-Used-secondary-CCPCH-Info          NULL          OPTIONAL,
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    CRITICALITY ignore EXTENSION Active-MBMS-Bearer-Service-ListFDD-PFL    PRESENCE optional }|
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 }|
  ...
}

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},
    ...
}

-- *****
--
-- 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,

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    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-CCTrCHInformationList-RL-AdditionRspTDD UL-CCTrCHInformationList-RL-AdditionRspTDD OPTIONAL,
    dl-CCTrCHInformationList-RL-AdditionRspTDD 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 },
    ...
}

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 {
    cCTrCH-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,

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    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 ::= {
    ...
}

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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,
    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
    },
    ...
}

RL-LCR-InformationResponse-RL-AdditionRspTDD ::= 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,
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-Information    UL-CCTrCH-LCR-InformationList-RL-AdditionRspTDD  OPTIONAL,
dl-CCTrCH-LCR-Information    DL-CCTrCH-LCR-InformationList-RL-AdditionRspTDD  OPTIONAL,
dch-InformationResponse      DCH-InformationResponseList-RL-AdditionRspTDD    OPTIONAL,
dsch-LCR-InformationResponse DSCH-LCR-InformationResponse-RL-AdditionRspTDD  OPTIONAL,
usch-LCR-InformationResponse USCH-LCR-InformationResponse-RL-AdditionRspTDD  OPTIONAL,
neighbouring-UMTS-CellInformation Neighbouring-UMTS-CellInformation          OPTIONAL,
neighbouring-GSM-CellInformation Neighbouring-GSM-CellInformation          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
  ...
}

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-Information    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 ::= {
    ...
}

```

```

-- *****
--
-- 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 }|
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 },
    ...
}

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 },
    ...
}

-- *****
--
-- 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         ProtocolExtensionContainer { { RLSpecificCauseItem-RL-AdditionFailureTDD-ExtIEs } }    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-DPDCHs          MaxNrOfUL-DPDCHs          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,

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    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,
    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-RLReconfPrepare-FDD PRESENCE optional }|
    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 }|
    optional }|
    { ID id-F-DPCH-Information-RL-ReconfPrepFDD CRITICALITY reject    EXTENSION F-DPCH-Information-RL-ReconfPrepFDD PRESENCE optional },
    ...
}

```

```

}

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 ::= {
    ...
}

PowerOffsetInformation-F-DPCH-RL-ReconfPrepFDD ::= SEQUENCE {
    po2-ForTPC-Bits            PowerOffset,
    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.
    { 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
    ...
}

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 TFCS-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 {
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 CCTrCH-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.
...
}
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            CCTrCH-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
  { 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 },
    ...
}

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 }|
    ...
}

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 },
    ...
}

-- *****
--
-- RADIO LINK RECONFIGURATION READY TDD
--
-- *****

RadioLinkReconfigurationReadyTDD ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container          {{RadioLinkReconfigurationReadyTDD-IEs}},
    protocolExtensions  ProtocolExtensionContainer {{RadioLinkReconfigurationReadyTDD-Extensions}}
    ...
}

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 },
  ...
}

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,
  --For 3.84Mcps TDD only
  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

```

```

    ...
}

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,
    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 ::= {
    ...
}

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
  ...
}

```

```

UL-TimeslotLCR-InformationModifyList-RL-ReconfReadyTDD ::= SEQUENCE ( SIZE (1..maxNrOfTsLCR)) OF UL-TimeslotLCR-InformationModifyItem-RL-
ReconfReadyTDD

```

```

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 ::= {
    ...
}
```

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}}

```
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 only, this is a DCH type CCTrCH power
{ ID id-CCTrCH-Minimum-DL-Power-RL-ReconfReadyTDD      CRITICALITY ignore  EXTENSION DL-Power      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-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
  ...
}

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-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 ::= {
    ...
}
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.
    ...
}

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 ::= {
    ...
}

-- *****
--
-- RADIO LINK RECONFIGURATION FAILURE
--
-- *****

RadioLinkReconfigurationFailure ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{RadioLinkReconfigurationFailure-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{RadioLinkReconfigurationFailure-Extensions}}
    ...
}

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 } }
    ...
}

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 ::= {
    ...
}

RadioLinkReconfigurationFailure-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK RECONFIGURATION CANCEL
--
-- *****

RadioLinkReconfigurationCancel ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{RadioLinkReconfigurationCancel-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{RadioLinkReconfigurationCancel-Extensions}}
    ...
}

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 ::= {
    ...
}

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-EDCHRL-Id CRITICALITY reject EXTENSION EDCH-Serving-RL PRESENCE optional},
  ...
}

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,
  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}}
  ...
}

```

```

RadioLinkReconfigurationRequestTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-AllowedQueuingTime          CRITICALITY reject  TYPE AllowedQueuingTime          PRESENCE optional } |
  { ID id-UL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD  CRITICALITY notify  TYPE UL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD  PRESENCE
optional } |
  { ID id-UL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD  CRITICALITY notify  TYPE UL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD  PRESENCE
optional } |
  { ID id-DL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD  CRITICALITY notify  TYPE DL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD  PRESENCE
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 ::= {
  { ID id-UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD  CRITICALITY notify  TYPE UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD  PRESENCE
mandatory }
}

UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD ::= SEQUENCE {
  cCTrCH-ID          CCTrCH-ID,
  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 CTrCH-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 CTrCH-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},
    ...
}

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
    ...
}

-- *****
--
-- RADIO LINK RECONFIGURATION RESPONSE FDD
--
-- *****

RadioLinkReconfigurationResponseFDD ::= SEQUENCE {
    protocolIEs                ProtocolIE-Container {{RadioLinkReconfigurationResponseFDD-IEs}},
    protocolExtensions          ProtocolExtensionContainer {{RadioLinkReconfigurationResponseFDD-Extensions}}
    ...
}

RadioLinkReconfigurationResponseFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationResponseList-RL-ReconfRspFDD          CRITICALITY ignore      TYPE RL-InformationResponseList-RL-ReconfRspFDD          PRESENCE
optional } |
    { 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 ::= {
    { ID id-RL-InformationResponseItem-RL-ReconfRspFDD          CRITICALITY ignore      TYPE RL-InformationResponseItem-RL-ReconfRspFDD          PRESENCE
mandatory }
}

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 },
  ...
}

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 },
  ...
}

-- *****
--
-- RADIO LINK RECONFIGURATION RESPONSE TDD
--
-- *****

RadioLinkReconfigurationResponseTDD ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container          {{RadioLinkReconfigurationResponseTDD-IEs}},
  protocolExtensions  ProtocolExtensionContainer {{RadioLinkReconfigurationResponseTDD-Extensions}}
  ...
}

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 only, this is a DCH type CCTrCH power
    cCTrCH-Minimum-DL-Power    DL-Power           OPTIONAL,
    --For 3.84Mcps 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-ReconfRgstTDD    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},
    ...
}

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-MacFlowSpecificInformationItemIEs-RL-PreemptRequiredInd RNSAP-PROTOCOL-IES ::= {
  { ID id-EDCH-MacFlowSpecificInformationItem-RL-PreemptRequiredInd      CRITICALITY ignore  TYPE EDCH-MacFlowSpecificInformationItem-RL-
PreemptRequiredInd  PRESENCE mandatory  }
}

EDCH-MacFlowSpecificInformationItem-RL-PreemptRequiredInd ::= SEQUENCE {
  eDCH-MACdFlow-ID          EDCH-MACdFlow-ID,
  iE-Extensions             ProtocolExtensionContainer { { EDCH-MacFlowSpecificInformation-RL-PreemptRequiredInd-ExtIEs} } OPTIONAL,
  ...
}

EDCH-MacFlowSpecificInformation-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}}
    ...
}

DL-PowerTimeslotControlRequest-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-timeSlot-ISCP CRITICALITY ignore TYPE DL-TimeSlot-ISCP-Info PRESENCE optional},
    --Mandatory for 3.84Mcps 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}}
    ...
}

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 ::= {
    ...
}

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}}    OPTIONAL,
    ...
}

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 CRITICALITY reject EXTENSION HSPDSCH-Timeslot-InformationListLCR-
PhyChReconfRqstTDD PRESENCE optional },
    --For 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
    ...
}

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 ::= {
...
}

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 ::= {
...
}

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
  ...
}

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 ::= {
  ...
}

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 ::= {
    ...
}

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 },
  ...
}

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}}}
  ...
}

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
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 },
    ...
}

-- *****
--
-- 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 }|
    { 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},
    ...
}

-- *****
--
-- 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.
    ...
}

-- *****
--
-- 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 ::= {
  ...
}

-- *****
--
-- 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
  ...
}

HSSICH-Info-DM-Rqst ::= SEQUENCE (SIZE (1..maxNrOfHSSICHs)) OF HS-SICH-ID

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
  },
  ...
}

-- *****
--
-- DEDICATED MEASUREMENT INITIATION RESPONSE
--
-- *****

DedicatedMeasurementInitiationResponse ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container      {{DedicatedMeasurementInitiationResponse-IEs}},
  protocolExtensions   ProtocolExtensionContainer {{DedicatedMeasurementInitiationResponse-Extensions}}
  OPTIONAL,
  ...
}

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.
    ...
}

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 ::= {
    ...
}

```

```

-- *****
--
-- DEDICATED MEASUREMENT INITIATION FAILURE
--
-- *****

DedicatedMeasurementInitiationFailure ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{DedicatedMeasurementInitiationFailure-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{DedicatedMeasurementInitiationFailure-Extensions}} OPTIONAL,
    ...
}

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
  ...
}

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
    ...
}

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}} OPTIONAL,
  ...
}

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
InformationResp-DM-Fail-Ind-IEs } ::= 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
Unsuccessful-InformationResp-DM-Fail-Ind-IEs } ::= 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},
...}

-- *****
--
-- 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,
    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},
    ...
}

-- *****

```

```

--
-- 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 {
    fFACH-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 },
    ...
}

-- *****
--
-- COMMON TRANSPORT CHANNEL RESOURCES FAILURE
--
-- *****

CommonTransportChannelResourcesFailure ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{CommonTransportChannelResourcesFailure-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{CommonTransportChannelResourcesFailure-Extensions}}    OPTIONAL,
    ...
}

```

```

}

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}}      OPTIONAL,
  ...
}

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}}      OPTIONAL,
  ...
}

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
    ...
}

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 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-neighbouringCellMeasurementInformation ::= ProtocolIE-Single-Container {{ Extension-neighbouringCellMeasurementInformationIE }}

Extension-neighbouringCellMeasurementInformationIE RNSAP-PROTOCOL-IES ::= {
    { ID id-neighbouringTDDCellMeasurementInformationLCR  CRITICALITY reject  TYPE NeighbouringTDDCellMeasurementInformationLCR  PRESENCE
    mandatory },
    ...
}

CellItem-CM-Rqst-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- 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}
}

GSM-Cell-InfEx-Rqst ::= SEQUENCE {
    CGI                                CGI,
    iE-Extensions                        ProtocolExtensionContainer { { GSMCellItem-InfEx-Rqst-ExtIEs } }    OPTIONAL,
    ...
}

GSMCellItem-InfEx-Rqst-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- 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}
}

MBMS-Bearer-Service-List-InfEx-Rsp      ::= SEQUENCE (SIZE (1..maxNrOfMBMSServices)) 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 ::= {
    ...
}
-- *****
--
-- 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,
    ...
}

Cell-InfEx-Rprt ::= SEQUENCE {
    requestedDataValueInformation,
    iE-Extensions      ProtocolExtensionContainer  {{ CellItem-InfEx-Rprt-ExtIEs }}    OPTIONAL,
    ...
}

CellItem-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 ::= {
    ...
}

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 ::= {
    ...
}

-- *****
--
-- 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 },
    ...
}

-- *****
--
-- 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 ::= {
  ...
}

-- *****
--
-- UE MEASUREMENT INITIATION RESPONSE
--
-- *****

UEMeasurementInitiationResponse ::= SEQUENCE {
  protocolIEs ProtocolIE-Container {{UEMeasurementInitiationResponse-IEs}},
  protocolExtensions ProtocolExtensionContainer {{UEMeasurementInitiationResponse-Extensions}} OPTIONAL,
  ...
}

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}}      OPTIONAL,
    ...
}

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}}      OPTIONAL,
    ...
}

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}}
    ...
}

```

```

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 ::= {
  ...
}

-- *****
--
-- 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,
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,
maxTGPS,
maxTTI-Count,
maxNoGPSTypes,
maxNoSat,
maxNrOfActiveMBMSServices,
maxNrOfCells,
maxNrOfSNAs,
maxNrOfHARQProc,
maxNrOfHSSCCHCodes,
maxNrOfMACdFlows,
maxNrOfMACdFlows-1,
maxNrOfMACdPDUSize,
maxNrOfEDCHMACdFlows,
maxNrOfEDCHMACdFlows-1,
maxNrOfMBMSServices,
maxNrOfPDUIndexes,
maxNrOfPDUIndexes-1,
maxNrOfPrioQueues,
maxNrOfPrioQueues-1,
maxNrOfSatAlmanac-maxNoSat,
maxNrOfGERANSI,
maxNrOfSigSeqERGHICH-1,
maxNrOfUEs,

maxNrOfAddFreq,
maxNrOfCellsPerFreq,
maxNoOfLogicalChannels,

id-Allowed-Rate-Information,
id-AntennaColocationIndicator,
id-BindingID,
id-Cell-Capacity-Class-Value,
id-CellCapabilityContainer-FDD,
id-CellCapabilityContainer-TDD,
id-CellCapabilityContainer-TDD-LCR,
id-CoverageIndicator,
id-DPC-Mode-Change-SupportIndicator,
id-E-DCH-Minimum-Set-E-TFCIValidityIndicator,
id-E-RGCH-E-HICH-ChannelisationCodeValidityIndicator,
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-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-Minimum-DL-Power-TimeslotLCR-InformationItem,
id-HS-SICH-Reception-Quality,
id-HS-SICH-Reception-Quality-Measurement-Value,
id-ExtendedGSMCellIndividualOffset,
id-Unidirectional-DCH-Indicator,
id-RTLloadValue,
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

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..maxNrOfActiveMBMSServices)) 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

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
}
```

```
}
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
-- 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
-- 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
-- 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,
  ...
}

```



```

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
}
-- 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-RTLoadValue CRITICALITY ignore TYPE RTLoadValue PRESENCE mandatory }|
    { ID id-NRTLoadInformationValue CRITICALITY ignore TYPE NRTLoadInformationValue PRESENCE mandatory }|
    { ID id-UpPTSInterferenceValue CRITICALITY reject TYPE UpPTSInterferenceValue 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
}

CorrespondingCells ::= SEQUENCE (SIZE (1..maxNrOfCellsPerFreq)) OF C-ID

CoverageIndicator ::= ENUMERATED {
  overlap,
  covers,
  containedIn,
  ...
}

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-Feedback-Cycle ::= ENUMERATED {v0, v2, v4, v8, v10, v20, v40, v80, v160,...}

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)

-- 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-TnlQos          CRITICALITY ignore     EXTENSION TnlQos          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 },
  ...
}

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-TnlQos                    CRITICALITY ignore  EXTENSION TnlQos          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-cCtRCH-ID                      CCTrCH-ID, -- UL CCTrCH in which the DCH is mapped
  dl-cCtRCH-ID                      CCTrCH-ID, -- DL CCTrCH 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
}

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 },
    ...
}

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 ::= {
    ...
}

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.

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-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)
DPCHConstantValue ::= INTEGER (-10..10)
-- Unit dB, Step 1dB
DRACControl            ::= ENUMERATED {
  not-Used-requested,
  not-requested
}
DRXCycleLengthCoefficient ::= INTEGER (3..9)
-- See in [16]
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                   CCTrCH-ID, -- DL CCTrCH in which the DSCH is mapped
    trChSourceStatisticsDescriptor TrCH-SrcStatisticsDescr,
    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.
    ...
}

DsField ::= BIT STRING (SIZE (8))

-- E

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 },
    ...
}

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 ::= {
    ...
}

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 ::= {
    ...
}

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 ::= {
    ...
}

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 ::= {
    ...
}

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,
    ...
}

E-DCH-MACdFlow-Specific-UpdateInformation-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 ::= {
    ...
}

E-DCH-Maximum-Bitrate ::= INTEGER (0..5742,...)

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-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 ::= {
...
}
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)

EDCH-MACdFlows-Information ::= SEQUENCE {
    eDCH-MACdFlow-Specific-Information      EDCH-MACdFlow-Specific-InfoList,
    iE-Extensions                           ProtocolExtensionContainer { { EDCH-MACdFlow-Information-ExtIEs } }      OPTIONAL,
    ...
}
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 } }      OPTIONAL,
    ...
}

EDCH-MACdFlow-Specific-InfoItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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 } }      OPTIONAL,
    ...
}

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 {
    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 ::= {
    ...
}

E-DCH-TFCI-Table-Index ::= INTEGER (0..1,...)

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 {
    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 ::= {
    ...
}

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 ::= {
    ...
}

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 ::= {
    ...
}

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,

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```

    hSDSCH-Configured-Indicator          HSDSCH-Configured-Indicator          OPTIONAL,
    iE-Extensions                        ProtocolExtensionContainer { { EDPCH-Information-RLReconfRequest-FDD-ExtIEs } } OPTIONAL,
    ...
}

EDPCH-Information-RLReconfRequest-FDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

E-DPCCH-PO ::= INTEGER (0..maxNrOfEDPCCH-PO-QUANTSTEPS)

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 ::= {
    ...
}

E-RNTI ::= INTEGER (0..65535)

E-TFCI ::= INTEGER (0..127)

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 },
  ...
}
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)

-- 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 ::= {
    ...
}

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)

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-GAIgeographicalCoordinate    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 ::= {
    ...
}

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 {
        gERAN-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)),
    sfl-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,...),
    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 ::= {
    ...
}

HARQ-MemoryPartitioningList ::= SEQUENCE (SIZE (1..maxNrOfHARQProc)) 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},
  ...
}

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},
  ...
}

HSDSCH-Information-to-Modify ::= SEQUENCE {
  hSDSCH-MACdFlow-Specific-InfoList-to-Modify HSDSCH-MACdFlow-Specific-InfoList-to-Modify OPTIONAL,
  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},
  ...
}

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},
...
}

HSDSCH-MACdFlow-ID ::= INTEGER (0..maxNrOfMACdFlows-1)

HSDSCH-MACdFlow-Specific-InfoList ::= SEQUENCE (SIZE (1..maxNrOfMACdFlows)) OF HSDSCH-MACdFlow-Specific-InfoItem

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 ::= {
...
}

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 ::= {
...
}

```

```

}

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 ::= {
    ...
}

HSDSCH-InitialWindowSize                ::= INTEGER (1..255)
-- Number of MAC-d PDUs.

HSDSCH-RNTI ::= INTEGER (0..65535)

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 ::= {

```

```

}
...
}

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,
    ...
}

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 ::= {
    ...
}

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 ::= {
    ...
}

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 ::= {
    ...
}

```

```

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
    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,
    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},
    ...
}

HSPDSCH-TDD-Specific-InfoList-Response ::= SEQUENCE (SIZE (0..maxNrOfDLTs)) OF HSPDSCH-TDD-Specific-InfoItem-Response

HSPDSCH-TDD-Specific-InfoItem-Response ::= SEQUENCE {
    timeslot                                         TimeSlot,
    midambleShiftAndBurstType                       MidambleShiftAndBurstType,
    iE-Extensions                                   ProtocolExtensionContainer { { HSPDSCH-TDD-Specific-InfoItem-Response-ExtIEs } }
    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                                     TimeSlotLCR,
    midambleShiftLCR                               MidambleShiftLCR,
    iE-Extensions                                   ProtocolExtensionContainer { { HSPDSCH-TDD-Specific-InfoItem-Response-LCR-ExtIEs } }
    OPTIONAL,
    ...
}

HSPDSCH-TDD-Specific-InfoItem-Response-LCR-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 ::= {
    ...
}

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 ::= {
    ...
}

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)

HSSCCH-CodeChangeIndicator ::= ENUMERATED {
    hsSCCHCodeChangeNeeded
}

HSSCCH-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 ::= {
    ...
}

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 ::= {
    ...
}

-- I

IMEI          ::= OCTET STRING (SIZE(8))
IMEISV       ::= OCTET STRING (SIZE(8))
IMSI         ::= OCTET STRING (SIZE(3..8))

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,
    ...
}

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
    },
    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 ::= {
    ...
}

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 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
}

-- J
-- K
-- L
```

```

LAC ::= OCTET STRING (SIZE (2)) --(EXCEPT ('0000'H|'FFFE'H))

LimitedPowerIncrease ::= ENUMERATED {
    used,
    not-used
}

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)
}

-- 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

MACdPDU-Size ::= INTEGER (1..5000,...)

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,...)

MACeReset-Indicator ::= ENUMERATED {mACeReset}

MACHsGuaranteedBitRate ::= INTEGER (0..16777215,...)

MACHsReorderingBufferSize-for-RLC-UM ::= INTEGER (0..300,...)
-- Unit kBytes

MAC-hsWindowSize      ::= ENUMERATED {v4, v6, v8, v12, v16, v24, v32,...}

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

MaxNrDLPhysicalchannelsTS ::= INTEGER (1..16)

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,
    ...
}
-- Values related to [9]

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
    affectedUEInformationForMBMS      C-ID,
    iE-Extensions                     AffectedUEInformationForMBMS OPTIONAL,
    ...                               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 ::= {
    ...
}

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)

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 }
}

```

```

}

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 ::= {
    ...
}

MinUL-ChannelisationCodeLength ::= ENUMERATED {
    v4,
    v8,
    v16,
    v32,
    v64,
    v128,
    v256
}

ModifyPriorityQueue ::= CHOICE {
    addPriorityQueue          PriorityQueue-InfoItem-to-Add,
    modifyPriorityQueue       PriorityQueue-InfoItem-to-Modify,
    deletePriorityQueue      PriorityQueue-Id,
    ...
}

Modulation ::= ENUMERATED {
    qPSK,
    eightPSK,
    ...
}

MultiplexingPosition ::= ENUMERATED {
    fixed,
    flexible
}

MACHs-ResetIndicator ::= ENUMERATED{
    mACHs-NotReset
}

-- N

NACC-Related-Data ::= SEQUENCE {
    gGERAN-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 },
  ...
}

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,
  closedLoopModel-SupportIndicator ClosedLoopModel-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-AntennaCollocationIndicator CRITICALITY ignore EXTENSION AntennaCollocationIndicator 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 },
    ...
}

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 },
  ...
}

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 ::= {
  ...
}

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 } |
    ...
}

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)
}

-- 0

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
}

PLMN-Identity ::= OCTET STRING (SIZE(3))

PowerAdjustmentType ::= ENUMERATED {
    none,
    common,
    individual
}

PowerOffset          ::= INTEGER (0..24)

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 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 ::= {
...
}

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 ::= {
...
}

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 ::= {
...
}

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,
    mChsGuaranteedBitRate    MChsGuaranteedBitRate 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 ::= {
    ...
}

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
}

-- R

RAC ::= OCTET STRING (SIZE(1))

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,
    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 ::= {
    ...
}

Reference-E-TFCI-PO ::= INTEGER (0.. maxNrOfRefETFCI-PO-QUANTSTEPS)

RefTFCNumber ::= INTEGER (0..15)

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 },
  ...
}

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 ::= {
    ...
}

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 ::= {
    ...
}

RLC-Mode ::= ENUMERATED {
    rLC-AM,
    rLC-UM,
    ...
}

```



```
RNC-ID ::= INTEGER (0..4095)

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.

Rx-Timing-Deviation-Value ::= INTEGER (0..8191)
--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]

-- 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
}

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-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-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 ::= {
    ...
}
SecondInterleavingMode ::= ENUMERATED {
    frame-related,
    timeslot-related,
    ...
}
Seed ::= INTEGER (0..63)
Service-ID ::= OCTET STRING (SIZE (3))
SFN ::= INTEGER (0..4095)
SFNSFN-FDD ::= INTEGER(0..614399)
SFNSFN-TDD ::= INTEGER(0..40961)
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 {
    sFNChangeLimit              SFNSFNChangeLimit                OPTIONAL,
    predictedSFNSFNDeviationLimit PredictedSFNSFNDeviationLimit    OPTIONAL,
    iE-Extensions                ProtocolExtensionContainer { { SFNSFNMeasurementThresholdInformation-ExtIEs} }    OPTIONAL,
    ...
}
SFNSFNMeasurementThresholdInformation-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

SFNSFNMeasurementValueInformation ::= SEQUENCE {
    successfulNeighbouringCellSFNSFNObservedTimeDifferenceMeasurementInformation SEQUENCE (SIZE(1..maxNrOfMeasNCell)) OF
        SEQUENCE {
            uC-ID UC-ID,
            sFNSFNQuality SFNSFNQuality,
            sFNSFNQuality SFNSFNQuality OPTIONAL,
            sFNSFNDriftRate SFNSFNDriftRate,
            sFNSFNDriftRateQuality SFNSFNDriftRateQuality OPTIONAL,
            sFNSFNTimeStampInformation SFNSFNTimeStampInformation,
            iE-Extensions ProtocolExtensionContainer { {
SuccessfulNeighbouringCellSFNSFNObservedTimeDifferenceMeasurementInformationItem-ExtIEs} } OPTIONAL,
            ...
        },
    unsuccessfulNeighbouringCellSFNSFNObservedTimeDifferenceMeasurementInformation SEQUENCE (SIZE(0..maxNrOfMeasNCell-1)) OF
        SEQUENCE {
            uC-ID UC-ID,
            iE-Extensions ProtocolExtensionContainer { { UnsuccessfulNeighbouringCellSFNSFNObservedTimeDifferenceMeasurementInformationItem-
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,
    ...
}

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)

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
}

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-ChannelisationCodeLCR ::= SEQUENCE {
    tDD-ChannelisationCode      TDD-ChannelisationCode,
    modulation                   Modulation, -- Modulation options for 1.28Mcps TDD in contrast to 3.84Mcps 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-TnIQos                CRITICALITY ignore     EXTENSION TnIQos 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-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-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)

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,
    nocode-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,
    ...
}

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]

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 {
    tTUTRANGPSChangeLimit          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,
    ...
}

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' --,
    rateMatchingAttribute            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,
    ...
}

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 ::= {
    ...
}
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 { { UEMeasurementReportCharacteristicsEvent1l-ExtIEs } } OPTIONAL,
    ...
}

```

```

}
UEMeasurementReportCharacteristicsEvent1i-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
UEMeasurementReportCharacteristicsEvent6a ::= SEQUENCE {
    uMeasurementTreshold      UEMeasurementThreshold,
    uMeasurementTimeToTrigger UEMeasurementTimeToTrigger,
    iE-Extensions             ProtocolExtensionContainer { { UEMeasurementReportCharacteristicsEvent6a-ExtIEs} } OPTIONAL,
    ...
}
UEMeasurementReportCharacteristicsEvent6a-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
UEMeasurementReportCharacteristicsEvent6b ::= SEQUENCE {
    uMeasurementTreshold      UEMeasurementThreshold,
    uMeasurementTimeToTrigger UEMeasurementTimeToTrigger,
    iE-Extensions             ProtocolExtensionContainer { { UEMeasurementReportCharacteristicsEvent6b-ExtIEs} } OPTIONAL,
    ...
}
UEMeasurementReportCharacteristicsEvent6b-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
UEMeasurementReportCharacteristicsEvent6c ::= SEQUENCE {
    uMeasurementTimeToTrigger UEMeasurementTimeToTrigger,
    iE-Extensions             ProtocolExtensionContainer { { UEMeasurementReportCharacteristicsEvent6c-ExtIEs} } OPTIONAL,
    ...
}
UEMeasurementReportCharacteristicsEvent6c-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
UEMeasurementReportCharacteristicsEvent6d ::= SEQUENCE {
    uMeasurementTimeToTrigger 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 ::= {
  ...
}

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
    uEMeasurementTransmittedPowerListLCR      UEMeasurementValueTransmittedPowerListLCR    OPTIONAL,
    -- Mandatory for 1.28Mcps TDD, Not applicable for 3.84Mcps TDD
    iE-Extensions                             ProtocolExtensionContainer { { UE-MeasurementValue-UE-Transmitted-Power-ExtIEs } }    OPTIONAL,
    ...
}

UE-MeasurementValue-UE-Transmitted-Power-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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 ::= {
  ...
}

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
  uEMeasurementTimeslotISCPListLCR      UEMeasurementValueTimeslotISCPListLCR  OPTIONAL,
  -- Mandatory for 1.28Mcps TDD, Not applicable for 3.84Mcps TDD
  iE-Extensions                         ProtocolExtensionContainer { { UE-MeasurementValue-DL-Timeslot-ISCP-ExtIEs} } OPTIONAL,
  ...
}

UE-MeasurementValue-DL-Timeslot-ISCP-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

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 ::= {
  ...
}

```



```

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-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 {
    srrc-id                      RNC-ID,
    ura-id                       URA-ID,
    ie-Extensions                 ProtocolExtensionContainer { { Ura-Pch-State-ExtIEs} }    OPTIONAL,
    ...
}

Ura-Pch-State-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

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 ::= {
    ...
}

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 ::= {
    ...
}

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 } } OPTIONAL,
    ...
}

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]

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 ::= {
    ...
}

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.
    ...
}

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 |

```
-- *****
--
-- Lists
--
-- *****
```

| | |
|----------------------|------------------|
| maxCellsSIB11OrSIB12 | 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 |
| 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 |
| 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
maxNrOfRefETFCIs           INTEGER ::= 8
maxNrOfRefETFCI-PO-QUANTSTEPS  INTEGER ::= 29
maxNrOfEDCHMACdFlows       INTEGER ::= 8
maxNoOfLogicalChannels      INTEGER ::= 16

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-- *****
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-- IEs
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id-AllowedQueuingTime       ProtocolIE-ID ::= 4
id-AllowedRate-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-InformationListIE-RL-ReconfReadyTDD  ProtocolIE-ID ::= 45
id-DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD  ProtocolIE-ID ::= 46
id-DL-CCTrCH-InformationItem-RL-SetupRqstTDD  ProtocolIE-ID ::= 47

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|--|-----------------------|
| id-DL-CCTrCH-InformationListIE-PhyChReconfRqstTDD | ProtocolIE-ID ::= 48 |
| id-DL-CCTrCH-InformationListIE-RL-AdditionRspTDD | ProtocolIE-ID ::= 49 |
| id-DL-CCTrCH-InformationListIE-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 |

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|---|-----------------------|
| 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 |
| id-RL-Set-InformationItem-DM-Rprt | ProtocolIE-ID ::= 143 |
| id-RL-Set-InformationItem-DM-Rqst | ProtocolIE-ID ::= 144 |
| id-RL-Set-InformationItem-DM-Rsp | ProtocolIE-ID ::= 145 |
| id-RL-Set-Information-RL-FailureInd | ProtocolIE-ID ::= 146 |
| id-RL-Set-Information-RL-RestoreInd | ProtocolIE-ID ::= 147 |
| id-RL-Set-Successful-InformationItem-DM-Fail | ProtocolIE-ID ::= 473 |
| id-RL-Set-Unsuccessful-InformationItem-DM-Fail | ProtocolIE-ID ::= 474 |
| id-RL-Set-Unsuccessful-InformationItem-DM-Fail-Ind | ProtocolIE-ID ::= 475 |
| id-RL-Successful-InformationItem-DM-Fail | ProtocolIE-ID ::= 476 |
| id-RL-Unsuccessful-InformationItem-DM-Fail | ProtocolIE-ID ::= 477 |
| id-RL-Unsuccessful-InformationItem-DM-Fail-Ind | ProtocolIE-ID ::= 478 |
| id-ReportCharacteristics | ProtocolIE-ID ::= 152 |
| id-Reporting-Object-RL-FailureInd | ProtocolIE-ID ::= 153 |
| id-Reporting-Object-RL-RestoreInd | ProtocolIE-ID ::= 154 |
| id-RT-Load-Value | ProtocolIE-ID ::= 307 |
| id-RT-Load-Value-IncrDecrThres | ProtocolIE-ID ::= 308 |
| id-S-RNTI | ProtocolIE-ID ::= 155 |
| id-ResetIndicator | ProtocolIE-ID ::= 244 |
| id-RNC-ID | ProtocolIE-ID ::= 245 |
| id-SAI | ProtocolIE-ID ::= 156 |
| id-SRNC-ID | ProtocolIE-ID ::= 157 |
| id-SuccessfulRL-InformationResponse-RL-AdditionFailureFDD | ProtocolIE-ID ::= 159 |
| id-SuccessfulRL-InformationResponse-RL-SetupFailureFDD | ProtocolIE-ID ::= 160 |
| id-TransportBearerID | ProtocolIE-ID ::= 163 |
| id-TransportBearerRequestIndicator | ProtocolIE-ID ::= 164 |
| id-TransportLayerAddress | ProtocolIE-ID ::= 165 |
| id-TypeOfError | ProtocolIE-ID ::= 140 |
| id-UC-ID | ProtocolIE-ID ::= 166 |

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|---|-----------------------|
| id-UL-CCTrCH-AddInformation-RL-ReconfPrepTDD | ProtocolIE-ID ::= 167 |
| id-UL-CCTrCH-InformationAddList-RL-ReconfPrepTDD | ProtocolIE-ID ::= 169 |
| id-UL-CCTrCH-InformationItem-RL-SetupRqstTDD | ProtocolIE-ID ::= 171 |
| id-UL-CCTrCH-InformationList-RL-SetupRqstTDD | ProtocolIE-ID ::= 172 |
| id-UL-CCTrCH-InformationListIE-PhyChReconfRqstTDD | ProtocolIE-ID ::= 173 |
| id-UL-CCTrCH-InformationListIE-RL-AdditionRspTDD | ProtocolIE-ID ::= 174 |
| id-UL-CCTrCH-InformationListIE-RL-ReconfReadyTDD | ProtocolIE-ID ::= 175 |
| id-UL-CCTrCH-InformationListIE-RL-SetupRspTDD | ProtocolIE-ID ::= 176 |
| id-UL-DPCH-Information-RL-ReconfPrepFDD | ProtocolIE-ID ::= 177 |
| id-UL-DPCH-Information-RL-ReconfRqstFDD | ProtocolIE-ID ::= 178 |
| id-UL-DPCH-Information-RL-SetupRqstFDD | ProtocolIE-ID ::= 179 |
| id-UL-DPCH-InformationItem-PhyChReconfRqstTDD | ProtocolIE-ID ::= 180 |
| id-UL-DPCH-InformationItem-RL-AdditionRspTDD | ProtocolIE-ID ::= 181 |
| id-UL-DPCH-InformationItem-RL-SetupRspTDD | ProtocolIE-ID ::= 182 |
| id-UL-DPCH-InformationAddListIE-RL-ReconfReadyTDD | ProtocolIE-ID ::= 183 |
| id-UL-SIRTarget | ProtocolIE-ID ::= 184 |
| id-URA-Information | ProtocolIE-ID ::= 185 |
| id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD | ProtocolIE-ID ::= 188 |
| id-UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD | ProtocolIE-ID ::= 189 |
| id-UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD | ProtocolIE-ID ::= 190 |
| id-Active-Pattern-Sequence-Information | ProtocolIE-ID ::= 193 |
| id-AdjustmentRatio | ProtocolIE-ID ::= 194 |
| id-CauseLevel-RL-AdditionFailureFDD | ProtocolIE-ID ::= 197 |
| id-CauseLevel-RL-AdditionFailureTDD | ProtocolIE-ID ::= 198 |
| id-CauseLevel-RL-ReconfFailure | ProtocolIE-ID ::= 199 |
| id-CauseLevel-RL-SetupFailureFDD | ProtocolIE-ID ::= 200 |
| id-CauseLevel-RL-SetupFailureTDD | ProtocolIE-ID ::= 201 |
| id-DL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD | ProtocolIE-ID ::= 205 |
| id-DL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD | ProtocolIE-ID ::= 206 |
| id-DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD | ProtocolIE-ID ::= 207 |
| id-DL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD | ProtocolIE-ID ::= 208 |
| id-DL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD | ProtocolIE-ID ::= 209 |
| id-DL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD | ProtocolIE-ID ::= 210 |
| id-DL-DPCH-InformationAddListIE-RL-ReconfReadyTDD | ProtocolIE-ID ::= 212 |
| id-DL-DPCH-InformationDeleteListIE-RL-ReconfReadyTDD | ProtocolIE-ID ::= 213 |
| id-DL-DPCH-InformationModifyListIE-RL-ReconfReadyTDD | ProtocolIE-ID ::= 214 |
| id-DSCHs-to-Add-TDD | ProtocolIE-ID ::= 215 |
| id-Unused-ProtocolIE-ID-216 | ProtocolIE-ID ::= 216 |
| id-DSCH-DeleteList-RL-ReconfPrepTDD | ProtocolIE-ID ::= 217 |
| id-Unused-ProtocolIE-ID-218 | ProtocolIE-ID ::= 218 |
| id-Unused-ProtocolIE-ID-219 | ProtocolIE-ID ::= 219 |
| id-DSCH-InformationListIE-RL-AdditionRspTDD | ProtocolIE-ID ::= 220 |
| id-DSCH-InformationListIEs-RL-SetupRspTDD | ProtocolIE-ID ::= 221 |
| id-DSCH-TDD-Information | ProtocolIE-ID ::= 222 |
| id-Unused-ProtocolIE-ID-223 | ProtocolIE-ID ::= 223 |
| id-Unused-ProtocolIE-ID-226 | ProtocolIE-ID ::= 226 |
| id-DSCH-ModifyList-RL-ReconfPrepTDD | ProtocolIE-ID ::= 227 |
| id-Unused-ProtocolIE-ID-228 | ProtocolIE-ID ::= 228 |
| id-Unused-ProtocolIE-ID-324 | ProtocolIE-ID ::= 324 |
| id-Unused-ProtocolIE-ID-229 | ProtocolIE-ID ::= 229 |
| id-DSCHToBeAddedOrModifiedList-RL-ReconfReadyTDD | ProtocolIE-ID ::= 230 |
| id-Unused-ProtocolIE-ID-29 | ProtocolIE-ID ::= 29 |
| id-Unused-ProtocolIE-ID-225 | ProtocolIE-ID ::= 225 |
| id-GA-Cell | ProtocolIE-ID ::= 232 |

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|---|-----------------------|
| id-GA-CellAdditionalShapes | ProtocolIE-ID ::= 3 |
| id-Unused-ProtocolIE-ID-246 | ProtocolIE-ID ::= 246 |
| id-Transmission-Gap-Pattern-Sequence-Information | ProtocolIE-ID ::= 255 |
| id-UL-CCTrCH-DeleteInformation-RL-ReconfPrepTDD | ProtocolIE-ID ::= 256 |
| id-UL-CCTrCH-ModifyInformation-RL-ReconfPrepTDD | ProtocolIE-ID ::= 257 |
| id-UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD | ProtocolIE-ID ::= 258 |
| id-UL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD | ProtocolIE-ID ::= 259 |
| id-UL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD | ProtocolIE-ID ::= 260 |
| id-UL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD | ProtocolIE-ID ::= 261 |
| id-UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD | ProtocolIE-ID ::= 262 |
| id-UL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD | ProtocolIE-ID ::= 263 |
| id-UL-DPCH-InformationDeleteListIE-RL-ReconfReadyTDD | ProtocolIE-ID ::= 264 |
| id-UL-DPCH-InformationModifyListIE-RL-ReconfReadyTDD | ProtocolIE-ID ::= 265 |
| id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureTDD | ProtocolIE-ID ::= 266 |
| id-USCHs-to-Add | ProtocolIE-ID ::= 267 |
| id-USCH-DeleteList-RL-ReconfPrepTDD | ProtocolIE-ID ::= 268 |
| id-USCH-InformationListIE-RL-AdditionRspTDD | ProtocolIE-ID ::= 269 |
| id-USCH-InformationListIEs-RL-SetupRspTDD | ProtocolIE-ID ::= 270 |
| id-USCH-Information | ProtocolIE-ID ::= 271 |
| id-USCH-ModifyList-RL-ReconfPrepTDD | ProtocolIE-ID ::= 272 |
| id-USCHToBeAddedOrModifiedList-RL-ReconfReadyTDD | ProtocolIE-ID ::= 273 |
| id-DL-Physical-Channel-Information-RL-SetupRqstTDD | ProtocolIE-ID ::= 274 |
| id-UL-Physical-Channel-Information-RL-SetupRqstTDD | ProtocolIE-ID ::= 275 |
| id-ClosedLoopModel-SupportIndicator | ProtocolIE-ID ::= 276 |
| id-Unused-ProtocolIE-ID-277 | ProtocolIE-ID ::= 277 |
| id-STTD-SupportIndicator | ProtocolIE-ID ::= 279 |
| id-CFNReportingIndicator | ProtocolIE-ID ::= 14 |
| id-CNOriginatedPage-PagingRqst | ProtocolIE-ID ::= 23 |
| id-InnerLoopDLPCStatus | ProtocolIE-ID ::= 24 |
| id-PropagationDelay | ProtocolIE-ID ::= 25 |
| id-RxTimingDeviationForTA | ProtocolIE-ID ::= 36 |
| id-timeSlot-ISCP | ProtocolIE-ID ::= 37 |
| id-CCTrCH-InformationItem-RL-FailureInd | ProtocolIE-ID ::= 15 |
| id-CCTrCH-InformationItem-RL-RestoreInd | ProtocolIE-ID ::= 16 |
| id-CommonMeasurementAccuracy | ProtocolIE-ID ::= 280 |
| id-CommonMeasurementObjectType-CM-Rprt | ProtocolIE-ID ::= 281 |
| id-CommonMeasurementObjectType-CM-Rqst | ProtocolIE-ID ::= 282 |
| id-CommonMeasurementObjectType-CM-Rsp | ProtocolIE-ID ::= 283 |
| id-CommonMeasurementType | ProtocolIE-ID ::= 284 |
| id-CongestionCause | ProtocolIE-ID ::= 18 |
| id-SFN | ProtocolIE-ID ::= 285 |
| id-SFNReportingIndicator | ProtocolIE-ID ::= 286 |
| id-InformationExchangeID | ProtocolIE-ID ::= 287 |
| id-InformationExchangeObjectType-InfEx-Rprt | ProtocolIE-ID ::= 288 |
| id-InformationExchangeObjectType-InfEx-Rqst | ProtocolIE-ID ::= 289 |
| id-InformationExchangeObjectType-InfEx-Rsp | ProtocolIE-ID ::= 290 |
| id-InformationReportCharacteristics | ProtocolIE-ID ::= 291 |
| id-InformationType | ProtocolIE-ID ::= 292 |
| id-neighbouring-LCR-TDD-CellInformation | ProtocolIE-ID ::= 58 |
| id-DL-Timeslot-ISCP-LCR-Information-RL-SetupRqstTDD | ProtocolIE-ID ::= 65 |
| id-RL-LCR-InformationResponse-RL-SetupRspTDD | ProtocolIE-ID ::= 66 |
| id-UL-CCTrCH-LCR-InformationListIE-RL-SetupRspTDD | ProtocolIE-ID ::= 75 |
| id-UL-DPCH-LCR-InformationItem-RL-SetupRspTDD | ProtocolIE-ID ::= 76 |
| id-DL-CCTrCH-LCR-InformationListIE-RL-SetupRspTDD | ProtocolIE-ID ::= 77 |

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|---|-----------------------|
| id-DL-DPCH-LCR-InformationItem-RL-SetupRspTDD | ProtocolIE-ID ::= 78 |
| id-DSCH-LCR-InformationListIEs-RL-SetupRspTDD | ProtocolIE-ID ::= 79 |
| id-USCH-LCR-InformationListIEs-RL-SetupRspTDD | ProtocolIE-ID ::= 80 |
| id-DL-Timeslot-ISCP-LCR-Information-RL-AdditionRqstTDD | ProtocolIE-ID ::= 81 |
| id-RL-LCR-InformationResponse-RL-AdditionRspTDD | ProtocolIE-ID ::= 86 |
| id-UL-CCTrCH-LCR-InformationListIE-RL-AdditionRspTDD | ProtocolIE-ID ::= 87 |
| id-UL-DPCH-LCR-InformationItem-RL-AdditionRspTDD | ProtocolIE-ID ::= 88 |
| id-DL-CCTrCH-LCR-InformationListIE-RL-AdditionRspTDD | ProtocolIE-ID ::= 89 |
| id-DL-DPCH-LCR-InformationItem-RL-AdditionRspTDD | ProtocolIE-ID ::= 94 |
| id-DSCH-LCR-InformationListIEs-RL-AdditionRspTDD | ProtocolIE-ID ::= 96 |
| id-USCH-LCR-InformationListIEs-RL-AdditionRspTDD | ProtocolIE-ID ::= 97 |
| id-UL-DPCH-LCR-InformationAddListIE-RL-ReconfReadyTDD | ProtocolIE-ID ::= 98 |
| id-UL-Timeslot-LCR-InformationModifyList-RL-ReconfReadyTDD | ProtocolIE-ID ::= 100 |
| id-DL-DPCH-LCR-InformationAddListIE-RL-ReconfReadyTDD | ProtocolIE-ID ::= 101 |
| id-DL-Timeslot-LCR-InformationModifyList-RL-ReconfReadyTDD | ProtocolIE-ID ::= 104 |
| id-UL-Timeslot-LCR-InformationList-PhyChReconfRqstTDD | ProtocolIE-ID ::= 105 |
| id-DL-Timeslot-LCR-InformationList-PhyChReconfRqstTDD | ProtocolIE-ID ::= 106 |
| id-timeSlot-ISCP-LCR-List-DL-PC-Rqst-TDD | ProtocolIE-ID ::= 138 |
| id-TSTD-Support-Indicator-RL-SetupRqstTDD | ProtocolIE-ID ::= 139 |
| id-RestrictionStateIndicator | ProtocolIE-ID ::= 142 |
| id-Load-Value | ProtocolIE-ID ::= 233 |
| id-Load-Value-IncrDecrThres | ProtocolIE-ID ::= 234 |
| id-OnModification | ProtocolIE-ID ::= 235 |
| id-Received-Total-Wideband-Power-Value | ProtocolIE-ID ::= 236 |
| id-Received-Total-Wideband-Power-Value-IncrDecrThres | ProtocolIE-ID ::= 237 |
| id-SFNMeasurementThresholdInformation | ProtocolIE-ID ::= 238 |
| id-Transmitted-Carrier-Power-Value | ProtocolIE-ID ::= 239 |
| id-Transmitted-Carrier-Power-Value-IncrDecrThres | ProtocolIE-ID ::= 240 |
| id-TUTRANGPSMeasurementThresholdInformation | ProtocolIE-ID ::= 241 |
| id-UL-Timeslot-ISCP-Value | ProtocolIE-ID ::= 242 |
| id-UL-Timeslot-ISCP-Value-IncrDecrThres | ProtocolIE-ID ::= 243 |
| id-Rx-Timing-Deviation-Value-LCR | ProtocolIE-ID ::= 293 |
| id-DPC-Mode-Change-SupportIndicator | ProtocolIE-ID ::= 19 |
| id-Unused-ProtocolIE-ID-247 | ProtocolIE-ID ::= 247 |
| id-Unused-ProtocolIE-ID-295 | ProtocolIE-ID ::= 295 |
| id-PrimaryCCPCH-RSCP-RL-ReconfPrepTDD | ProtocolIE-ID ::= 202 |
| id-DL-TimeSlot-ISCP-Info-RL-ReconfPrepTDD | ProtocolIE-ID ::= 203 |
| id-DL-Timeslot-ISCP-LCR-Information-RL-ReconfPrepTDD | ProtocolIE-ID ::= 204 |
| id-DSCH-RNTI | ProtocolIE-ID ::= 249 |
| id-DL-PowerBalancing-Information | ProtocolIE-ID ::= 296 |
| id-DL-PowerBalancing-ActivationIndicator | ProtocolIE-ID ::= 297 |
| id-DL-PowerBalancing-UpdatedIndicator | ProtocolIE-ID ::= 298 |
| id-DL-ReferencePowerInformation | ProtocolIE-ID ::= 299 |
| id-Enhanced-PrimaryCPICH-EcNo | ProtocolIE-ID ::= 224 |
| id-IPDL-TDD-ParametersLCR | ProtocolIE-ID ::= 252 |
| id-CellCapabilityContainer-FDD | ProtocolIE-ID ::= 300 |
| id-CellCapabilityContainer-TDD | ProtocolIE-ID ::= 301 |
| id-CellCapabilityContainer-TDD-LCR | ProtocolIE-ID ::= 302 |
| id-RL-Specific-DCH-Info | ProtocolIE-ID ::= 317 |
| id-RL-ReconfigurationRequestFDD-RL-InformationList | ProtocolIE-ID ::= 318 |
| id-RL-ReconfigurationRequestFDD-RL-Information-IEs | ProtocolIE-ID ::= 319 |
| id-RL-ReconfigurationRequestTDD-RL-Information | ProtocolIE-ID ::= 321 |
| id-CommonTransportChannelResourcesInitialisationNotRequired | ProtocolIE-ID ::= 250 |
| id-DelayedActivation | ProtocolIE-ID ::= 312 |

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| id-DelayedActivationList-RL-ActivationCmdFDD | ProtocolIE-ID ::= 313 |
| id-DelayedActivationInformation-RL-ActivationCmdFDD | ProtocolIE-ID ::= 314 |
| id-DelayedActivationList-RL-ActivationCmdTDD | ProtocolIE-ID ::= 315 |
| id-DelayedActivationInformation-RL-ActivationCmdTDD | ProtocolIE-ID ::= 316 |
| id-neighbouringTDDCellMeasurementInformationLCR | ProtocolIE-ID ::= 251 |
| id-UL-SIR-Target-CCTrCH-InformationItem-RL-SetupRspTDD | ProtocolIE-ID ::= 150 |
| id-UL-SIR-Target-CCTrCH-LCR-InformationItem-RL-SetupRspTDD | ProtocolIE-ID ::= 151 |
| id-PrimCCPCH-RSCP-DL-PC-RqstTDD | ProtocolIE-ID ::= 451 |
| id-HSDSCH-FDD-Information | ProtocolIE-ID ::= 452 |
| id-HSDSCH-FDD-Information-Response | ProtocolIE-ID ::= 453 |
| id-HSDSCH-FDD-Update-Information | ProtocolIE-ID ::= 466 |
| id-HSDSCH-Information-to-Modify | ProtocolIE-ID ::= 456 |
| id-HSDSCHMacdFlowSpecificInformationList-RL-PreemptRequiredInd | ProtocolIE-ID ::= 516 |
| id-HSDSCHMacdFlowSpecificInformationItem-RL-PreemptRequiredInd | ProtocolIE-ID ::= 517 |
| id-HSDSCH-RNTI | ProtocolIE-ID ::= 457 |
| id-HSDSCH-TDD-Information | ProtocolIE-ID ::= 458 |
| id-HSDSCH-TDD-Information-Response | ProtocolIE-ID ::= 459 |
| id-HSDSCH-TDD-Update-Information | ProtocolIE-ID ::= 467 |
| id-HSPDSCH-RL-ID | ProtocolIE-ID ::= 463 |
| id-HSDSCH-MACdFlows-to-Add | ProtocolIE-ID ::= 531 |
| id-HSDSCH-MACdFlows-to-Delete | ProtocolIE-ID ::= 532 |
| id-Angle-Of-Arrival-Value-LCR | ProtocolIE-ID ::= 148 |
| id-TrafficClass | ProtocolIE-ID ::= 158 |
| id-Unused-ProtocolIE-ID-248 | ProtocolIE-ID ::= 248 |
| id-Unused-ProtocolIE-ID-253 | ProtocolIE-ID ::= 253 |
| id-PDSCH-RL-ID | ProtocolIE-ID ::= 323 |
| id-TimeSlot-RL-SetupRspTDD | ProtocolIE-ID ::= 325 |
| id-GERAN-Cell-Capability | ProtocolIE-ID ::= 468 |
| id-GERAN-Classmark | ProtocolIE-ID ::= 469 |
| id-DSCH-InitialWindowSize | ProtocolIE-ID ::= 480 |
| id-UL-Synchronisation-Parameters-LCR | ProtocolIE-ID ::= 464 |
| id-SNA-Information | ProtocolIE-ID ::= 479 |
| id-MACHs-ResetIndicator | ProtocolIE-ID ::= 465 |
| id-TDD-DL-DPCH-TimeSlotFormatModifyItem-LCR-RL-ReconfReadyTDD | ProtocolIE-ID ::= 481 |
| id-TDD-UL-DPCH-TimeSlotFormatModifyItem-LCR-RL-ReconfReadyTDD | ProtocolIE-ID ::= 482 |
| id-TDD-TPC-UplinkStepSize-LCR-RL-SetupRqstTDD | ProtocolIE-ID ::= 483 |
| id-UL-CCTrCH-InformationList-RL-AdditionRqstTDD | ProtocolIE-ID ::= 484 |
| id-UL-CCTrCH-InformationItem-RL-AdditionRqstTDD | ProtocolIE-ID ::= 485 |
| id-DL-CCTrCH-InformationList-RL-AdditionRqstTDD | ProtocolIE-ID ::= 486 |
| id-DL-CCTrCH-InformationItem-RL-AdditionRqstTDD | ProtocolIE-ID ::= 487 |
| id-TDD-TPC-UplinkStepSize-InformationAdd-LCR-RL-ReconfPrepTDD | ProtocolIE-ID ::= 488 |
| id-TDD-TPC-UplinkStepSize-InformationModify-LCR-RL-ReconfPrepTDD | ProtocolIE-ID ::= 489 |
| id-TDD-TPC-DownlinkStepSize-InformationAdd-RL-ReconfPrepTDD | ProtocolIE-ID ::= 490 |
| id-TDD-TPC-DownlinkStepSize-InformationModify-RL-ReconfPrepTDD | ProtocolIE-ID ::= 491 |
| id-UL-TimingAdvanceCtrl-LCR | ProtocolIE-ID ::= 492 |
| id-HSPDSCH-Timeslot-InformationList-PhyChReconfRqstTDD | ProtocolIE-ID ::= 493 |
| id-HSPDSCH-Timeslot-InformationListLCR-PhyChReconfRqstTDD | ProtocolIE-ID ::= 494 |
| id-HS-SICH-Reception-Quality | ProtocolIE-ID ::= 495 |
| id-HS-SICH-Reception-Quality-Measurement-Value | ProtocolIE-ID ::= 496 |
| id-HSSICH-Info-DM-Rprt | ProtocolIE-ID ::= 497 |
| id-HSSICH-Info-DM-Rqst | ProtocolIE-ID ::= 498 |
| id-HSSICH-Info-DM | ProtocolIE-ID ::= 499 |
| id-CCTrCH-Maximum-DL-Power-RL-SetupRspTDD | ProtocolIE-ID ::= 500 |
| id-CCTrCH-Minimum-DL-Power-RL-SetupRspTDD | ProtocolIE-ID ::= 501 |

| | |
|---|-----------------------|
| id-CCTrCH-Maximum-DL-Power-RL-AdditionRspTDD | ProtocolIE-ID ::= 502 |
| id-CCTrCH-Minimum-DL-Power-RL-AdditionRspTDD | ProtocolIE-ID ::= 503 |
| id-CCTrCH-Maximum-DL-Power-RL-ReconfReadyTDD | ProtocolIE-ID ::= 504 |
| id-CCTrCH-Minimum-DL-Power-RL-ReconfReadyTDD | ProtocolIE-ID ::= 505 |
| id-Maximum-DL-Power-TimeslotLCR-InformationModifyItem-RL-ReconfReadyTDD | ProtocolIE-ID ::= 506 |
| id-Minimum-DL-Power-TimeslotLCR-InformationModifyItem-RL-ReconfReadyTDD | ProtocolIE-ID ::= 507 |
| id-DL-CCTrCH-InformationList-RL-ReconfRspTDD | ProtocolIE-ID ::= 508 |
| id-DL-DPCH-InformationModifyItem-LCR-RL-ReconfRspTDD | ProtocolIE-ID ::= 509 |
| id-Maximum-DL-Power-TimeslotLCR-InformationItem | ProtocolIE-ID ::= 510 |
| id-Minimum-DL-Power-TimeslotLCR-InformationItem | ProtocolIE-ID ::= 511 |
| id-TDD-Support-8PSK | ProtocolIE-ID ::= 512 |
| id-TDD-maxNrDLPhysicalchannels | ProtocolIE-ID ::= 513 |
| id-ExtendedGSMCellIndividualOffset | ProtocolIE-ID ::= 514 |
| id-RL-ParameterUpdateIndicationFDD-RL-InformationList | ProtocolIE-ID ::= 518 |
| id-Primary-CPICH-Usage-For-Channel-Estimation | ProtocolIE-ID ::= 519 |
| id-Secondary-CPICH-Information | ProtocolIE-ID ::= 520 |
| id-Secondary-CPICH-Information-Change | ProtocolIE-ID ::= 521 |
| id-Unused-ProtocolIE-ID-522 | ProtocolIE-ID ::= 522 |
| id-Unused-ProtocolIE-ID-523 | ProtocolIE-ID ::= 523 |
| id-RL-ParameterUpdateIndicationFDD-RL-Information-Item | ProtocolIE-ID ::= 524 |
| id-Phase-Reference-Update-Indicator | ProtocolIE-ID ::= 525 |
| id-Unidirectional-DCH-Indicator | ProtocolIE-ID ::= 526 |
| id-RL-Information-RL-ReconfPrepTDD | ProtocolIE-ID ::= 527 |
| id-Multiple-RL-InformationResponse-RL-ReconfReadyTDD | ProtocolIE-ID ::= 528 |
| id-RL-ReconfigurationResponseTDD-RL-Information | ProtocolIE-ID ::= 529 |
| id-Satellite-Almanac-Information-ExtItem | ProtocolIE-ID ::= 530 |
| id-HSDSCH-Information-to-Modify-Unsynchronised | ProtocolIE-ID ::= 533 |
| id-TnIQos | ProtocolIE-ID ::= 534 |
| id-RTLloadValue | ProtocolIE-ID ::= 535 |
| id-NRTLloadInformationValue | ProtocolIE-ID ::= 536 |
| id-CellPortionID | ProtocolIE-ID ::= 537 |
| id-UpPTSInterferenceValue | ProtocolIE-ID ::= 538 |
| id-PrimaryCCPCH-RSCP-Delta | ProtocolIE-ID ::= 539 |
| id-UEMeasurementType | ProtocolIE-ID ::= 540 |
| id-UEMeasurementTimeslotInfoHCR | ProtocolIE-ID ::= 541 |
| id-UEMeasurementTimeslotInfoLCR | ProtocolIE-ID ::= 542 |
| id-UEMeasurementReportCharacteristics | ProtocolIE-ID ::= 543 |
| id-UEMeasurementParameterModAllow | ProtocolIE-ID ::= 544 |
| id-UEMeasurementValueInformation | ProtocolIE-ID ::= 545 |
| id-InterfacesToTraceItem | ProtocolIE-ID ::= 546 |
| id-ListOfInterfacesToTrace | ProtocolIE-ID ::= 547 |
| id-TraceDepth | ProtocolIE-ID ::= 548 |
| id-TraceRecordingSessionReference | ProtocolIE-ID ::= 549 |
| id-TraceReference | ProtocolIE-ID ::= 550 |
| id-UEIdentity | ProtocolIE-ID ::= 551 |
| id-NACC-Related-Data | ProtocolIE-ID ::= 552 |
| id-GSM-Cell-InfEx-Rqst | ProtocolIE-ID ::= 553 |
| id-MeasurementRecoveryBehavior | ProtocolIE-ID ::= 554 |
| id-MeasurementRecoveryReportingIndicator | ProtocolIE-ID ::= 555 |
| id-MeasurementRecoverySupportIndicator | ProtocolIE-ID ::= 556 |
| 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-EDPCH-Information-RLAdditionReq-FDD | ProtocolIE-ID ::= 648 |
| id-HSDSCH-Configured-Indicator | ProtocolIE-ID ::= 649 |
| 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-TFCIValidityIndicator | ProtocolIE-ID ::= 667 |

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_{Preempt}

- Specifies the maximum time that a DRNS may wait for pre-emption of resources for establishment or reconfiguration of Radio Links.

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.

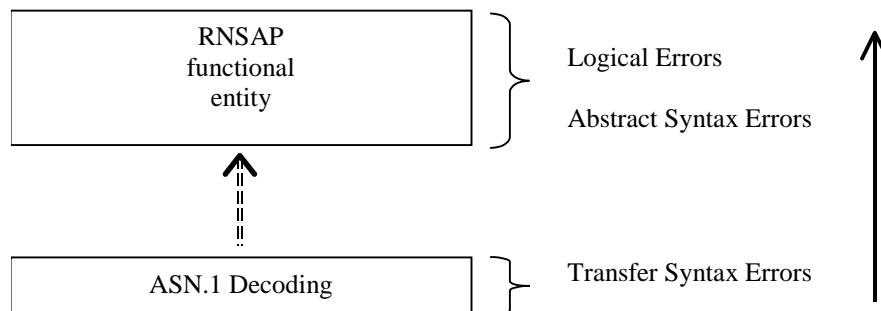


Figure 34: Protocol Errors in RNSAP

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_{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_{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_{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.

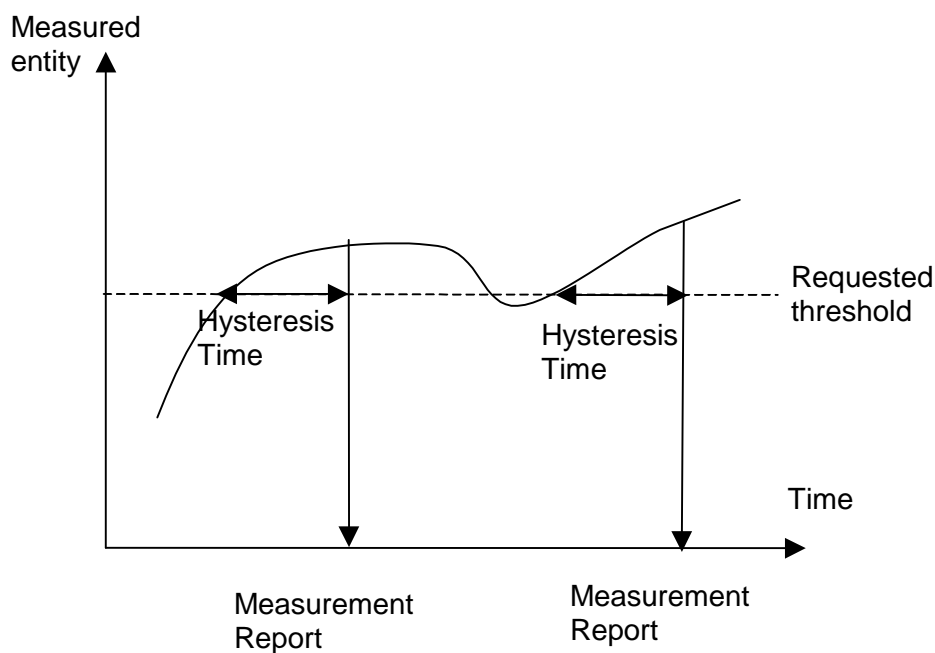


Figure B.1: Event A reporting with Hysteresis Time specified

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.

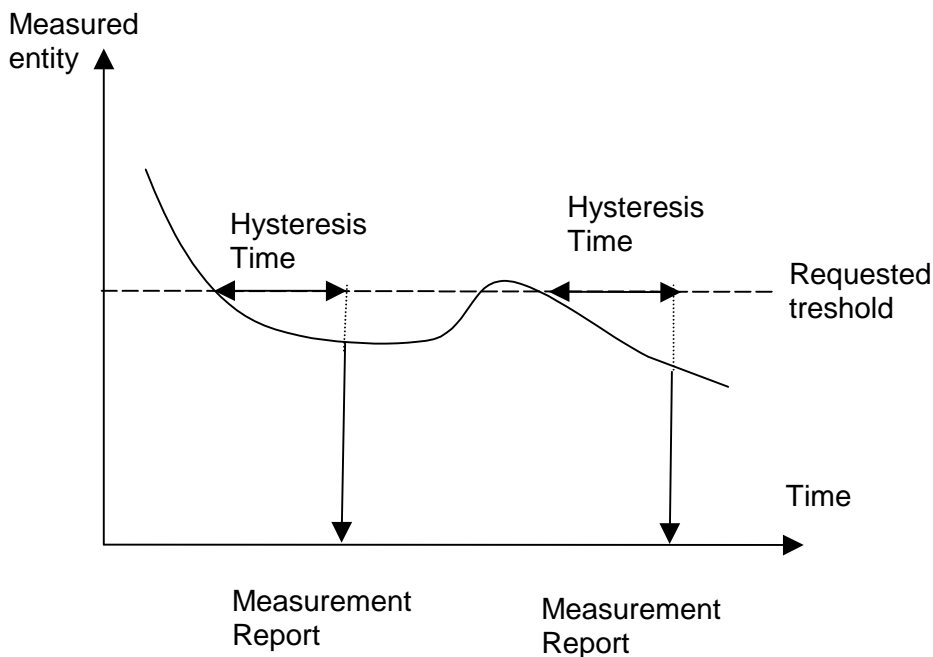


Figure B.2: Event B reporting with Hysteresis Time specified

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.

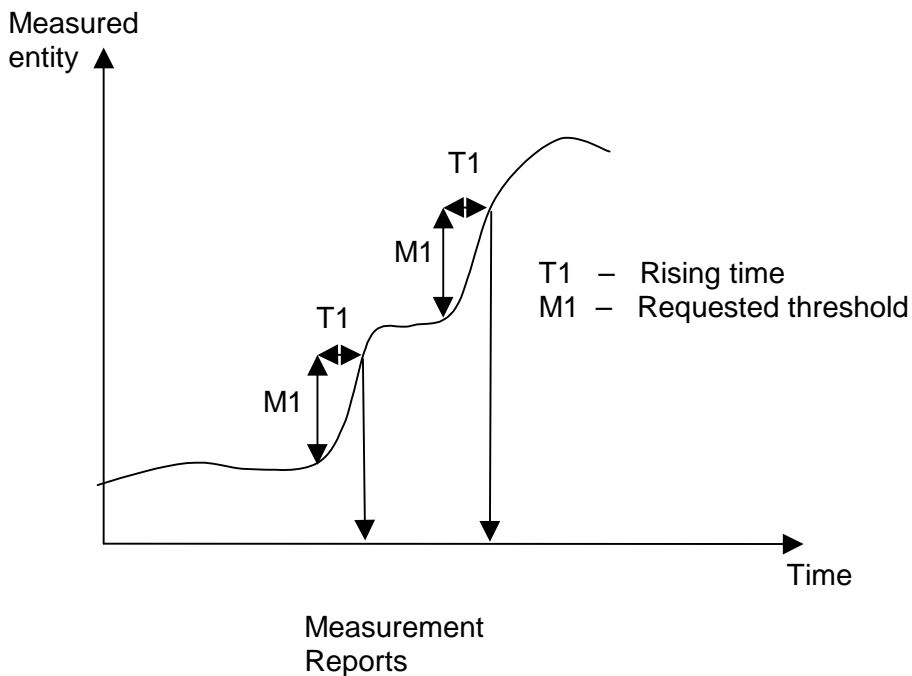


Figure B.3: Event C reporting

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.

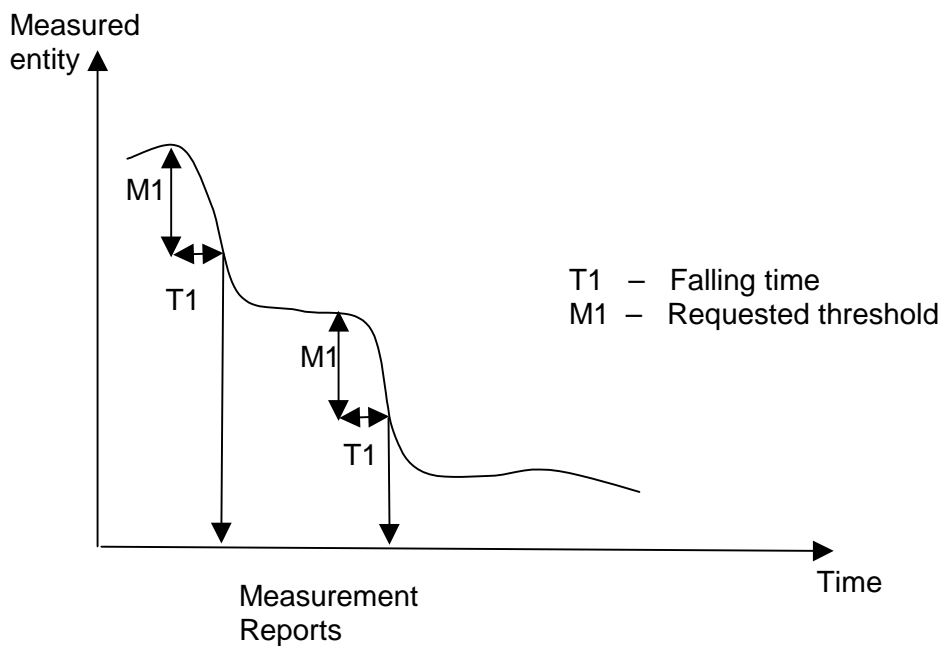


Figure B.4: Event D reporting

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.

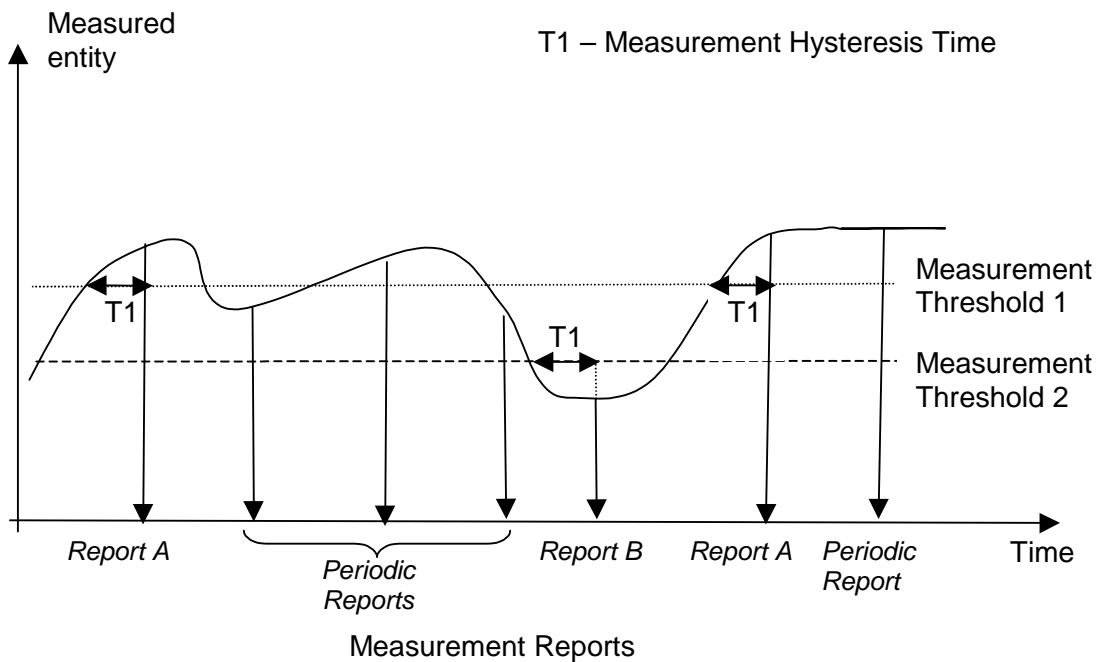


Figure B.5: Event E reporting with Hysteresis Time specified and Periodic Reporting requested

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.

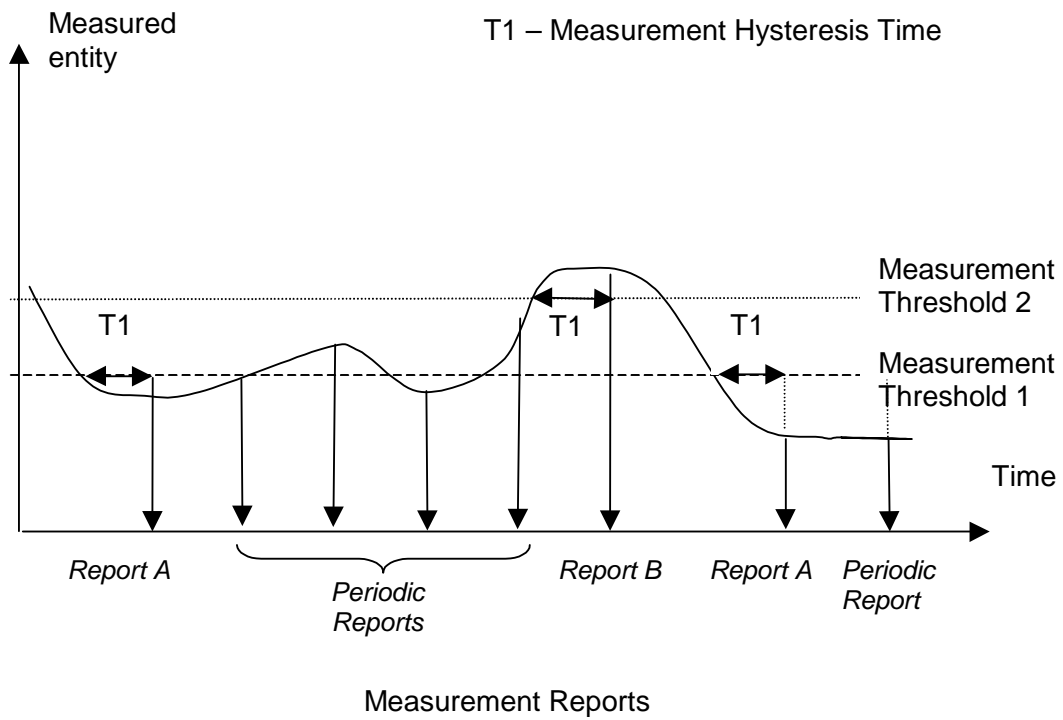


Figure B.6: Event F reporting with Hysteresis Time specified and Periodic Reporting requested

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.

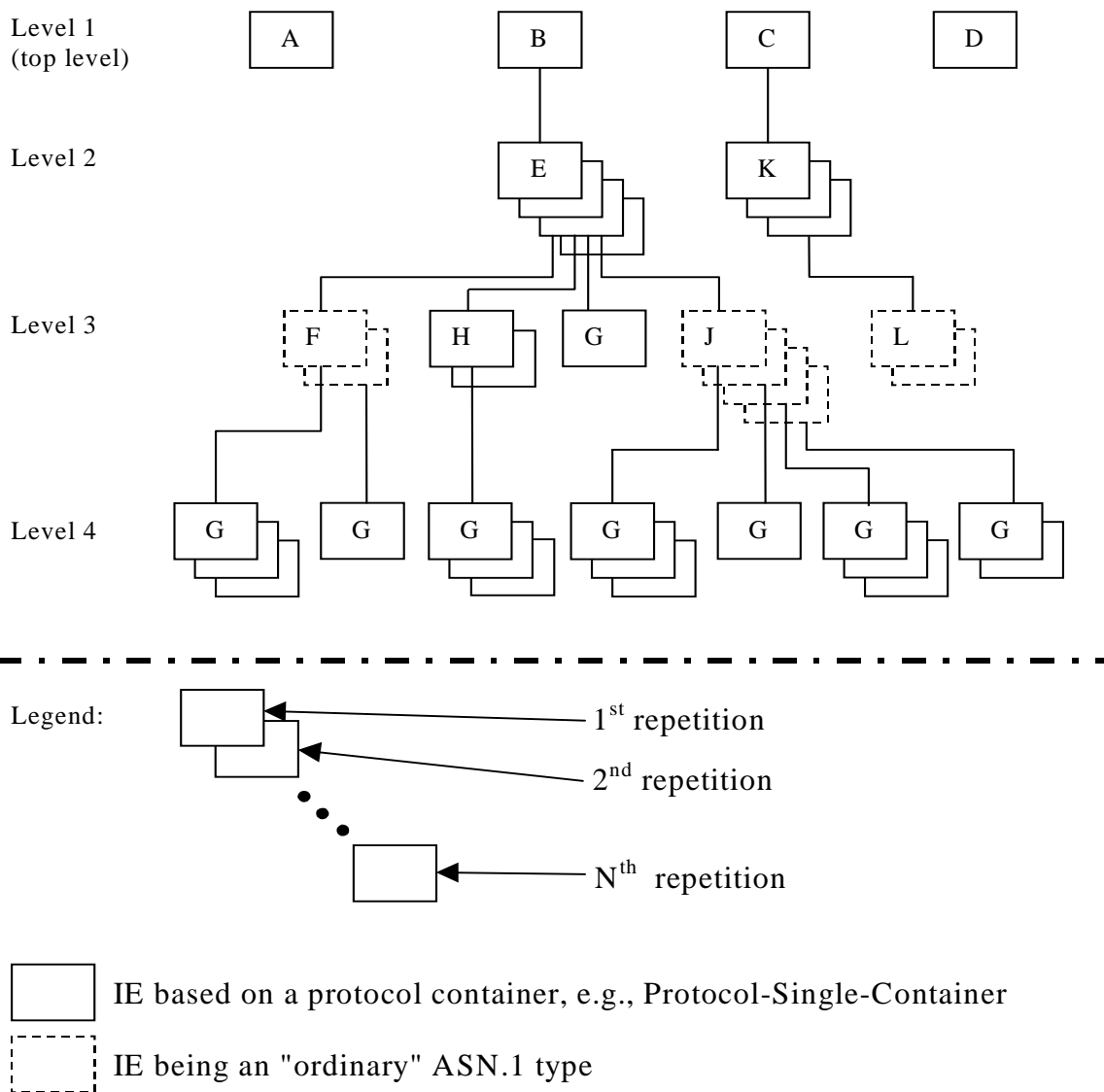
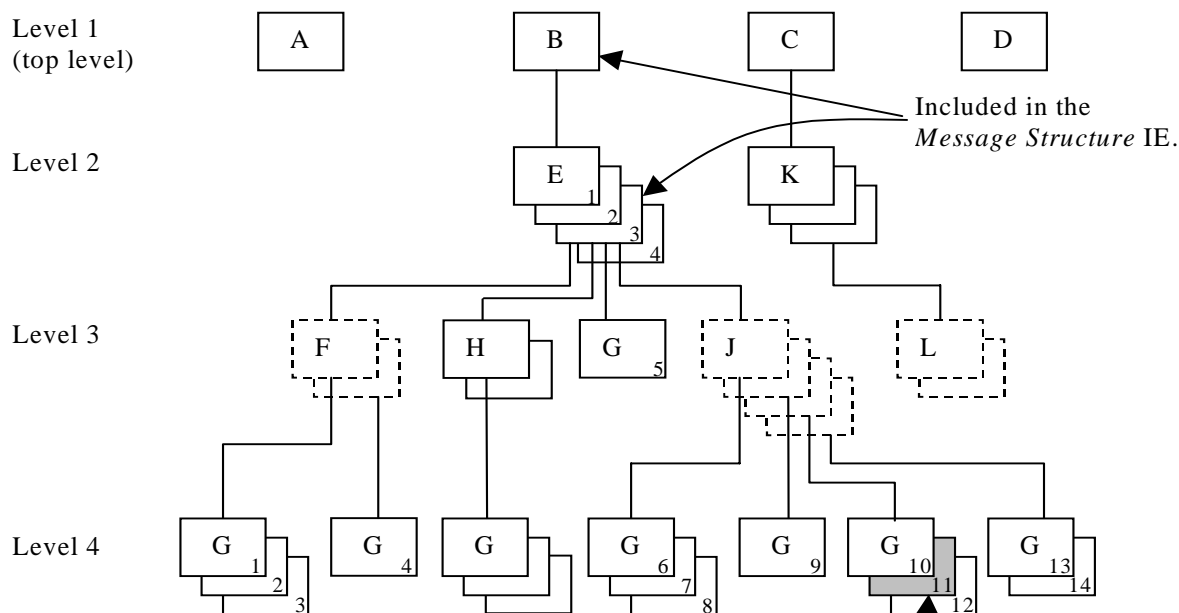


Figure C.1: Example of content of a received RNSAP message based on the EXAMPLE MESSAGE

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. (Since the IE E (level 2) is the lowest level included in the <i>Message Structure IE</i> 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

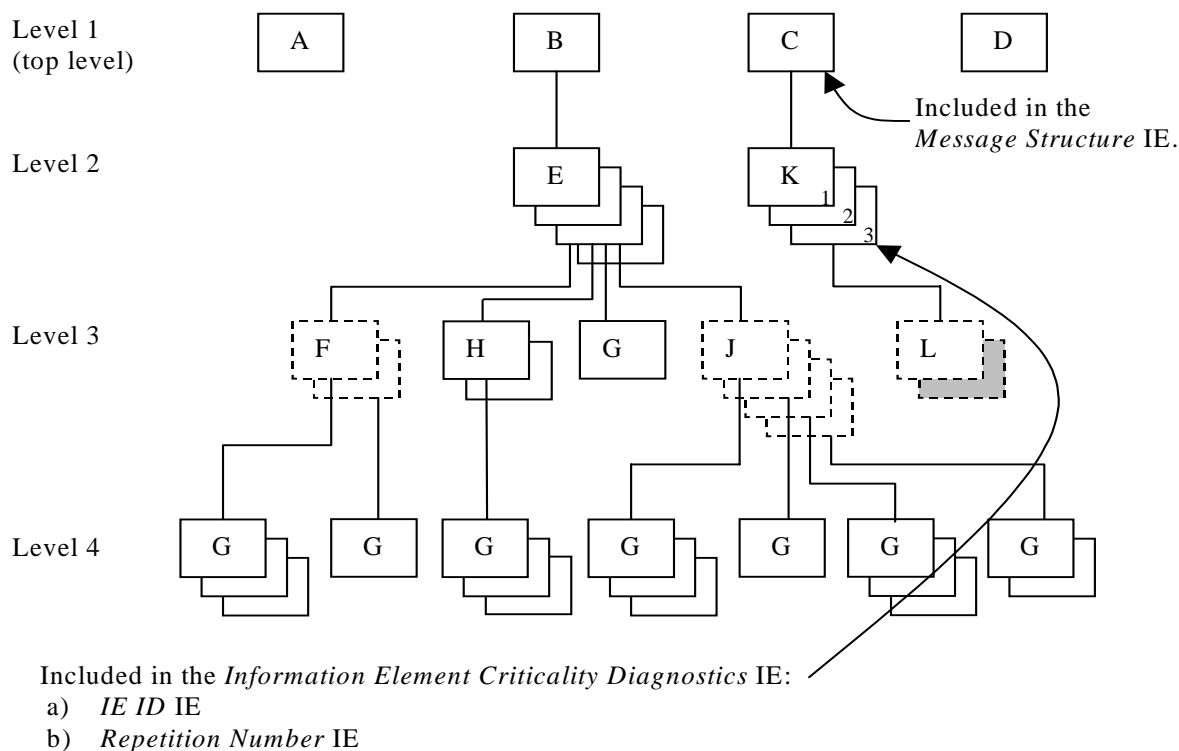


Figure C.3: Example of a received RNSAP message containing a not comprehended IE

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

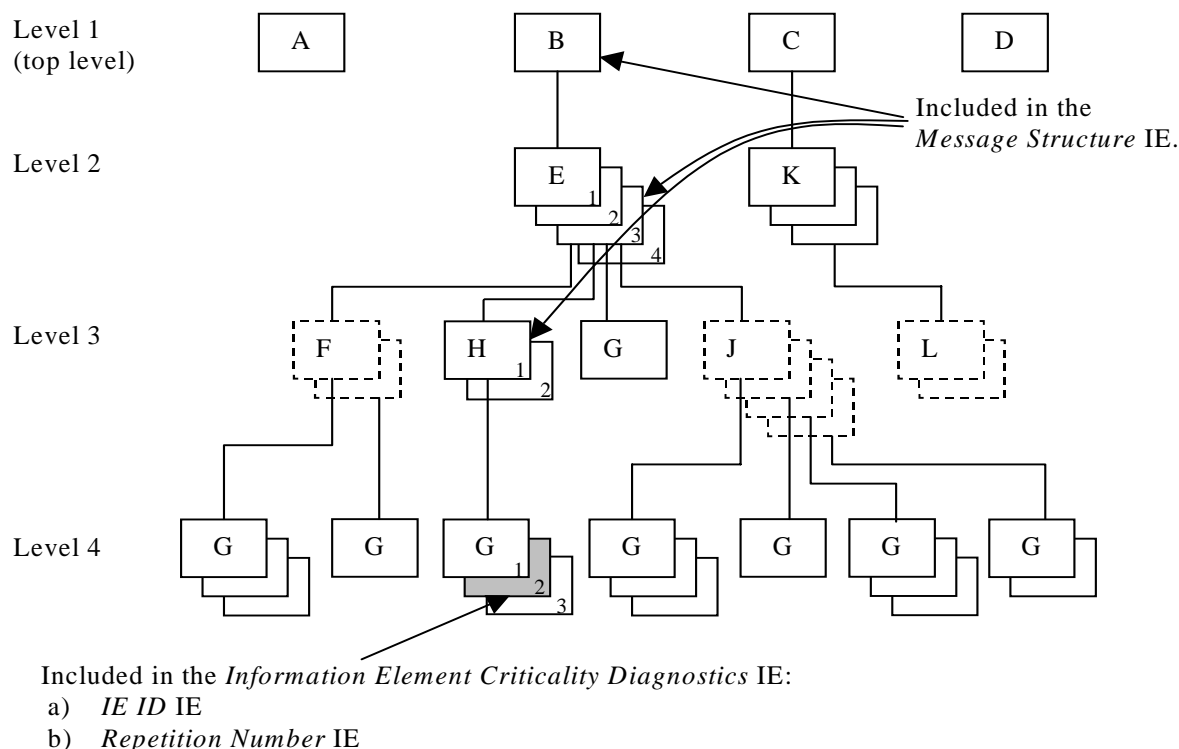


Figure C.4: Example of a received RNSAP message containing a not comprehended IE

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

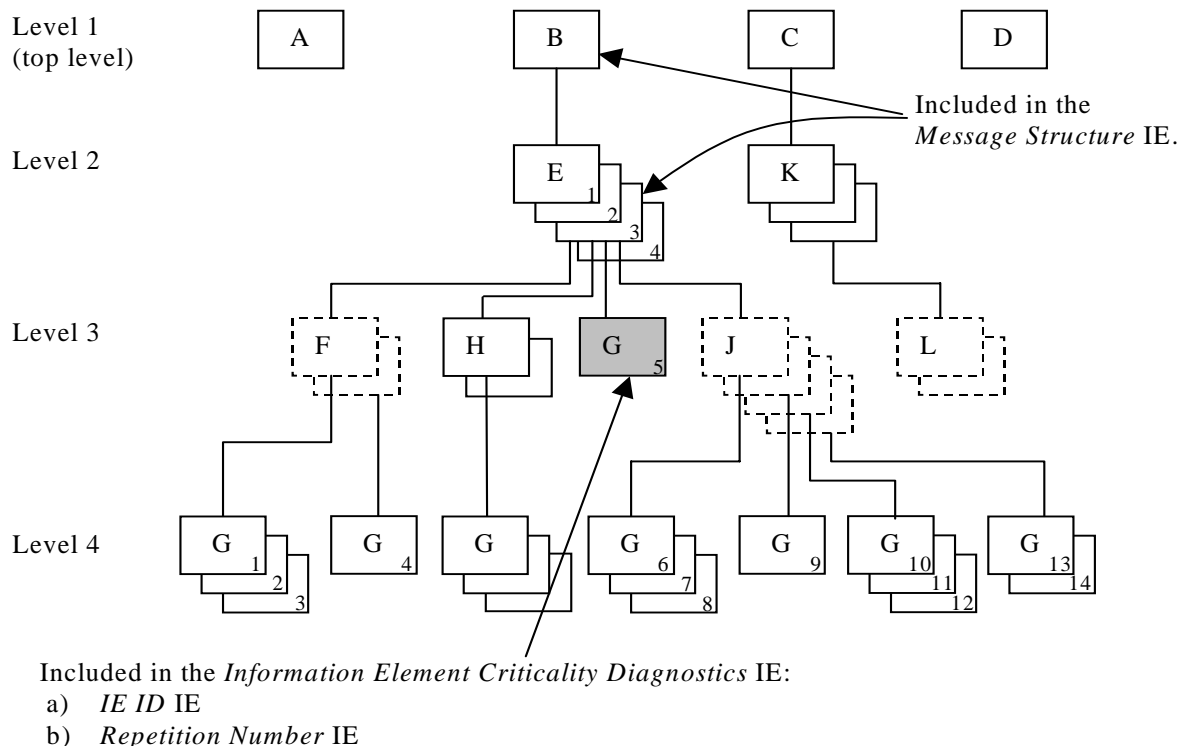


Figure C.5: Example of a received RNSAP message containing a not comprehended IE

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. (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

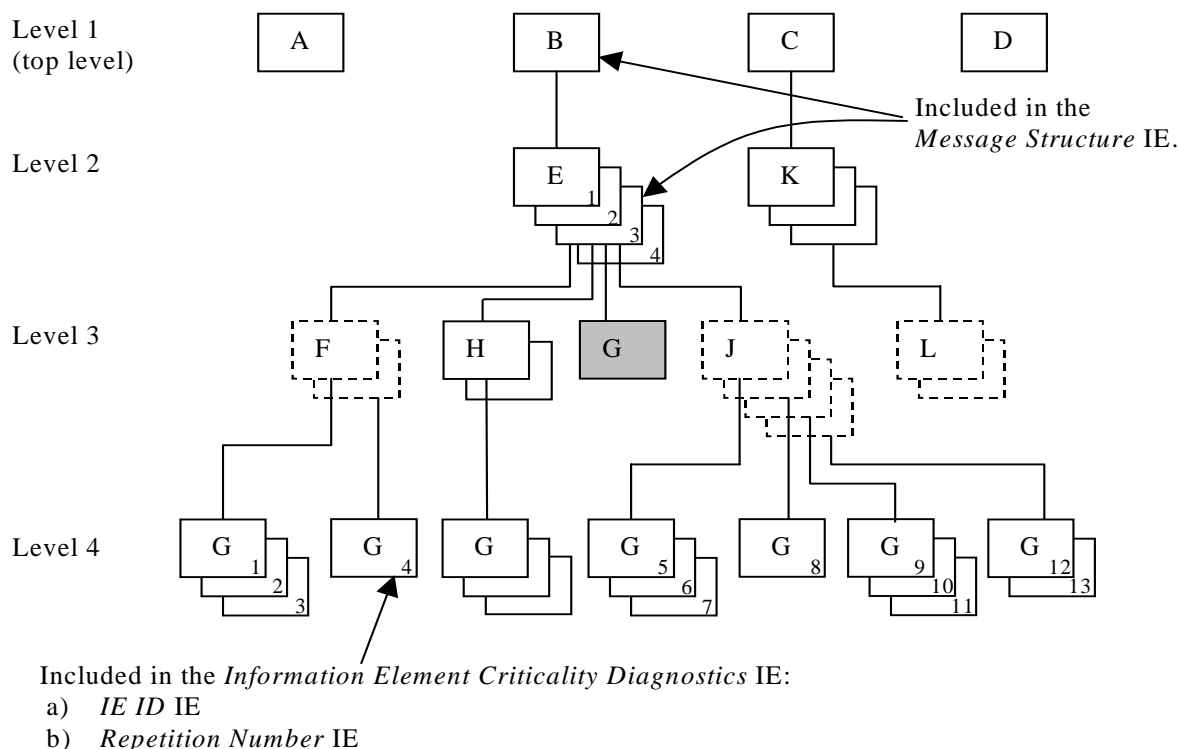


Figure C.6: Example of a received RNSAP message with a missing IE

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 <i>Message Structure</i> IE there have been four occurrences of IE G within the IE E (level 2) up to the missing occurrence. |
| Type of Error | missing | |
| <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 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

| Change history | | | | | |
|----------------|---------|---|--|-------------|--|
| TSG RAN# | Version | CR | Tdoc RAN | New Version | Subject/Comment |
| RAN_06 | - | - | RP-99755 | 3.0.0 | Approved at TSG RAN #6 and placed under Change Control |
| RAN_07 | 3.0.0 | - | RP-000100 | 3.1.0 | Approved at TSG RAN #7 |
| RAN_07 | 3.0.0 | - | RP-000143 | 3.1.0 | Approved at TSG RAN #7 |
| RAN_07 | 3.0.0 | - | RP-000146 | 3.1.0 | Approved at TSG RAN #7 |
| RAN_08 | 3.1.0 | - | RP-000241 | 3.2.0 | Approved at TSG RAN #8 |
| RAN_08 | 3.1.0 | - | RP-000242 | 3.2.0 | Approved at TSG RAN #8 |
| RAN_08 | 3.1.0 | - | RP-000243 | 3.2.0 | Approved at TSG RAN #8 |
| RAN_08 | 3.1.0 | - | RP-000244 | 3.2.0 | Approved at TSG RAN #8 |
| RAN_09 | 3.2.0 | 145-149, 151-154, 156-164, 166 167 | RP-000379 | 3.3.0 | Approved at TSG RAN #9 |
| RAN_09 | 3.2.0 | 168 169 171 173 174 176 178-180 183-193 | RP-000380 | 3.3.0 | Approved at TSG RAN #9 |
| RAN_09 | 3.2.0 | 194-200- | RP-000381 | 3.3.0 | Approved at TSG RAN #9 |
| RAN_10 | 3.3.0 | 202-219, 221-228, 230, 232-239, 241, 243-257, 259, 260, 263-265, 268-272, 274-278, 280, 281 | RP-000618 RP-000619 RP-000621 RP-000696 | 3.4.0 | Approved at TSG RAN #10 |
| RAN_11 | 3.4.0 | 282-286, 288-293, 295-302, 304-308, 311, 313-319, 329, 332, 334-335 | RP-010117 RP-010118 | 3.5.0 | Approved at TSG RAN #11 |

| Change history | | | | | | | |
|----------------|-------|-----------|---|-----|---|-------|-------|
| Date | TSG # | TSG Doc. | CR | Rev | Subject/Comment | Old | New |
| March 01 | 11 | RP-010167 | 310 | | Approved at TSG RAN #11 and placed under Change Control | - | 4.0.0 |
| March 01 | 11 | RP-010164 | 309 | | | | |
| March 01 | 11 | RP-010159 | 327,3 28,33 6,337 | | Approved at TSG RAN #11 and placed under Change Control | - | 4.0.0 |
| March 01 | 11 | RP-010160 | 320,3 23,33 9 | | Approved at TSG RAN #11 and placed under Change Control | - | 4.0.0 |
| 06/2001 | 12 | RP-010378 | 341,3 43,34 5,347 ,349, 351,3 53,35 5,357 ,359 | | Approved at TSG RAN#12 | 4.0.0 | 4.1.0 |
| 06/2001 | 12 | RP-010379 | 361,3 63,36 5,367 ,369, 378,3 80,38 2,388 ,390 | | Approved at TSG RAN#12 | 4.0.0 | 4.1.0 |
| 06/2001 | 12 | RP-010380 | 399,4 03,40 5,407 ,409, 411,4 14 | | Approved at TSG RAN#12 | 4.0.0 | 4.1.0 |
| 06/2001 | 12 | RP-010394 | 372,3 73,37 4,375 ,376, 379,3 80,39 1,393 ,412 | | Approved at TSG RAN#12 | 4.0.0 | 4.1.0 |
| 09/2001 | 13 | RP-010583 | 371 | 2 | Ambiguity in CM handling | 4.1.0 | 4.2.0 |
| 09/2001 | 13 | RP-010583 | 416 | 1 | Corrections to the DSCH Code Mapping IE | 4.1.0 | 4.2.0 |
| 09/2001 | 13 | RP-010583 | 418 | | Transport bearer replacement clarification | 4.1.0 | 4.2.0 |
| 09/2001 | 13 | RP-010583 | 425 | 1 | Correction to the Error handling of the ERROR INDICATION message | 4.1.0 | 4.2.0 |
| 09/2001 | 13 | RP-010583 | 432 | 2 | Cell Reserved for operator use | 4.1.0 | 4.2.0 |
| 09/2001 | 13 | RP-010583 | 437 | 1 | Clarification of Abnormal Conditions/Unsuccessful Operation | 4.1.0 | 4.2.0 |
| 09/2001 | 13 | RP-010583 | 440 | 1 | TFCS Correction for TDD | 4.1.0 | 4.2.0 |
| 09/2001 | 13 | RP-010583 | 442 | | Correction of a wrong implementation of CR 414 | 4.1.0 | 4.2.0 |
| 09/2001 | 13 | RP-010583 | 444 | 1 | Error handling of the Erroneously Present Conditional Ies | 4.1.0 | 4.2.0 |
| 09/2001 | 13 | RP-010583 | 446 | 1 | Correction to Downlink Signaling Transfer | 4.1.0 | 4.2.0 |
| 09/2001 | 13 | RP-010584 | 450 | | Bitstrings ordering | 4.1.0 | 4.2.0 |
| 09/2001 | 13 | RP-010584 | 460 | | Mapping of TFCS to TFCI | 4.1.0 | 4.2.0 |
| 09/2001 | 13 | RP-010584 | 463 | | TDD Channelisation code range definition | 4.1.0 | 4.2.0 |
| 09/2001 | 13 | RP-010584 | 475 | 2 | Clarification of coordinated DCHs | 4.1.0 | 4.2.0 |
| 09/2001 | 13 | RP-010584 | 466 | 1 | Clarification on the Time Slot LCR | 4.1.0 | 4.2.0 |
| 09/2001 | 13 | RP-010584 | 468 | 1 | Rnsap criticality | 4.1.0 | 4.2.0 |
| 09/2001 | 13 | RP-010584 | 470 | 1 | Clarification of chapter 10 | 4.1.0 | 4.2.0 |
| 09/2001 | 13 | RP-010584 | 472 | 1 | Clarification of use of Diversity Control Indicator | 4.1.0 | 4.2.0 |
| 09/2001 | 13 | RP-010596 | 415 | | Clarification on the reference of the 'Neighbouring TDD Cell Information LCR' | 4.1.0 | 4.2.0 |
| 09/2001 | 13 | RP-010596 | 420 | 2 | Allowed Combinations of Dedicated Measurement Type and the Reporting Characteristics Type | 4.1.0 | 4.2.0 |
| 09/2001 | 13 | RP-010596 | 423 | | Support of 8PSK modulation for LCR TDD | 4.1.0 | 4.2.0 |
| 09/2001 | 13 | RP-010596 | 430 | | Allowed combination of the measurement and event types | 4.1.0 | 4.2.0 |
| 09/2001 | 13 | RP-010596 | 435 | 1 | Adding protocol container in CHOICE type IE | 4.1.0 | 4.2.0 |
| 09/2001 | 13 | RP-010596 | 438 | 1 | Clarification of Abnormal Conditions/Unsuccessful Operation | 4.1.0 | 4.2.0 |
| 09/2001 | 13 | RP-010596 | 455 | 1 | Correction to position reporting | 4.1.0 | 4.2.0 |
| 09/2001 | 13 | RP-010596 | 461 | 1 | CR to 25.423 v4.1.0: RX timing deviation as dedicated measurement for 1.28Mcps TDD | 4.1.0 | 4.2.0 |
| 12/2001 | 14 | RP-010896 | 478 | 2 | CR on Priority range | 4.2.0 | 4.3.0 |
| 12/2001 | 14 | RP-010855 | 480 | | Bitstrings ordering | 4.2.0 | 4.3.0 |
| 12/2001 | 14 | RP-010855 | 482 | | Added UTRAN modes in the Semantics Description in IEs in | 4.2.0 | 4.3.0 |

| | | | | | | | |
|---------|----|-----------|-----|---|--|-------|-------|
| | | | | | RNSAP messages | | |
| 12/2001 | 14 | RP-010855 | 484 | | Alignment to RAN4 spec for Transmitted Code Power Measurement | 4.2.0 | 4.3.0 |
| 12/2001 | 14 | RP-010855 | 491 | | Transmit Diversity for TDD | 4.2.0 | 4.3.0 |
| 12/2001 | 14 | RP-010855 | 497 | | Clarification for the definition of the ASN.1 constants | 4.2.0 | 4.3.0 |
| 12/2001 | 14 | RP-010855 | 504 | 1 | Terminology Corrections | 4.2.0 | 4.3.0 |
| 12/2001 | 14 | RP-010855 | 509 | | Procedure Code Criticality in Error Indication | 4.2.0 | 4.3.0 |
| 12/2001 | 14 | RP-010855 | 512 | | Clarification for the Power Adjustment Type IE in the DL POWER CONTROL REQUEST message | 4.2.0 | 4.3.0 |
| 12/2001 | 14 | RP-010855 | 514 | 1 | Forward Compatibility for DL Power Balancing | 4.2.0 | 4.3.0 |
| 12/2001 | 14 | RP-010856 | 516 | | Reconfiguration clarification | 4.2.0 | 4.3.0 |
| 12/2001 | 14 | RP-010856 | 518 | 2 | DRNC behaviour at SRNC or RNSAP Signalling Bearer failure | 4.2.0 | 4.3.0 |
| 12/2001 | 14 | RP-010856 | 520 | 2 | Addition of amendment to clarify the PER encoding of bitstrings | 4.2.0 | 4.3.0 |
| 12/2001 | 14 | RP-010856 | 525 | | Clarification on Primary CPICH Ec/No IE | 4.2.0 | 4.3.0 |
| 12/2001 | 14 | RP-010856 | 527 | 2 | Transport Bearer replacement clarification for the DSCH case | 4.2.0 | 4.3.0 |
| 12/2001 | 14 | RP-010856 | 529 | | Clarification of the Transaction ID | 4.2.0 | 4.3.0 |
| 12/2001 | 14 | RP-010856 | 532 | | Clarification of S Field Length usage | 4.2.0 | 4.3.0 |
| 12/2001 | 14 | RP-010856 | 534 | | Correction the Clause 10 Error Handling | 4.2.0 | 4.3.0 |
| 12/2001 | 14 | RP-010856 | 540 | | Correction to Primary CPICH handling in RL Setup procedure | 4.2.0 | 4.3.0 |
| 12/2001 | 14 | RP-010873 | 486 | 1 | Correction of drift rate resolution | 4.2.0 | 4.3.0 |
| 12/2001 | 14 | RP-010873 | 487 | | Cell Parameter ID IE definition for 1.28Mcps TDD | 4.2.0 | 4.3.0 |
| 12/2001 | 14 | RP-010873 | 488 | | Introduction of Band Indicator in GSM Neighbouring Cell Information | 4.2.0 | 4.3.0 |
| 12/2001 | 14 | RP-010873 | 489 | | UL SIR Target in RL Setup Request TDD | 4.2.0 | 4.3.0 |
| 12/2001 | 14 | RP-010873 | 502 | 2 | Handling of the DPC Mode IE | 4.2.0 | 4.3.0 |
| 12/2001 | 14 | RP-010873 | 505 | 1 | Rel-4 specific terminology corrections | 4.2.0 | 4.3.0 |
| 12/2001 | 14 | RP-010873 | 521 | 1 | Correction to the RNSAP Congestion Indication | 4.2.0 | 4.3.0 |
| 12/2001 | 14 | RP-010873 | 530 | 2 | SFN-SFN quality indication | 4.2.0 | 4.3.0 |
| 12/2001 | 14 | RP-010911 | 485 | 1 | Correction to SFN-SFN Observed Time Difference Measurement report mapping | 4.2.0 | 4.3.0 |
| 03/2002 | 15 | RP-020169 | 542 | 3 | RNSAP signalling support for flexible split | 4.3.0 | 4.4.0 |
| 03/2002 | 15 | RP-020169 | 549 | 1 | Setting of Initial power in a new CCTrCH in TDD | 4.3.0 | 4.4.0 |
| 03/2002 | 15 | RP-020169 | 560 | | Clarification to measurement unit at Higher Layer Filtering. | 4.3.0 | 4.4.0 |
| 03/2002 | 15 | RP-020169 | 574 | 2 | New UE identifier for MAC-c/sh multiplexing for DSCH | 4.3.0 | 4.4.0 |
| 03/2002 | 15 | RP-020169 | 581 | 1 | Correction to physical channels which SCTD can be applied (Iur) | 4.3.0 | 4.4.0 |
| 03/2002 | 15 | RP-020181 | 545 | 1 | Corrections to the Information Exchange Initiation procedure | 4.3.0 | 4.4.0 |
| 03/2002 | 15 | RP-020181 | 546 | 1 | Correction to UE position measurements quality and threshold | 4.3.0 | 4.4.0 |
| 03/2002 | 15 | RP-020181 | 547 | 1 | Correction to UE position measurements change and deviation limit | 4.3.0 | 4.4.0 |
| 03/2002 | 15 | RP-020181 | 552 | | Re-ordering of cause values | 4.3.0 | 4.4.0 |
| 03/2002 | 15 | RP-020181 | 561 | | Clarification to the Allowed Rate Information in RL Setup/Addition/Reconfiguration response and RL Reconfiguration Ready messages. | 4.3.0 | 4.4.0 |
| 03/2002 | 15 | RP-020181 | 562 | 1 | Modification of the T_utran-gps length | 4.3.0 | 4.4.0 |
| 03/2002 | 15 | RP-020181 | 567 | | Amendment of the COMMON MEASUREMENT INITIATION | 4.3.0 | 4.4.0 |
| 03/2002 | 15 | RP-020181 | 576 | 2 | Load Value Extension | 4.3.0 | 4.4.0 |
| 03/2002 | 15 | RP-020181 | 588 | | The correction on duplicated allocation of protocolIE-ID | 4.3.0 | 4.4.0 |
| 03/2002 | 15 | RP-020181 | 589 | | Enhanced DSCH and syntax error ASN.1 correction | 4.3.0 | 4.4.0 |
| 03/2002 | 15 | RP-020181 | 596 | 1 | Introduction of ellipses for IPDL parameters | 4.3.0 | 4.4.0 |
| 03/2002 | 15 | RP-020231 | 586 | 2 | Removing of channel coding option "no coding" for FDD | 4.3.0 | 4.4.0 |
| 03/2002 | 15 | RP-020188 | 433 | 4 | Power Balancing Activation with Radio Link Setup and Radio Link Addition procedures in RNSAP | 4.4.0 | 5.0.0 |
| 03/2002 | 15 | RP-020188 | 434 | 3 | Power Balancing Restart with Radio Link Reconfiguration procedure in RNSAP | 4.4.0 | 5.0.0 |
| 03/2002 | 15 | RP-020188 | 473 | 2 | Traffic class signalling over Iur | 4.4.0 | 5.0.0 |
| 03/2002 | 15 | RP-020188 | 506 | 2 | Alignment to RAN4 specifications for CPICH Ec/No | 4.4.0 | 5.0.0 |
| 03/2002 | 15 | RP-020194 | 543 | 2 | RNSAP Signalling support for flexible hard split | 4.4.0 | 5.0.0 |
| 03/2002 | 15 | RP-020193 | 544 | 2 | Add IPDL TDD parameters for LCR in RNSAP information element functional definition and contents | 4.4.0 | 5.0.0 |
| 03/2002 | 15 | RP-020192 | 553 | 1 | Introduction of cell capability container over Iur | 4.4.0 | 5.0.0 |
| 03/2002 | 15 | RP-020189 | 555 | 2 | Introduction of IP Transport option in UTRAN | 4.4.0 | 5.0.0 |
| 03/2002 | 15 | RP-020197 | 556 | 1 | Iur Common Transport Channel Efficiency Optimisation | 4.4.0 | 5.0.0 |
| 03/2002 | 15 | RP-020188 | 558 | | RNSAP Reset procedure | 4.4.0 | 5.0.0 |
| 03/2002 | 15 | RP-020199 | 563 | 2 | Separation of Resource Reservation and Radio Link Activation | 4.4.0 | 5.0.0 |
| 03/2002 | 15 | RP-020196 | 564 | | Introduction of RL Timing Adjustment support | 4.4.0 | 5.0.0 |
| 03/2002 | 15 | RP-020193 | 568 | 1 | Introduction of the Neighbouring TDD Cell Measurement | 4.4.0 | 5.0.0 |

| | | | | | Information LCR | | |
|---------|----|-----------|-----|---|---|-------|-------|
| 03/2002 | 15 | RP-020188 | 569 | 1 | Uplink SIR Target in RL Setup Response TDD | 4.4.0 | 5.0.0 |
| 03/2002 | 15 | RP-020190 | 570 | 3 | HSDPA RL-Level Signalling | 4.4.0 | 5.0.0 |
| 03/2002 | 15 | RP-020193 | 571 | 1 | Introduction of Angle of Arrival enhanced UE positioning for 1.28Mcps TDD in RNSAP | 4.4.0 | 5.0.0 |
| 03/2002 | 15 | RP-020188 | 572 | 2 | Traffic class signalling for USCH | 4.4.0 | 5.0.0 |
| 03/2002 | 15 | RP-020188 | 577 | 4 | New Measurement Type in Common Measurements and Information Exchange | 4.4.0 | 5.0.0 |
| 03/2002 | 15 | RP-020194 | 582 | 3 | RNSAP changes for TFCI power control in DSCH hard split mode | 4.4.0 | 5.0.0 |
| 03/2002 | 15 | RP-020188 | 587 | 1 | Introduction of the cell relation parameters | 4.4.0 | 5.0.0 |
| 06/2002 | 16 | RP-020426 | 554 | 4 | Introduction of Qth signalling in UTRAN | 5.0.0 | 5.1.0 |
| 06/2002 | 16 | RP-020406 | 599 | | Criticality Information Decoding Failure Handling | 5.0.0 | 5.1.0 |
| 06/2002 | 16 | RP-020406 | 602 | 1 | Alignment of tabular and ASN.1 coding for DL power | 5.0.0 | 5.1.0 |
| 06/2002 | 16 | RP-020406 | 605 | 1 | Correction to RL Restore Indication | 5.0.0 | 5.1.0 |
| 06/2002 | 16 | RP-020406 | 611 | | New UE identifier for Shared Channel handling for TDD DSCH/USCH | 5.0.0 | 5.1.0 |
| 06/2002 | 16 | RP-020406 | 614 | 1 | Clarification of Cell individual offset | 5.0.0 | 5.1.0 |
| 06/2002 | 16 | RP-020419 | 618 | | Clarification on the Neighboring TDD Cell Measurement information | 5.0.0 | 5.1.0 |
| 06/2002 | 16 | RP-020422 | 619 | | HS_DSCH Support Indicator in FDD Cell Capability Container | 5.0.0 | 5.1.0 |
| 06/2002 | 16 | RP-020432 | 620 | | Removal of syntax errors from ASN.1 | 5.0.0 | 5.1.0 |
| 06/2002 | 16 | RP-020422 | 621 | | Interaction between HSDPA and IP transport in UTRAN | 5.0.0 | 5.1.0 |
| 06/2002 | 16 | RP-020428 | 623 | | RNSAP changes for TFCI power control in DSCH hard split mode | 5.0.0 | 5.1.0 |
| 06/2002 | 16 | RP-020406 | 626 | 1 | Correction to the use of the CFN IE / SFN IE in the Measurement Initiation procedures | 5.0.0 | 5.1.0 |
| 06/2002 | 16 | RP-020406 | 632 | | TFCI 0 definition for TDD | 5.0.0 | 5.1.0 |
| 06/2002 | 16 | RP-020406 | 635 | 1 | CELL_DCH to CELL_FACH TDD correction | 5.0.0 | 5.1.0 |
| 06/2002 | 16 | RP-020407 | 641 | 1 | DSCH Information Correction | 5.0.0 | 5.1.0 |
| 06/2002 | 16 | RP-020419 | 648 | | Definition of quality figures for SFN-SFN and Tdtd-gps measurement value information | 5.0.0 | 5.1.0 |
| 06/2002 | 16 | RP-020407 | 656 | 1 | Clarification for the usage of the cause value | 5.0.0 | 5.1.0 |
| 06/2002 | 16 | RP-020422 | 662 | 2 | HS-DSCH Initial credits | 5.0.0 | 5.1.0 |
| 06/2002 | 16 | RP-020419 | 663 | 1 | Clarification to the RNSAP RL Congestion procedure | 5.0.0 | 5.1.0 |
| 06/2002 | 16 | RP-020432 | 664 | 1 | DSCH Support Indicator in Cell Capability Container | 5.0.0 | 5.1.0 |
| 06/2002 | 16 | RP-020407 | 673 | | RNSAP Tabular alignment to ASN1 and other corrections | 5.0.0 | 5.1.0 |
| 06/2002 | 16 | RP-020447 | 669 | 2 | Support of Iur-g procedures (implemented after PCG endorsement) | 5.1.0 | 5.2.0 |
| 09/2002 | 17 | RP-020607 | 675 | | Correction of Criticality of RL set information in Dedicated Measurement initiation | 5.2.0 | 5.3.0 |
| 09/2002 | 17 | RP-020614 | 677 | 1 | Rx Timing Deviation (TDD) corrections | 5.2.0 | 5.3.0 |
| 09/2002 | 17 | RP-020616 | 679 | 1 | Clarification of the Common Measurement Reporting procedure | 5.2.0 | 5.3.0 |
| 09/2002 | 17 | RP-020607 | 681 | | Clarification to DCH Rate Control for modified DCHs | 5.2.0 | 5.3.0 |
| 09/2002 | 17 | RP-020648 | 682 | 3 | CQI and ACK/NACK Repetition factor and Power Offset and k-value | 5.2.0 | 5.3.0 |
| 09/2002 | 17 | RP-020622 | 683 | | Change of Maximum Number of HS-SCCH Codes | 5.2.0 | 5.3.0 |
| 09/2002 | 17 | RP-020652 | 684 | 2 | Required enhancements due to GERAN specific impacts on the Iur-ns interface | 5.2.0 | 5.3.0 |
| 09/2002 | 17 | RP-020618 | 685 | | Clarification for the initial power of the power balancing (Pinit) | 5.2.0 | 5.3.0 |
| 09/2002 | 17 | RP-020651 | 686 | 2 | Partial dedicated measurement reporting | 5.2.0 | 5.3.0 |
| 09/2002 | 17 | RP-020646 | 687 | 1 | DSCH Initial Credits | 5.2.0 | 5.3.0 |
| 09/2002 | 17 | RP-020619 | 688 | | Removal of BLER for HS-DSCH | 5.2.0 | 5.3.0 |
| 09/2002 | 17 | RP-020617 | 689 | 1 | Correction for inconsistency in length of TFCI field 2 | 5.2.0 | 5.3.0 |
| 09/2002 | 17 | RP-020612 | 691 | | WG4 Reference Corrections | 5.2.0 | 5.3.0 |
| 09/2002 | 17 | RP-020607 | 694 | 2 | RNSAP Procedures alignment to NBAP and other corrections | 5.2.0 | 5.3.0 |
| 09/2002 | 17 | RP-020607 | 696 | 2 | Handling of Common measurement of neighbor cell information elements | 5.2.0 | 5.3.0 |
| 09/2002 | 17 | RP-020589 | 700 | 1 | Replacing all occurrences of P _{SIR(k)} by dP _{curr} in 25.423 | 5.2.0 | 5.3.0 |
| 09/2002 | 17 | RP-020623 | 701 | 1 | RL Parameter Update Procedure | 5.2.0 | 5.3.0 |

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|---------|----|-----------|-----|---|---|-------|-------|
| 09/2002 | 17 | RP-020625 | 702 | 1 | Introduction of Shared Network Area information support | 5.2.0 | 5.3.0 |
| 09/2002 | 17 | RP-020603 | 705 | 2 | Correction of the Error Indication | 5.2.0 | 5.3.0 |
| 09/2002 | 17 | RP-020613 | 707 | 2 | Uplink Synchronisation in 1.28Mcps TDD | 5.2.0 | 5.3.0 |
| 09/2002 | 17 | RP-020628 | 714 | | Traffic Class for HS-DSCH | 5.2.0 | 5.3.0 |
| 09/2002 | 17 | RP-020607 | 716 | 1 | Clarification of the DCH rate coding | 5.2.0 | 5.3.0 |
| 09/2002 | 17 | RP-020649 | 717 | 1 | HS-SCCH Power offset | 5.2.0 | 5.3.0 |
| 09/2002 | 17 | RP-020603 | 720 | 1 | Correction to Compressed Mode in RL Addition Failure | 5.2.0 | 5.3.0 |
| 09/2002 | 17 | RP-020615 | 722 | | Quality les for UE positioning measurements | 5.2.0 | 5.3.0 |

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|---------|----|-----------|-----|---|--|-------|-------|
| 12/2002 | 18 | RP-020758 | 724 | | Add UL SIR_target for Unsynchronized RL Reconfiguration in 1.28Mcps TDD | 5.3.0 | 5.4.0 |
| 12/2002 | 18 | RP-020757 | 726 | | Correction to RX Timing Deviation LCR value range | 5.3.0 | 5.4.0 |
| 12/2002 | 18 | RP-020759 | 728 | 2 | Slot Format for 1.28Mcps TDD | 5.3.0 | 5.4.0 |
| 12/2002 | 18 | RP-020762 | 729 | 1 | MAC-hs Reset Indicator | 5.3.0 | 5.4.0 |
| 12/2002 | 18 | RP-020773 | 730 | 1 | Measurement power offset signalling for HSDPA | 5.3.0 | 5.4.0 |
| 12/2002 | 18 | RP-020768 | 731 | | Power offset values for HS-DPCCH | 5.3.0 | 5.4.0 |
| 12/2002 | 18 | RP-020762 | 732 | | Correction on the Cell Capacity Class | 5.3.0 | 5.4.0 |
| 12/2002 | 18 | RP-020762 | 733 | | Rel-5 ASN.1 Error correction | 5.3.0 | 5.4.0 |
| 12/2002 | 18 | RP-020753 | 738 | 2 | Final Corrections from RNSAP Procedure Review | 5.3.0 | 5.4.0 |
| 12/2002 | 18 | RP-020767 | 742 | 1 | Addition of the second TDD Channelisation Code of HS-SCCH for the 1.28Mcps TDD option. | 5.3.0 | 5.4.0 |
| 12/2002 | 18 | RP-020765 | 744 | 1 | Clarification of the usage of HS-DSCH-RNTI | 5.3.0 | 5.4.0 |
| 12/2002 | 18 | RP-020766 | 753 | | Clarification for the inclusion of the DL Power Balancing Updated Indicator IE | 5.3.0 | 5.4.0 |
| 12/2002 | 18 | RP-020744 | 756 | | Correction for the DL DPDCH transmission | 5.3.0 | 5.4.0 |
| 12/2002 | 18 | RP-020855 | 757 | 3 | MAC-hs Window Size | 5.3.0 | 5.4.0 |
| 12/2002 | 18 | RP-020743 | 763 | 1 | DSCH-RNTI in RADIO LINK SETUP FAILURE | 5.3.0 | 5.4.0 |
| 03/2003 | 19 | RP-030068 | 767 | | Clarification to DL Power definition for TDD | 5.4.0 | 5.5.0 |
| 03/2003 | 19 | RP-030077 | 768 | 2 | Correction to DL Tx Power for TDD | 5.4.0 | 5.5.0 |
| 03/2003 | 19 | RP-030072 | 770 | 1 | TPC Step Size for TDD | 5.4.0 | 5.5.0 |
| 03/2003 | 19 | RP-030069 | 772 | | Clarification to 2 nd Interleaving Mode for TDD | 5.4.0 | 5.5.0 |
| 03/2003 | 19 | RP-030078 | 773 | 1 | HS-PDSCH RNSAP Corrections for TDD | 5.4.0 | 5.5.0 |
| 03/2003 | 19 | RP-030073 | 775 | 1 | Clarification of HS-SCCH power offset usage in case of multiple HS-SCCHs | 5.4.0 | 5.5.0 |
| 03/2003 | 19 | RP-030062 | 778 | | Correction of Guaranteed DL Rate | 5.4.0 | 5.5.0 |
| 03/2003 | 19 | RP-030062 | 780 | 1 | Correction of the TDD UE capabilities necessary to pass from SRNC to CRNC | 5.4.0 | 5.5.0 |
| 03/2003 | 19 | RP-030080 | 781 | 1 | Measurement for HS-SICH Outer Loop Power Control | 5.4.0 | 5.5.0 |
| 03/2003 | 19 | RP-030082 | 784 | 1 | Corrections to Channelisation Code TFCI Mapping for TDD | 5.4.0 | 5.5.0 |
| 03/2003 | 19 | RP-030070 | 786 | | Correction for the Information Exchange Initiation procedure | 5.4.0 | 5.5.0 |
| 03/2003 | 19 | RP-030074 | 787 | 1 | T1 signalling for HSDPA | 5.4.0 | 5.5.0 |
| 03/2003 | 19 | RP-030183 | 790 | 5 | Support of Cell Individual Offset in RNSAP | 5.4.0 | 5.5.0 |
| 03/2003 | 19 | RP-030071 | 792 | | Midamble Configuration for Midamble Shift LCR | 5.4.0 | 5.5.0 |
| 03/2003 | 19 | RP-030067 | 796 | | Alignment of 'Uncertainty Ellipse' with RRC | 5.4.0 | 5.5.0 |
| 03/2003 | 19 | RP-030058 | 798 | 2 | Uplink Timing Advance Control Parameters in LCR TDD | 5.4.0 | 5.5.0 |
| 03/2003 | 19 | RP-030119 | 800 | 1 | Signalling of Midamble Shift and Burst type for HS-PDSCH in TDD | 5.4.0 | 5.5.0 |
| 03/2003 | 19 | RP-030066 | 803 | | Corrections to DCH Combining in RL SETUP and RL ADDITION | 5.4.0 | 5.5.0 |
| 03/2003 | 19 | RP-030058 | 809 | | Correction on CGA Additional Shapes | 5.4.0 | 5.5.0 |
| 03/2003 | 19 | RP-030076 | 810 | 2 | Guaranteed Bit Rate for HSDPA | 5.4.0 | 5.5.0 |
| 06/2003 | 20 | RP-030332 | 815 | | Alignment of TDD HSDPA parameters to RAN2 and RAN 1. | 5.5.0 | 5.6.0 |
| 06/2003 | 20 | RP-030333 | 816 | | HSDPA General Corrections | 5.5.0 | 5.6.0 |
| 06/2003 | 20 | RP-030358 | 820 | 3 | Group reset | 5.5.0 | 5.6.0 |
| 06/2003 | 20 | RP-030334 | 821 | | TDD Channelisation Code LCR correction for HSDPA | 5.5.0 | 5.6.0 |
| 06/2003 | 20 | RP-030319 | 822 | | Correction of the figure of the Information Exchange Failure procedure | 5.5.0 | 5.6.0 |
| 06/2003 | 20 | RP-030324 | 824 | 1 | Alignment of the Requested Data Value Information IE description | 5.5.0 | 5.6.0 |
| 06/2003 | 20 | RP-030325 | 826 | | GPS trigger condition | 5.5.0 | 5.6.0 |
| 06/2003 | 20 | RP-030319 | 827 | | Alignment of tables in Information Exchange Initiation procedure description | 5.5.0 | 5.6.0 |
| 06/2003 | 20 | RP-030329 | 832 | 2 | HS-SCCH Change Indicator | 5.5.0 | 5.6.0 |
| 06/2003 | 20 | RP-030335 | 835 | | Correction to HARQ Memory Partitioning | 5.5.0 | 5.6.0 |
| 06/2003 | 20 | RP-030337 | 836 | | Correction for the value range of 'CQI Feedback cycle, k' | 5.5.0 | 5.6.0 |
| 06/2003 | 20 | RP-030279 | 837 | 2 | Clarification for the handling of the HS-DSCH | 5.5.0 | 5.6.0 |
| 06/2003 | 20 | RP-030328 | 838 | 2 | Resource handling of HS-DSCH Guaranteed Bit Rate | 5.5.0 | 5.6.0 |
| 06/2003 | 20 | RP-030326 | 842 | | Correction of Failure message used for logical errors | 5.5.0 | 5.6.0 |
| 09/2003 | 21 | RP-030451 | 843 | 2 | Discard timer signalling for HSDPA | 5.6.0 | 5.7.0 |
| 09/2003 | 21 | RP-030452 | 844 | 1 | Phase Reference Signalling Support | 5.6.0 | 5.7.0 |
| 09/2003 | 21 | RP-030449 | 847 | 2 | HS-DSCH Priority Queue to Modify | 5.6.0 | 5.7.0 |
| 09/2003 | 21 | RP-030536 | 848 | 2 | MAC-hs Reordering Buffer Size | 5.6.0 | 5.7.0 |
| 09/2003 | 21 | RP-030443 | 852 | | Corrections to Tx Diversity | 5.6.0 | 5.7.0 |
| 09/2003 | 21 | RP-030440 | 853 | 1 | Correction of the Measurement Increase/Decrease Threshold IE | 5.6.0 | 5.7.0 |
| 09/2003 | 21 | RP-030444 | 856 | | 'On Modification' and 'Periodic' reporting alignment for Information Exchange procedures | 5.6.0 | 5.7.0 |
| 09/2003 | 21 | RP-030445 | 857 | | Alignment of title and sub-clause text of chapter 10.3.4.2 | 5.6.0 | 5.7.0 |
| 09/2003 | 21 | RP-030440 | 858 | | Corrections on Uplink Signalling Transfer | 5.6.0 | 5.7.0 |
| 09/2003 | 21 | RP-030447 | 860 | 2 | Coordination with RRC about the TFS of DL DCH for HS-DSCH | 5.6.0 | 5.7.0 |
| 09/2003 | 21 | RP-030453 | 862 | 1 | HS-DSCH information usage description clarification | 5.6.0 | 5.7.0 |
| 09/2003 | 21 | RP-030440 | 865 | 1 | RNSAP correction for CRRM alignment | 5.6.0 | 5.7.0 |
| 09/2003 | 21 | RP-030446 | 866 | | Removal of the note in chapter 10 | 5.6.0 | 5.7.0 |
| 12/2003 | 22 | RP-030687 | 867 | | Correction for the HS-DSCH Initial Capacity Allocation | 5.7.0 | 5.8.0 |
| 12/2003 | 22 | RP-030688 | 868 | | Correction of Backward Compatibility for Uni-directional DCH | 5.7.0 | 5.8.0 |

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|---------|----|-----------|------|---|---|-------|-------|
| | | | | | indicator. | | |
| 12/2003 | 22 | RP-030692 | 869 | | Reconfiguration of Multiple Radio Links in TDD | 5.7.0 | 5.8.0 |
| 12/2003 | 22 | RP-030693 | 870 | | The usage of the MAC-hs Reordering Buffer Size | 5.7.0 | 5.8.0 |
| 12/2003 | 22 | RP-030691 | 877 | 1 | Range Extension for GPS Almanac Reporting | 5.7.0 | 5.8.0 |
| 12/2003 | 22 | RP-030713 | 879 | 2 | Explicit HARQ Memory Partitioning Clarification' | 5.7.0 | 5.8.0 |
| 12/2003 | 22 | RP-030686 | 880 | 1 | RT Load Value Clarification | 5.7.0 | 5.8.0 |
| 12/2003 | 22 | RP-030677 | 881 | 1 | RNSAP TDD Review | 5.7.0 | 5.8.0 |
| 12/2003 | 22 | RP-030684 | 885 | 1 | Removal of the ambiguity about the activation time | 5.7.0 | 5.8.0 |
| 12/2003 | 22 | RP-030690 | 888 | 2 | Correction to Addition of HS-DSCH MAC-d Flows | 5.7.0 | 5.8.0 |
| 12/2003 | 22 | RP-030695 | 889 | 2 | Unsynchronised RL Reconfiguration for HSDPA | 5.7.0 | 5.8.0 |
| 12/2003 | 22 | RP-030694 | 890 | 2 | TNL QoS for uplink IP traffic | 5.7.0 | 5.8.0 |
| 12/2003 | 22 | RP-030689 | 891 | | Correction of Transmission Gap Pattern Sequence Information | 5.7.0 | 5.8.0 |
| 12/2003 | 22 | RP-030683 | 893 | | Information Exchange Initiation behavior correction | 5.7.0 | 5.8.0 |
| 12/2003 | 22 | RP-030677 | 894 | 2 | RNSAP review | 5.7.0 | 5.8.0 |
| 12/2003 | 22 | RP-030726 | 887 | | Signalling Support for Beamforming Enhancement | 5.8.0 | 6.0.0 |
| 03/2004 | 23 | RP-040052 | 901 | | Correction of RL Congestion Indication | 6.0.0 | 6.1.0 |
| 03/2004 | 23 | RP-040088 | 902 | | Interference measurement in UpPTS for 1.28Mcps TDD | 6.0.0 | 6.1.0 |
| 03/2004 | 23 | RP-040074 | 903 | | Introduction of UE measurement forwarding over the lur for TDD | 6.0.0 | 6.1.0 |
| 03/2004 | 23 | RP-040070 | 908 | | Ignore Criticality for RL Activation Command | 6.0.0 | 6.1.0 |
| 03/2004 | 23 | RP-040070 | 910 | | Ignore Criticality for RL Parameter Update | 6.0.0 | 6.1.0 |
| 03/2004 | 23 | RP-040065 | 912 | | Corrections for HS-DSCH Configuration Signalling | 6.0.0 | 6.1.0 |
| 03/2004 | 23 | RP-040066 | 914 | 1 | Priority Queue ID for HSDPA | 6.0.0 | 6.1.0 |
| 03/2004 | 23 | RP-040070 | 922 | | Correction of ASN.1 code | 6.0.0 | 6.1.0 |
| 03/2004 | 23 | RP-040053 | 925 | | Alignment with 23.032 correction of Included Angle for Ellipsoid Arc | 6.0.0 | 6.1.0 |
| 03/2004 | 23 | RP-040067 | 939 | | Correction Related to HS-DSCH Information Response | 6.0.0 | 6.1.0 |
| 03/2004 | 23 | RP-040059 | 932 | | Correction to the threshold of Rx Timing Deviation LCR in tabular | 6.0.0 | 6.1.0 |
| 03/2004 | 23 | RP-040068 | 934 | | Extension of the range of PCCPCH RSCP | 6.0.0 | 6.1.0 |
| 03/2004 | 23 | RP-040069 | 936 | | Introduce the description of AOA measurement in the Allowed Combinations of Dedicated Measurement | 6.0.0 | 6.1.0 |
| 03/2004 | 23 | RP-040070 | 942 | | Criticality Settings for HSDPA. | 6.0.0 | 6.1.0 |
| 03/2004 | 23 | RP-040070 | 944 | | GA Incompatibility issue | 6.0.0 | 6.1.0 |
| 03/2004 | 23 | RP-040064 | 949 | | Setting of TGPSI | 6.0.0 | 6.1.0 |
| 03/2004 | 23 | RP-040057 | 951 | | DCH Information Response Issue | 6.0.0 | 6.1.0 |
| 06/2004 | 24 | RP-040175 | 955 | 1 | Correction the presence of Traffic Class IE | 6.1.0 | 6.2.0 |
| 06/2004 | 24 | RP-040175 | 957 | 1 | Inclusion of scrambling code information in HS-DSCH FDD Information Response IE | 6.1.0 | 6.2.0 |
| 06/2004 | 24 | RP-040178 | 961 | | Node B usage of the MAC-hs re-ordering buffer size | 6.1.0 | 6.2.0 |
| 06/2004 | 24 | RP-040180 | 963 | 1 | Unsuccessful Operation of RL Setup Procedure for HSDPA | 6.1.0 | 6.2.0 |
| 06/2004 | 24 | RP-040184 | 966 | 1 | Measurement Recovery Behavior for Common and Dedicated Measurement Procedures | 6.1.0 | 6.2.0 |
| 06/2004 | 24 | RP-040182 | 967 | 3 | Introduction of support of NetworkAssistedCellChange from UTRAN to GERAN | 6.1.0 | 6.2.0 |
| 06/2004 | 24 | RP-040179 | 969 | | Clarification on number of and capacity reporting of Priority Queues | 6.1.0 | 6.2.0 |
| 06/2004 | 24 | RP-040184 | 972 | | Correction of HS-SICH reception quality | 6.1.0 | 6.2.0 |
| 06/2004 | 24 | RP-040181 | 976 | | Power Balancing Corrections | 6.1.0 | 6.2.0 |
| 06/2004 | 24 | RP-040175 | 978 | | HSDPA Corrections in RL Reconfiguration | 6.1.0 | 6.2.0 |
| 06/2004 | 24 | RP-040183 | 979 | 1 | Trace Parameter Propagation over the lur | 6.1.0 | 6.2.0 |
| 09/2004 | 25 | RP-040307 | 985 | 1 | Correction of Trace reference in Deactivate trace | 6.2.0 | 6.3.0 |
| 09/2004 | 25 | RP-040302 | 989 | | Correction to tabular text associated with TDD DPCH Offset IE | 6.2.0 | 6.3.0 |
| 09/2004 | 25 | RP-040300 | 995 | 1 | Traffic Class IE in RNSAP | 6.2.0 | 6.3.0 |
| 12/2004 | 26 | RP-040435 | 998 | 1 | Correction to the Assigned Criticality of UL Synchronisation Parameters LCR IE for 1.28Mcps TDD | 6.3.0 | 6.4.0 |
| 12/2004 | 26 | RP-040437 | 999 | 2 | MBMS changes for RNSAP | 6.3.0 | 6.4.0 |
| 12/2004 | 26 | RP-040433 | 1002 | | Correction of reference to "MAC-hs Guaranteed Bit Rate" | 6.3.0 | 6.4.0 |
| 12/2004 | 26 | RP-040433 | 1004 | | Correction of duplicated and misplaced procedure text for RL Addition | 6.3.0 | 6.4.0 |
| 12/2004 | 26 | RP-040433 | 1006 | | Correction to not mention Flexible Hard Split Support Indicator IE in procedure text | 6.3.0 | 6.4.0 |
| 12/2004 | 26 | RP-040440 | 1007 | 2 | Changes for Introducing EDCH | 6.3.0 | 6.4.0 |
| 12/2004 | 26 | RP-040441 | 1010 | | outdated ITU-T reference | 6.3.0 | 6.4.0 |
| 12/2004 | 26 | RP-040519 | 1011 | | HS-DPCCH ACK/NACK preamble and postamble | 6.3.0 | 6.4.0 |
| 01/2005 | | | | | space removed in ASN.1 from MBMSAttach- and DetachCommand | 6.4.0 | 6.4.1 |
| 03/2005 | 27 | RP-050057 | 1021 | 3 | Optimisation of MBMS channel type indication via lur | 6.4.1 | 6.5.0 |
| 03/2005 | 27 | RP-050038 | 1025 | 1 | Removal of TGPL2 | 6.4.1 | 6.5.0 |
| 03/2005 | 27 | RP-050053 | 1027 | | Wrong HS IE referenced | 6.4.1 | 6.5.0 |
| 03/2005 | 27 | RP-050054 | 1029 | | Measurement Power Offset IE procedure text missing | 6.4.1 | 6.5.0 |
| 03/2005 | 27 | RP-050058 | 1034 | 1 | Correction of RNSAP E-DCH IEs | 6.4.1 | 6.5.0 |
| 03/2005 | 27 | RP-050057 | 1035 | 2 | MBMS Identifiers Retrieval | 6.4.1 | 6.5.0 |
| 03/2005 | 27 | RP-050056 | 1036 | 1 | Introduction of Fractional DPCH | 6.4.1 | 6.5.0 |
| 03/2005 | 27 | RP-050059 | 1037 | | Initial Radio Link Timing Adjustment | 6.4.1 | 6.5.0 |
| 03/2005 | 27 | RP-050058 | 1039 | | EDCH RNSAP ASN.1 | 6.4.1 | 6.5.0 |
| 03/2005 | 27 | RP-050053 | 1041 | | Interaction between Synchronised RL Reconfiguration and RL | 6.4.1 | 6.5.0 |

| | | | | | Deletion | | |
|---------|----|-----------|------|---|--|-------|--------|
| 03/2005 | 27 | RP-050053 | 1043 | | Clarification on HS-DSCH Information IE | 6.4.1 | 6.5.0 |
| 06/2005 | 28 | RP-050254 | 1042 | 3 | Timing maintained hard HO | 6.5.0 | 6.6.0 |
| 06/2005 | 28 | RP-050217 | 1046 | 1 | Correction to the RL Reconf for serving HS-DSCH cell change | 6.5.0 | 6.6.0 |
| 06/2005 | 28 | RP-050233 | 1050 | | Proposed CR to 25.423 [Rel-6] on some IEs with SatID | 6.5.0 | 6.6.0 |
| 06/2005 | 28 | RP-050233 | 1051 | | Correction to the on demand measurement with no DPCH ID in the dedicated measurement procedure for TDD | 6.5.0 | 6.6.0 |
| 06/2005 | 28 | RP-050236 | 1052 | 3 | Revision to HARQ Preamble Mode support | 6.5.0 | 6.6.0 |
| 06/2005 | 28 | RP-050225 | 1059 | | Feature Cleanup: Removal of CPCH | 6.5.0 | 6.6.0 |
| 06/2005 | 28 | RP-050229 | 1060 | 1 | E-DCH general corrections and improvements | 6.5.0 | 6.6.0 |
| 06/2005 | 28 | RP-050224 | 1065 | 1 | Feature clean-up: Removal of Compressed mode by puncturing | 6.5.0 | 6.6.0 |
| 06/2005 | 28 | RP-050221 | 1067 | 1 | Feature clean-up: Removal of Tx diversity closed loop mode2 | 6.5.0 | 6.6.0 |
| 06/2005 | 28 | RP-050222 | 1069 | 1 | Feature clean-up: Removal of DSCH (FDD mode) | 6.5.0 | 6.6.0 |
| 06/2005 | 28 | RP-050218 | 1071 | 1 | Feature Clean-up: Removal of 80 ms TTI for DCH for all other cases but when the UE supports SF512 | 6.5.0 | 6.6.0 |
| 06/2005 | 28 | RP-050220 | 1073 | | Feature Clean-up: Removal of Support of dedicated pilot as sole phase reference | 6.5.0 | 6.6.0 |
| 06/2005 | 28 | RP-050219 | 1075 | 1 | Feature Clean-up: Removal of SSDT | 6.5.0 | 6.6.0 |
| 06/2005 | 28 | RP-050229 | 1076 | 1 | Correction on E-RGCH Sequence Signature | 6.5.0 | 6.6.0 |
| 06/2005 | 28 | RP-050230 | 1077 | 1 | Introduction of Bundling Feature | 6.5.0 | 6.6.0 |
| 06/2005 | 28 | RP-050229 | 1078 | 1 | Alignment of RNSAP with latest status of EUDCH stage 2 (TS 25.309) and RRC (TS 25.331) | 6.5.0 | 6.6.0 |
| 06/2005 | 28 | RP-050235 | 1080 | 1 | Congestion control for HSDPA | 6.5.0 | 6.6.0 |
| 06/2005 | 28 | RP-050228 | 1081 | | Direct Information Transfer for MBMS purposes | 6.5.0 | 6.6.0 |
| 09/2005 | 29 | RP-050597 | 1082 | 3 | RNSAP stage 3 alignment with current status | 6.6.0 | 6.7.0 |
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| 06/2006 | 32 | RP-060280 | 1161 | 2 | CR cross-dependencies for E-DCH Reference Power Offset by RL ADDITION | 6.9.0 | 6.10.0 |

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| 09/2006 | 33 | RP-060500 | 1214 | 1 | Optional usage of the E-DCH Reference Power Offset IE | 6.10.0 | 6.11.0 |
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| 09/2006 | 33 | RP-060504 | 1233 | 1 | Correction on the value range of E-DCH Ies | 6.10.0 | 6.11.0 |
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| 12/2006 | 34 | RP-060698 | 1240 | 2 | Enhancing RNSAP specification to support Mobile TV | 6.11.0 | 6.12.0 |
| 12/2006 | 34 | RP-060699 | 1242 | 2 | Correction for Misalignment between Tabular and ASN.1 for "E-RGCH and E-HICH Channelisation Code" IE | 6.11.0 | 6.12.0 |
| 12/2006 | 34 | RP-060777 | 1244 | 3 | Correction for Misalignment between Tabular and ASN.1 for "E-DCH Minimum Set E-TFCI " IE | 6.11.0 | 6.12.0 |
| 12/2006 | 34 | RP-060700 | 1246 | 1 | Correction for the max reptition of RL Information Response IE in tabular | 6.11.0 | 6.12.0 |
| 12/2006 | 34 | RP-060700 | 1252 | | Correction to an abnormal case in E-DCH RL ADDITION | 6.11.0 | 6.12.0 |
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| 03/2007 | 35 | RP-070053 | 1274 | | Correction of the procedure code ID | 6.12.0 | 6.13.0 |

History

| Document history | | |
|-------------------------|----------------|-------------|
| V6.0.0 | December 2003 | Publication |
| V6.1.0 | May 2004 | Publication |
| V6.2.0 | June 2004 | Publication |
| V6.3.0 | September 2004 | Publication |
| V6.4.0 | December 2004 | Publication |
| V6.4.1 | January 2005 | Publication |
| V6.5.0 | March 2005 | Publication |
| V6.6.0 | June 2005 | Publication |
| V6.7.0 | September 2005 | Publication |
| V6.8.0 | December 2005 | Publication |
| V6.9.0 | March 2006 | Publication |
| V6.10.0 | June 2006 | Publication |
| V6.11.0 | September 2006 | Publication |
| V6.12.0 | December 2006 | Publication |
| V6.13.0 | March 2007 | Publication |