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*Technical Specification*

# Universal Mobile Telecommunications System (UMTS); UTRAN Iub Interface NBAP Signalling (3GPP TS 25.433 version 5.0.0 Release 5)

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# Foreword

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# Contents

# Foreword

This Technical Specification has been produced by the 3GPP.

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# 1 Scope

The present document specifies the radio network layer signalling protocol called Node B Application Part (NBAP) specification to be used for Control Plane over Iub Interface.

# 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 25.401: "UTRAN Overall Description".

[2]      3GPP TS 25.426: "UTRAN Iur and Iub Interface Data Transport & Transport Signalling for DCH Data Streams".

[3]      CCITT Recommendation X.731 (01/92): "Information Technology – Open Systems Interconnection – Systems Management: State Management function".

[4]      3GPP TS 25.215: "Physical layer – Measurements (FDD)".

[5]      3GPP TS 25.225: "Physical layer – Measurements (TDD)".

[6]      3GPP TS 25.430: "UTRAN Iub General Aspect and Principle".

[7]      3GPP TS 25.211: "Physical channels and mapping of transport channels onto physical channels (FDD)".

[8]      3GPP TS 25.212: "Multiplexing and channel coding (FDD)".

[9]      3GPP TS 25.213: "Spreading and modulation (FDD)".

[10]     3GPP TS 25.214: "Physical layer procedures (FDD)".

[11]     ITU-T Recommendation X.691, (12/97) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)".

[12]     ITU-T Recommendation X.680, (12/97) "Information Technology - Abstract Syntax Notation One (ASN.1):Specification of basic notation".

[13]     ITU-T Recommendation X.681, (12/97) "Information Technology - Abstract Syntax Notation One (ASN.1): Information object specification".

[14]     3GPP TS 25.104: "UTRA (BS) FDD; Radio Transmission and Reception".

[15]     3GPP TS 25.105: "UTRA (BS) TDD; Radio Transmission and Reception".

[16]     3GPP TS 25.427: "UTRAN Iur/Iub Interface User Plane Protocol for DCH Data Stream".

[17]     3GPP TS 25.402: "Synchronisation in UTRAN Stage2".

[18]     3GPP TS 25.331: "RRC Protocol Specification".

[19]     3GPP TS25.221: "Physical channels and mapping of transport channels onto physical channels[TDD]".

[20]     3GPP TS 25.223: "Spreading and modulation (TDD)".

[21]     3GPP TS 25.224: "Physical Layer Procedures (TDD)".

[22]     3GPP TS 25.133 (V3.3): "Requirements for support of Radio Resource management (FDD)".

[23]     3GPP TS 25.123 (V4.0): " Requirements for support of Radio Resource management (TDD)".

[24]     3GPP TS 25.435: "UTRAN Iub Interface: User Plane Protocols for Common Transport Channel Data Streams".

[25]     3GPP TS 25.302: "Services Provided by the Physical Layer".

[26]     3GPP TR 25.921: "Guidelines and Principles for Protocol Description and Error Handling".

[27      ICD-GPS-200: "Navstar GPS Space Segment/Navigation User Interface".

[28]     RTCM-SC104: "RTCM Recommended Standards for Differential GNSS Service (v.2.2)".

[29]     IETF RFC 2460 "Internet Protocol, Version 6 (IPv6) Specification".

[30]     IETF RFC 768 "User Datagram Protocol", (8/1980)

[31]     3GPP TS 25.434: " UTRAN Iub Interface Data Transport & Transport Signalling for Common Transport Channel Data Streams ".

# 3      Definitions, symbols and abbreviations

## 3.1      Definitions

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

**CRNC Communication Context:** The CRNC Communication Context contains the necessary information for the CRNC for communication with a specific UE. The CRNC Communication Context is identified by the CRNC Communication Context ID.

**Elementary Procedure**: The NBAP protocol consists of Elementary Procedures (EPs). An Elementary Procedure is a unit of interaction between the CRNC and the Node B.

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.

**Node B Communication Context:** The Node B Communication Context contains the necessary information for the Node B for communication with a specific UE. The Node B Communication Context is created by the Radio Link Setup procedure and deleted by the Radio Link Deletion procedure when deleting the last Radio Link within the Node B Communication Context. The Node B Communication Context is identified by the Node B Communication Context ID.

**Prepared Reconfiguration:** A Prepared Reconfiguration exists when the Synchronised Radio Link Reconfiguration Preparation procedure has been completed successfully. The Prepared Reconfiguration does not exist any more after either of the procedures Synchronised Radio Link Reconfiguration Commit or Synchronised Radio Link Reconfiguration Cancellation has been completed.

## 3.2     Symbols

Void.

## 3.3     Abbreviations

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

| | |
|---|---|
| A-GPS | Assisted GPS |
| AICH | Acquisition Indicator Channel |
| ALCAP | Access Link Control Application Part |
| AP-AICH | Access Preamble Acquisition Indicator Channel |
| ASN.1 | Abstract Syntax Notation One |
| BCCH | Broadcast Control Channel |
| CCPCH | Common Control Physical Channel |
| CFN | Connection Frame Number |
| CM | Compressed Mode |
| CPCH | Common Packet Channel |
| CPICH | Common Pilot Channel |
| CRNC | Controlling Radio Network Controller |
| CSICH | CPCH Status Indicator Channel |
| DCH | Dedicated Channel |
| DGPS | Differential GPS |
| DL | Downlink |
| DPCCH | Dedicated Physical Control Channel |
| DPCH | Dedicated Physical Channel |
| DPDCH | Dedicated Physical Data Channel |
| DSCH | Downlink Shared Channel |
| FACH | Forward Access Channel |
| FDD | Frequency Division Duplex |
| FP | Frame Protocol |
| GPS | Global Positioning System |
| HS-DSCH | High Speed Downlink Shared Channel |
| HS-PDSCH | High Speed Physical Downlink Shared Channel |
| HS-SCCH | High Speed Shared Control Channel |
| HS-SICH | High Speed Shared Information Channel |
| IP | Internet Protocol |
| IPDL | Idle Periods in the DownLink |
| ISCP | Interference Signal Code Power |
| L1 | Layer 1 |
| L2 | Layer 2 |
| MIB | Master Information Block |
| NBAP | Node B Application Part |
| O&M | Operation and Maintenance |
| PCCPCH | Primary Common Control Physical Channel |
| PCH | Paging Channel |
| PCPCH | Physical Common Packet Channel |
| PDSCH | Physical Downlink Shared Channel |
| PICH | Paging Indication Channel |
| PUSCH | Physical Uplink Shared Channel |

| | |
|---|---|
| RACH | Random Access Channel |
| RL | Radio Link |
| RLS | Radio Link Set |
| RNC | Radio Network Controller |
| RRC | Radio Resource Control |
| SB | Scheduling Block |
| SCCPCH | Secondary Common Control Physical Channel |
| SCH | Synchronisation Channel |
| SCTD | Space Code Transmit Diversity |
| SIB | System Information Block |
| SRNC | Serving Radio Network Controller |
| SSDT | Site Selection Diversity Transmission |
| STTD | Space Time Transmit Diversity |
| TDD | Time Division Duplex |
| TFC | Transport Format Combination |
| TFCI | Transport Format Combination Indicator |
| TFCS | Transport Format Combination Set |
| TFS | Transport Format Set |
| TPC | Transmit Power Control |
| TSTD | Time Switched Transmit Diversity |
| UARFCN | UTRA Absolute Radio Frequency Channel Number |
| UDP | User Datagram Protocol |
| UE | User Equipment |
| UL | Uplink |
| UMTS | Universal Mobile Telecommunications System |
| 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 Node B exactly and completely. The CRNC functional behaviour is left unspecified. The Reset procedure is 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.

## 4.2 Forwards and Backwards Compatibility

The forwards and backwards compatibility of the protocol is assured by a mechanism where 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 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 1.28Mcps 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 *Information Element Name* is written with the first letters in each word in upper case characters and all letters in Italic font followed by the abbreviation "IE", e.g. *Transport Format Set* IE.

Value of an IE     When referring to the value of an information element (IE) in the specification the "Value" is written as it is specified in subclause 9.2 enclosed by quotation marks, e.g. "Abstract Syntax Error (Reject)" or "SSDT Active in the UE".

# 5 NBAP Services

## 5.1 Parallel Transactions

Unless explicitly indicated in the procedure description, at any instance in time one protocol peer shall have a maximum of one ongoing dedicated NBAP procedure related to a certain Node B communication context.

# 6 Services Expected from Signalling Transport

NBAP requires an assured in-sequence delivery service from the signalling bearer, and notification if the assured in-sequence delivery service is no longer available.

# 7 Functions of NBAP

The NBAP protocol provides the following functions:

- Cell Configuration Management. This function gives the CRNC the possibility to manage the cell configuration information in a Node B.

- Common Transport Channel Management. This function gives the CRNC the possibility to manage the configuration of Common Transport Channels in a Node B.

- System Information Management. This function gives the CRNC the ability to manage the scheduling of System Information to be broadcast in a cell.

- Resource Event Management. This function gives the Node B the ability to inform the CRNC about the status of Node B resources.

- Configuration Alignment. This function gives the CRNC and the Node B the possibility to verify and enforce that both nodes have the same information on the configuration of the radio resources.

- Measurements on Common Resources. This function allows the CRNC to initiate measurements in the Node B. The function also allows the Node B to report the result of the measurements.

- Radio Link Management. This function allows the CRNC to manage radio links using dedicated resources in a Node B.

-  Radio Link Supervision. This function allows the CRNC to report failures and restorations of a Radio Link.

- Compressed Mode Control [FDD]. This function allows the CRNC to control the usage of compressed mode in a Node B.

- Measurements on Dedicated Resources. This function allows the CRNC to initiate measurements in the Node B. The function also allows the Node B to report the result of the measurements.

- DL Power Drifting Correction [FDD]. This function allows the CRNC to adjust the DL power level of one or more Radio Links in order to avoid DL power drifting between the Radio Links.

- Reporting of General Error Situations. This function allows reporting of general error situations, for which function specific error messages have not been defined.

- Physical Shared Channel Management. This function allows the CRNC to manage physical resources in the Node B belonging to High Speed Downlink Shared Channels and High Speed Shared Control Channels [TDD – and High Speed Shared Indication Channels and Shared Channels (USCH/DSCH)].

- DL Power Timeslot Correction [TDD]. This function enables the Node B to apply an individual offset to the transmission power in each timeslot according to the downlink interference level at the UE.

- Cell Synchronisation [TDD]. This function allows the synchronisation of cells or Node Bs via the air interface.

- Information Exchange. This function allows the CRNC to initiate information provision from the Node B. The function also allows the Node B to report the requested information.

- Bearer Rearrangement. This function allows Node B to indicate the neeed for bearer re-arrngement for UE context. The function also allows the CRNC to re-arrange bearers for UE context.

The mapping between the above functions and NBAP elementary procedures is shown in the table below.

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

| Function | Elementary Procedure(s) |
|---|---|
| Cell Configuration Management | a) Cell Setup<br>b) Cell Reconfiguration<br>c) Cell Deletion |
| Common Transport Channel Management | a) Common Transport Channel Setup<br>b) Common Transport Channel Reconfiguration<br>c) Common Transport Channel Deletion |
| System Information Management | System Information Update |
| Resource Event Management | a) Block Resource<br>b) Unblock Resource<br>c) Resource Status Indication |
| Configuration Alignment | a) Audit Required<br>b) Audit<br>c) Reset |
| Measurements on Common Resources | a) Common Measurement Initiation<br>b) Common Measurement Reporting<br>c) Common Measurement Termination<br>d) Common Measurement Failure |
| Radio Link Management. | a) Radio Link Setup<br>b) Radio Link Addition<br>c) Radio Link Deletion<br>d) Unsynchronised Radio Link Reconfiguration<br>e) Synchronised Radio Link Reconfiguration Preparation<br>f) Synchronised Radio Link Reconfiguration Commit<br>g) Synchronised Radio Link Reconfiguration Cancellation<br>h) Radio Link Pre-emption |
| Radio Link Supervision. | a) Radio Link Failure<br>b) Radio Link Restoration |
| Compressed Mode Control [FDD] | a) Radio Link Setup<br>b) Radio Link Addition<br>c) Compressed Mode Command<br>d) Unsynchronised Radio Link Reconfiguration<br>e) Synchronised Radio Link Reconfiguration Preparation<br>f) Synchronised Radio Link Reconfiguration Commit<br>g) Synchronised Radio Link Reconfiguration Cancellation |
| Measurements on Dedicated Resources | a) Dedicated Measurement Initiation<br>b) Dedicated Measurement Reporting<br>c) Dedicated Measurement Termination<br>d) Dedicated Measurement Failure |
| DL Power Drifting Correction [FDD] | Downlink Power Control |
| Reporting of General Error Situations | Error Indication |
| Physical Shared Channel Management | Physical Shared Channel Reconfiguration |
| DL Power Timeslot Correction [TDD] | Downlink Power Timeslot Control |
| Cell Synchronisation [TDD] | a) Cell Synchronisation Initiation<br>b) Cell Synchronisation Reconfiguration<br>c) Cell Synchronisation Reporting<br>d) Cell Synchronisation Termination<br>e) Cell Synchronisation Failure<br>f) Cell Synchronisation Adjustment |
| Information Exchange | a) Information Exchange Initiation<br>b) Information Reporting<br>c) Information Exchange Termination<br>d) Information Exchange Failure |

| Function | Elementary Procedure(s) |
|---|---|
| Bearer Re-arrangement | a)   Bearer Re-arrangement Indication<br>b) Unsynchronised Radio Link Reconfiguration<br>c) Synchronised Radio Link Reconfiguration Preparation<br>d) Synchronised Radio Link Reconfiguration Commit<br>e) Synchronised Radio Link Reconfiguration Cancellation |

# 8 NBAP Procedures

## 8.1 Elementary Procedures

NBAP procedures are divided into common procedures and dedicated procedures.

-   NBAP common procedures are procedures that request initiation of a UE context for a specific UE in Node B or are not related to a specific UE. NBAP common procedures also incorporate logical O&M [1] procedures.

-   NBAP dedicated procedures are procedures that are related to a specific UE context in Node B. This UE context is identified by a UE context identity.

The two types of procedures may be carried on separate signalling links.

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

**Table 2: Class 1**

| Elementary Procedure | Message | Successful Outcome Response message | Unsuccessful Outcome Response message |
|---|---|---|---|
| Cell Setup | CELL SETUP REQUEST | CELL SETUP RESPONSE | CELL SETUP FAILURE |
| Cell Reconfiguration | CELL RECONFIGURATION REQUEST | CELL RECONFIGURATION RESPONSE | CELL RECONFIGURATION FAILURE |
| Cell Deletion | CELL DELETION REQUEST | CELL DELETION RESPONSE | |
| Common Transport Channel Setup | COMMON TRANSPORT CHANNEL SETUP REQUEST | COMMON TRANSPORT CHANNEL SETUP RESPONSE | COMMON TRANSPORT CHANNEL SETUP FAILURE |
| Common Transport Channel Reconfiguration | COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST | COMMON TRANSPORT CHANNEL RECONFIGURATION RESPONSE | COMMON TRANSPORT CHANNEL RECONFIGURATION FAILURE |
| Common Transport Channel Deletion | COMMON TRANSPORT CHANNEL DELETION REQUEST | COMMON TRANSPORT CHANNEL DELETION RESPONSE | |
| Physical Shared Channel Reconfigure | PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST | PHYSICAL SHARED CHANNEL RECONFIGURATION RESPONSE | PHYSICAL SHARED CHANNEL RECONFIGURATION FAILURE |
| Audit | AUDIT REQUEST | AUDIT RESPONSE | AUDIT FAILURE |
| Block Resource | BLOCK RESOURCE REQUEST | BLOCK RESOURCE RESPONSE | BLOCK RESOURCE FAILURE |
| Radio Link Setup | RADIO LINK SETUP REQUEST | RADIO LINK SETUP RESPONSE | RADIO LINK SETUP FAILURE |
| System Information Update | SYSTEM INFORMATION UPDATE REQUEST | SYSTEM INFORMATION UPDATE RESPONSE | SYSTEM INFORMATION UPDATE FAILURE |
| Common Measurement Initiation | COMMON MEASUREMENT INITIATION REQUEST | COMMON MEASUREMENT INITIATION RESPONSE | COMMON MEASUREMENT INITIATION 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 |
| Dedicated Measurement Initiation | DEDICATED MEASUREMENT INITIATION REQUEST | DEDICATED MEASUREMENT INITIATION RESPONSE | DEDICATED MEASUREMENT INITIATION FAILURE |
| Reset | RESET REQUEST | RESET RESPONSE | |
| Cell Synchronisation Initiation [TDD] | CELL SYNCHRONISATION INITIATION REQUEST | CELL SYNCHRONISATION INITIATION RESPONSE | CELL SYNCHRONISATION INITIATION FAILURE |
| Cell Synchronisation Reconfiguration [TDD] | CELL SYNCHRONISATION RECONFIGURATION REQUEST | CELL SYNCHRONISATION RECONFIGURATION RESPONSE | CELL SYNCHRONISATION RECONFIGURATION FAILURE |
| Cell Synchronisation Adjustment [TDD] | CELL SYNCHRONISATION ADJUSTMENT REQUEST | CELL SYNCHRONISATION ADJUSTMENT RESPONSE | CELL SYNCHRONISATION ADJUSTMENT FAILURE |
| Information Exchange Initiation | INFORMATION EXCHANGE INITIATION REQUEST | INFORMATION EXCHANGE INITIATION RESPONSE | INFORMATION EXCHANGE INITIATION FAILURE |

**Table 3: Class 2**

| Elementary Procedure | Message |
|---|---|
| Resource Status Indication | RESOURCE STATUS INDICATION |
| Audit Required | AUDIT REQUIRED INDICATION |
| Common Measurement Reporting | COMMON MEASUREMENT REPORT |
| Common Measurement Termination | COMMON MEASUREMENT TERMINATION REQUEST |
| Common Measurement Failure | COMMON MEASUREMENT FAILURE INDICATION |
| Synchronised Radio Link Reconfiguration Commit | RADIO LINK RECONFIGURATION COMMIT |
| Synchronised Radio Link Reconfiguration Cancellation | RADIO LINK RECONFIGURATION CANCELLATION |
| Radio Link Failure | RADIO LINK FAILURE INDICATION |
| Radio Link Restoration | RADIO LINK RESTORE INDICATION |
| Dedicated Measurement Reporting | DEDICATED MEASUREMENT REPORT |
| Dedicated Measurement Termination | DEDICATED MEASUREMENT TERMINATION REQUEST |
| Dedicated Measurement Failure | DEDICATED MEASUREMENT FAILURE INDICATION |
| Downlink Power Control [FDD] | DL POWER CONTROL REQUEST |
| Compressed Mode Command [FDD] | COMPRESSED MODE COMMAND |
| Unblock Resource | UNBLOCK RESOURCE INDICATION |
| Error Indication | ERROR INDICATION |
| Downlink Power Timeslot Control [TDD] | DL POWER TIMESLOT CONTROL REQUEST |
| Radio Link Pre-emption | RADIO LINK PREEMPTION REQUIRED INDICATION |
| Cell Synchronisation Reporting [TDD] | CELL SYNCHRONISATION REPORT |
| Cell Synchronisation Termination [TDD] | CELL SYNCHRONISATION TERMINATION REQUEST |
| Cell Synchronisation Failure [TDD] | CELL SYNCHRONISATION FAILURE INDICATION |
| Information Reporting | INFORMATION REPORT |
| Information Exchange Termination | INFORMATION EXCHANGE TERMINATION REQUEST |
| Information Exchange Failure | INFORMATION EXCHANGE FAILURE INDICATION |
| Bearer Re-arrangement | BEARER REARRANGEMENT INDICATION |

# 8.2 NBAP Common Procedures

## 8.2.1 Common Transport Channel Setup

### 8.2.1.1 General

This procedure is used for establishing the necessary resources in Node B, regarding Secondary CCPCH, PICH, PRACH, PCPCH [FDD], AICH [FDD], AP_AICH [FDD], CD/CA-ICH [FDD], FACH, PCH, RACH, FPACH[1.28Mcps TDD] and CPCH [FDD].

### 8.2.1.2 Successful Operation

CRNC Node B

COMMON TRANSPORT CHANNEL SETUP
REQUEST

COMMON TRANSPORT CHANNEL SETUP
RESPONSE
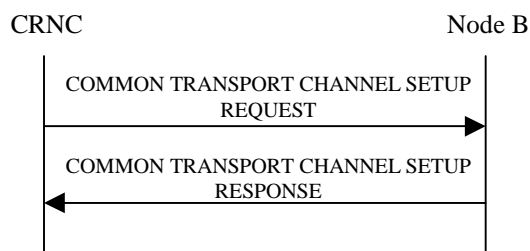
**Figure 1: Common Transport Channel Setup procedure, Successful Operation**

The procedure is initiated with a COMMON TRANSPORT CHANNEL SETUP REQUEST message sent from the CRNC to the Node B.

One message can configure only one of the following combinations:

- [FDD - one Secondary CCPCH, and FACHs, PCH and PICH related to that Secondary CCPCH], or

- [TDD - one CCTrCH consisting of Secondary CCPCHs and FACHes, PCH with the corresponding PICH related to that group of Secondary CCPCHs], or

- one [1.28Mcps TDD – or more] PRACH, one RACH and one AICH [FDD] and one FPACH[1.28Mcps TDD] related to that PRACH.

- [FDD-PCPCHs, one CPCH, one AP_AICH and one CD/CA-ICH related to that group of PCPCHs.]

**Secondary CCPCH:** [FDD - When the COMMON TRANSPORT CHANNEL SETUP REQUEST message contains a Secondary CCPCH, the Node B shall configure and activate it according to the COMMON TRANSPORT CHANNEL SETUP REQUEST message.]

[TDD - When the COMMON TRANSPORT CHANNEL SETUP REQUEST message contains one or more Secondary CCPCHs, the Node B shall configure and activate them according to the COMMON TRANSPORT CHANNEL SETUP REQUEST message.]

[TDD- FACHs and PCH may be mapped onto a CCTrCH which may consist of several Secondary CCPCHs]

If the COMMON TRANSPORT CHANNEL SETUP REQUEST message contains one or several FACHs, the Node B shall configure and activate them according to the COMMON TRANSPORT CHANNEL SETUP REQUEST message.

If the COMMON TRANSPORT CHANNEL SETUP REQUEST message contains a PCH and a PICH, the Node B shall configure and activate them according to the COMMON TRANSPORT CHANNEL SETUP REQUEST message.

**PRACH:** When the COMMON TRANSPORT CHANNEL SETUP REQUEST message contains a PRACH, the Node B shall configure and activate it according to the COMMON TRANSPORT CHANNEL SETUP REQUEST message.

**[1.28Mcps TDD – FPACH]:** If the COMMON TRANSPORT CHANNEL SETUP REQUEST message contains a FPACH, the Node B shall configure and activate it according to the COMMON TRANSPORT CHANNEL SETUP REQUEST message.

**[FDD-PCPCHs]:** When the COMMON TRANSPORT CHANNEL SETUP REQUEST message contains PCPCHs, the Node B shall configure and activate it according to the COMMON TRANSPORT CHANNEL SETUP REQUEST message.

If the COMMON TRANSPORT CHANNEL SETUP REQUEST message includes *CD Signatures* IE, the Node B may use only the given CD signatures on CD/CA-ICH.

If the COMMON TRANSPORT CHANNEL SETUP REQUEST message includes Channel Request Parameters IE, the Node B shall use the parameters to distinguish the PCPCHs.

If the COMMON TRANSPORT CHANNEL SETUP REQUEST message includes *AP Sub Channel Number* IE in Channel Request Parameters IE, the Node B shall use AP sub channel number to distinguish the PCPCHs.

If the COMMON TRANSPORT CHANNEL SETUP REQUEST message includes *AP Sub Channel Number* IE in SF Request Parameters IE, the Node B shall use AP sub channel number to distinguish the requested Spreading Factors.

After successfully configuring the requested common transport channels and the common physical channels , the Node B shall store the value of *Configuration Generation ID* IE and it shall respond with the COMMON TRANSPORT CHANNEL SETUP RESPONSE message with the *Common Transport Channel ID* IE, the *Binding ID* IE and the *Transport Layer Address* IE for the configured common transport channels.

If the COMMON TRANSPORT CHANNEL SETUP REQUEST message includes the *Transport Layer Adress* and *Binding ID* IEs, the Node B may use the transport layer adress and the binding identifier received from the CRNC when establishing a transport bearer for the indicated common transport channels.

After a successful procedure and once the transport bearers are established, the configured common transport channels and the common physical channels shall adopt the state Enabled [6] in Node B and the common physical channels exist on the Uu interface.

## 8.2.1.3 Unsuccessful Operation
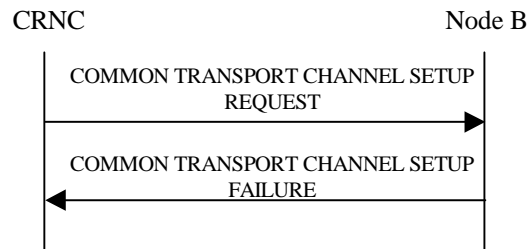


**Figure 2: Common Transport Channel Setup procedure, Unsuccessful Operation**

If the Node B is not able to support all or part of the configuration, it shall reject the configuration of all the channels in the COMMON TRANSPORT CHANNEL SETUP REQUEST message. The channels in the COMMON TRANSPORT CHANNEL SETUP REQUEST message shall remain in the same state as prior to the procedure. The *Cause* IE shall be set to an appropriate value. The value of *Configuration Generation ID* IE from the COMMON TRANSPORT CHANNEL SETUP REQUEST message shall not be stored.

If the configuration was unsuccessful, the Node B shall respond with a COMMON TRANSPORT CHANNEL SETUP FAILURE message.

Typical cause values are as follows:

**Radio Network Layer Cause**

- Cell not available

- Power level not supported

- Node B Resources unavailable

- Requested Tx Diversity Mode not supported

- UL SF not supported

- DL SF not supported

- Common Transport Channel Type not supported

**Transport Layer Cause**

- Transport Resources Unavailable

**Miscellaneous Cause**

- O&M Intervention

- Control processing overload

- HW failure

## 8.2.1.4 Abnormal Conditions

If the COMMON TRANSPORT CHANNEL SETUP REQUEST message contains the *Secondary CCPCH* IE, and that IE contains [FDD – neither the *FACH Parameters* IE nor the *PCH Parameters* IE] [TDD – neither the *FACH* IE nor the *PCH* IE], the Node B shall reject the procedure using the COMMON TRANSPORT CHANNEL SETUP FAILURE message.

[FDD – If the COMMON TRANSPORT CHANNEL SETUP REQUEST message contains the *CD Sub Channel Numbers* IE, but the *CD Signatures* IE is not present, the Node B shall reject the procedure using the COMMON TRANSPORT CHANNEL SETUP FAILURE message.]

[TDD – If the *FACH CCTrCH id* IE or the *PCH CCTrCH id* IE does not equal the *SCCPCH CCTrCH id* IE the Node B shall regard the Common Transport Channel Setup procedure as having failed and the Node B shall send the COMMON TRANSPORT CHANNEL SETUP FAILURE message to the CRNC.]

[TDD – If the *TDD Physical Channel Offset* IE, the *Repetition Period* IE, and the *Repetition Length* IE are not equal for each SCCPCH configured within the CCTrCH the Node B shall regard the Common Transport Channel Setup procedure as having failed and the Node B shall send the COMMON TRANSPORT CHANNEL SETUP FAILURE message to the CRNC.]

If the state is already Enabled or Disabled [6] for at least one channel in the COMMON TRANSPORT CHANNEL SETUP REQUEST message which is received, the Node B shall reject the configuration of all channels with the *Cause* IE set to "Message not compatible with receiver state".

If the COMMON TRANSPORT CHANNEL SETUP 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 Node B shall reject the procedure using the COMMON TRANSPORT CHANNEL SETUP FAILURE message.

## 8.2.2 Common Transport Channel Reconfiguration

## 8.2.2.1 General

This procedure is used for reconfiguring common transport channels and/or common physical channels, while they still might be in operation.

## 8.2.2.2 Successful Operation
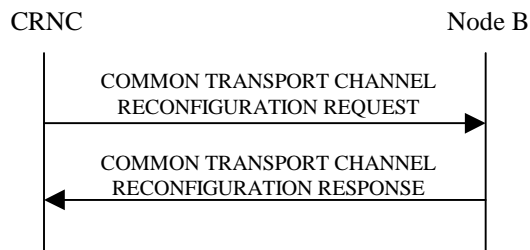


**Figure 3: Common Transport Channel Reconfiguration, Successful Operation**

The procedure is initiated with a COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message sent from the CRNC to the Node B.

One message can configure only one of the following combinations:

- [FDD – FACHs, one PCH and/or one PICH related to one Secondary CCPCH], or

- [TDD – one CCTrCH consisting of Secondary CCPCHs and FACHs, PCH with the corresponding PICH related to that group of Secondary CCPCHs], or

- one RACH and/or one AICH[FDD] )] and/or one FPACH[1.28Mcps TDD] related to one PRACH, or

- [FDD – one CPCH and/or one AP-AICH and/or one CD/CA-ICH related to one CPCH].

**[TDD - SCCPCH:** If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes the *SCCPCH Power* IE, the Node B shall reconfigure the power that the indicated S-CCPCH shall use.]

**FACH:** When one or several FACHs are present Node B shall reconfigure the indicated FACHs.

[FDD - If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes the *Max FACH Power* IE, the Node B shall reconfigure the maximum power that the FACH may use.]

[1.28Mcps TDD - If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes the *Max FACH Power* IE, the Node B shall reconfigure the maximum power that the FACH may use.]

If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes the *ToAWS* IE, the Node B shall reconfigure the time of arrival window startpoint that the FACH shall use.

If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes the *ToAWE* IE, the Node B shall reconfigure the time of arrival window endpoint that the FACH shall use.

**PCH:** When the PCH is present Node B shall reconfigure the indicated PCH.

[FDD - If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes the *PCH Power* IE, the Node B shall reconfigure the power that the PCH shall use.]

[1.28Mcps TDD - If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes the *PCH Power* IE, the Node B shall reconfigure the power that the PCH shall use.]

If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes the *ToAWS* IE, the Node B shall reconfigure the time of arrival window startpoint that the PCH shall use.

If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes the *ToAWE* IE, the Node B shall reconfigure the time of arrival window endpoint that the PCH shall use.

**PICH:**        When a PICH is present Node B shall reconfigure the indicated PICH.

If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes the *PICH Power* IE, the Node B shall reconfigure the power that the PICH shall use.

**[FDD – PRACH]:**    When a PRACH is present Node B shall reconfigure the indicated PRACH.

If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes the Allowed Preamble Signatures Information, the Node B shall reconfigure the preamble signatures that the PRACH shall use.

If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes the Allowed Slot Format Information, the Node B shall reconfigure the slot formats that the PRACH shall use.

If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes the Allowed Sub Channel Information, the Node B shall reconfigure the sub channel numbers that the PRACH shall use.

**[FDD – AICH]:**    When a AICH is present Node B shall reconfigure the indicated AICH.

If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes the *AICH Power* IE, the Node B shall reconfigure the power that the AICH shall use.

**[FDD – CPCH]:**    When a CPCH is present Node B shall reconfigure the indicated CPCH.

If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes UL SIR Information, the Node B shall reconfigure the UL SIR for the UL power control for the CPCH.

If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes Initial DL transmission Power Information, the Node B shall reconfigure the Initial DL transmission Power for the CPCH.

If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes Maximum DL Power Information, the Node B shall apply this value to the new configuration and never transmit with a higher power on any DL PCPCHs once the new configuration is being used.

If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes Minimum DL Power Information, the Node B shall apply this value to the new configuration and never transmit with a lower power on any DL PCPCHs once the new configuration is being used.

**[FDD – AP-AICH]:** When a AP-AICH is present Node B shall reconfigure the indicated AP-AICH.

If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes the *AP-AICH Power* IE, the Node B shall reconfigure the power that the AP-AICH shall use.

If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes the *CSICH Power* IE, the Node B shall reconfigure the power that the CSICH shall use.

**[FDD-CD/CA-ICH]:** When a CD/CA-ICH is present Node B shall reconfigure the indicated CD/CA-ICH.

If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes the *CD/CA-AICH Power* IE, the Node B shall reconfigure the power that the CD/CA-AICH shall use.

**[1.28Mcps TDD - FPACH]:** If the FPACH is included, the Node B shall reconfigure the indicated FPACH.

If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes the *Max FPACH Power* IE, the Node B shall reconfigure the power that the FPACH shall use.

After a successful procedure, the channels will have adopted the new configuration in Node B. The channels in the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message shall remain in the same state as prior to the procedure. Node B shall store the value of *Configuration Generation ID* IE, and the Node B shall respond with the COMMON TRANSPORT CHANNEL RECONFIGURATION RESPONSE message.

## 8.2.2.3 Unsuccessful Operation
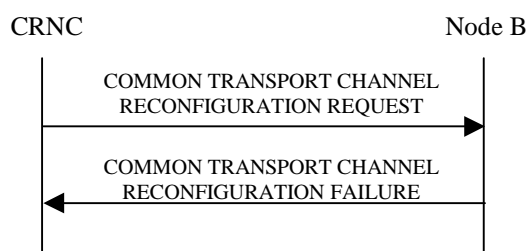


**Figure 4: Common Transport Channel Reconfiguration procedure, Unsuccessful Operation**

If the Node B is not able to support all or parts of the configuration, it shall reject the configuration of all the channels in the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message. The channels in the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message shall remain in the same state as prior to the procedure. The *Cause* IE shall be set to an appropriate value. The value of *Configuration Generation ID* IE from the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message shall not be stored.

If the configuration was unsuccessful, the Node B shall respond with the COMMON TRANSPORT CHANNEL RECONGURATION FAILURE message.

Typical cause values are as follows:

**Radio Network Layer Cause**

- Cell not available

- Power level not supported

- Node B Resources unavailable

**Transport Layer Cause**

- Transport Resources Unavailable

**Miscellaneous Cause**

- O&M Intervention

- Control processing overload

- HW failure

## 8.2.2.4 Abnormal Conditions

-

## 8.2.3 Common Transport Channel Deletion

### 8.2.3.1 General

This procedure is used for deleting common physical channels and common transport channels.

### 8.2.3.2          Successful Operation
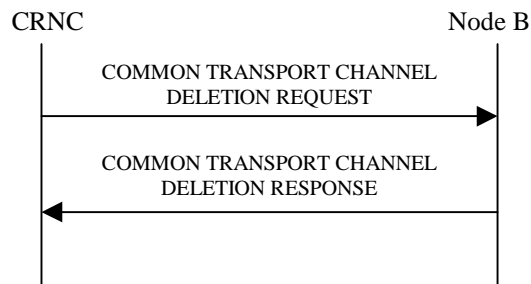


**Figure 5: Common Transport Channel Deletion procedure, Successful Operation**

The procedure is initiated with a COMMON TRANSPORT CHANNEL DELETION REQUEST message sent from the CRNC to the Node B.

**Secondary CCPCH:**     When the COMMON TRANSPORT CHANNEL DELETION REQUEST message contains a Secondary CCPCH, Node B shall delete the indicated channel and the FACHs and PCH supported by that Secondary CCPCH. If there is a PCH that is deleted, the PICH associated with that PCH shall also be deleted.

**PRACH:**                When the COMMON TRANSPORT CHANNEL DELETION REQUEST message contains a PRACH, Node B shall delete the indicated channel and the RACH supported by the PRACH. [FDD - The AICH associated with the RACH shall also be deleted.]

**[FDD – PCPCHes]:**      When the COMMON TRANSPORT CHANNEL DELETION REQUEST message contains one of PCPCHes for a CPCH, Node B shall delete all PCPCHs associated with the indicated channel and the CPCH supported by the PCPCHes. The AP-AICH and CD/CA-ICH associated with the CPCH shall also be deleted.

[TDD – If the requested common physical channel is a part of a CCTrCH, all common transport channels and all common physical channels associated with this CCTrCH shall be deleted.]

After a successful procedure, the channels are deleted in Node B. The channels in the COMMON TRANSPORT CHANNEL DELETION REQUEST message shall be set to state Not Existing ref. [6]. Node B shall store the received value of the *Configuration Generation ID* IE, and respond with the COMMON TRANSPORT CHANNEL DELETION RESPONSE message.

### 8.2.3.3          Unsuccessful Operation

-

### 8.2.3.4          Abnormal Conditions

If the C-ID in the COMMON TRANSPORT CHANNEL DELETION REQUEST message is not existing in the Node B or the Common Physical Channel ID does not exist in the Cell, the Node B shall respond with the COMMON TRANSPORT CHANNEL DELETION RESPONSE message.

## 8.2.4          Block Resource

### 8.2.4.1          General

The Node B initiates this procedure to request the CRNC to prohibit the usage of the specified logical resources.

The logical resource that can be blocked is a cell.

## 8.2.4.2     Successful Operation

CRNC                                                              Node B

BLOCK RESOURCE REQUEST

BLOCK RESOURCE RESPONSE
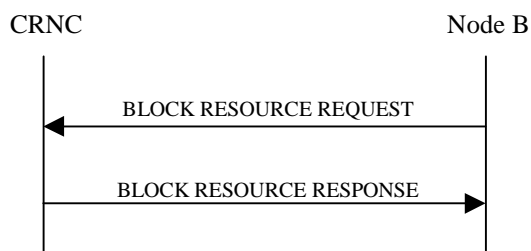
**Figure 6: Block Resource procedure, Successful Operation**

The procedure is initiated with a BLOCK RESOURCE REQUEST message sent from the Node B to the CRNC.

Upon reception of the BLOCK RESOURCE REQUEST message, the CRNC shall prohibit the use of the indicated logical resources according to the *Blocking Priority Indicator* IE.

If the *Blocking Priority Indicator* IE in the BLOCK RESOURCE REQUEST message indicates 'High Priority', the CRNC shall prohibit the use of the logical resources immediately.

The BLOCK RESOURCE REQUEST message shall include the *Shutdown Timer* IE when the *Blocking Priority Indicator* IE indicates 'Normal Priority'.  The CRNC shall prohibit the use of the logical resources if the resources are idle or immediately upon expiry of the shutdown timer specified in the message.  New traffic shall not be allowed to use the logical resources while the CRNC waits for the resources to become idle and once the resources are blocked.

If the *Blocking Priority Indicator* IE in the BLOCK RESOURCE REQUEST message indicates 'Low Priority', the CRNC shall prohibit the use of the logical resources when the resources become idle. New traffic shall not be allowed to use the logical resources while the CRNC waits for the resources to become idle and once the resources are blocked.

If the resources are successfully blocked, the CRNC shall respond with a BLOCK RESOURCE RESPONSE message. Upon reception of the BLOCK RESOURCE RESPONSE message, the Node B may disable [3.84Mcps TDD - SCH], [FDD - the Primary SCH, the Secondary SCH, the Primary CPICH, if present the Secondary CPICH(s)], [128Mcps Tdd – DwPCH] and the Primary CCPCH. The other logical resources in the cell shall be considered as blocked.

Reconfiguration of logical resources and change of System Information can be done, even when the logical resources are blocked.

**Interactions with the Unblock Resource procedure:**

If the UNBLOCK RESOURCE INDICATION message is received by the CRNC while a Block Resource procedure on the same logical resources is in progress, the CRNC shall cancel the Block Resource procedure and proceed with the Unblock Resource procedure.

If the BLOCK RESOURCE RESPONSE message or the BLOCK RESOURCE FAILURE message is received by the Node B after the Node B has initiated an Unblock Resource procedure on the same logical resources as the ongoing Block Resource procedure, the Node B shall ignore the response to the Block Resource procedure.

## 8.2.4.3     Unsuccessful Operation

CRNC                                                              Node B

BLOCK RESOURCE REQUEST

BLOCK RESOURCE FAILURE
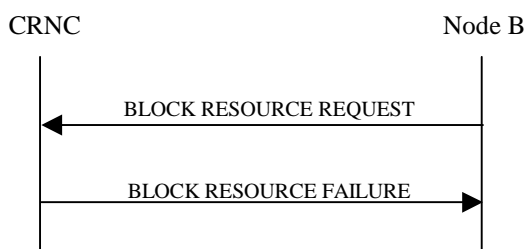
**Figure 7: Block Resource procedure, Unsuccessful Operation**

The CRNC may reject the request to block the logical resources, in which case the logical resources will remain unaffected and the CRNC shall respond to the Node B with the BLOCK RESOURCE FAILURE message. Upon reception of the BLOCK RESOURCE FAILURE message, the Node B shall leave the logical resources in the state that they were in prior to the start of the Block Resource procedure.

Typical cause values are as follows:

**Miscellaneous Cause**

- O&M Intervention

- Control processing overload

- HW failure

**Radio Network Layer Cause**

- Priority transport channel established

## 8.2.4.4 Abnormal Conditions

-

## 8.2.5 Unblock Resource

### 8.2.5.1 General

The Node B initiates this procedure to indicate to the CRNC that logical resources are now unblocked.

The logical resource that can be unblocked is a cell.

### 8.2.5.2 Successful Operation



**Figure 8: Unblock Resource procedure, Successful Operation**

The procedure is initiated with an UNBLOCK RESOURCE INDICATION message sent from the Node B to the CRNC. Node B shall enable [TDD - SCH], [FDD - the Primary SCH, the Secondary SCH, the Primary CPICH, the Secondary CPICH(s) (if present)], [1.28Mcps TDD – DwPCH] and the Primary CCPCH that had been disabled due to the preceding Block Resource procedure before sending the UNBLOCK RESOURCE INDICATION message. Upon reception of the UNBLOCK RESOURCE INDICATION message, the CRNC may permit the use of the logical resources.

When the logical resource indicated is a cell, all associated physical channels and transport channels are unblocked.

### 8.2.5.3 Abnormal Conditions

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## 8.2.6 Audit Required

### 8.2.6.1 General

The Node B initiates this procedure to request the CRNC to perform an audit of the logical resources at the Node B. This procedure is used to indicate a possible misalignment of state or configuration information

### 8.2.6.2 Successful Operation

CRNC                                                    Node B

AUDIT REQUIRED INDICATION
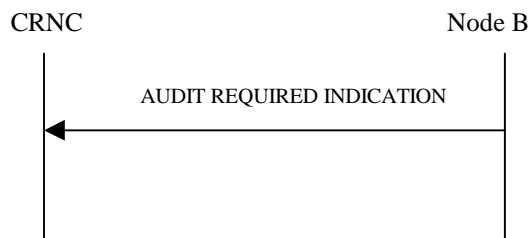
**Figure 9: Audit Required procedure, Successful Operation**

The procedure is initiated with an AUDIT REQUIRED INDICATION message sent from the Node B to the CRNC.

If the Node B cannot ensure alignment of the state or configuration information, it should initiate the Audit Required procedure.

Upon receipt of the AUDIT REQUIRED INDICATION message, the CRNC should initiate the Audit procedure.

### 8.2.6.3 Abnormal Conditions

-

## 8.2.7 Audit

### 8.2.7.1 General

This procedure is executed by the CRNC to perform an audit of the configuration and status of the logical resources in the Node B. A complete audit of a Node B is performed by one or more Audit procedures, together performing an audit sequence. The audit may cause the CRNC to re-sync the Node B to the status of logical resources known by the CRNC, that the Node B can support.

### 8.2.7.2 Successful Operation

CRNC                                                    Node B

AUDIT REQUEST

AUDIT RESPONSE
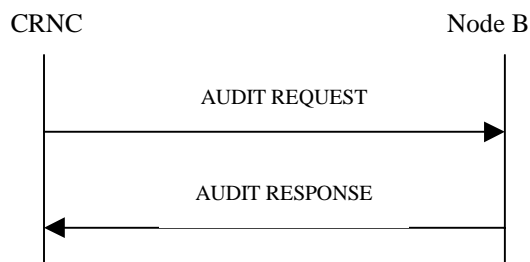
**Figure 10: Audit procedure, Successful Operation**

The procedure is initiated with an AUDIT REQUEST message sent from the CRNC to the Node B.

If the *Start of Audit Sequence* IE in the AUDIT REQUEST message is set to "start of audit sequence" a new audit sequence is started, any ongoing audit sequence shall be aborted and the Node B shall provide (part of the) audit information. If the *Start of Audit Sequence* IE is set to "not start of audit sequence", the Node B shall provide (part of) the remaining audit information not already provided during this audit sequence.

If the information provided in the AUDIT RESPONSE message completes the audit sequence, the Node B shall set the *End Of AuditSequence Indicator* IE in the AUDIT RESPONSE message to "End of Audit Sequence". If not all audit information has been provided yet as part of the ongoing audit sequence, the Node B shall set the *End Of AuditSequence Indicator* IE in the AUDIT RESPONSE message to "Not End of Audit Sequence".

**Information Provided In One Audit Sequence.**

The Node B shall include one *Local Cell Information* IE for each local cell present in the Node B. The Node B shall include the *Maximum DL Power Capability* IE and the *Minimum DL Power Capability* IE when any of those values are known by the Node B.

[TDD - The Node B shall include the *Reference Clock availability* IE to indicate the availability of a Reference clock connected to the Local cell.]

If Node B internal resources are pooled for a group of cells, the Node B shall include one *Local Cell Group Information* IE containing Node B internal resource capacity and consumption laws per group of cells. If the *UL Capacity Credit* IE is not present, then the internal resource capabilities of the Node B are modelled as shared resources between Uplink and Downlink.

If the Node B internal power resources are pooled for a group of Local Cells, the Node B shall include one *Power Local Cell Group Information* IE containing the Maximum DL Power Capability for each Power Local Cell Group for which this value is known by the Node B. In this case, the Node B shall also include the *Maximum DL Power Capability* IE in the *Local Cell Information* IE for all the Local Cells belonging to a Power Local Cell Group reported in the *Power Local Cell Group Information* IE. Furthermore, the sum of the Maximum DL Power Capability of all the Local Cells belonging to the same Power Local Cell Group shall not exceed the Maximum DL Power Capability of the concerned Power Local Cell Group.

The Node B shall include for each local cell present in the Node B the Node B internal resource capability and consumption laws within the *Local Cell Information* IE. If the *UL Capacity Credit* IE is not present, then the internal resource capabilities of the local cell are modelled as shared resources between Uplink and Downlink. If the Local Cell utilises Node B internal resource capabilities that are pooled for several Local Cell(s), the *Local Cell Group ID* IE shall contain the identity of the used Local Cell Group. If the Local Cell utilises Node B internal power resources that are pooled for several Local Cells, the *Power Local Cell Group ID* IE shall contain the identity of the concerned Power Local Cell Group.

The Node B shall include one *Cell Information* IE for each cell in the Node B and information about all common transport channels and all common physical channels for each cell. If a *Configuration Generation ID* IE for a cell can not be trusted, the Node B shall set this *Configuration Generation ID* IE = '0'.

The Node B shall also include one *Communication Control Port Information* IE for each communication control port in the Node B.

## 8.2.7.3     Unsuccessful Operation
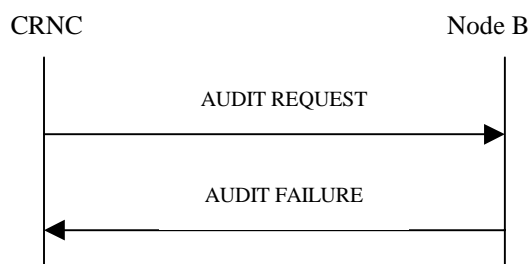


**Figure 10A: Audit procedure, Unsuccessful Operation**

If the Node B can not perform an audit of the configuration and status of the logical resources, it shall send a AUDIT FAILURE with the *Cause* IE set to an appropriate value.

### 8.2.7.4 Abnormal Conditions

If the Node B receives the AUDIT REQUEST message with the *Start of Audit Sequence* IE set to "not start of audit sequence" and there is no ongoing audit sequence, the Node B shall send the AUDIT FAILURE message with the appropriate cause value.

## 8.2.8 Common Measurement Initiation

### 8.2.8.1 General

This procedure is used by a CRNC to request the initiation of measurements on common resources in a Node B.

### 8.2.8.2 Successful Operation
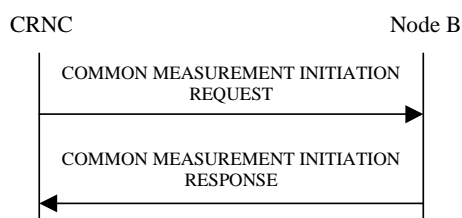


**Figure 11: Common Measurement Initiation procedure, Successful Operation**

The procedure is initiated with a COMMON MEASUREMENT INITIATION REQUEST message sent from the CRNC to the Node B using the Node B control port.

Upon reception, the Node B 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 Time Slot Information is provided in the *Common Measurement Object Type* IE , the measurement request shall apply to the requested time slot individually.]

[FDD - If the Spreading Factor Information is provided in the *Common Measurement Object Type* IE, measurement request shall apply to the PCPCHs whose minimum allowed spreading factor (Min UL Channelisation Code Length) is equal to the value of Spreading Factor Information.

If the *Common Measurement Type* IE is not set to 'SFN-SFN Observed Time Difference' and the *SFN Reporting Indicator* IE is set to "FN Reporting Required", the *SFN* IE shall be included in the measurement report or in the measurement response, the latter only in the case the *Report Characteristics* IE is set to 'On-Demand'. 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 [25]. If the *Common Measurement Type* IE is set to 'SFN-SFN Observed Time Difference' and the *SFN Reporting Indicator* IE is ignored.

If the *SFN* IE is provided, it indicates the frame for which the first measurement 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 [25].

**Common measurement type**

If the *Common Measurement Type* IE is set to 'SFN-SFN Observed Time Difference', then the Node B shall initiate the SFN-SFN Observed Time Difference measurements between the reference cell identified by *C-ID* IE and the neighbouring cells identified by the *UTRAN Cell Identifier(UC-Id)* IE.

**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', the Node B shall report the result of the requested measurement immediately.

If the *Report Characteristics* IE is set to 'Periodic', the Node B shall periodically initiate a Measurement Reporting procedure for this measurement, with the requested report frequency. If the *Common Measurement Type* IE is set to 'SFN-SFN Observed Time Difference', all the available measurement results shall be reported in the *Successful Neighbouring cell SFN-SFN Observed Time Difference Measurement Information* IE in the *SFN-SFN Measurement Value Information* IE and the Node B shall indicate in the *Unsuccessful Neighbouring cell SFN-SFN Observed Time Difference Measurement Information* IE all the remaining neighbouring cells with no measurement result available in the Common Measurement Reporting procedure.

If the *Report Characteristics* IE is set to 'Event A', the Node B shall initiate the Common Measurement Reporting procedure when the measured entity rises above the requested threshold and stays there for the requested hysteresis time. If no hysteresis time is given, the Node B shall use the value zero for the hysteresis time.

If the *Report Characteristics* IE is set to 'Event B', the Node B shall initiate the Common Measurement Reporting procedure when the measured entity falls below the requested threshold and stays there for the requested hysteresis time. If no hysteresis time is given, the Node B shall use the value zero for the hysteresis time.

If the *Report Characteristics* IE is set to 'Event C', the Node B shall initiate the Common Measurement Reporting procedure when the measured entity rises by an amount greater than the requested threshold within the requested time. After having reported this type of event, the next C event reporting for the same measurement cannot be initiated before the rising/falling time has elapsed since the previous event reporting.

If the *Report Characteristics* IE is set to 'Event D', the Node B shall initiate the Common Measurement Reporting procedure when the measured entity falls more than the requested threshold within the requested time. After having reported this type of event, the next D event reporting for the same measurement cannot be initiated before the rising/falling time has elapsed since the previous event reporting.

If the *Report Characteristics* IE is set to 'Event E', the Node B shall initiate the Common Measurement Reporting procedure when the measured entity rises above the 'Measurement Threshold 1' and stays there for the 'Measurement Hysteresis Time' (Report A). When the conditions for Report A are met and the *Report Periodicity* IE is provided, the Node B shall initiate the Common Measurement Reporting procedure periodically. If the conditions for Report A have been met and the measured entity falls below the 'Measurement Threshold 2' and stays there for the 'Measurement Hysteresis Time', the Node B shall initiate the Common Measurement Reporting procedure (Report B) as well as terminating any corresponding periodic reporting. If 'Measurement Threshold 2' is not present, the Node B shall use 'Measurement Threshold 1' instead. If no 'Measurement Hysteresis Time' is provided, the Node B 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 Node B shall initiate the Common Measurement Reporting procedure when the measured entity falls below the 'Measurement Threshold 1' and stays there for the 'Measurement Hysteresis Time' (Report A). When the conditions for Report A are met and the *Report Periodicity* IE is provided the Node B shall also initiate the Common Measurement Reporting procedure periodically. If the conditions for Report A have been met and the measured entity rises above the 'Measurement Threshold 2' and stays there for the 'Measurement Hysteresis Time', the Node B shall initiate the Common Measurement Reporting procedure (Report B) as well as terminating any corresponding periodic reporting. If 'Measurement Threshold 2' is not present, the Node B shall use 'Measurement Threshold 1' instead. If no 'Measurement Hysteresis Time' is provided, the Node B 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', the Node B shall report the result of the requested measurement immediately. Then the Node B 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 Frame for LCS':

If the $T_{UTRAN-GPS}$ *Change Limit* IE is included in the $T_{UTRAN-GPS}$ *Measurement Threshold Information* IE, the Node B shall each time a new measurement result is received after point C in the measurement model [25], calculate the change of $T_{UTRAN-GPS}$ value ($F_n$). The Node B 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:

$F_n=0$ *for n=0*

$F_n = (M_n - M_{n-1})$ *mod 37152912000000 – (($SFN_n$ – $SFN_{n-1}$) mod 4096) \*10\*3.84\*10^3\*16 + $F_{n-1}$*

*for n>0*

$F_n$ is the change of the $T_{UTRAN\text{-}GPS}$ value expressed in unit [1/16 chip] when n measurement results has 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 $SFN_n$.

$M_{n-1}$ 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 $T_{UTRAN\text{-}GPS}$ Deviation Limit* IE is included in the *$T_{UTRAN\text{-}GPS}$ Measurement Threshold Information* IE, the Node B 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 Node B shall initiate the Common Measurement Reporting procedure and set n equal to zero when $F_n$ rises above the threshold indicated by the *Predicted $T_{UTRAN\text{-}GPS}$ Deviation Limit* IE. The $P_n$ and $F_n$ are calculated according to the following:

$P_n=b$ *for n=0*

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

$F_n = min((M_n - P_n)$ *mod 37158912000000, (P_n - M_n) mod 37158912000000) for n>0*

$P_n$ is the predicted $T_{UTRAN\text{-}GPS}$ value when n measurement results has been received after first Common Measurement Reporting at initiation or after the last event was triggered.

*a* is the last reported $T_{UTRAN\text{-}GPS}$ Drift Rate value.

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

$F_n$ is the deviation of the last measurement result from the predicted $T_{UTRAN\text{-}GPS}$ value ($P_n$) when n measurements has 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 $SFN_n$.

$M_1$ 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 $T_{UTRAN\text{-}GPS}$ Drift Rate is determined by the Node B in an implementation-dependent way after point B in the measurement model [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 Node B shall each time a new measurement result is received after point C in the measurement model [25], calculate the change of SFN-SFN value ($F_n$). The Node B 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 *SFN-SFN Change Limit* IE. The change of the SFN-SFN value is calculated according to the following:

$F_n=0$ *for n=0*

[FDD - $F_n = (M_n - a)$ *mod 614400 for n>0*]

[TDD - $F_n = (M_n - a)$ *mod 40960 for n>0*]

$F_n$ is the change of the SFN-SFN

value expressed in unit [1/16 chip] when n measurement results has been received after 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 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 Node B 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 Node B 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 $F_n$ 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:

$P_n = b$ *for n=0*

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

$F_n = min((M_n - P_n) \bmod 614400, (P_n - M_n) \bmod 614400)$ *for n>0*]

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

$F_n = min((M_n - P_n) \bmod 40960, (P_n - M_n) \bmod 40960)$ *for n>0*]

$P_n$ is the predicted *SFN-SFN* value when n measurement results has been received after 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.

*abs* denotes the absolute value.

$F_n$ is the deviation of the last measurement result from the predicted *SFN-SFN* value ($P_n$) when n measurements has 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 -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 Node B in an implementation-dependent way after point B in the measurement model [26].

If the *Report Characteristics* IE is not set to 'On-Demand', the Node B 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 Node B shall terminate the measurement locally without reporting this to the CRNC.

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 Node B shall initiate the Common Measurement Reporting procedure immediately, and then continue with the measurements as specified in the COMMON MEASUREMENT INITIATION REQUEST message.

**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 Fn)

$a = 1/2^{(k/2)}$ -, 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.

**Common measurement accuracy**

If the *Common Measurement Type* IE is set to 'UTRAN GPS Timing of Cell Frame for LCS', then the Node B shall use the *UTRAN GPS Timing Measurement Accuracy Class* IE included in the *Common Measurement Accuracy* IE according to the following:

If the *UTRAN GPS Timing Measurement Accuracy Class* IE indicates 'Class A', then the Node B shall perform the measurement with highest supported accuracy within the accuracy classes A, B and C.

If the *UTRAN GPS Timing Measurement Accuracy Class* IE indicates 'Class B', then the Node B shall perform the measurement with highest supported accuracy within the accuracy classes B and C.

If the *UTRAN GPS Timing Measurement Accuracy Class* IE indicates 'Class C'  then the Node B shall perform the measurements with the accuracy according to class C.

**Response message**
If the Node B was able to initiate the measurement requested by the CRNC it shall respond with the COMMON MEASUREMENT INITIATION RESPONSE message sent over the Node B control port. 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", or "On Modification", the COMMON MEASUREMENT INITIATION RESPONSE message shall contain the measurement result and also the *Common Measurement Achieved Accuracy* IE if the *Common Measurement Type* IE is set to 'UTRAN GPS Timing of Cell Frame for LCS'.

If the *Common Measurement Type* IE is set to 'SFN-SFN Observed Time Difference' and the *Report Characteristics* IE is set to 'On Demand' or "On Modification", all the available measurement results shall be reported in the *Successful Neighbouring cell SFN-SFN Observed Time Difference Measurement Information* IE in the *SFN-SFN Measurement Value Information* IE and the Node B shall indicate in the *Unsuccessful Neighbouring cell SFN-SFN Observed Time Difference Measurement Information* IE all the remaining neighbouring cells with no measurement result available in the COMMON MEASUREMENT INITIATION RESPONSE message.

## 8.2.8.3     Unsuccessful Operation
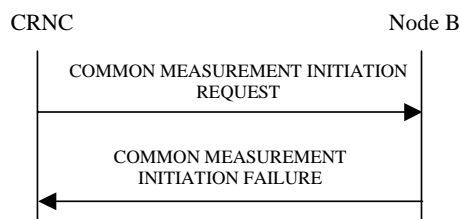


**Figure 12: Common Measurement Initiation procedure, Unsuccessful Operation**

If the requested measurement cannot be initiated, the Node B shall send a COMMON MEASUREMENT INITIATION FAILURE message sent over the Node B control port. The message shall include the same Measurement ID that was used in the COMMON MEASUREMENT INITIATION REQUEST message and 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

## 8.2.8.4 Abnormal Conditions

If the Common Measurement Type received in the *Common Measurement Type* IE is not defined in ref. [4] or [5] to be measured on the Common Measurement Object Type received in the *Common Measurement Object Type* IE in the COMMON MEASUREMENT INITIATION REQUEST message the Node B shall regard the Common Measurement Initiation procedure as failed.

[TDD - If the common measurement type requires the Time Slot Information but the [3.84Mcps TDD - *Time Slot* IE] [1.28Mcps TDD - - *Time SlotLCR* IE] is not provided in the *Common Measurement Object Type* IE in the COMMON MEASUREMENT INITIATION REQUEST message the Node B shall regard the Common Measurement Initiation procedure as failed.]

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 Node B 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 Node B shall reject the 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 Node B shall regard the Common Measurement Initiation procedure as failed.

If the *Common Measurement Type* IE is set to 'UTRAN GPS Timing of Cell Frame for LCS', but the $T_{UTRAN-GPS}$ *Measurement Accuracy Class* IE in the *Common Measurement Accuracy* IE is not received in the COMMON MEASUREMENT INITIATION REQUEST message, the Node B shall regard the Common Measurement Initiation procedure as failed.

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 Node B shall regard the Common Measurement Initiation procedure as failed.

**Table 4: 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 | |
| Acknowledged PRACH preambles | X | X | X | X | X | X | X | X | |
| UL Timeslot ISCP | X | X | X | X | X | X | X | X | |
| Acknowledged PCPCH Access Preambles | X | X | X | X | X | X | X | X | |
| Detected PCPCH Access Preambles | X | X | X | X | X | X | X | X | |
| UTRAN GPS Timing of Cell Frames for LCS | X | X | | | | | | | X |
| SFN-SFN Observed Time Difference | X | X | | | | | | | X |

## 8.2.9 Common Measurement Reporting

### 8.2.9.1 General

This procedure is used by a Node B to report the result of measurements requested by the CRNC with the Common Measurement Initiation procedure.

### 8.2.9.2 Successful Operation
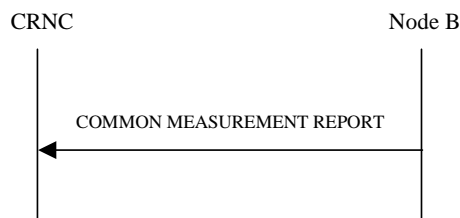


**Figure 13: Common Measurement Reporting procedure, Successful Operation**

If the requested measurement reporting criteria are met, the Node B shall initiate the Common Measurement Reporting procedure. The COMMON MEASUREMENT REPORT message shall use the Node B control port.

The *Common Measurement ID* IE shall be set to the Common Measurement ID provided by the CRNC when initiating the measurement with the Common Measurement Initiation procedure.

If the achieved measurement accuracy does not fulfil the given accuracy requirement (see ref.[22] and [23]), the Measurement not available shall be reported.

### 8.2.9.3 Abnormal Conditions

-

## 8.2.10 Common Measurement Termination

### 8.2.10.1 General

This procedure is used by the CRNC to terminate a measurement previously requested by the Common Measurement Initiation procedure.

### 8.2.10.2 Successful Operation

CRNC                                      Node B

COMMON MEASUREMENT TERMINATION
REQUEST

**Figure 14: Common Measurement Termination procedure, Successful Operation**

This procedure is initiated with a COMMON MEASUREMENT TERMINATION REQUEST message, sent from the CRNC to the Node B using the Node B control port.

Upon reception, the Node B shall terminate reporting of measurements corresponding to the Common Measurement ID.

### 8.2.10.3 Abnormal Conditions

-

## 8.2.11 Common Measurement Failure

### 8.2.11.1 General

This procedure is used by the Node B to notify the CRNC that a measurement previously requested by the Common Measurement Initiation procedure can no longer be reported.

### 8.2.11.2 Successful Operation

CRNC                                      Node B

COMMON MEASUREMENT FAILURE
INDICATION

**Figure 15: Common Measurement Failure procedure, Successful Operation**

This procedure is initiated with a COMMON MEASUREMENT FAILURE INDICATION message, sent from the Node B to the CRNC using the Node B control port, to inform the CRNC that a previously requested measurement can no longer be reported. The Node B has locally terminated the indicated measurement.

### 8.2.11.3 Abnormal Conditions

-

## 8.2.12 Cell Setup

### 8.2.12.1 General

This procedure is used to set up a cell in Node B. The CRNC takes the cell, identified via the *C-ID* IE, into service and uses the resources in Node B identified via the *Local Cell ID* IE.

## 8.2.12.2    Successful Operation



CRNC                                              Node B

CELL SETUP REQUEST

CELL SETUP
RESPONSE
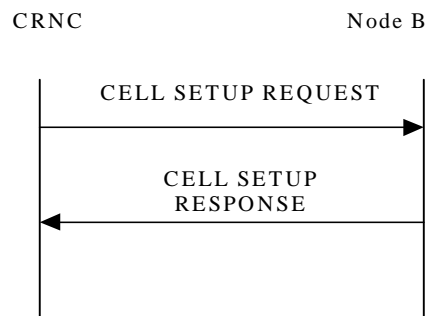
**Figure 16: Cell Setup procedure, Successful Operation**

The procedure is initiated with a CELL SETUP REQUEST message sent from CRNC to Node B. Upon Reception, the Node B shall reserve the necessary resources and configure the new cell according to the parameters given in the message.

[FDD - If the CELL SETUP REQUEST message includes one or more *Secondary CPICH Information* IE the Node B shall configure and activate the Secondary CPICH(s) in the cell according to received configuration data.]

The *Maximum Transmission Power* IE value shall be stored in the Node B and at any instance of time the total maximum output power in the cell shall not be above this value.

[FDD - If the *Closed Loop Timing Adjustment Mode* IE is included in the CELL SETUP REQUEST message, the value shall be stored in the Node B and applied when closed loop Feed-Back mode diversity is used on DPCH.]

[TDD - If the *Reference SFN offset* IE is included in the CELL SETUP REQUEST message, Node B where a reference clock is connected shall consider the SFN derived from the synchronisation port and the reference offset for reference time setting. All other Node B shall ignore the *Reference SFN offset* IE if included.]

[FDD - If the *IPDL Parameter Information* IE is included in the CELL SETUP REQUEST message, the parameters defining IPDL shall be stored in the Node B and applied according to the *IPDL Indicator* IE value.

[3.84Mcps TDD - If the *IPDL Parameter Information* IE containing *IPDL TDD parameters* IE is included in the CELL SETUP REQUEST message, the parameters defining IPDL in 3.84Mcps TDD mode shall be stored in the Node B and applied according to the *IPDL Indicator* IE value.]

[1.28Mcps TDD - If the *IPDL Parameter Information LCR* IE containing *IPDL TDD parameters LCR* IE is included in the CELL SETUP REQUEST message, the parameters defining IPDL in 1.28Mcps TDD mode shall be stored in the Node B and applied according to the *IPDL Indicator* IE value.]

When the cell is successfully configured the Node B shall store the *Configuration Generation ID* IE value and send a CELL SETUP RESPONSE message as a response.

[FDD - When the cell is successfully configured CPICH(s), Primary SCH, Secondary SCH, Primary CCPCH and BCH exist.][3.84Mcps TDD - When the cell is successfully configured SCH, Primary CCPCH and BCH exist and the switching-points for the 3.84Mcps TDD frame structure are defined.] [1.28Mcps TDD - When the cell is successfully configured, DwPCH, Primary CCPCH and BCH exist and the switching-points for the 1.28Mcps TDD frame structure are defined.] The cell and the channels shall be set to state Enabled [6].

[FDD – If the CELL SETUP REQUEST message includes the *Maximum PDSCH Power* IE, the Node B shall, if supported, store the values in the Node B and apply the indicated maximum power levels to the PDSCH.]

### 8.2.12.3 Unsuccessful Operation

CRNC                                    Node B

CELL SETUP REQUEST
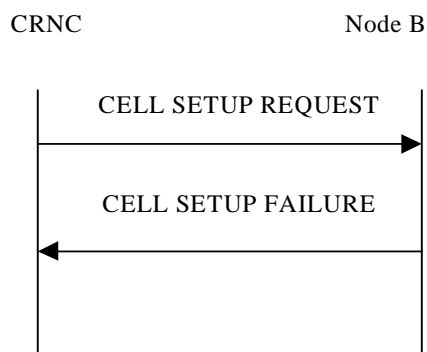
CELL SETUP FAILURE

**Figure 17: Cell Setup procedure: Unsuccessful Operation**

If the Node B cannot set up the cell according to the information given in CELL SETUP REQUEST message the CELL SETUP FAILURE message shall be sent to CRNC.

In this case the cell is Not Existing in Node B. The Configuration Generation ID shall not be changed in Node B.

The *Cause* IE shall be set to an appropriate value.

Typical cause values are as follows:

**Radio Network Layer Cause**

- S-CPICH not supported

- Requested Tx Diversity Mode not supported

- Power level not supported

- Node B Resources unavailable

- IPDL not supported

**Miscellaneous Cause**

- O&M Intervention

- Control processing overload

- HW failure

### 8.2.12.4 Abnormal Conditions

If the state of the cell already is Enabled or Disabled [6] when the CELL SETUP REQUEST message is received in Node B, it shall reject the configuration of the cell and all channels in the CELL SETUP REQUEST message with the *Cause* IE set to "Message not compatible with receiver state".

If the Local Cell on which the cell is mapped does not belong to a Power Local Cell Group and the requested maximum transmission power indicated by the *Maximum Transmission Power* IE exceeds the Maximum DL Power Capability of the Local Cell, the Node B shall consider the procedure as having failed and send a CELL SETUP FAILURE message to the CRNC.

If the Local Cell on which the cell is mapped belongs to a Power Local Cell Group and the requested maximum transmission power indicated by *Maximum Transmission Power* IE exceeds the Maximum DL Power Capability of the Power Local Cell Group, the Node B shall consider the procedure as having failed and send a CELL SETUP FAILURE message to the CRNC.

## 8.2.13 Cell Reconfiguration

### 8.2.13.1 General

This procedure is used to reconfigure a cell in Node B.

### 8.2.13.2 Successful Operation
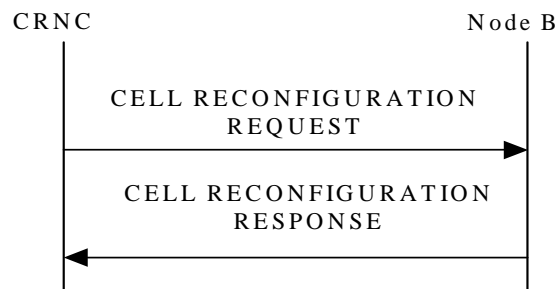


**Figure 18: Cell Reconfiguration procedure, Successful Operation**

The procedure is initiated with a CELL RECONFIGURATION REQUEST message sent from CRNC to Node B. Upon Reception, the Node B shall reconfigure the cell according to the parameters given in the message.

[FDD - If the CELL RECONFIGURATION REQUEST message includes the *Primary SCH Information* IE the Node B shall reconfigure Primary SCH power in the cell according to *Primary SCH Power* IE value.]

[FDD - If the CELL RECONFIGURATION REQUEST message includes the *Secondary SCH Information* IE the Node B shall reconfigure Secondary SCH power in the cell according to the *Secondary SCH Power* IE value.]

[FDD - If the CELL RECONFIGURATION REQUEST message includes the *Primary CPICH Information* IE the Node B shall reconfigure Primary CPICH power in the cell according to the *Primary CPICH Power* IE value. Node B shall adjust all the transmitted power levels relative to the Primary CPICH power according to the new value.]

[FDD - If the CELL RECONFIGURATION REQUEST message includes one or more *Secondary CPICH Information* IE the Node B shall reconfigure the power for each Secondary CPICH in the cell according to their *Secondary CPICH Power* IE value.]

[3.84Mcps TDD - If the CELL RECONFIGURATION REQUEST message includes the *SCH Information* IE the Node B shall reconfigure SCH power in the cell according to the *SCH Power* IE value.]

[3.84Mcps TDD - If the CELL RECONFIGURATION REQUEST message includes the *Timing Advance Applied* IE the Node B shall apply the necessary functions for Timing Advance in that cell including reporting of the Rx Timing Deviation measurement, according to the *Timing Advance Applied* IE value.]

[FDD - If the CELL RECONFIGURATION REQUEST message includes the *Primary CCPCH Information* IE the Node B shall reconfigure BCH power in the cell according to the *BCH Power* IE value.]

[TDD - If the CELL RECONFIGURATION REQUEST message includes the *Primary CCPCH Information* IE the Node B shall reconfigure P-CCPCH power in the cell according to the *P-CCPCH Power* IE value. Node B shall adjust all the transmitted power levels relative to the Primary CPPCH power according to the new value.]

If the CELL RECONFIGURATION REQUEST message includes the *Maximum Transmission Power* IE the value shall be stored in the Node B and at any instance of time the total maximum output power in the cell shall not be above this value.

[TDD - If the CELL RECONFIGURATION REQUEST message includes the *Timeslot Information* IE the Node B shall reconfigure switching-point structure in the cell according to the *Timeslot* IE value.]

[TDD - If the CELL RECONFIGURATION REQUEST message includes any of the *Constant Value* IEs, the Node B shall use these values when generating the appropriate SIB.]

[FDD -If the CELL RECONFIGURATION REQUEST message includes the *IPDL Parameter Information* IE with the *IPDL Indicator* IE having the value 'active' the Node B shall apply the IPDL in that cell according the latest downloaded parameters defined by the *IPDL FDD Parameters* IE]

[3.84Mcps TDD - If the CELL RECONFIGURATION REQUEST message includes the *IPDL Parameter Information* IE with the *IPDL Indicator* IE having the value 'active' the Node B shall apply the IPDL in that cell according the latest downloaded parameters defined by the *IPDL TDD Parameters* IE.]

[1.28Mcps TDD - If the CELL RECONFIGURATION REQUEST message includes the *IPDL Parameter Information LCR* IE with the *IPDL Indicator* IE having the value 'active' the Node B shall apply the IPDL in that cell according the latest downloaded parameters defined by the *IPDL TDD Parameters LCR* IE.].

If the CELL RECONFIGURATION REQUEST message includes *IPDL Parameter Information* IE with *the IPDL Indicator* IE having the value 'inactive' the Node B shall deactivate the ongoing IPDL.

When the cell is successfully reconfigured the Node B shall store the new *Configuration Generation ID* IE value and send a CELL RECONFIGURATION RESPONSE message as a response.

If the CELL RECONFIGURATION REQUEST message includes the *Synchronisation Configuration* IE the Node B shall reconfigure the indicated parameters in the cell according to the IE value. When the parameters in the *Synchronisation Configuration* IE affect the thresholds applied to a RL set, the Node B shall immediately apply the new thresholds. When applying the new thresholds the Node B shall not change the state or value of any of the timers and counters for which the new thresholds apply.

[FDD – If the CELL RECONFIGURATION REQUEST message includes the *Maximum PDSCH Power* IE, the Node B shall, if supported, store the values in the Node B and apply the indicated maximum power levels to the PDSCH. For spreading factors for which a maximum PDSCH power level was already configured and the CELL RECONFIGURATION REQUEST does not provide a new value for the concerning spreading factor, the Node-B shall continue to use the existing value.]

## 8.2.13.3    Unsuccessful Operation
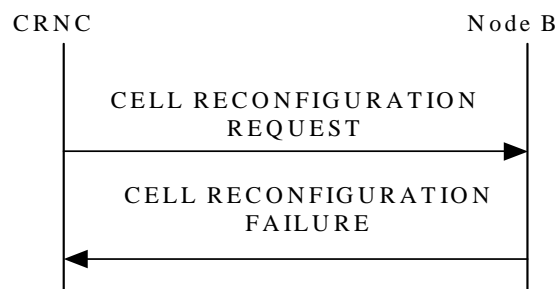


**Figure 19: Cell Reconfiguration procedure: Unsuccessful Operation**

If the Node B cannot reconfigure the cell according to the information given in CELL RECONFIGURATION REQUEST message the CELL RECONFIGURATION FAILURE message shall be sent to CRNC.

In this case, the Node B shall keep the old configuration of the cell and the Configuration Generation ID shall not be changed in Node B.

The Cause IE shall be set to an appropriate value.

Typical cause values are as follows:

**Radio Network Layer Cause**

- Power level not supported

- Node B Resources unavailable

- IPDL not supported

**Miscellaneous Cause**

- O&M Intervention

- Control processing overload

- HW failure

## 8.2.13.4 Abnormal Conditions

If the *IPDL Indicator* IE having the value 'active' is included in the CELL RECONFIGURATION REQUEST message and there is active IPDL ongoing in the Node B, the Node B shall response with CELL RECONFIGURATION FAILURE- message with the cause value 'IPDL already activated'.]

If the *IPDL Indicator* IE having the value 'active' is included in the CELL RECONFIGURATION REQUEST message and there is no IPDL stored to Node B defining the IPDL, the Node B shall response with CELL RECONFIGURATION FAILURE- message with the cause value 'IPDL parameters not available'.]

If the Local Cell on which the cell is mapped does not belong to of a Power Local Cell Group and the requested maximum transmission power indicated by the *Maximum Transmission Power* IE exceeds the Maximum DL Power Capability of the Local Cell, the Node B shall consider the procedure as having failed and send a CELL RECONFIGURATION FAILURE message to the CRNC.

If the Local Cell on which the cell is mapped belongs to a Power Local Cell Group and the requested maximum transmission power indicated by *Maximum Transmission Power* IE exceeds the Maximum DL Power Capability of the Power Local Cell Group, the Node B shall consider the procedure as having failed and send a CELL RECONFIGURATION FAILURE message to the CRNC.

## 8.2.14 Cell Deletion

### 8.2.14.1 General

This procedure is used to delete a cell in Node B.

### 8.2.14.2 Successful Operation

CRNC                               Node B

CELL DELETION REQUEST

CELL DELETION RESPONSE
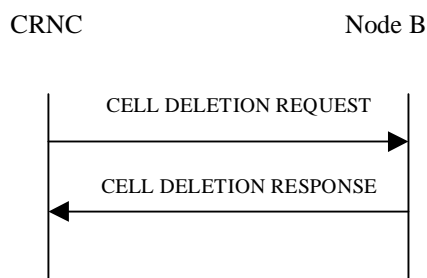
**Figure 10: Cell Deletion procedure, Successful Operation**

The procedure is initiated with a CELL DELETION REQUEST message sent from CRNC to Node B. Upon Reception, the Node B shall remove the cell and any remaining common and dedicated channels within the cell. The states for the cell and the deleted common channels shall be set to Not Existing [6]. The Node B shall remove all Radio Links from the Cell and all Node B Communication Contexts that as a result do not have a Radio Link. The Node B shall also initiate release of the user plane transport bearers for the removed common and dedicated channels.

When the cell is deleted, the Node B shall send a CELL DELETION RESPONSE message as a response.

### 8.2.14.3 Unsuccessful Operation

-

### 8.2.14.4 Abnormal Conditions

If the CELL DELETION REQUEST message includes a *C-ID* IE value that is not existing in Node B the Node B shall respond with the CELL DELETION RESPONSE message.

## 8.2.15 Resource Status Indication

### 8.2.15.1 General

This procedure is used in the following cases:

1. When a Local Cell becomes Existing at the Node B.

2. When a Local Cell is to be deleted in Node B, i.e. become Not Existing.

3. When the capabilities of the Local Cell change at the Node B.

4. When a cell has changed its capability and/or its resource operational state at Node B.

5. When common physical channels and/or common transport channels have changed their capabilities at a Node B.

6. When a communication control port changed its resource operational state at the Node B.

7. When a Local Cell Group has changed its resource capability at the Node B.

Each of the above cases shall trigger a Resource Status Indication procedure and the RESOURCE STATUS INDICATION message shall contain the logical resources affected for that case and the cause value when applicable.

### 8.2.15.2 Successful Operation

```
CRNC                                          Node B

   |                                             |
   |          RESOURCE STATUS INDICATION         |
   | <------------------------------------------ |
   |                                             |
   |                                             |
```

**Figure 21: Resource Status Indication procedure, Successful Operation**

The procedure is initiated with a RESOURCE STATUS INDICATION message sent from the Node B to CRNC.

**Local Cell Becomes Existing:**

When a Local Cell becomes Existing at the Node B, the Node B shall make it available to the CRNC by sending a RESOURCE STATUS INDICATION message with the *Indication Type* IE set equal to "No Failure", the *Local Cell ID* IE and the *Add/Delete Indicator* IE set equal to 'Add'.

When the capacity credits and consumption laws are shared between several Local Cells, the Node B includes the *Local Cell Group ID* IE for the Local Cell. If the *Local Cell Group Information* IE is not already reported in a previous RESOURCE STATUS INDICATION message, the Node B shall include the capacity credits and the consumption laws in the *Local Cell Group Information* IE.

If the *Local Cell* IE contains both the *DL or Global Capacity Credit* IE and the *UL Capacity Credit* IE then the internal resource capabilities of the Local Cell are modelled independently in the Uplink and Downlink direction. If the *UL Capacity Credit* IE is not present, then the internal resource capabilities of the Local Cell are modelled as shared resources between Uplink and Downlink. If the *Local Cell Group Information* IE contains both the *DL or Global Capacity Credit* IE and the *UL Capacity Credit* IE then the internal resource capabilities of the Local Cell Group are

modelled independently in the Uplink and Downlink direction. If the *UL Capacity Credit* IE IE is not present, then the internal resource capabilities of the Local Cell Group are modelled as shared resources between Uplink and Downlink.

[TDD - The Node B shall include the *Reference Clock availability* IE within the *Local Cell* IE to indicate the availability of a Reference clock connected to the Local Cell, when a Local Cell is made available to the CRNC.]

If the Node B internal power resources are pooled for a group of Local Cells, the Node B shall include the *Power Local Cell Group ID* IE for the Local Cell. If the *Power Local Cell Group Information* IE has not already been reported in a previous RESOURCE STATUS INDICATION message, the Node B shall include this IE for the concerned Power Local Cell Group in this message. Furthermore, the sum of the Maximum DL Power Capability of all the Local Cells belonging to the same Power Local Cell Group shall not exceed the Maximum DL Power Capability of the concerned Power Local Cell Group.

**Local Cell Deletion:**

When a Local Cell is to be deleted in Node B, i.e. become Not Existing, the Node B shall withdraw the Local Cell from the CRNC by sending a RESOURCE STATUS INDICATION message with the *Indication Type* IE set equal to "No Failure", the *Local Cell ID* IE and the *Add/Delete Indicator* IE set equal to 'Delete'. The Node B shall not withdraw a previously configured cell at the Node B that the CRNC had configured using the Cell Setup procedure, until the CRNC has deleted that cell at the Node B using the Cell Delete procedure.

**Capability Change of a Local Cell:**

When the capabilities of a Local Cell change at the Node B, the Node B shall report the new capability by sending a RESOURCE STATUS INDICATION message with the *Indication Type* IE set equal to "Service Impacting" and the Local Cell ID. The Node B shall include the *Minimum DL Power Capability* IE when it is known by the Node B. If the DL power capability has changed, the new capability shall be indicated in the *DL Power Capability* IE. If the DL capability for supporting the minimum spreading factor has changed, the new capability shall be indicated in the *Minimum Spreading Factor* IE. [TDD - If the availability of the Reference clock connected to a Local Cell has changed, the new availability condition shall be indicated in the *Reference Clock availability* IE.] The *Cause* IE in the RESOURCE STATUS INDICATION message shall be set to the appropriate value. If the internal resource capabilities of the Local Cell are affected, it shall be reported in the following way: If the internal resource capabilities of the Local Cell are modelled as shared resources between Uplink and Downlink, the new capacity shall be reported in the *DL or Global Capacity Credit* IE. If the internal resource capabilities of the Local Cell are modelled independently in the Uplink and Downlink direction, then the *DL or Global Capacity Credit* IE and the *UL Capacity Credit* IE shall be present in the RESOURCE STATUS INDICATION. If the maximum DL power capability of the Local Cell is affected, this shall be reported using the *Maximum DL Power Capability* IE.

**Capability Change of a Cell:**

When the capabilities and/or resource operational state of a cell changes at the Node B, the Node B shall report the new capability and/or resource operational state by sending a RESOURCE STATUS INDICATION message with the *Indication Type* IE set equal to "Service Impacting", the *C-ID* IE, the *Resource Operational State* IE and the *Availability Status* IE. The *Cause* IE in the RESOURCE STATUS INDICATION message shall be set to the appropriate value.

**Capability Change of a Common Physical Channel and/or Common Transport Channel:**

The Node B shall not delete any common or dedicated channels, due to the cell being "Disabled". For all affected common and dedicated channels, the Node B shall report the impact to the CRNC with the relevant procedures.

When the capabilities and/or resource operational state of common physical channels and/or common transport channels have changed, the Node B shall report the new capability and/or resource operational state by sending a RESOURCE STATUS INDICATION message with the *Indication Type* IE set equal to "Service Impacting", the *Resource Operational State* IE and the *Availability Status* IE set to appropriate values for the affected channel(s). The *Cause* IE in the RESOURCE STATUS INDICATION message shall be set to the appropriate value.

When a power value for a common physical channel and/or a common transport channel becomes beyond the supported power value range due to a change in capability in Node Bs, it shall be reported to the CRNC in the RESOURCE STATUS INDICATION message, with the *Resource Operational State* IE set to "Enabled", the *Availability Status* IE set to "Degraded" and the *Cause* IE set to "Power level not supported". Affected channels shall use the nearest power value that is supported.

**Capability Change of a Communication Control Port:**

When the resource operational state of a communication control port has changed, the Node B shall report the new resource operational state by sending a RESOURCE STATUS INDICATION message with the *Indication Type* IE set equal to "Service Impacting" and the *Communication Control Port ID* IE. The *Cause* IE in the RESOURCE STATUS INDICATION message shall be set to the appropriate value.

**Capability Change of a Local Cell Group:**

When the resource capabilities of a Local Cell Group change at the Node B, the Node B shall report the new capability by sending a RESOURCE STATUS INDICATION message with the *Indication Type* IE set equal to "Service Impacting" and the *Local Cell Group Information* IE reporting the change. The *Cause* IE in the RESOURCE STATUS INDICATION message shall be set to an appropriate value. If the RESOURCE STATUS INDICATION message contains both the *DL or Global Capacity Credit* IEand the *UL Capacity Credit* IEthen the internal resource capabilities of the Node B are modelled independently in the Uplink and Downlink direction. If the *UL Capacity Credit* IE is not present, then the internal resource capabilities of the Node B are modelled as shared resources between Uplink and Downlink.

**Capability Change of a Power Local Cell Group:**

When the power capability of a Power Local Cell Group changes at the Node B, the Node B shall report the new capability by sending a RESOURCE STATUS INDICATION message with the *Indication Type* IE set equal to "Service Impacting" and the *Power Local Cell Group Information* IE reporting the change. The *Cause* IE in the RESOURCE STATUS INDICATION message shall be set to an appropriate value. In this case, the Node B shall also include the *Maximum DL Power Capability* IE in the *Local Cell Information* IE for all the Local Cells belonging to the concerned Power Local Cell Group. Furthermore, the sum of the Maximum DL Power Capability of all the Local Cells belonging to the same Power Local Cell Group shall not exceed the Maximum DL Power Capability of the concerned Power Local Cell Group.

**General:**

When the RESOURCE STATUS INDICATION is used to report an error, only one cause value for all reported objects can be sent in one message. When the RESOURCE STATUS INDICATION is used to clear errors, only all errors for one object can be cleared per message. It is not possible to clear one out of several errors for one object.

## 8.2.15.3     Abnormal Conditions

-

# 8.2.16     System Information Update

## 8.2.16.1     General

The System Information Update procedure performs the necessary operations in order for the Node B to apply the correct scheduling of and/or to include the appropriate content to the system information segments broadcast on the BCCH.

## 8.2.16.2     Successful Operation
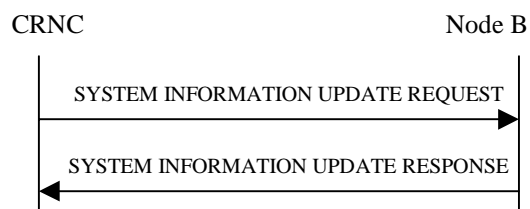


**Figure 22: System Information Update procedure, Successful Operation**

The procedure is initiated with a SYSTEM INFORMATION UPDATE REQUEST message sent from the CRNC to the Node B.

The Node B shall consider the requested updates to the BCCH schedule in the same order as the MIB/SB/SIB information is included in the SYSTEM INFORMATION UPDATE REQUEST message.

If the SYSTEM INFORMATION UPDATE REQUEST message includes the *BCCH Modification Time* IE, the updates to the BCCH schedule (possibly consisting of IB occurrence additions, IB occurrence deletions and IB occurrence content updates) indicated in the SYSTEM INFORMATION UPDATE REQUEST message shall be applied by Node B at the first time instance starting from the SFN value set by the *BCCH Modification Time* IE. If no *BCCH Modification Time* IE is included, the updates to the BCCH schedule shall be applied as soon as possible.

**Information Block addition**
If the SYSTEM INFORMATION UPDATE REQUEST message includes segments of a certain MIB/SB/SIB, the Node B shall assume that all segments for that Information Block are included in the message and ordered with increasing Segment Index (starting from 0). For each included segment, segment type information and *IB SG POS* IE are also given in the SYSTEM INFORMATION UPDATE REQUEST message.

The Node B shall determine the correct cell system frame number(s) (SFN) for transmission of the segments of system information, from the scheduling parameters provided in the SYSTEM INFORMATION UPDATE REQUEST message. The SFN for transmitting the segments shall be determined by the *IB SG REP* IE and *IB SG POS* IE such that:

- SFN mod IB_SG_REP = IB_SG_POS

If the SYSTEM INFORMATION UPDATE REQUEST message contains Master Information Block (MIB) segments in addition to SIB or SB segments, the MIB segments shall first be sent in the physical channel by the Node B. Once these MIB segments have been sent in the physical channel, the updated SB/SIB segments shall then be sent in the physical channel.

Only if the inclusion of each new IB segment in the BCCH schedule leads to a valid segment combination according to [18], the Node B shall accept the system information update.

If the *SIB Originator* IE value is set to 'Node B ' the Node B shall create the SIB segment of the SIB type given by the *IB Type* IE and autonomously update the SIB segment and apply the scheduling and repetition as given by the *IB SG REP* IE and *IB SG POS* IE.

SIBs originating from the Node B can only be SIBs containing information that the Node B can obtain on its own.

**Information Block deletion**
If an IB Deletion is indicated in an instance of *MIB/SB/SIB information* IE in the SYSTEM INFORMATION UPDATE REQUEST message, the Node B shall delete the IB indicated by the *IB Type* IE and *IB OC ID* IE from the transmission schedule on BCCH.

**Information Block update**
If the SYSTEM INFORMATION UPDATE REQUEST message contains segments for an IB without *IB SG REP* IE and *IB SG POS* IE and there is already an IB in the BCCH schedule with the same IB Type and IB OC ID which is not requested to be deleted from the BCCH schedule by an IB deletion indicated in a *MIB/SB/SIB information* IE repetition present in the SYSTEM INFORMATION UPDATE REQUEST message before the IB segments are included, then the Node B shall only update the contents of the IB segments without any modification in segment scheduling.

If the Node B successfully completes the updating of the physical channel scheduling cycle according to the parameters given in the SYSTEM INFORMATION UPDATE REQUEST message, it shall respond to the CRNC with a SYSTEM INFORMATION UPDATE RESPONSE message.

## 8.2.16.3 Unsuccessful Operation
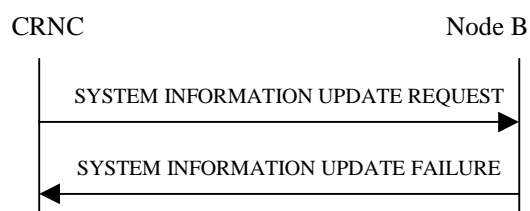


**Figure 23: System Information Update procedure: Unsuccessful Operation**

If the Node B is unable to update the physical channel scheduling cycle according to all the parameters given in the SYSTEM INFORMATION UPDATE REQUEST message, it shall respond with a SYSTEM INFORMATION UPDATE FAILURE message with an appropriate cause value. No changes to the BCCH schedule are made in this case.

Typical cause values are:

Radio Network Layer Cause

- SIB Origination in Node B not Supported

Miscellaneous Cause

- Hardware failure

- Control Processing overload

- O&M Intervention

In the case of failure, the Node B shall not incorporate any of the requested changes into the physical channel scheduling cycle, and the previous system information configuration shall remain intact.

## 8.2.16.4    Abnormal Conditions

Node B shall reject, with cause value 'SIB origination in Node B not supported', requests for Node B originated system information blocks that make use of a value tag.

Node B shall reject the requested update with cause value "BCCH scheduling error" if:

- After having handled a certain *MIB/SB/SIB information* IE repetition, an illegal BCCH schedule results;

- If a MIB/SB/SIB information IE repetition includes an *IB SG REP* IE or an *IB SG POS* IE and there is already an IB in the BCCH schedule with the same IB Type and IB OC ID which is not requested to be deleted from the BCCH schedule by an IB deletion indicated in a *MIB/SB/SIB information* IE repetition present in the SYSTEM INFORMATION UPDATE REQUEST message before the IB addition is indicated. This rule shall apply even if the scheduling instructions in *IB SG REP* IE and *IB SG POS* IE were the same as the current scheduling instructions for the concerned IB;

- If a MIB/SB/SIB information IE repetition includes no *IB SG REP* IE and *IB SG POS* IE and there is no IB in the BCCH schedule with the same IB Type and IB OC ID;

- If a MIB/SB/SIB information IE repetition includes no *IB SG REP* IE and *IB SG POS* IE and there is already an IB in the BCCH schedule with the same IB Type and IB OC ID but it is requested to be deleted from the BCCH schedule by an IB deletion indicated in a *MIB/SB/SIB information* IE repetition present in the SYSTEM INFORMATION UPDATE REQUEST message before the IB addition is indicated.

## 8.2.17    Radio Link Setup

### 8.2.17.1    General

This procedure is used for establishing the necessary resources for a new Node B Communication Context in the Node B.

[FDD – The RL Setup procedure is used to establish one or more radio links. The procedure establishes one or more DCHs on all radio links, and in addition, it can include the establishment of one or more DSCHs or an HS-DSCH on one radio link.]

[TDD – The RL Setup procedure is used for establish one radio link including one or more transport channels. The transport channels can be a mixture of DCHs, DSCHs, and USCHs, or DCHs and an HS-DSCH, including also combinations where one or more transport channel types are not present.]

### 8.2.17.2 Successful Operation
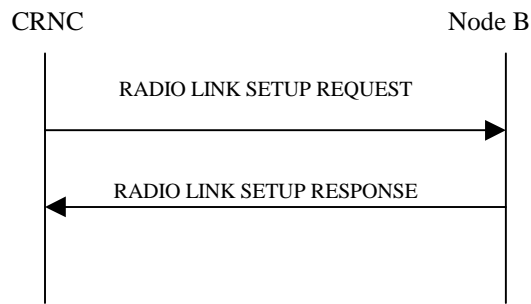


**Figure 24: Radio Link Setup procedure, Successful Operation**

The procedure is initiated with a RADIO LINK SETUP REQUEST message sent from the CRNC to Node B.

Upon reception of RADIO LINK SETUP REQUEST message, the Node B shall reserve necessary resources and configure the new Radio Link(s) according to the parameters given in the message.

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

Transport Channels Handling:

> DCH(s):

> [TDD – If the *DCH Information* IE is present, the Node B shall configure the new DCH(s) 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 Node B shall treat the DCHs in the *DCH Information* IE as a set of co-ordinated DCHs. The Node B shall include these DCHs in the new configuration only if it can include all of them in the new configuration.

> [FDD – For DCHs which do not belong to a set of co-ordinated DCHs with the *QE-Selector* IE set to "selected", the Transport channel BER from that DCH shall be the base for the QE in the UL data frames. If no Transport channel BER is available for the selected DCH the Physical channel BER shall be used for the QE, ref. [16]. If the QE-Selector is set to "non-selected", the Physical channel BER shall be used for the QE in the UL data frames, ref. [16].]

> For a set of co-ordinated DCHs the Transport channel BER from the DCH with the *QE-Selector* IE set to "selected" shall be used for the QE in the UL data frames, ref. [16]. [FDD - If no Transport channel BER is available for the selected DCH the Physical channel BER shall be used for the QE, ref. [16]. If all DCHs have *QE-Selector* IE set to "non-selected" the Physical channel BER shall be used for the QE, ref. [16]].

> The Node B shall use the included *UL FP Mode* IE for a DCH or a set of co-ordinated DCHs to be added as the FP Mode in the Uplink of the user plane for the DCH or the set of co-ordinated DCHs in the configuration.

> The Node B shall use the included *ToAWS* IE for a DCH or a set of co-ordinated DCHs to be added as the Time of Arrival Window Start Point in the user plane for the DCH or the set of co-ordinated DCHs in the configuration.

> The Node B shall use the included *ToAWE* IE for a DCH or a set of co-ordinated DCHs to be added as the Time of Arrival Window End Point in the user plane for the DCH or the set of co-ordinated DCHs in the configuration.

> The received *Frame Handling Priority* IE specified for each Transport Channel should be used when prioritising between different frames in the downlink on the radio interface in congestion situations within the Node B once the new RL(s) has been activated.

> [FDD – The *Diversity Control Field* IE indicates for each RL (except the first RL in the message) whether the Node B shall combine the concerned RL or not. If the *Diversity Control Field* IE is set to"May", then Node B shall decide for either of the alternatives. If the *Diversity Control Field* IE is set to "Must", the Node B shall combine the RL with one of the other RL. Diversity combining is applied to Dedicated Transport Channels

(DCH), i.e. it is not applied to the DSCHs. When a new RL is to be combined, the Node B shall choose which RL(s) to combine it with. If the *Diversity Control Field* IE is set to "Must not" , the Node B shall not combine the RL with any other existing RL.]

[FDD – In the RADIO LINK SETUP RESPONSE message the Node B shall indicate with the *Diversity Indication* IE whether the RL is combined or not. In case of combining, only the *Reference RL ID* IE shall be included to indicate one of the existing RLs that the concerned RL is combined with. In case of not combining the Node B shall include in the RL SETUP RESPONSE the *Binding ID* IE and *Transport Layer Address* IE for the transport bearer to be established for each DCH of this RL.]

[TDD – The Node B shall include in the RADIO LINK SETUP RESPONSE the *Binding ID* IE and *Transport Layer Address* IE for the transport bearer to be established for each DCH of this RL.]

In case of coordinated DCH, the *Binding ID* IE and the *Transport Layer Address* IE shall be specified for only one of the coordinated DCHs.

DSCH(s):

If the *DSCH Information* IE is present, the Node B shall configure the new DSCH(s) according to the parameters given in the message.

[FDD – If the RADIO LINK SETUP REQUEST message includes the *TFCI2 Bearer Information* IE then the Node B shall support the establishment of a transport bearer on which the DSCH TFCI Signaling control frames shall be received. The Node B shall manage the time of arrival of these frames according to the values of ToAWS and ToAWE specified in the IE's. The *Binding ID* IE and *Transport Layer Address* IE for the new bearer to be set up for this purpose shall be returned in the RADIO LINK SETUP RESPONSE message.]

If the RADIO LINK SETUP REQUEST message includes the *Transport Layer Address* IE and *Binding ID* IE in the *DSCH Information* IE the Node B may use the transport layer address and the binding identifier received from the CRNC when establishing a transport bearer for the DSCH.

The Node B shall include in the RADIO LINK SETUP RESPONSE the *Binding ID* IE and *Transport Layer Address* IE for the transport bearer to be established for each DSCH of this RL.

[TDD – USCH(s)]:

[TDD – If the *USCH Information* IE is present, the Node B shall configure the new USCH(s) according to the parameters given in the message.]

[TDD - If the RADIO LINK SETUP REQUEST message includes the *Transport Layer Address* IE and *Binding ID* IE in the *USCH Information* IE the Node B may use the transport layer address and the binding identifier received from the CRNC when establishing a transport bearer for the USCH.]

[TDD – In case the *USCH Information* IE is present, the Node B shall include in the RADIO LINK SETUP RESPONSE the *Binding ID* IE and *Transport Layer Address* IE for the transport bearer to be established for each USCH of this RL.]

HS-DSCH(s):

If the *HS-DSCH Information* IE is present the Node B shall configure the new HS-DSCH resources according to the parameters given in the message.

[FDD – If the *HS-DSCH Information* IE and the *HS-PDSCH RL ID* IE are present, the Node B shall configure the new HS-DSCH resources in the radio link specified by the HS-PDSCH RL ID.]

In addition the Node B shall include in the RADIO LINK SETUP RESPONSE the *Binding ID* IE and *Transport Layer Address* IE for the transport bearers to be established for the HS-DSCH MAC-d flows of this RL.

If the *HS-DSCH-RNTI* IE is present, the Node B shall use the HS-DSCH RNTI value for HS-DSCH processing for the respective Node B Communication Context.

Physical Channels Handling:

[FDD – Compressed Mode]:

[FDD – If the RADIO LINK SETUP REQUEST message includes the *Transmission Gap Pattern Sequence Information* IE, the Node B 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 Node B until the next Compressed Mode Configuration is configured in the Node B or Node B Communication Context is deleted.]

[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, the Node B shall use or not the alternate scrambling code as indicated for each DL Channelisation Code in the *Transmission Gap Pattern Sequence Code Information* IE.]

[FDD – If the RADIO LINK SETUP REQUEST message includes the *Transmission Gap Pattern Sequence Information* IE and the *Active Pattern Sequence Information* IE, the Node B shall use the information to activate the indicated Transmission Gap Pattern Sequence(s) in the new RL.The received *CM Configuration Change CFN* refers to the latest passed CFN with that value The Node B 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 Node B shall consider the concerning 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 Node B shall consider the concerning 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 Node B 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 – 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*".]

General:

[FDD – If the *Propagation Delay* IE is included, the Node B may use this information to speed up the detection of L1 synchronisation.]

[FDD – The *UL SIR Target* IE included in the message shall be used by the Node B as initial UL SIR target for the UL inner loop power control.]

[1.28Mcps TDD – The *UL SIR Target* IE included in the message shall be used by the Node B as initial UL SIR target for the UL inner loop power control according [19] and [21].]

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

[FDD – If the *TFCI Signalling Mode* IE within the RADIO LINK SETUP message indicates that there shall be a hard split on the TFCI field but the *TFCI2 Bearer Information* IE is not included in the message then the Node B shall transmit the TFCI2 field with zero power.]

[FDD - If the *TFCI Signalling Mode* IE within the RADIO LINK SETUP message indicates that there shall be a hard split on the TFCI and the *TFCI2 Bearer Information* IE is included in the message then the Node B shall transmit the TFCI2 field with zero power until Synchronization is achieved on the TFCI2 transport bearer and the first valid DSCH TFCI Signalling control frame is received on this bearer (see ref.[24]).]

[FDD – If the RADIO LINK SETUP REQUEST message includes *the Length of TFCI2* IE, then the Node B shall apply the length of TFCI (field 2) indicated in the message.]

[FDD – If the RADIO LINK SETUP REQUEST message does not include the *Length of TFCI2* IE and the *Split type* IE is present with the value "Hard", then the Node B shall assume the length of the TFCI (field 2) is 5 bits.]

Radio Link Handling:

[FDD – Transmit Diversity]:

[FDD – When *Diversity Mode* IE is "*STTD*", "*Closedloop mode1*", or "*Closedloop mode2*", the Node B shall activate/deactivate the Transmit Diversity to each Radio Link in accordance with *Transmit Diversity Indication* IE]

DL Power Control:

[FDD – The Node B shall start any DL transmission using the initial DL power specified in the message on each DL DPCH of the RL until either UL synchronisation on the Uu is achieved for the RLS or Power Balancing is activated. No inner loop power control or 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 subclause 8.3.7), but shall always be kept within the maximum and minimum limit specified in the RADIO LINK SETUP REQUEST message. During compressed mode, the $P_{SIR}(k)$ , as described in ref.[10] subclause 5.2.1.3, shall be added to the maximum DL power in slot k.]

[FDD - If the *DPC Mode* IE is present in the RADIO LINK SETUP REQUEST message, the Node B shall apply the DPC mode indicated in the message, and be prepared that the DPC mode may be changed during the life time 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]).]]

[TDD – The Node B shall determine the initial CCTrCH DL power for each CCTrCH by the following rule: If the *CCTrCH Initial DL transmission Power* IE is included for that CCTrCH then the Node B shall use that power for the initial CCTrCH DL power, otherwise the initial CCTrCH DL power is the *Initial DL transmission Power* IE included in the *RL Information* IE. The Node B shall start any DL transmission on each CCTrCH using the initial CCTrCH DL power, as determined above, on each DL DPCH and on each Time Slot of the CCTrCH until the UL synchronisation on the Uu is achieved for theCCTrCH. 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), but shall always be kept within the maximum and minimum limit specified in the RL SETUP REQUEST message.]

[TDD – If the [3.84Mcps TDD - *DL Time Slot ISCPInfo* IE] or [1.28Mcps TDD - *DL Timeslot ISCP LCR* IE] is present, the Node B shall use the indicated value when deciding the initial DL TX Power for each timeslot as specified in [21], 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].

[FDD – If the received *Inner Loop DL PC Status* IE is set to "Active", the Node B shall activate the inner loop DL power control for all RLs. If *Inner Loop DL PC Status* IE is set to "Inactive", the Node B shall deactivate the inner loop DL power control for all RLs according to 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 Node B shall activate the power balancing, if activation of power balancing by the RADIO LINK SETUP REQUEST message is supported is supported, according to subclause 8.3.7, using the *DL Power Balancing Information* IE. If the Node B starts the DL transmission and the activation of the power balancing at the same CFN, the initial power of the power balancing shall be set to the indicated DL TX power level (if received) or the decided DL TX power level on each DL channelisation code of a RL.]

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

General:

If the RADIO LINK SETUP REQUEST message includes the *RL Specific DCH Information* IE, the Node B may use the transport layer address and the binding identifier received from the CRNC when establishing a transport bearer for the DCH or the set of co-ordinated DCHs.

[FDD – If the RADIO LINK SETUP REQUEST message includes the *SSDT Cell Identity* IE and the *S-Field Length* E, the Node B shall activate SSDT, if supported, using the *SSDT Cell Identity* IE and *SSDT Cell Identity Length* IE.]

[FDD – Irrespective of SSDT activation, the Node B shall include in the RADIO LINK SETUP RESPONSE message an indication concerning the capability to support SSDT on this RL. Only if the RADIO LINK SETUP REQUEST message requested SSDT activation and the RADIO LINK SETUP RESPONSE message indicates that the SSDT capability is supported for this RL, SSDT is activated in the Node B.]

[FDD - If the RADIO LINK SETUP REQUEST message includes the *SSDT Cell Identity for EDSCHPC* IE, the Node B shall activate enhanced DSCH power control, if supported, using the *SSDT Cell Identity for EDSCHPC* IE and *SSDT Cell Identity Length* IE as well as *Enhanced DSCH PC* IE in accordance with ref. [10] subclause 5.2.2. If the RADIO LINK SETUP REQUEST message includes both *SSDT Cell Identity* IE and *SSDT Cell Identity for EDSCHPC* IE, then the Node B shall ignore the value in *SSDT Cell Identity for EDSCHPC* IE. If the enhanced DSCH power control is activated and the TFCI power control in DSCH hard split mode is supported, the primary/secondary status determination in the enhanced DSCH power control is also applied to the TFCI power control in DSCH hard split mode.]

[FDD – Radio Link Set Handling]:

[FDD – The *First RLS Indicator* IE indicates if the concerning RL shall be considered part of the first RLS established towards this UE. The *First RLS Indicator* IE shall be used by the Node B together with the value of the *DL TPC pattern 01 count* IE which the Node B has received in the Cell Setup procedure, to determine the initial TPC pattern in the DL of the concerning 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 Node B shall assign the *RL Set ID* IE included in the RADIO LINK SETUP RESPONSE message a value that uniquely identifies the RL Set within the Node B Communication context.]

[FDD – For all RLs having a common generation of the TPC commands in the DL with another RL, the Node B shall assign the *RL Set ID* IE included in the RADIO LINK SETUP RESPONSE message the same value. This value shall uniquely identify the RL Set within the Node B Communication context.]

[FDD – The UL out-of-sync algorithm defined in [10] shall for each of the established RL Set(s) use the maximum value of the parameters N_OUTSYNC_IND and T_RLFAILURE, and the minimum value of the parameters N_INSYNC_IND, that are configured in the cells supporting the radio links of the RL Set]

Response Message:

If the RLs are successfully established, the Node B shall start reception on the new RL(s) and respond with a RADIO LINK SETUP RESPONSE message.

After sending of the RADIO LINK SETUP RESPONSE message the Node B shall continuously attempt to obtain UL synchronisation on the Uu 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 Node B shall:

-   [FDD - start transmission on the new RL after synchronisation is achieved in the DL user plane as specified in [16].]

-   [TDD - start transmission on the new RL immediately as specified in [16].]

    For each RL for which the *Delayed Activation* IE is included in the RADIO LINK SETUP REQUEST message, the Node B 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 new RL after synchronisation is achieved in the DL user plane as specified in [16], 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 [16].]

### 8.2.17.3 Unsuccessful Operation
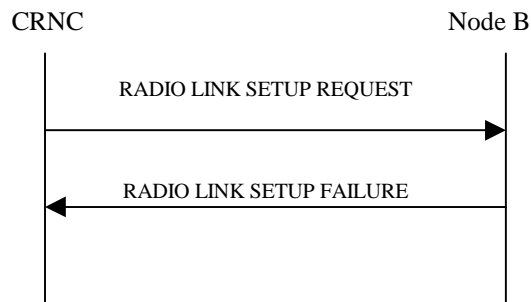


**Figure 25: Radio Link Setup procedure: Unsuccessful Operation**

If the establishment of at least one radio link is unsuccessful, the Node B shall respond with a RADIO LINK SETUP FAILURE message. The message contains the failure cause in the *Cause* IE.

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

Typical cause values are as follows:

**Radio Network Layer Cause**

- Combining not supported

- Combining Resources not available

- Requested Tx Diversity Mode not supported

- Number of DL codes not supported

- Number of UL codes not supported

- UL SF not supported

- DL SF not supported

- Dedicated Transport Channel Type not supported

- Downlink Shared Channel Type not supported

- Uplink Shared Channel Type not supported

- CM not supported

- DPC mode change not supported

- Delayed Activation not supported

**Transport Layer Cause**

- Transport Resources Unavailable

**Miscellaneous Cause**

- O&M Intervention

- Control processing overload

- HW failure

### 8.2.17.4 Abnormal Conditions

[FDD – If the RADIO LINK SETUP REQUEST message contains the *Active Pattern Sequence Information* IE, but the *Transmission Gap Pattern Sequence Information* IE is not present, then the Node B 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 Node B shall regard the Radio Link Setup procedure as failed and shall respond with a 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 Node B 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 Node B shall regard the Radio Link Setup procedure as failed and respond with the RADIO LINK SETUP FAILURE message.

If the RADIO LINK SETUP REQUEST message contains the *Transport Layer Address* IE or the *Binding ID* IE, and not both are present for a transport bearer intended to be established, the Node B shall reject the procedure using the RADIO LINK SETUP FAILURE message.

[FDD – If the RADIO LINK SETUP REQUEST message includes the *Length of TFCI2* IE but the *TFCI signalling option* IE is set to "Normal", then the Node B shall reject the procedure using the RADIO LINK SETUP FAILURE message.]

[FDD – If the RADIO LINK SETUP REQUEST message does not include the *Length of TFCI2* IE but the *Split type* IE is set to "Logical", then the Node B shall reject the procedure using the RADIO LINK SETUP FAILURE message.]

[FDD - If the RADIO LINK SETUP REQUEST message includes the *Split Type* IE set to the value "Hard" and the *Length of TFCI2* IE set to the value "5", then the Node B shall reject the procedure using the RADIO LINK SETUP FAILURE message.]

[FDD – If the RADIO LINK RECONFIGURATION REQUEST message includes the *Length of TFCI2* IE but the *TFCI signalling option* IE is set to "Normal", then the Node B shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.]

[FDD – If the RADIO LINK RECONFIGURATION REQUEST message does not include the *Length of TFCI2* IE but the *Split type* IE is set to "Logical", then the Node B shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.]

[FDD – If the RADIO LINK RECONFIGURATION REQUEST message includes the *Split Type* IE set to the value "Hard" and the *Length of TFCI2* IE set to the value "5", then the Node B shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.]

## 8.2.18 Physical Shared Channel Reconfiguration

### 8.2.18.1 General

This procedure is used to assign HS-DSCH related resources to the Node B.

[TDD - This procedure is also used for handling PDSCH Sets and PUSCH Sets in the Node B, i.e.

- Adding new PDSCH Sets and/or PUSCH Sets,

- Modifying these, and

- Deleting them.]

### 8.2.18.2 Successful Operation



CRNC                                                                 Node B

PHYSICAL SHARED CHANNEL
RECONFIGURATION REQUEST

PHYSICAL SHARED CHANNEL
RECONFIGURATION RESPONSE
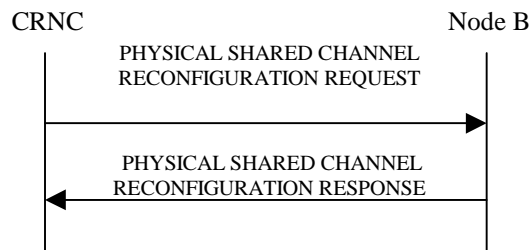
**Figure 26: Physical Shared Channel Reconfiguration: Successful Operation**

The procedure is initiated with a PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST message sent from the CRNC to the Node B.

If the PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST message includes an *SFN* IE the Node B will activate the new configuration on that specified SFN.

**HS-DSCH Resources**

[FDD - If the PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST message includes *HS-PDSCH and HS-SCCH Total Power* IE the Node B shall not exceed this maximum transmission power on all HS-PDSCH and HS-SCCH codes in the cell. If a value has never been set or if the value of the *HS-PDSCH Total Power* IE is equal to or greater than the maximum transmission power of the cell the Node B may use all unused power for HS-PDSCH and HS-SCCH codes.]

[FDD - If the PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST message includes *HS-PDSCH and HS-SCCH Scrambling Code* IE the Node B shall use this as the scrambling code for all HS-PDSCHs and HS-SCCHs. If a value has never been set the Node B shall use the primary scrambling code for all HS-PDSCH and HS-SCCH codes.]

[FDD - If the PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST message includes *HS-PDSCH FDD Code Information*  IE the Node B shall:

-    If the *HS-PDSCH FDD Code Information* IE contains no codes, delete any existing HS-PDSCH resources from the cell.

-    If the *HS-PDSCH FDD Code Information* IE contains one or more codes and HS-PDSCH resources are not currently configured in the cell, use this list as the range of codes for HS-PDSCH channels.

-    If the *HS-PDSCH FDD Code Information* IE contains one or more codes and HS-PDSCH resources are currently configured in the cell, replace the current range of codes with this new range of codes for HS-PDSCH channels.]

[FDD - If the PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST message includes *HS-SCCH FDD Code Information* IE the Node B shall:

-    If the *HS-SCCH FDD Code Information* IE contains no codes, delete any existing HS-SCCH resources from the cell.

-    If the *HS-SCCH FDD Code Information* IE contains one or more codes and HS-SCCH resources are not currently configured in the cell, use this list of codes as the list of codes for HS-SCCH channels.

-    If the *HS-SCCH FDD Code Information* IE contains one or more codes and HS-SCCH resources are currently configured in the cell, replace the current list of codes with this new list of codes for HS-SCCH channels.]

[TDD - If the PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST message includes *HS-SCCH Maximum Power* IE the Node B shall not exceed this power for each HS-SCCH code.]

[TDD - If the PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST message includes *HS-PDSCH TDD Information* IE the Node B shall:

- If the *HS-PDSCH TDD Code Information* IE contains no codes, delete any existing HS-PDSCH resources from the cell.

- If the *HS-PDSCH TDD Code Information* IE contains one or more codes and HS-PDSCH resources are not currently configured in the cell, use this list as the list of codes for HS-PDSCH channels.

- If the *HS-PDSCH TDD Code Information* IE contains one or more codes and HS-PDSCH resources are currently configured in the cell, replace the current list of codes with this new list of codes for HS-PDSCH channels.]

[TDD - If the PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST message includes *Add to HS-SCCH Resource Pool* IE the Node B shall add this resource to the HS-SCCH resource pool to be used to assign HS-SCCH sets.]

[TDD - If the PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST message includes any *Modify HS-SCCH Resource Pool* IEs and includes any of [3.84Mcps TDD - *TDD Channelisation Code* IE, *Midamble shift and burst type* IE, *Time Slot* IE], [1.28Mcps TDD - *TDD Channelisation Code LCR* IE, *Midamble shift LCR* IE, *Time Slot LCR* IE], for either HS-SCCH or HS-SICH channels the Node B shall apply these as the new values, otherwise the old values specified for this set are still applicable.]

[TDD - If the PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST message includes any *Delete from HS-SCCH Resource Pool* IEs the Node B shall delete these resources from the HS-SCCH resource pool.]

[**TDD - PDSCH/PUSCH Addition**]

[TDD - If the PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST message includes any PDSCH sets or PUSCH sets to be added the Node B shall add these new sets to its PDSCH/PUSCH configuration.]

[**TDD - PDSCH/PUSCH Modification**]

[TDD - If the PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST message includes any PDSCH sets or PUSCH sets to be modified, and includes any of [3.84Mcps TDD - *TDD Channelisation Code* IE, *Midamble shift and burst type* IE, *Time Slot* IE], [1.28Mcps TDD - *TDD Channelisation Code LCR* IE, *Midamble shift LCR* IE, *Time Slot LCR* IE], *TDD Physical Channel Offset* IE, *Repetition Period* IE, *Repetition Length* IE, or *TFCI presence* IE the Node B shall apply these as the new values, otherwise the old values specified for this set are still applicable.]

[**TDD - PDSCH/PUSCH Deletion**]

[TDD - If the PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST message includes any PDSCH sets or PUSCH sets to be deleted the Node B shall delete these new sets to its PDSCH/PUSCH configuration.]

Response Message

**HS-DSCH/HS-SCCH Resources**

In the successful case involving HS-PDSCH or HS-SCCH resources the Node B shall make these resources available to all the current and future HS-DSCH transport channels; and shall respond with PHYSICAL SHARED CHANNEL RECONFIGURATION RESPONSE:

[**TDD – PDSCH/PUSCH Addition/Modification/Deletion**]

[TDD - In the successful case involving PDSCH/PUSCH addition, modification or deletion, the Node B shall add, modify and delete the PDSCH Sets and PUSCH Sets in the Common Transport Channel data base, as requested in the PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST, and shall make these available to all the current and future DSCH and USCH transport channels; and shall respond with PHYSICAL SHARED CHANNEL RECONFIGURATION RESPONSE:]

### 8.2.18.3 Unsuccessful Operation

CRNC                                                                    Node B

|———————————————————————————————————————→|
PHYSICAL SHARED CHANNEL
RECONFIGURATION REQUEST

|←———————————————————————————————————————|
PHYSICAL SHARED CHANNEL
RECONFIGURATION FAILURE
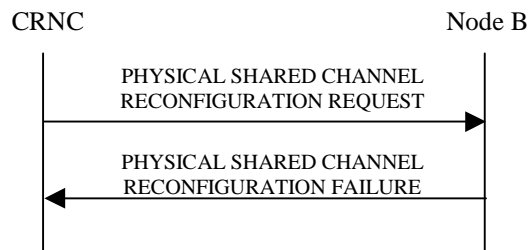
**Figure 27: Physical Shared Channel Reconfiguration procedure: Unsuccessful Opreration**

If the Node B is not able to support all parts of the configuration, it shall reject the configuration of all the channels in the PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST message. The *Cause Value* IE shall be set to an appropriate value.

If the configuration was unsuccessful, the Node B shall respond with the PHYSICAL SHARED CHANNEL RECONFIGURATION FAILURE message:

Typical cause values are as follows:

**Radio Network Layer Cause**

- Cell not available

- Node B Resources unavailable

**Transport Layer Cause**

- Transport Resources Unavailable

**Miscellaneous Cause**

- O&M Intervention

- Control processing overload

- HW failure

### 8.2.18.4 Abnormal Conditions

-

## 8.2.19 Reset

### 8.2.19.1 General

The purpose of the reset procedure is to align the resources in the CRNC and Node B in the event of an abnormal failure. The CRNC or Node B may initiate the procedure.

## 8.2.19.2 Successful Operation

### 8.2.19.2.1 Reset Initiated by the CRNC

CRNC                                                                 Node B

RESET REQUEST →

RESET RESPONSE ←
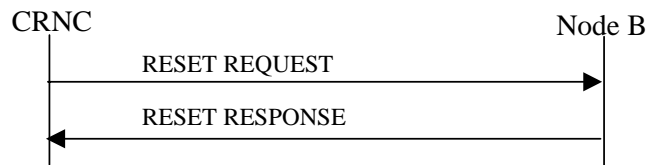
**Figure 27A Reset procedure (CRNC to Node B), Successful Operation**

The procedure is initiated with a RESET REQUEST message sent from the CRNC to the Node B.

If the *Reset Indicator* IE is set to 'CommunicationContext', the Node B shall remove all the indicated Node B Communication Contexts (typically identified by a *Node B Communication Context ID* IE) and all the radio resources allocated for these Node B Communication Contexts. The Node B shall also initiate release of the user plane transport bearers that were involved in these Contexts. After clearing all related resources, the Node B shall return the RESET RESPONSE message to the CRNC.

If the *Reset Indicator* IE is set to 'CommunicationControlPort', the Node B shall remove all the Node B Communication Contexts controlled via the indicated Communication Control Port(s) and all the radio resources allocated for these Node B Communication Contexts. The Node B shall also initiate release of the user plane transport bearers that were involved in these Contexts. After clearing all related resources, the Node B shall return the RESET RESPONSE message to the CRNC.

If the *Reset Indicator* IE is set to 'Node B', the Node B shall remove all the Node B Communication Contexts within the Node B and all the radio resources allocated for these Node B Communication Contexts. The Node B shall also initiate release of the user plane transport bearers that were involved in these Contexts. After clearing all related resources, the Node B shall return the RESET RESPONSE message to the CRNC.

### 8.2.19.2.2 Reset Initiated by the Node B

CRNC                                                                 Node B

← RESET REQUEST

RESET RESPONSE →
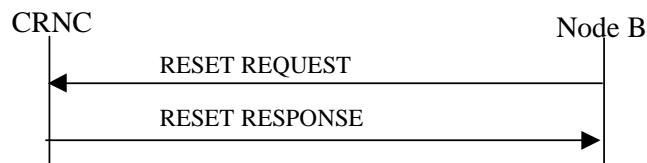
**Figure 27B Reset procedure (Node B to CRNC ), Successful Operation**

The procedure is initiated with a RESET REQUEST message sent from the Node B to the CRNC.

If the *Reset Indicator* IE is set to 'CommunicationContext', for all indicated CRNC Communication Contexts (indicated by a *CRNC Communication Context ID* IE) the CRNC shall remove the information related to this Node B and all the radio resources allocated in the CRNC. The CRNC shall also initiate release of the user plane transport bearers towards the Node B involved in the indicated CRNC Communication Contexts. After clearing all related resources, the CRNC shall return the RESET RESPONSE message to the Node B.

If the *Reset Indicator* IE is set to 'CommunicationControlPort', for all the CRNC Communication Contexts controlled via the indicated Communication Control Port(s) the CRNC shall remove the information related to this Node B and all the radio resources allocated in the CRNC. The CRNC shall also initiate release of the user plane transport bearers towards the Node B involved in the CRNC Communication Contexts controlled via the indicated Communication Control Port(s). After clearing all related resources, the CRNC shall return the RESET RESPONSE message to Node B.

If the *Reset Indicator* IE is set to the 'Node B', for all the CRNC Communication Contexts related to this Node B the CRNC shall remove the information related to this Node B and all the radio resources allocated in the CRNC. The CRNC shall also initiate release of the user plane transport bearers towards the Node B involved in the CRNC Communication Contexts related to this Node B. After clearing all related resources, the CRNC shall return the RESET RESPONSE message to Node B.

## 8.2.19.3 Unsuccessful Operation

-

## 8.2.19.4 Abnormal Conditions

If the RESET message is received any ongoing procedure related to a CRNC Communication Context in the CRNC or Node B Communication Context in the Node B indicated (explicitly or implicitly) in the message shall be aborted.

# 8.2.20 Cell Synchronisation Initiation [TDD]

## 8.2.20.1 General

This procedure is used by a CRNC to request the transmission of cell synchronisation bursts and/or to start measurements on cell synchronisation bursts in a Node B. Note: The term "cell synchronisation burst" is used as a generic term which refers to the synchronisation bursts used in the two TDD chip rate options. A "cell synchronisation burst" is a [3.84Mcps TDD – cell sync burst sent in the PRACH time slots] or a [1.28Mcps TDD - SYNC_DL code sent in the DwPTS], respectively.

## 8.2.20.2 Successful Operation
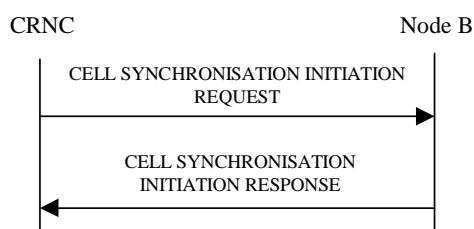


**Figure 27C Cell Synchronisation Initiation procedure, Successful Operation**

The procedure is initiated with a CELL SYNCHRONISATION INITIATION REQUEST message sent from the CRNC to the Node B using the Node B control port.

Upon reception, the Node B shall initiate the requested transmission according to the parameters given in the request and start the measurement on cell synchronsiation bursts if requested.

Cell Sync Burst Transmission Initiation

When the Cell Sync Burst Transmission Initiation Information is present, the Node B shall configure the transmission of the cell sync burst according to the parameters given in the CELL SYNCHRONISATION INITIATION REQUEST message. The *SFN* IE indicates the frame number when the cell shall start transmitting cell sync bursts.

[3.84Mcps TDD - When the Cell Sync Burst Transmission Initiation Information is present and the 'Frequency Acquisition' is indicated within the *Synchronisation Report Type* IE, the Node B shall first perform only frequency locking on received cell sync bursts. Transmission of the indicated cell sync bursts shall be started only if the frequency locking is performed successfully and 'Frequency Acquisition completed' is reported to the RNC.]

[3.84Mcps TDD - Cell Sync Burst Measurement characteristics] [1.28Mcps TDD – SYNC_DL Code Measurement characteristics LCR]

When the [3.84Mcps TDD - Cell Sync Burst Measurement Initiation Information][1.28Mcps TDD – SYNC_DL Code Measurement Initiation Information LCR] is present, the Node B shall initiate measurements on the indicated cell synchronisation burst.

In case the *SFN* IE is present, the Node B shall after measurement of the indicated cell synchronisation burst adjust the frame number of the indicated cell according to the SFN of the CELL SYNCHRONISATION INITIATION REQUEST message. This adjustment shall only apply to the late entrant cell at the late entrant phase.

**Synchronisation Report characteristics**

The *Synchronisation Report Characteristics* IE indicates how the reporting of the cell synchronisation burst measurement shall be performed. Whenever the Cell Synchronisation Initiation procedure is initiated, only the 'Frequency Acquisition completed' or 'Frame related' report characteristics type shall apply.

[3.84Mcps TDD - If the *Synchronisation Report characteristics type* IE is set to ' Frequency Acquisition completed', the Node B shall signal completion of frequency acquisition to the RNC when locking is completed.]

If the *Synchronisation Report characteristics type* IE is set to 'Frame related', the Node B shall report the result of the cell synchronisation burst measurement after every measured frame.

**Response message**

If the Node B was able to initiate the cell synchronisation burst transmission and/or measurement requested by the CRNC it shall respond with the CELL SYNCHRONISATION INITIATION RESPONSE message sent over the Node B control port.

## 8.2.20.3     Unsuccessful Operation
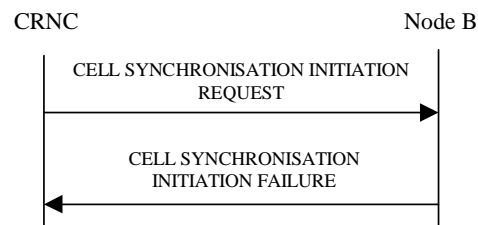


**Figure 27D Cell Synchronisation Initiation procedure, Unsuccessful Operation**

If the requested transmission or measurement on cell synchronisation bursts cannot be initiated, the Node B shall send a CELL SYNCHRONISATION INITIATION FAILURE message over the Node B control port. The message shall include the *Cause* IE set to an appropriate value.

Typical cause values are as follows:

**Radio Network Layer Cause**

-   Cell Synchronisation not supported

-   Power level not supported

-   Measurement Temporarily not Available

-   Frequency Acquisition not supported

**Miscellaneous Cause**

-   O&M Intervention

-   HW failure

## 8.2.20.4     Abnormal Conditions

-

# 8.2.21 Cell Synchronisation Reconfiguration [TDD]

## 8.2.21.1 General

This procedure is used by a CRNC to reconfigure the transmission of cell synchronisation bursts and/or to reconfigure measurements on cell synchronisation bursts in a Node B.

## 8.2.21.2 Successful Operation

### 8.2.21.2.1 General
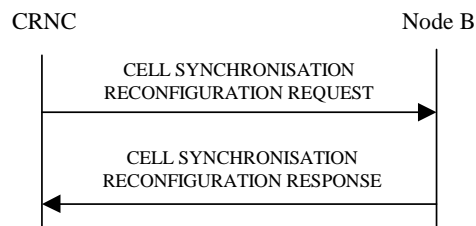


**Figure 27E Cell Synchronisation Reconfiguration procedure, Successful Operation**

The procedure is initiated with a CELL SYNCHRONISATION RECONFIGURATION REQUEST message sent from the CRNC to the Node B using the Node B control port.

Upon reception, the Node B shall reconfigure the cell sync burst transmission and/or measurements according to the parameters given in the request.

### 8.2.21.2.2 Cell Sync Burst Schedule

Within the CELL SYNCHRONISATION RECONFIGURATION REQUEST message first the schedule for the steady state phase is fixed. I.e. the number of cycles per SFN period is defined with the same schedule. For each cycle the number of repetitions is defined according to following equations:

Cycle length: 4096 / value of the IE 'Number of cycles per SFN period'

Repetition period:    Cycle length / value of IE 'Number of repetitions per cycle period'

Cell Sync Frame number is calculated by:
SFN = floor((k-1) * Cycle length + (i-1)* Repetition period)

   k = {1, 2, 3, .. Number of cycle per SFN period}

   i = {1, 2, 3, .. Cell Sync Frame number within cycle period}

### 8.2.21.2.3 [1.28Mcps TDD – SYNC_DL Code Schedule]

Within the CELL SYNCHRONISATION RECONFIGURATION REQUEST message first the schedule for the steady state phase is fixed. The "schedule" includes

- the list of frame numbers SFN within the SFN period where synchronisation burst transmission or reception takes place, i.e. the "synchronisation frames", and

- the associated actions (burst transmission, reception, averaging, reporting etc) to be performed for synchronisation purpose by the Node B at each of these SFNs.

Within the synchronisation frames, only the first subframe shall be used for sending or receiving a synchronisation burst in the DwPTS while in the second subframe, normal operation continues.

In case of 1.28Mcps TDD, the synchronisation schedule includes the option of averaging of measured correlation results within the Node B over a sequence of measurements, for increasing the reliability of the Time of Arrival measurement obtained from the correlation results. For this purpose, the concept of "subcycles" has been introduced: Each Synchronisation Cycle is devided into "subcycles" where in each subcycle, the same set of SYNC_DL transmissions and receptions is performed, and averaging takes place over all the subcycles within a Synchronisation Cycle. Since the list of actions (transmission, measurements etc) is the same in each subcycle, and the subcycles are repeated to make up a cycle, and the cycles make up an SFN period, the full list of actions is derived by the actions specified for a subcycle.

The full list of SFNs which make up the synchronisation schedule within the SFN period are calculated in Node B and RNC autonomously based on the following parameters included in the CELL SYNCHRONISATION RECONFIGURATION REQUEST message: "Number of cycles per SFN period", "Number of sybcycles per cycle period", and "Number of repetitions per cycles period", along the following equations:

Cycle length: 4096 / value of the IE 'Number of cycles per SFN period'

Subcycle length: Cycle length / value of the IE "Number of subcycles per cycle period"

Repetition period: Subcycle length / value of IE 'Number of repetitions per cycle period'


SFN = floor((k-1) * Cycle length + (j-1)*Subcycle length + (i-1)* Repetition period)

k = {1, 2, 3, .. Number of cycle per SFN period}

j = {1, 2, 3, .. Number of subcycles per cycle}

i = {1, 2, 3, .. Number of repetitions per cycle period}

Note that if the *Number of subcycles per cycle* IE is equal to 1, then the subcycles are identical to the "Synchronisation Cycles".

If the *Number of subcycles per cycle* IE is included in the CELL SYNCHRONISATION RECONFIGURATION REQUEST [TDD], then the Node B shall apply this number for dividing the Synchronisation Cycles in Subcycles. If the IE is not present, then the Node B shall assume that there is one subcycle per synchronisation cycle only, which is identical to the synchronisation cycle.

Averaging is performed as follows:

- From each SYNC_DL code being received according to the schedule, the Node B shall calculate a "correlation function" by matching the received data with the respective expected code.

- Therefore the set of measurements within one sybcycle provides a set of "correlation functions".

- The set of correlation functions of the first subcycle within a synchronisation cycle is stored in an averaging memory.

- The sets of correlation functions of the subsequent subcycles within a synchronisation cycle are combined with the available contents of the "averaging memory", to produce an average over all the sets of correlation functions within a synchronisation cycle.

- At the end of a synchronisation cycle, the Time-of-Arrival measurements for that synchronisation cycle are obtained by evaluating the final set of correlation functions.

These Time-of-Arrival measurements, together with associated SIR values obtained from the averaged correlation functions, are included in a Measurement Report to the RNC, according to a measurement reporting plan.

In addition, the Time-of-Arrival measurements may optionally be used for autonomous self-adjustment of the timing of the respective cell.

### 8.2.21.2.4        [3.84Mcps TDD - Cell Sync Burst Transmission Reconfiguration] [1.28Mcps TDD – SYNC_DL Code Transmission Reconfiguration]

When the [3.84Mcps TDD - Cell Sync Burst Transmission Reconfiguration Information] [1.28Mcps TDD – SYNC_DL Code Transmission Reconfiguration Information LCR] is present, the Node B shall reconfigure the transmission of the [3.84Mcps TDD - cell sync burst] [1.28Mcps TDD - SYNC_DL Code] according to the parameters given in the CELL SYNCHRONISATION RECONFIGURATION REQUEST message.

[3.84Mcps TDD - If the CELL SYNCHRONISATION RECONFIGURATION REQUEST message includes the *Cell Sync Burst Code* IE the Node B shall reconfigure the synchronisation code in the cell according to the *Cell Sync Burst Code* IE value.]

[3.84Mcps TDD - If the CELL SYNCHRONISATION RECONFIGURATION REQUEST message includes the *Cell Sync Burst Code* shift IE the Node B shall reconfigure the synchronisation code shift in the cell according to the *Cell Sync Burst Code* shift IE value.]

[3.84Mcps TDD - If the CELL SYNCHRONISATION RECONFIGURATION REQUEST message includes the *DL transmission Power* IE the Node B shall reconfigure the Dl transmission power of the cell sync burst in the cell according to the *DL transmission Power* IE value.]

[1.28Mcps TDD - If the CELL SYNCHRONISATION RECONFIGURATION REQUEST message includes the *DwPCH Power* IE the Node B shall store the DwPCH power according to the *DwPCH Power* IE value. For the duration of those subsequent transmissions of the DwPCH which are specifically for the purpose of Node B synchronisation the power of the DwPCH shall be set to the stored power. During subsequent transmissions of the DwPCH which are for normal operation the power of the DwPCH shall assume its normal level.]

### 8.2.21.2.5 [3.84Mcps TDD - Cell Sync Burst Measurement Reconfiguration] [1.28Mcps TDD – SYNC_DL Code Measurement Reconfiguration]

When the [3.84Mcps TDD - Cell Sync Burst Measurement Reconfiguration Information] [1.28Mcps TDD - Cell SYNC_DL Code Measurement Reconfiguration Information LCR] is present, the Node B shall reconfigure the [3.84Mcps TDD - cell sync burst] [1.28Mcps TDD - SYNC_DL Code] measurements according the parameters given in the message.

If the CELL SYNCHRONISATION RECONFIGURATION REQUEST message includes the [3.84Mcps TDD -Cell Sync Burst Measurement Information][1.28Mcps TDD – SYNC_DL Code Measurement Information LCR] the measurements shall apply on the individual [3.84Mcps TDD - cell sync bursts] [1.28Mcps TDD - SYNC_DL Codes] on the requested Sync Frame number.

[1.28Mcps TDD - When the *Propagation Delay Compensation* IE is present in the Cell Sync Burst Measurement Information, the Node B shall, if supported, perform the following functions: (1) use the respective SYNC_DL measurement (after potential averaging) to perform the self-adjustment of the respective cell's timing at the end of a Synchronisation Cycle; (2) include the *Accumulated Clock Update* IE  in the CELL SYNCHRONISATION REPORT message, to report the total accumulated amount of timing adjustments since the last report to the RNC. This Accumulated Clock Update value shall also include the adjustments which may have been performed by explicit order from the RNC in the CELL SYNCHRONISATION ADJUSTMENT REQUEST message. The times for self-adjustment at the end of a synchronisation cycle shall be independent from the measurement reporting characteristics; the Accumulated Adjustment values shall be included in the CELL SYNCHRONISATION REPORT messages without influencing the frequency of measurement reporting. ]

If the *Synchronisation Report Type* IE is provided, the measurement reporting shall apply according the parameter given in the message.

**Synchronisation Report characteristics**
The *Synchronisation Report Characteristics* IE indicates how the reporting of the cell synchronisation burst measurement shall be performed.

If the *Synchronisation Report characteristics type* IE is set to 'Frame related', the Node B shall report the result of the cell synchronisation burst measurement after every measured frame.

If the *Synchronisation Report characteristics type* IE is set to 'SFN period related', the Node B shall report the result of the cell synchronisation burst measurements after every SFN period.

If the *Synchronisation Report characteristics type* IE is set to 'Cycle length related', the Node B shall report the result of the cell synchronisation burst measurements after every cycle length within the SFN period.

If the *Synchronisation Report characteristics type* IE is set to 'Threshold exceeding', the Node B shall report the result of the [3.84Mcps TDD - cell sync burst] [1.28Mcps TDD - SYNC_DL Code] measurement when the [3.84Mcps TDD - cell sync burst timing] [1.28Mcps TDD – SYNC_DL Code timing] rises or falls more than the requested threshold value compared to the arrival time in synchronised state which is represented by the [3.84Mcps TDD - *Cell Sync Burst Arrival Time* IE] [1.28Mcps TDD – *SYNC_DL Code ID Arrival Time* IE].

**Response message**
If the Node B was able to reconfigure the cell synchronisation burst transmission and/or measurement requested by the CRNC it shall respond with the CELL SYNCHRONISATION RECONFIGURATION RESPONSE message sent over the Node B control port.

## 8.2.21.3     Unsuccessful Operation
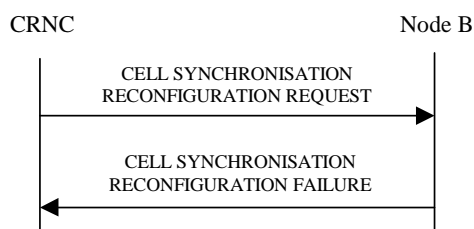


**Figure 27F Cell Synchronisation Reconfiguration procedure, Unsuccessful Operation**

If the Node B cannot reconfigure the requested transmission or measurement on [3.84Mcps TDD - cell sync burst] [1.28Mcps TDD – SYNC_DL Code], the CELL SYNCHRONISATION RECONFIGURATION FAILURE message shall be sent to the CRNC. The message shall include the *Cause* IE set to an appropriate value.

Typical cause values are as follows:

**Radio Network Layer Cause**

- Cell Synchronisation not supported

- Power level not supported

- Measurement Temporarily not Available

**Miscellaneous Cause**

- O&M Intervention

- HW failure

## 8.2.21.4     Abnormal Conditions

-

# 8.2.22     Cell Synchronisation Reporting [TDD]

## 8.2.22.1     General

This procedure is used by a Node B to report the result of [3.84Mcps TDD - cell sync burst] [1.28Mcps TDD - SYNC_DL Code]  measurements requested by the CRNC with the Cell Synchronisation Initiation or Cell Synchronisation Reconfiguration procedure.

## 8.2.22.2     Successful Operation

CRNC                                    Node B

CELL SYNCHRONISATION REPORT
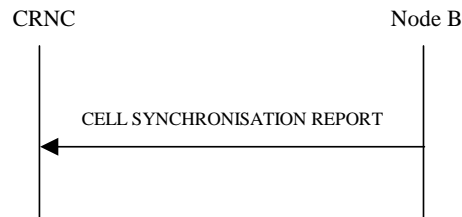
**Figure 27G Cell Synchronisation Reporting procedure, Successful Operation**

If the requested synchronisation measurement reporting criteria are met, the Node B shall initiate a Cell Synchronisation Reporting procedure. The CELL SYNCHRONISATION REPORT message shall use the Node B control port.

In the steady state phase when several [3.84Mcps TDD - cell sync bursts] [1.28Mcps TDD - SYNC_DL Codes] shall be measured per Sync Frame number, the sequence of the reported measured values shall be the same as defined in the Cell Synchronisation Reconfiguration procedure.

[1.28Mcps TDD The Node B shall - if supported - include the *Accumulated Clock update* IE in the CELL SYNCHRONISATION REPORT message whenever the RNC has included at least one instance of the *Propagation Delay Compensation* IE in the CELL SYNCHRONISATION RECONFIGURATION REQUEST message. The *Accumulated Clock update* IE shall include the accumulated timing adjustment which has been done as commanded by the RNC, as well as by self-adjustment, since the last *Accumulated Clock update* IE report.]

If the achieved measurement accuracy does not fulfil the given accuracy requirement defined in [23], the Cell Sync Burst not available shall be reported.

## 8.2.22.3    Abnormal Conditions

-

# 8.2.23    Cell Synchronisation Termination [TDD]

## 8.2.23.1    General

This procedure is used by the CRNC to terminate a [3.84Mcps TDD - cell sync burst] [1.28Mcps TDD - SYNC_DL Code] transmission or measurement previously requested by the Cell Synchronisation Initiation procedure or Cell Synchronisation Reconfiguration procedure.

## 8.2.23.2    Successful Operation

CRNC                                    Node B

CELL SYNCHRONISATION TERMINATION
REQUEST

**Figure 27H Cell Synchronisation Termination procedure, Successful Operation**

This procedure is initiated with a CELL SYNCHRONISATION TERMINATION REQUEST message, sent from the CRNC to the Node B using the Node B control port.

Upon reception, the Node B shall terminate transmission of [3.84Mcps TDD - cell sync bursts or reporting of cell sync burst measurements] [1.28Mcps TDD - SYNC_DL Codes or reporting of  SYNC_DL Code measurements] corresponding to the CSB Transmission Id or CSB Measurement Id.

### 8.2.23.3 Abnormal Conditions

-

## 8.2.24 Cell Synchronisation Failure [TDD]

### 8.2.24.1 General

This procedure is used by the Node B to notify the CRNC that a synchronisation burst transmission or synchronisation measurement procedure can no longer be supported.

### 8.2.24.2 Successful Operation

CRNC          Node B

CELL SYNCHRONISATION FAILURE
INDICATION
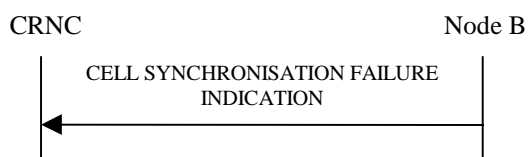
**Figure 27I Cell Synchronisation Failure procedure, Successful Operation**

This procedure is initiated with a CELL SYNCHRONISATION FAILURE INDICATION message, sent from the Node B to the CRNC using the Node B control port, to inform the CRNC that a previously requested transmission or measurement on [3.84Mcps TDD - cell sync bursts] [1.28Mcps TDD – SYNC_DL Codes] can no longer be supported.

### 8.2.24.3 Abnormal Conditions

-

## 8.2.25 Cell Synchronisation Adjustment [TDD]

### 8.2.25.1 General

The purpose of Cell Synchronisation Adjustment procedure is to allow the CRNC to adjust the timing of the radio transmission of a cell within a Node B for time alignment.

### 8.2.25.2 Successful Operation

CRNC          Node B

CELL SYNCHRONISATION ADJUSTMENT
REQUEST

CELL SYNCHRONISATION ADJUSTMENT
RESPONSE
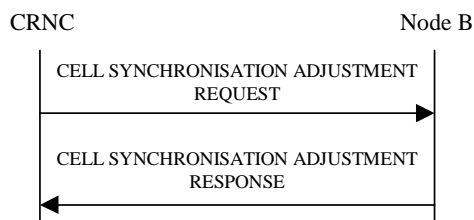
**Figure 27J Cell Synchronisation Adjustment, Successful Operation**

This procedure is initiated with a CELL SYNCHRONISATION ADJUSTMENT REQUEST message sent by the CRNC to the Node B using the Node B control port.

Upon reception, the Node B adjusts its timing according to the parameters given in the message.

If the CELL SYNCHRONISATION ADJUSTMENT REQUEST message includes the *Frame Adjustment value* IE the Node B shall apply the frame adjustment in the cell according to the *Frame Adjustment value* IE value.

If the CELL SYNCHRONISATION ADJUSTMENT REQUEST message includes the *Timing Adjustment value* IE the Node B shall apply the timing adjustment in the cell according to the *Timing Adjustment value* IE value.

[3.84Mcps TDD - If the CELL SYNCHRONISATION ADJUSTMENT REQUEST message includes the *DL Transmission Power* IE the Node B shall apply the transmission power of the cell sync burst according to the *DL Transmission Power* IE value.]

[1.28Mcps TDD - If the CELL SYNCHRONISATION ADJUSTMENT REQUEST message includes the *DwPCH Power* IE the Node B shall store the DwPCH power according to the *DwPCH Power* IE value. For the duration of those subsequent transmissions of the DwPCH which are specifically for the purpose of Node B synchronisation the power of the DwPCH shall be set to the stored power. During subsequent transmissions of the DwPCH which are for normal operation the power of the DwPCH shall assume its normal level.]

If the CELL SYNCHRONISATION ADJUSTMENT REQUEST message includes the *SFN* IE the Node B shall apply the synchronisation adjustment starting with the SFN number indicated in the message.

When the cell synchronisation adjustment is successfully done by the Node B the Node B shall respond with a CELL SYNCHRONISATION ADJUSTMENT RESPONSE message.

### 8.2.25.3 Unsuccessful Operation
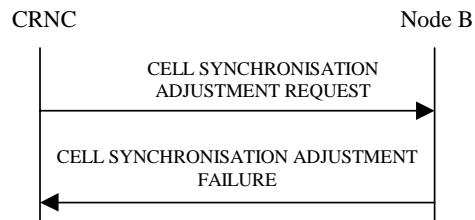


**Figure 27K Cell Synchronisation Adjustment, Unsuccessful Operation**

If the Node B cannot perform the indicated cell synchronisation adjustment due to hardware failure or other problem it shall send the CELL SYNCHRONISATION ADJUSTMENT FAILURE as a response.

Typical cause values are as follows:

**Radio Network Layer Cause**

- Cell Synchronisation Adjustment not supported

- Power level not supported

**Miscellaneous Cause**

- O&M Intervention

- HW failure

### 8.2.25.4 Abnormal Conditions

-

## 8.2.26 Information Exchange Initiation

### 8.2.26.1 General

This procedure is used by a CRNC to request the initiation of information provisioning from a Node B.

### 8.2.26.2 Successful Operation

CRNC                                    Node B

INFORMATION EXCHANGE INITIATION
REQUEST

INFORMATION EXCHANGE  INITIATION
RESPONSE
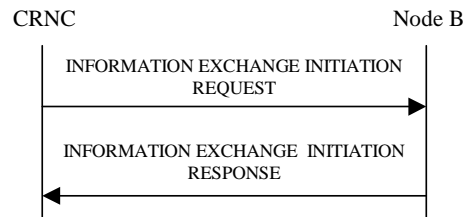
**Figure 27L: Information Exchange Initiation procedure, Successful Operation**

The procedure is initiated with the INFORMATION EXCHANGE INITIATION REQUEST message sent from the CRNC to the Node B using the Node B control port.

Upon reception, the Node B shall provide the requested information according to the *Information Type Item* IE. Unless specified below, the meaning of the parameters are given in other specifications.

**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 Node B shall report the requested information immediately.

If the *Information Report Characteristics* IE is set to 'Periodic', the Node B shall periodically initiate the Information Reporting procedure for all the requested information, with the requested reporting frequency.

If the *Information Report Characteristics* IE is set to 'On Modification', the Node B shall immediately report the requested information and then shall initiate the Information Reporting procedure in accordance to the following conditions related to the *Information Type* IE:

1) If the *Information Type Item* IE is set to 'DGPS Corrections', the Node B shall initiate the Information Reporting procedure when either the PRC has drifted from the previously reported value more than the threshold indicated in the *PRC Deviation* IE or a change has occurred in the IODE.

2) If the *Information Type Item* IE is set to 'GPS Information' and the *GPS Information Item* IE includes 'GPS Navigation Model & Time Recovery', the Node B 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 *SatID* IEs.

3) If the *Information Type Item* IE is set to 'GPS Information' and the *GPS Information Item* IE includes 'GPS Ionospheric Model', the Node B shall initiate the Information Reporting procedure for this specific GPS Information Item when any change has occurred.

4) If the *Information Type Item* IE is set to 'GPS Information' and the *GPS Information Item* IE includes 'GPS UTC Model', the Node B shall initiate the Information Reporting procedure for this specific GPS Information Item when a change has occurred in the t_ot parameter.

5) If the *Information Type Item* IE is set to 'GPS Information' and the *GPS Information Item* IE includes 'GPS Almanac', the Node B shall initiate the Information Reporting procedure for this specific GPS Information Item when any change has occurred.

6) If the *Information Type Item* IE is set to 'GPS Information' and the *GPS Information Item* IE includes 'GPS Real-Time Integrity', the Node B shall initiate the Information Reporting procedure for this specific GPS Information Item when any change has occurred.

**Response message**
If the Node B was able to initiate the information provision requested by the CRNC it shall respond with the INFORMATION EXCHANGE INITIATION RESPONSE message sent over the Node B control port. The message shall include the same Information Exchange ID that was included in the INFORMATION EXCHANGE REQUEST message. When the *Report Characteristics* IE is set to "On-Demand" or "On Modification" or "Periodic", the INFORMATION EXCHANGE INITIATION RESPONSE message shall contain the requested data.

### 8.2.26.3 Unsuccessful Operation

CRNC                                        Node B

INFORMATION EXCHANGE INITIATION
REQUEST

INFORMATION EXCHANGE
INITIATION FAILURE
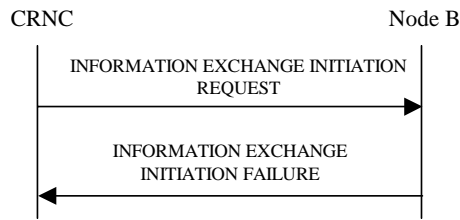
**Figure 27M: Information Exchange Initiation procedure, Unsuccessful Operation**

If the Information Type Item received in the *Information Type Item* IE indicates a type of information that cannot be provided, the Node B shall regard the Information Exchange Initiation procedure as failed.

If the requested information provision cannot be initiated, the Node B shall send the INFORMATION EXCHANGE INITIATION FAILURE message over the Node B control port. The message shall include the same Information Exchange ID 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.

### 8.2.27.4 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 Node B shall regard the Information Exchange Initiation procedure as failed.

## 8.2.27 Information Reporting

### 8.2.27.1 General

This procedure is used by a Node B to report the information requested by the CRNC with the Information Exchange Initiation procedure.

### 8.2.27.2 Successful Operation

CRNC                                        Node B

INFORMATION REPORT

**Figure 27N: Information Reporting procedure, Successful Operation**

If the requested information reporting criteria are met, the Node B shall initiate the Information Reporting procedure. The INFORMATION REPORT message shall use the Node B control port. 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 CRNC 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.

### 8.2.27.3 Abnormal Conditions

-

## 8.2.28 Information Exchange Termination

### 8.2.28.1 General

This procedure is used by the CRNC to terminate the provision of information previously requested by the Information Exchange Initiation procedure.

### 8.2.28.2 Successful Operation

CRNC                                                    Node B

INFORMATION EXCHANGE  TERMINATION
REQUEST

**Figure 27O: Information Exchange Termination procedure, Successful Operation**

This procedure is initiated with an INFORMATION EXCHANGE TERMINATION REQUEST message, sent from the CRNC to the Node B using the Node B control port.

Upon reception, the Node B shall terminate the provision of information corresponding to the Information Exchange ID.

### 8.2.28.3 Abnormal Conditions

-

## 8.2.29 Information Exchange Failure

### 8.2.29.1 General

This procedure is used by the Node B to notify the CRNC that information previously requested by the Information Exchange Initiation procedure can no longer be reported.

### 8.2.29.2 Successful Operation

CRNC                                                    Node B

INFORMATION EXCHANGE FAILURE
INDICATION
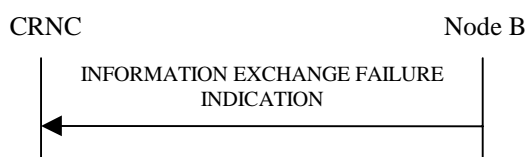
**Figure 27P: Information Exchange Failure procedure, Successful Operation**

This procedure is initiated with the INFORMATION EXCHANGE FAILURE INDICATION message, sent from the Node B to the CRNC using the Node B control port, to inform the CRNC that information previously requested by the Information Exchange Initiation procedure can no longer be reported. The message shall include the same Information Exchange ID that was used in the INFORMATION EXCHANGE INITIATION REQUEST message and the *Cause* IE set to an appropriate value.

# 8.3 NBAP Dedicated Procedures

## 8.3.1 Radio Link Addition

### 8.3.1.1 General

This procedure is used for establishing the necessary resources in the Node B for one or more additional RLs towards a UE when there is already a Node B communication context for this UE in the Node B.

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

### 8.3.1.2 Successful Operation



**Figure: 28 Radio Link Addition procedure, Successful Operation**

The procedure is initiated with a RADIO LINK ADDITION REQUEST message sent from the CRNC to the Node B.

Upon reception, the Node B 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 Node B shall prioritise resource allocation for the RL(s) to be established according to Annex A.

Physical Channels Handling:

[TDD – If the *UL DPCH Information* IE is present, the Node B shall configure the new UL DPCH(s) according to the parameters given in the message.]

[TDD – If the *DL DPCH Information* IE is present, the Node B shall configure the new DL DPCH(s) according to the parameters given in the message.]

　　[FDD – Compressed Mode]:

　　[FDD – If the RADIO LINK ADDITION REQUEST includes the *Compressed Mode Deactivation Flag* IE with value "Deactivate", the Node B shall not activate any compressed mode pattern in the new RLs. In all the other cases (Flag set to "Maintain Active" or not present), the ongoing compressed mode (if existing) shall be applied also to the added RLs.]

　　[FDD- If the RADIO LINK ADDITION REQUEST contains the *Transmission Gap Pattern Sequence Code Information* IE for any of the allocated DL Channelisation Codes, the Node B shall apply the alternate scrambling code as indicated for each DL Channelisation Code for which the *Transmission Gap Pattern Sequence Code Information* IE is set to "Code Change".]

　　[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 ref. [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 Node B shall configure the new UL CCTrCH(s) according to the parameters given in the message.]

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

Radio Link Handling:

Diversity Combination Control:

The *Diversity Control Field* IE indicates for each RL whether the Node B shall combine the new RL with existing RL(s) or not. If the *Diversity Control Field* IE is set to "May", then Node B shall decide for any of the alternatives. If the *Diversity Control Field* IE is set to "Must", the Node B shall combine the RL with one of the other RL. When a new RL is to be combined, the Node B shall choose which RL(s) to combine it with. If the *Diversity Control Field* IE is set to "Must not" the Node B shall not combine the RL with any other existing RL.

In the case of combining an RL with existing RL(s) the Node B shall indicate in the RADIO LINK ADDITION RESPONSE message with the Diversity Indication that the RL is combined. In this case the Reference RL ID shall be included to indicate one of the existing RLs that the new RL is combined with.

In the case of not combining an RL with existing RL(s), the Node B shall indicate in the RADIO LINK ADDITION RESPONSE message with the Diversity Indication that no combining is done. In this case the Node B shall include both the Transport Layer Address and the binding ID for the transport bearer to be established for each DCH, [TDD – DSCH, USCH] of the RL in the RADIO LINK ADDITION RESPONSE message.

In case of coordinated DCH, the binding ID and the transport address shall be included for only one of the coordinated DCHs.

[TDD – The Node B shall 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.]

[FDD – Transmit Diversity]:

[FDD – When *Diversity Mode* IE is "*STTD*", "*Closedloop mode1*", or "*Closedloop mode2*", the Node B shall activate/deactivate the Transmit Diversity to each Radio Link in accordance with *Transmit Diversity Indication* IE.]

[FDD – When *Transmit Diversity Indicator* IE is present Node B shall activate/deactivate the Transmit Diversity to each new Radio Link in accordance with the *Transmit Diversity Indicator* IE and the already known diversity mode.]

DL Power Control:

[FDD – If the RADIO LINK ADDITION REQUEST message includes the *Initial DL Transmission Power* IE, the Node B shall apply the given power to the transmission on each DL DPCH of the RL when starting transmission until either UL synchronisation on the Uu is achieved for the RLS or Power Balancing is activated. If no *Initial DL Transmission power* IE is included, the Node B shall use any transmission power level currently used on already existing RL's for this UE. No inner loop power control or 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) with DPC MODE currently configured for the relevant Node B Communication Context and the downlink power control procedure (see 8.3.7).]

[TDD – If the RADIO LINK ADDITION REQUEST message includes the [3.84Mcps TDD - *Initial DL Transmission Power* IE] [1.28Mcps TDD – *DL Time Slot ISCP Info LCR* IE], the Node B shall determine the initial CCTrCH DL power for each CCTrCH by the following rule: If the *CCTrCH Initial DL transmission*

*Power* IE is included for that CCTrCH then the Node B shall use that power for the initial CCTrCH DL power, otherwise the initial CCTrCH DL power is the *Initial DL transmission Power* IE included in the *RL Information* IE. The Node B shall apply the given power to the transmission on each DL DPCH and on each Time Slot of the CCTrCHwhen starting transmission until the UL synchronisation on the Uu is achieved for theCCTrCH. If no *Initial DL Transmission power* IE is included (even if *CCTrCH Initial DL transmission Power* IEs are included), the Node B shall use any transmission power level currently used on already existing CCTrCH's for this UE. 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).]

If the RADIO LINK ADDITION REQUEST message includes the *Maximum DL power* IE, the Node B shall store this value and not transmit with a higher power on any DL DPCH of the RL. If no *Maximum DL power* IE is included, any Maximum DL power stored for already existing RLs for this UE shall be applied. [FDD - During compressed mode, the $P_{SIR}(k)$ , as described in ref.[10] subclause 5.2.1.3, shall be added to the maximum DL power in slot k.]

If the RADIO LINK ADDITION REQUEST message includes the *Minimum DL power* IE, the Node B shall store this value and never transmit with a lower power on any DL DPCH of the RL. If no *Minimum DL power* IE is included, any Minimum DL power stored for already existing RLs for this UE shall be applied.

[TDD – If the RADIO LINK ADDITION REQUEST message includes the *DL Time Slot ISCP Info* IE, the Node B shall use the indicated value when deciding the DL TX Power for each timeslot as specified in ref. [21], 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].

[FDD – If the power balancing is active with the Power Balancing Adjustment Type of the Node B Communication Context set to ""Individual" in the existing RL(s) and the RADIO LINK ADDITION REQUEST message includes the *DL Reference Power* IE, the Node B 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, according to subclause 8.3.7.]

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

General:

If the RADIO LINK ADDITION REQUEST message includes the *RL Specific DCH Information* IE, the Node B may use the transport layer address and the binding identifier received from the CRNC when establishing a transport bearer for the DCH or the set of co-ordinated DCHs.

[FDD – If the RADIO LINK ADDITION REQUEST message contains an *SSDT Cell Identity* IE the Node B shall activate SSDT, if supported, for the concerned new RL, with the indicated SSDT cell identity used for that RL.]

[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 Node B shall assign the *RL Set ID* IE included in the RADIO LINK ADDITION RESPONSE message a value that uniquely identifies the RL Set within the Node B Communication context.]

[FDD – For all RLs having a common generation of the TPC commands in the DL with another new or existing RL, the Node B shall assign the *RL Set ID* IE included in the RADIO LINK ADDITION RESPONSE message the same value. This value shall uniquely identify the RL Set within the Node B Communication context.]

[FDD – After addition of the new RL(s), the UL out-of-sync algorithm defined in [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, and the minimum value of the parameters N_INSYNC_IND, that are configured in the cells supporting the radio links of the RL Set.]

Response Message:

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

After sending of the RADIO LINK ADDITION RESPONSE message the Node B shall continuously attempt to obtain UL synchronisation on the Uu and start reception on the new RL.

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

- [FDD - start transmission on the new RL after synchronisation is achieved in the DL user plane as specified in [16].]

- [TDD - start transmission on the new RL immediately as specified in [16].]

    For each RL for which the *Delayed Activation* IE is included in the RADIO LINK ADDITION REQUEST message, the Node B 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 new RL after synchronisation is achieved in the DL user plane as specified in [16], 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 [16].]

## 8.3.1.3     Unsuccessful Operation
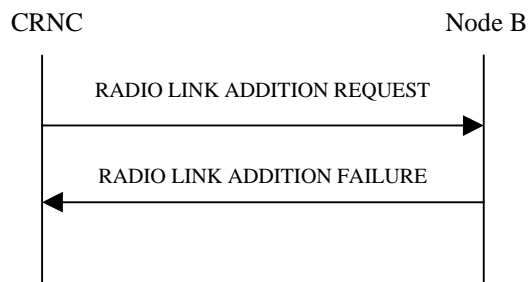


**Figure 29: Radio Link Addition procedure: Unsuccessful Operation**

If some RL(s) were established successfully, the Node B 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 RADIO LINK ADDITION REQUEST contains a *C-ID* IE indicating that a Radio Link must be established on a Cell where DPC Mode change is not supported and DPC Mode can be changed for the relevant Node B Communication Context, the Node B shall consider the procedure as failed for the concerned Radio Link and shall respond with a RADIO LINK ADDITION FAILURE with the appropriate cause value ('DPC Mode change not supported').]

Typical cause values are as follows:

Radio Network Layer Cause

- Combining not supported

- Combining Resources not available

- Requested Tx Diversity Mode not supported

- UL SF not supported

- DL SF not supported

- Reconfiguration CFN not elapsed

- CM not supported

- [FDD – DPC Mode change not supported]

- Delayed Activation not supported

**Transport Layer Cause**

- Transport Resources Unavailable

**Miscellaneous Cause**

- O&M Intervention

- Control processing overload

- HW failure

## 8.3.1.4 Abnormal conditions

[FDD – If the RADIO LINK ADDITION REQUEST contains the *Compressed Mode Deactivation Flag* IE with the value "Deactivate" when compressed mode is active for the existing RL(s), and at least one of the new RL is added in a cell that has the same UARFCN (both UL and DL) of at least one cell with an already existing RL, the Node B shall regard the Radio Link Addition procedure as failed 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 Node B Communication 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 Node B shall regard the Radio Link Addition procedure as failed 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 Node B Communication Context set to "Common" in the existing RL(s), the Node B shall regard the Radio Link Addition procedure as failed and shall respond with a RADIO LINK ADDITION FAILURE message with the cause value "Power Balancing status not compatible".]

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 Node B shall regard the Radio Link Addition procedure as failed and respond with the RADIO LINK ADDITION FAILURE message.

If the RADIO LINK ADDITION REQUEST message contains the *Transport Layer Address* IE or the *Binding ID* IE, and not both are present for a transport bearer intended to be established, the Node B shall reject the procedure using the RADIO LINK ADDITION FAILURE message.

## 8.3.2 Synchronised Radio Link Reconfiguration Preparation

### 8.3.2.1 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 Node B.

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

## 8.3.2.2 Successful Operation
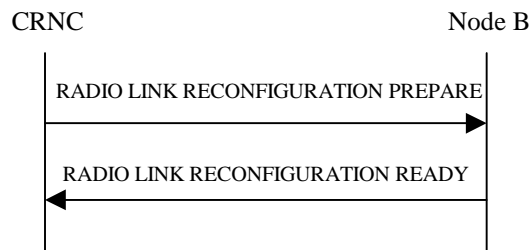


**Figure 30: Synchronised Radio Link Reconfiguration Preparation procedure, Successful Operation**

The Synchronised Radio Link Reconfiguration Preparation procedure is initiated by the CRNC by sending the message RADIO LINK RECONFIGURATION PREPARE to the Node B. The message shall use the Communication Control Port assigned for this Node B Communication Context.

Upon reception, the Node B 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.

The Node B 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 then the Node B shall treat them each as follows:

- If the *DCHs to Modify* IE includes the *Frame Handling Priority* IE, the Node B 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 Node B once the new configuration has been activated.

- If the *DCHs to Modify* IE includes the *Transport Format Set* IE for the UL of a DCH, the Node B 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 *Transport Format Set* IE for the DL of a DCH, the Node B shall apply the new Transport Format Set in the Downlink of this DCH in the new configuration.

- If the *DCHs to Modify* IE includes multiple *DCH Specific Info* IEs then the Node B shall treat the DCHs in the *DCHs to Modify* IE as a set of co-ordinated DCHs. The Node B 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 DCH which belongs to a set of co-ordinated DCHs, the Node B 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 DCH which belongs to a set of co-ordinated DCHs, the Node B 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 DCH which belongs to a set of co-ordinated DCHs, the Node B shall apply the new ToAWE in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.

- [TDD – If the *DCHs to Modify* IE includes the *CCTrCH ID* IE for the DL of a DCH to be modified, the Node B shall apply the new CCTrCH ID in the Downlink of this DCH in the new configuration.]

- [TDD – If the *DCHs to Modify* IE includes the *CCTrCH ID* IE for the UL of a DCH to be modified, the Node B shall apply the new CCTrCH ID in the Uplink of this DCH in the new configuration.]

**DCH Addition:**

If the RADIO LINK RECONFIGURATION PREPARE message includes any *DCHs to Add* IEs then the Node B shall treat them each as follows:

- If the *DCHs to Add* IE includes multiple *DCH specific Info* IEs then, the Node B shall treat the DCHs in the *DCHs to Add* IE as a set of co-ordinated DCHs. The Node B shall include these DCHs in the new configuration only if it can include all of them in the new configuration.

- [FDD – For DCHs which do not belong to a set of co-ordinated DCHs with the *QE-Selector* IE set to "selected", the Transport channel BER from that DCH shall be the base for the QE in the UL data frames. If no Transport channel BER is available for the selected DCH the Physical channel BER shall be used for the QE, ref. [16]. If the QE-Selector is set to "non-selected", the Physical channel BER shall be used for the QE in the UL data frames, ref. [16].]

- For a set of co-ordinated DCHs the Transport channel BER from the DCH with the *QE-Selector* IE set to "selected" shall be used for the QE in the UL data frames, ref. [16]. [FDD – If no Transport channel BER is available for the selected DCH the Physical channel BER shall be used for the QE, ref. [16]. If all DCHs have *QE-Selector* IE set to "non-selected" the Physical channel BER shall be used for the QE, ref. [16].]

- The Node B 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 radio interface in congestion situations within the Node B once the new configuration has been activated.

- The Node B 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 Node B 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 Start Point in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.

- The Node B 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 End Point in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.

- [TDD – The Node B shall apply the *CCTrCH ID* IE (for the DL) in the Downlink of this DCH in the new configuration.]

- [TDD – The Node B 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 *DCHs to Delete* IEs, the Node B shall not include the referenced DCHs in the new configuration.

If all of the DCHs belonging to a set of coordinated DCHs are requested to be deleted, the Node B shall not include this set of coordinated DCHs in the new configuration.

**Physical Channel Modification:**

[FDD – If the RADIO LINK RECONFIGURATION PREPARE message includes an *UL DPCH Information* IE then the Node B shall apply the parameters to the new configuration as follows: ]

- [FDD – If the *UL DPCH Information* IE includes the *Uplink Scrambling Code* IE, the Node B 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 Node B shall apply the value in the new configuration. The Node B 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 *UL SIR Target* IE, the Node B 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 Node B shall apply the value in the uplink of the new configuration.]

- [FDD – The Node B shall use the *TFCS* IE for the UL (if present) when reserving resources for the uplink of the new configuration. The Node B 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 Node B shall set the new Uplink DPCCH Structure to the new configuration.]

- [FDD - If the *UL DPCH Information* IE includes the *Diversity Mode* IE, the Node B shall apply diversity according to the given value.]

- [FDD – If the *UL DPCH Information* IE includes an *SSDT Cell Identity Length* IE and/or an *S-Field Length* IE, the Node B shall apply the values in the new configuration.]

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

- [FDD – The Node B shall use the *TFCS* IE for the DL (if it is present) when reserving resources for the downlink of the new configuration. The Node B 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 or the *TFCI Presence* IE, the Node B shall use the information when building TFCIs in the new configuration.]

- [FDD – If the *DL DPCH Information* IE includes the *DL DPCCH Slot Format* IE, group the Node B shall set the new Downlink DPCCH Structure to the new configuration.]

- [FDD – If the *DL DPCH Information* IE includes the *Multiplexing Position* IE, the Node B shall apply the indicated multiplexing type in the new configuration.]

- [FDD – If the *DL DPCH Information* IE includes the *Limited Power Increase* IE and the IE is set to 'Used', the Node B shall, if supported, use Limited Power Increase 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 Node B shall not use Limited Power Increase for the inner loop DL power control in the new configuration.]

- [FDD – If the *DL DPCH Information* IE includes the *PDSCH code mapping* IE then the Node B shall apply the defined mapping between TFCI values and PDSCH channelisation codes.]

- [FDD – If the *DL DPCH Information* IE includes the *PDSCH RL ID* IE then the Node B shall infer that the PDSCH for the specified user will be transmitted on the defined radio link.]

[FDD – If the RADIO LINK RECONFIGURATION PREPARE message includes the *Transmission Gap Pattern Sequence Information* IE the Node B shall store the new information about the Transmission Gap Pattern Sequences to be used in the new Compressed Mode Configuration. This new Compressed Mode Configuration shall be valid in the Node B until the next Compressed Mode Configuration is configured in the Node B or Node B Communication Context is deleted.]

**[TDD – UL/DL CCTrCH Modification]**

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

- [TDD – If the IE includes any of *TFCS* IE, *TFCI coding* IE or *Puncture Limit* IE the Node B shall apply these as the new values, otherwise the old values specified for this CCTrCH are still applicable.]

- [TDD – If the IE includes any *UL DPCH to add* or *DL DPCH to add* IEs, the Node B shall include this DPCH in the new configuration.]

- [TDD – If the IE includes any *UL DPCH to delete* or *DL DPCH to delete* IEs, the Node B shall remove this DPCH in the new configuration.]

- [TDD – If the IE includes any UL *DPCH to modify* or *DL DPCH to modify* IEs, and includes any of *Repetition Period* IE, *Repetition Length* IE, or *TDD DPCH Offset* IE or the message includes UL/DL Timeslot Information and includes any of *[3.84Mcps TDD - Midamble shift and Burst Type* IE, *Time Slot* IE], [1.28Mcps TDD - *Midamble shift LCR* IE, *Time Slot LCR* IE], or *TFCI presence* IE or the message includes UL/DL Code information and includes [3.84Mcps TDD - *TDD Channelisation Code* IE], [1.28Mcps TDD - *TDD*

*Channelisation Code LCR* IE], the Node B shall apply these specified information elements as the new values, otherwise the old values specified for this DPCH configuration are still applicable.]

- [1.28Mcps TDD – If the *UL CCTrCH to Modify* IE includes the *UL SIR Target* IE, the Node B shall use the value for the UL inner loop power control according [19] and [21] when the new configuration is being used.]

**[TDD – UL/DL CCTrCH Addition]**

[TDD – If the RADIO LINK RECONFIGURATION PREPARE message includes any *UL CCTrCH to Add* IE or *DL CCTrCH to Add* IE, the Node B shall include this CCTrCH in the new configuration.]

[TDD – If the *UL/DL CCTrCH to Add* IE includes any *UL/DL DPCH Information* IE, the Node B shall reserve necessary resources for the new configuration of the UL/DL DPCH(s) according to the parameters given in the message.]

[TDD – If the RADIO LINK RECONFIGURATION PREPARE message includes a *DL CCTrCH to Add* IE, the Node B shall set the TPC step size of that CCTrCH to the same value as the lowest numbered DL CCTrCH in the current configuration.]

[1.28Mcps TDD –The Node B shall use the *UL SIR Target* IE in the *UL CCTrCH to Add* IE as the UL SIR value for the inner loop power control for this CCTrCH according [19] and [21] in the new configuration.]

**[TDD – UL/DL CCTrCH Deletion]**

[TDD – If the RADIO LINK RECONFIGURATION PREPARE message includes any UL or DL CCTrCH to be deleted , the Node B shall remove this CCTrCH in the new configuration.]

DL Power Control:

- [FDD - If the *RL Information* IE includes the *DL Reference Power* IEs and the power balancing is active, Node B 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 8.3.7, 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 Node B, the Node B shall include the *DL Power Balancing Updated Indicator* IE in the *RL Information Response* IE in the RADIO LINK RECONFIGURATION READY message.]

**DSCH Addition/Modification/Deletion:**

If the RADIO LINK RECONFIGURATION PREPARE message includes any *DSCH to modify*, *DSCH to add* or *DSCH to delete* IEs, then the Node B 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.

The Node B 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 DSCH.

[FDD – If the RADIO LINK RECONFIGURATION PREPARE message includes the *TFCI2 Bearer Information* IE then the Node B shall support the establishment of a transport bearer on which the DSCH TFCI Signaling control frames shall be received if one does not already exist or shall apply the new values if such a bearer does already exist. The *Binding ID* IE and *Transport Layer Address* IE of any new bearer to be set up for this purpose shall be returned in the RADIO LINK RECONFIGURATION READY message. If the RADIO LINK RECONFIGURATION PREPARE message specifies that the TFCI2 transport bearer is to be deleted then the Node B shall release the resources associated with that bearer in the new configuration.]

[FDD – If the RADIO LINK RECONFIGURATION PREPARE message includes the *TFCI2 Bearer Request Indicator IE* in the *TFCI2 Bearer Information* IE with the value "New Bearer Requested", the Node B shall, if supported, establish a new transport bearer replacing the existing transport bearer on which the DSCH TFCI Signaling control frames shall be received. The *Binding ID* IE and *Transport Layer Address* IE of a new bearer to be set up for this purpose shall be returned in the RADIO LINK RECONFIGURATION READY message.]

[FDD – If the *TFCI Signalling Mode* IE within the RADIO LINK RECONFIGURATION PREPARE message indicates that there shall be a hard split on the TFCI field but a TFCI2 transport bearer has not already been set up and *TFCI2 Bearer Information* IE is not included in the message then the Node B shall transmit the TFCI2 field with zero power in the new configuration.]

[FDD – If the *TFCI Signalling Mode* IE within the RADIO LINK RECONFIGURATION PREPARE message indicates that there shall be a hard split on the TFCI and the *TFCI2 Bearer Information* IE is included in the message then the Node B shall transmit the TFCI2 field with zero power until Synchronisation is achieved on the TFCI2 transport bearer and the first valid DSCH TFCI Signalling control frame is received on this bearer in the new configuration (see ref. [24]).]

[FDD – If the RADIO LINK RECONFIGURATION PREPARE message includes the *Length of TFCI2* IE, then the Node B shall apply the length of TFCI (field 2) indicated in the message in the new configuration.]

[FDD – If the RADIO LINK RECONFIGURATION PREPARE message does not include the *Length of TFCI2* IE and the *Split type* IE is present with the value "Hard", then the Node B shall assume the length of the TFCI (field 2) is 5 bits in the new configuration.]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *DSCH Common Information IE,* the Node B shall treat it as follows:]

- [FDD - If the *Enhanced DSCH PC Indicator* IE is included and set to "Enhanced DSCH PC Active in the UE ", the Node B shall activate enhanced DSCH power control in accordance with ref. [10] subclause 5.2.2, if supported, using either:]

    - [FDD - the *SSDT Cell Identity for EDSCHPC* IE in the *RL Information* IE, if the *SSDT Cell Identity* IE is not included in the *RL Information* IE or]

    - [FDD - the *SSDT Cell Identity* IE in the *RL Information* IE, if both the *SSDT Cell Identity* IE and the *SSDT Cell Identity for EDSCHPC* IE are included in the *RL Information* IE.]

    [FDD - together with the *SSDT Cell Identity Length* IE in *UL DPCH Information* IE, and *Enhanced DSCH PC* IE, in the new configuration.]

[FDD - If the enhanced DSCH power control is activated and the TFCI power control in DSCH hard split mode is supported, the primary/secondary status determination in the enhanced DSCH power control is also applied to the TFCI power control in DSCH hard split mode.]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *Enhanced DSCH PC Indicator* IE set to "Enhanced DSCH PC not Active in the UE", the Node B shall deactivate enhanced DSCH power control in the new configuration.]

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

- [TDD – If the RADIO LINK RECONFIGURATION PREPARE message includes USCH information for the USCHs to be added/modified/deleted then the Node B 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 – The Node B 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 USCH.]

**RL Information:**

If the RADIO LINK RECONFIGURATION PREPARE message includes the *RL Information* IE, the Node B shall treat it as follows:

- [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 *RL Information* IE includes the *SSDT Indication* IE set to "SSDT Active in the UE", the Node B may activate SSDT using the *SSDT Cell Identity* IE in the new configuration.]

- [FDD – If the *RL Information* IE includes the *SSDT Indication* IE set to "SSDT not Active in the UE", the Node B shall deactivate SSDT in the new configuration.]

- [FDD – If the *RL Information* IE includes a *DL Code Information* IE, the Node B shall apply the values in the new configuration.]

- [FDD – If the *RL Information* IE contains the *Transmission Gap Pattern Sequence Code Information* IE in the *DL Code Information* IE for any of the allocated DL Channelisation Codes, the Node B shall apply the alternate scrambling code as indicated whenever the downlink compressed mode method SF/2 is active in the new configuration.]

- If the *RL Information* IE includes the *Maximum DL Power* and/or the *Minimum DL Power* IEs, the Node B shall apply the values in the new configuration. [FDD - During compressed mode, the $P_{SIR}(k)$ , as described in ref.[10] subclause 5.2.1.3, shall be added to the maximum DL power in slot k.].

- [TDD – If the *RL Information* IE includes the *Initial DL Transmission Power* IE, the Node B shall determine the initial CCTrCH DL power for each CCTrCH by the following rule: If the *CCTrCH Initial DL transmission Power* IE is included for that CCTrCH then the Node B shall use that power for the initial CCTrCH DL power, otherwise the initial CCTrCH DL power is the *Initial DL transmission Power* IE included in the *RL Information* IE. The Node B shall apply the determined initial CCTrCH DL power to the transmission on each DPCH of the CCTrCH when starting transmission on a new CCTrCH.until the UL synchronisation on the Uu is achieved for the CCTrCH. If no *Initial DL Transmission power* IE is included with a new CCTrCH (even if *CCTrCH Initial DL transmission Power* IEs are included), the Node B shall use any transmission power level currently used on already existing CCTrCH's when starting transmission for a new CCTrCH. 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 *RL Information* IE includes the *DL DPCH Timing Adjustment* IE, the Node B shall adjust the timing of the radio link accordingly in the new configuration.]

**Signalling bearer rearrangement:**

If the RADIO LINK RECONFIGURATION PREPARE message includes the *Signalling Bearer Request Indicator* IE the Node B shall, if supported , allocate a new Communication Control Port for the control of the Node B Communication Context and include the *Target Communication Control Port ID* IE in the RADIO LINK RECONFIGURATION READY message.

HS-DSCH Addition/Modification/Deletion:

If the RADIO LINK RECONFIGURATION PREPARE message includes any *HS-DSCH Information to add* IE *or HS-DSCH Information to delete* IEs or *HS-DSCH Information to modify* IE, then the Node B shall use this information to add/modify/delete the indicated HS-DSCH channel to/from the radio link.

If the RADIO LINK RECONFIGURATION PREPARE message includes an *HS-PDSCH RL ID* IE, then the Node B shall configure the HS-PDSCH in the radio link indicated by this IE, while removing any existing HS-PDSCH resources from other radio links associated with the Node B Communication Context.

If the RADIO LINK RECONFIGURATION PREPARE message includes an *HS-DSCH-RNTI* IE, then the Node shall use the HS-DSCH-RNTI for the Node B Communication Context.

If the RADIO LINK CONFIGURATION PREPARE message includes an *HS-DSCH Information to delet*e IE requesting the deletion of certain HS-DSCH resources for the Node B Communication Context, the Node B shall remove the indicated HS-DSCH in the new configuration.

**General**

If the RADIO LINK RECONFIGURATION PREPARE message includes the *Transport Layer Address* IE and *Binding ID* IEs in the *DSCHs to Modify* , *DSCHs to Add*, [TDD - *USCHs to Modify* , *USCHs to Add*] or in the *RL Specific DCH Information* IEs, the Node B may use the transport layer address and the binding identifier received from the CRNC when establishing a transport bearer for any Transport Channel being added, or any Transport Channel being modified for which a new transport bearer was requested with the *Transport Bearer Request Indicator* IE.

If the requested modifications are allowed by the Node B and the Node B has successfully reserved the required resources for the new configuration of the Radio Link(s), it shall respond to the CRNC with the RADIO LINK

RECONFIGURATION READY message. When this procedure has been completed successfully there exist a Prepared Reconfiguration, as defined in subclause 3.1.

In the RADIO LINK RECONFIGURATION READY message, the Node B shall include the *RL Information Response* IE for each affected Radio Link.

The Node B shall include in the RADIO LINK RECONFIGURATION READY message the Transport Layer Address and the Binding ID for any Transport Channel being added, or any Transport Channel being modified for which a new transport bearer was requested with the *Transport Bearer Request Indicator* IE.

In case of a DCH requiring a new transport bearer on Iub, the *Transport Layer Address* IE and the *Binding ID* shall be included in the IE *DCH Information Response* IE.

In case of a set of coordinated DCHs requiring a new transport bearer on Iub, the *Transport Layer Address* IE and the *Binding ID* IE in the *DCH Information Response* IE shall be included only for one of the DCH in the set of coordinated DCHs.

In case of a Radio Link being combined with another Radio Link within the Node B,the RL Information Response IE shall be included only for one of the combined RLs. The *Transport Layer Address* IE and the  *Binding ID* IE in the *DCH Information Response* IE shall be included only for one of the combined Radio Links.

## 8.3.2.3        Unsuccessful Operation
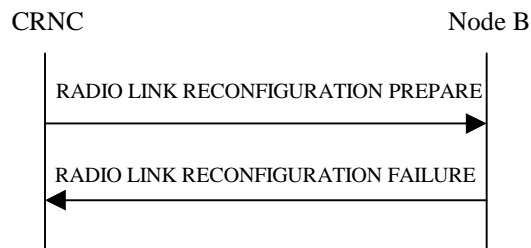


**Figure 31: Synchronised Radio Link Reconfiguration Preparation procedure, Unsuccessful Operation**

If the Node B cannot reserve the necessary resources for all the new DCHs of one set of co-ordinated DCHs requested to be added, it shall regard 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 Node B shall send the RADIO LINK RECONFIGURATION FAILURE message to the CRNC, indicating the reason for failure.

Typical cause values are as follows:

**Radio Network Layer Cause**

- UL SF not supported

- DL SF not supported

- Downlink Shared Channel Type not supported

- Uplink Shared Channel Type not supported

- CM not supported

- Number of DL codes not supported

- Number of UL codes not supported

- RL Timing Adjustment not supported

**Transport Layer Cause**

- Transport Resources Unavailable

**Miscellaneous Cause**

- O&M Intervention

- Control processing overload

- HW failure

## 8.3.2.4 Abnormal Conditions

If only a subset of all the DCHs belonging to a set of co-ordinated DCHs is requested to be deleted, the Node B shall regard the Synchronised Radio Link Reconfiguration Preparation procedure as having failed and the Node B shall send the RADIO LINK RECONFIGURATION FAILURE message to the CRNC.

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 Node B shall regard the Synchronised Radio Link Reconfiguration Preparation procedure as failed and shall respond with a RADIO LINK RECONFIGURATION FAILURE message.

[FDD - If the *RL Information* IE includes the *SSDT Indication* IE set to "SSDT Active in the UE" and SSDT is not active in the current configuration, the Node B shall regard the Synchronised Radio Link Reconfiguration Preparation procedure as failed if the *UL DPCH Information* IE does not include the *SSDT Cell Identity Length* IE. In this case, it 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 Node B shall reject the procedure using the RADIO LINK SETUP FAILURE message.

[FDD - If the *RL Information* IE includes the *DL Reference Power* IEs, but the power balancing is not active in the indicated RL(s), the Node B shall regard the Synchronised Radio Link Reconfiguration Preparation procedure as having failed and the Node B 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 Node B Communication Context set to "Common" in the existing RL(s) but the *RL Information* IE includes more than one *DL Reference Power* IEs, the Node B shall regard the Synchronised Radio Link Reconfiguration Preparation procedure as having failed and the Node B shall respond with the RADIO LINK RECONFIGURATION FAILURE message with the cause value "Power Balancing status not compatible".]

[FDD – If the RADIO LINK RECONFIGURATION PREPARE message includes the *Length of TFCI2* IE but the *TFCI signalling option* IE is set to "Normal", then the Node B shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.]

[FDD – If the RADIO LINK RECONFIGURATION PREPARE message does not include the *Length of TFCI2* IE but the *Split type* IE is set to "Logical", then the Node B shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.]

 [FDD – If the RADIO LINK RECONFIGURATION PREPARE message includes the *Split Type* IE set to the value "Hard" and the *Length of TFCI2* IE set to the value "5", then the Node B shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.]

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 being added, or any Transport Channel 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 Node B shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.

## 8.3.3 Synchronised Radio Link Reconfiguration Commit

### 8.3.3.1 General

This procedure is used to order the Node B to switch to the new configuration for the Radio Link(s) within the Node B, previously prepared by the Synchronised Radio Link Reconfiguration Preparation procedure.

The message shall use the Communication Control Port assigned for this Node B Communication Context.

## 8.3.3.2 Successful Operation

```
        CRNC                                    Node B

          │    RADIO LINK RECONFIGURATION COMMIT   │
          │ ─────────────────────────────────────► │
          │                                        │
```
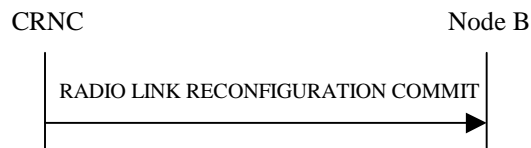
**Figure 32:Synchronised Radio Link Reconfiguration Commit procedure, Successful Operation**

The Node B 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 CRNC in the *CFN* IE when receiving the RADIO LINK RECONFIGURATION COMMIT message from the CRNC.

[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 Node B.]

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 [16], section 5.10.1 and in [24], subclause 5.8.2.

In case of signalling bearer re-arrangement, the new Communication Control Port shall be used once the Node B has received the RADIO LINK RECONFIGURATION COMMIT message via the old Communication Control Port.

[FDD – If the RADIO LINK RECONFIGURATION COMMIT includes the *Active Pattern Sequence Information* IE, the Node B 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 concerning Transmission Gap Pattern Sequence shall be started immediately at the CFN with a value equal to the value received in the *CFN* IE.]

## 8.3.3.3 Abnormal Conditions

If a new transport bearer is required for the new reconfiguration and it is not available at the requested CFN, the Node B shall initiate the Radio Link Failure procedure.

## 8.3.4 Synchronised Radio Link Reconfiguration Cancellation

### 8.3.4.1 General

This procedure is used to order the Node B to release the new configuration for the Radio Link(s) within the Node B, previously prepared by the Synchronised Radio Link Preparation Reconfiguration procedure.

The message shall use the Communication Control Port assigned for this Node B Communication Context.

### 8.3.4.2 Successful Operation

```
        CRNC                                    Node B

          │    RADIO LINK RECONFIGURATION CANCEL   │
          │ ─────────────────────────────────────► │
          │                                        │
```

**Figure 33:Synchronised Radio Link Reconfiguration Cancellation procedure, Successful Operation**

When receiving the RADIO LINK RECONFIGURATION CANCEL message from the CRNC, the Node B shall release the new configuration ([FDD - including the new Transmission Gap Pattern Sequence parameters (if existing)]) previously prepared by the Synchronised Radio Link 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.

### 8.3.4.3 Abnormal Conditions

-

## 8.3.5 Unsynchronised Radio Link Reconfiguration

### 8.3.5.1 General

The Unsynchronised Radio Link Reconfiguration procedure is used to reconfigure Radio Link(s) related to one UE-UTRAN connection within a Node B.

The Unsynchronised Radio Link Reconfiguration procedure is used when there is no need to synchronise the time of the switching from the old to the new configuration in one Node B used for a UE-UTRAN connection with any other Node B also used for the UE–UTRAN connection.

The Unsynchronised Radio Link Reconfiguration procedure shall not be initiated if a Prepared Reconfiguration exists, as defined in subclause 3.1.
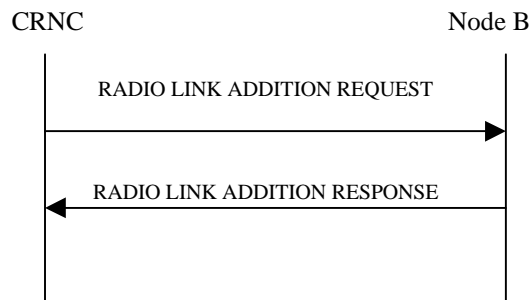
### 8.3.5.2 Successful Operation

CRNC                                    Node B

RADIO LINK RECONFIGURATION REQUEST

RADIO LINK RECONFIGURATION RESPONSE
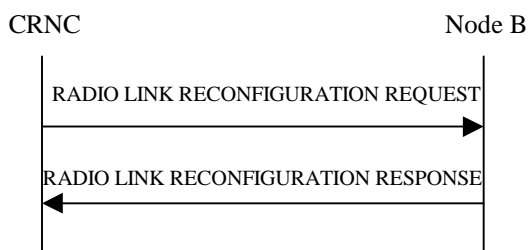
**Figure 34: Unsynchronised Radio Link Reconfiguration Procedure, Successful Operation**

The Unsynchronised Radio Link Reconfiguration procedure is initiated by the CRNC by sending the message RADIO LINK RECONFIGURATION REQUEST to the Node B. The message shall use the Communication Control Port assigned for this Node B Communication Context.

Upon reception, the Node B 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.

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

**DCH Modification:**

If the RADIO LINK RECONFIGURATION REQUEST message includes any *DCHs to Modify* IEs then the Node B shall treat them each as follows:

- If the *DCHs to Modify* IE includes on the *Frame Handling Priority* IE, the Node B 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 Node B once the new configuration has been activated.

- If the *DCHs to Modify* IE includes the *Transport Format Set* IE for the UL, the Node B 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 *Transport Format Set* IE for the DL, the Node B shall apply the new Transport Format Set in the Downlink of this DCH in the new configuration.

- If the *DCHs to Modify* IE includes multiple *DCH Specific Info* IEs then the Node B shall treat the DCHs in the *DCHs to Modify* IE as a set of co-ordinated DCHs. The Node B 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, the Node B 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, the Node B 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, the Node B shall apply the new ToAWE in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.

- [TDD – If the RADIO LINK RECONFIGURATION REQUEST message includes the *CCTrCH ID* IE for the DL of a DCH to be modified, the Node B shall apply the new CCTrCH ID in the Downlink of this DCH in the new configuration.]

- [TDD – If the RADIO LINK RECONFIGURATION REQUEST message includes the *CCTrCH ID* IE for the UL of a DCH to be modified, the Node B shall apply the new CCTrCH ID in the Uplink of this DCH in the new configuration.]

**DCH Addition:**

If the RADIO LINK RECONFIGURATION REQUEST message includes any *DCH to Add* IEs, the Node B shall reserve necessary resources for the new configuration of the Radio Link(s) according to the parameters given in the message and include these DCHs in the new configuration. In particular:

- If a *DCHs to Add* IE includes multiple *DCH Specific Info* IEs for a DCH to be added, the Node B shall treat the DCHs in the *DCHs to Add* IE as a set of co-ordinated DCHs. The Node B shall include these DCHs in the new configuration only if it can include all of them in the new configuration.

- [FDD - For DCHs which do not belong to a set of co-ordinated DCHs with the *QE-Selector* IE set to "selected", the Node B shall use the Transport channel BER from that DCHas the base for the QE in the UL data frames. If no Transport channel BER is available for the selected DCH, the Physical channel BER shall be used for the QE [16]. If the QE-Selector is set to "non-selected", the Physical channel BER shall be used for the QE in the UL data frames, ref. [16].]

- For a set of co-ordinated DCHs, the Node B shall use the Transport channel BER from the DCH with the *QE-Selector* IE set to "selected" as the QE in the UL data frames [16]. [FDD – If no Transport channel BER is available for the selected DCH, the Physical channel BER shall be used for the QE [16]. If all DCHs have *QE-Selector* IE set to "non-selected" the Physical channel BER shall be used for the QE [16].]

- The Node B 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 radio interface in congestion situations within the Node B once the new configuration has been activated.

- The Node B 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 Node B 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 Start Point in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.

- The Node B 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 End Point in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.

- [TDD – If the RADIO LINK RECONFIGURATION REQUEST message includes the *CCTrCH ID* IE for the DL of a DCH to be modified, the Node B shall apply the new CCTrCH ID in the downlink of this DCH in the new configuration.]

- [TDD – If the RADIO LINK RECONFIGURATION REQUEST message includes the *CCTrCH ID* IE for the UL of a DCH to be modified, the Node B shall apply the new CCTrCH ID in the Uplink of this DCH in the new configuration.]

**DCH Deletion:**

If the RADIO LINK RECONFIGURATION REQUEST message includes any DCH to be deleted from the Radio Link(s), the Node B shall not include this DCH in the new configuration.

If all of the DCHs belonging to a set of co-ordinated DCHs are requested to be deleted, the Node B shall not include this set of coordinated 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 Node B 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 Node B 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 Node B shall apply the parameters to the new configuration as follows:]

- [FDD – If the *DL DPCH Information* IE includes on the *TFCS* IE for the DL, the Node B 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, the Node B shall use the use the information when building TFCIs in the new configuration.

  - [FDD – If the *Length of TFCI2* IE is included, then the Node B shall apply the length of TFCI (field 2) indicated in the message in the new configuration.]

  - [FDD – If the *Length of TFCI2* IE is not included and the *Split type* IE is present with the value "Hard", then the Node B shall assume the value of the TFCI (field 2) is 5 bits in the new configuration.]

- [FDD – If the *DL DPCH Information* IE includes the *Limited Power Increase* IE and the IE is set to 'Used', the Node B 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 message includes the *Limited Power Increase* IE and the IE is set to 'Not Used', the Node B 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 Node B shall store the new information about the Transmission Gap Pattern Sequences to be used in the new Compressed Mode Configuration. This new Compressed Mode Configuration shall be valid in the Node B until the next Compressed Mode Configuration is configured in the Node B or Node B Communication Context is deleted.]

**[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 in the Radio Link(s), the Node B shall reserve necessary resources for the new configuration of the Radio Link(s) according to the parameters given in the message.]

[TDD – If the *UL/DL CCTrCH to modify* IE includes *TFCS* IE, and/or *Puncture Limit* IE the Node B shall apply these as the new values, otherwise the old values specified for this CCTrCH are still applicable.]

**[TDD – UL/DL CCTrCH Deletion]**

[TDD – If the RADIO LINK RECONFIGURATION REQUEST message includes any *UL CCTrCH to delete* IE or *DL CCTrCH to delete* IE, the Node B shall not include this CCTrCH in the new configuration.]

DL Power Control:

- [FDD – If the *Radio Link Information* IE includes the *DL Reference Power* IE and the power balancing is active, the Node B 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* 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 Node B, the Node B shall include the *DL Power Balancing Updated Indicator* IE in the *RL Information Response* IE in the RADIO LINK RECONFIGURATION RESPONSE message.]

**RL Information:**

If the RADIO LINK RECONFIGURATION REQUEST message includes the *RL Information* IE, the Node B shall treat it as follows:

- If the *RL Information* IE includes the *Maximum DL Power* IE, the Node B shall apply this value to the new configuration and not transmit with a higher power on any Downlink DPCH of the Radio Link once the new configuration is being used. [FDD - During compressed mode, the $P_{SIR}(k)$ , as described in ref.[10] subclause 5.2.1.3, shall be added to the maximum DL power in slot k.]

- If the *RL Information* IE includes the *Minimum DL Power* IE, the Node B shall apply this value to the new configuration and never transmit with a lower power on any Downlink Channelisation Code of the Radio Link once the new configuration is being used.

- [FDD – If the *RL Information* IE contains the *Transmission Gap Pattern Sequence Code Information* IE in the *DL Code Information* IE for any of the allocated DL Channelisation Codes, the Node B shall apply the alternate scrambling code as indicated whenever the downlink compressed mode method SF/2 is active in the new configuration.]

**Signalling Bearer Re-arrangement:**

If the RADIO LINK RECONFIGURATION REQUEST message includes the *Signalling Bearer Request Indicator* IE the Node B shall, if supported, allocate a new Communication Control Port for the control of the Node B Communication Context and include the *Target Communication Control Port ID* IE in the RADIO LINK RECONFIGURATION RESPONSE message.

**General**

If the RADIO LINK RECONFIGURATION REQUEST message includes the *RL Specific DCH Information* IE, the Node B may use the transport layer address and the binding identifier received from the CRNC when establishing a transport bearer for any Transport Channel being added, or any Transport Channel being modified for which a new transport bearer was requested with the *Transport Bearer Request Indicator* IE.

If the requested modifications are allowed by the Node B, the Node B has successfully allocated the required resources, and changed to the new configuration it shall respond to the CRNC with the RADIO LINK RECONFIGURATION RESPONSE message.

In the RADIO LINK RECONFIGURATION RESPONSE message, the Node B shall include the *RL Information Response* IE for each affected Radio Link.

The Node B shall include in the RADIO LINK RECONFIGURATION RESPONSE message the *Transport Layer Address* IE and the *Binding ID* IE in the *DCH Information Response* IE for any Transport Channel being added, or any Transport Channel 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 [16], section 5.10.1.

In case of a set of coordinated DCHs requiring a new transport bearer on Iub, the *Transport Layer Address* IE and the *Binding ID* IE in the *DCH Information Response* IE shall be included only for one of the DCH in the set of coordinated DCHs.

In case of a Radio Link being combined with another Radio Link within the Node B, *RL Information Response* IE shall be included only for one of the combined Radio Links. The *Transport Layer Address* IE and the *Binding ID* IE in the *DCH Information Response* IE shall be included only for one of the combined Radio Links.

In the case of signalling bearer re-arrangement, the new Communication Control Port shall be used once the Node B has sent the RADIO LINK RECONFIGURATION RESPONSE message via the old Communication Control Port.

## 8.3.5.3 Unsuccessful Operation
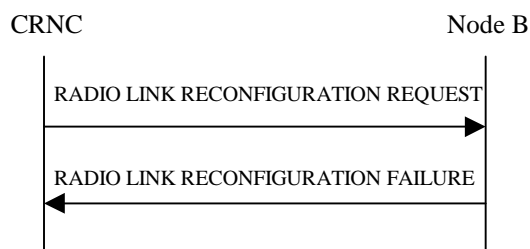
**Figure 35: Unsynchronised Radio Link Reconfiguration procedure, Unsuccessful Operation**

If the Node B cannot allocate the necessary resources for all the new DCHs of one set of coordinated, DCHs requested to be set-up it shall regard 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 Node B shall send the RADIO LINK RECONFIGURATION FAILURE message to the CRNC, indicating the reason for failure.

Typical cause values are as follows:

**Radio Network Layer Cause**

- CM not supported

**Transport Layer Cause**

- Transport Resources Unavailable

**Miscellaneous Cause**

- O&M Intervention

- Control processing overload

- HW failure

## 8.3.5.4 Abnormal Conditions

If only a subset of all the DCHs belonging to a set of co-ordinated DCHs is requested to be deleted, the Node B shall regard the Unsynchronised Radio Link Reconfiguration procedure as having failed and shall send the RADIO LINK RECONFIGURATION FAILURE message to the CRNC.

[FDD – If the *RL Information* IE contains the *DL Code Information* IE and this IE includes *DL Scrambling Code* and *FDD DL Channelisation Code Number* IEs not matching the DL Channelisation code(s) already allocated to the Radio Link identified by *RL ID* IE, then the Node B shall consider the Unsynchronised Radio Link Reconfiguration procedure as having failed and it shall send the RADIO LINK RECONFIGURATION FAILURE message to the CRNC.

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 Node B shall regard the Unsynchronised Radio Link Reconfiguration Preparation procedure as failed and 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 Node B shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.

[FDD - If the *RL Information* IE includes the *DL Reference Power* IEs, but the power balancing is not active in the indicated RL(s), the Node B shall regard the Unsynchronised Radio Link Reconfiguration procedure as having failed

and the Node B 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 Node B Communication Context set to "Common" in the existing RL(s) but the *RL Information* IE includes more than one *DL Reference Power* IEs, the Node B shall regard the Unsynchronised Radio Link Reconfiguration procedure as having failed and the Node B shall respond 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 being added, or any Transport Channel 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 Node B shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.

# 8.3.6 Radio Link Deletion

## 8.3.6.1 General

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

The Radio Link Deletion procedure may be initiated by the CRNC at any time when the Node B Communication Context exists.

## 8.3.6.2 Successful Operation
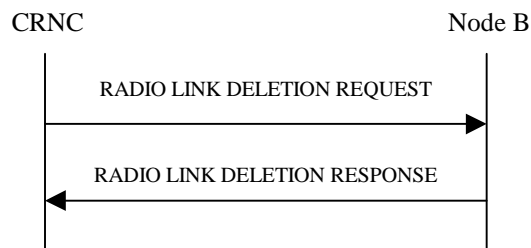


**Figure 36: Radio Link Deletion procedure, Successful Operation**

The procedure is initiated with a RADIO LINK DELETION REQUEST message sent from the CRNC to the Node B.

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

[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, and the minimum value of the parameters N_INSYNC_IND, that are configured in the cells supporting the radio links of the RL Set].

## 8.3.6.3 Unsuccessful Operation

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## 8.3.6.4 Abnormal Conditions

If the RL indicated by the *RL ID* IE*, Node B Communication ID* IE *and CRNC Communication ID* IE does not exists, the Node B shall response with the RADIO LINK DELETION RESPONSE message and use the *CRNC Communication Context ID* IE received in the RADIO LINK DELETION REQUEST message.

# 8.3.7 Downlink Power Control [FDD]

## 8.3.7.1 General

The purpose of this procedure is to balance the DL transmission powers of one or more Radio Links used for the related UE-UTRAN connection within the Node B. The Downlink Power Control procedure may be initiated by the CRNC at any time when the Node B communication context exists, irrespective of other ongoing CRNC initiated dedicated NBAP procedures towards this Node B communication context. The only exception occurs when the CRNC has requested the deletion of the last RL via this Node B, in which case the Downlink Power Control procedure shall no longer be initiated.

## 8.3.7.2 Successful Operation

CRNC                                                    Node B

|————————— DL POWER CONTROL REQUEST —————————▶|

**Figure 37: Downlink Power Control procedure, Successful Operation**

The procedure is initiated by the CRNC sending a DL POWER CONTROL REQUEST message to the Node B.

The *Power Adjustment Type* IE defines the characteristic of the power adjustment.

If the value of the *Power Adjustment Type* IE is *Common*, the Power Balancing Adjustment Type of the Node B Communication Context shall be set to "Common". As long as the Power Balancing Adjustment Type of the Node B Communication Context is set to "Common", the Node B shall perform the power adjustment (see below) for all existing and future radio links associated with the context identified by the *Node B Communication Context ID* IE and use a common DL reference power level.

If the value of the *Power Adjustment Type* IE is *Individual*, the Power Balancing Adjustment Type of the Node B Communication Context shall be set to "Individual". The Node B shall perform the power adjustment (see below) for all radio links addressed in the message using the given DL Reference Powers per RL. If the Power Balancing Adjustment Type of the Node B Communication 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 Power Balancing Adjustment Type of the Node B Communication Context shall be set to "None" and the Node B 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 Node B shall activate inner loop DL power control for all radio links for the Node B communication context. If the *Inner Loop DL PC Status* IE is present and set to 'Inactive ', the Node B shall deactivate inner loop DL power control for all radio links for the Node B communication 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:

$$\sum P_{bal} = (1-r)(P_{ref} + P_{P-CPICH} - P_{init})$$ with an accuracy of ±0.5 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, $P_{P\text{-}CPICH}$ 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 CRNC.

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.

### 8.3.7.3     Abnormal Conditions

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## 8.3.8     Dedicated Measurement Initiation

### 8.3.8.1     General

This procedure is used by a CRNC to request the initiation of measurements on dedicated resources in a Node B.

The Dedicated Measurement Initiation procedure shall not be initiated if a Prepared Reconfiguration exists, as defined in subclause 3.1.

### 8.3.8.2     Successful Operation
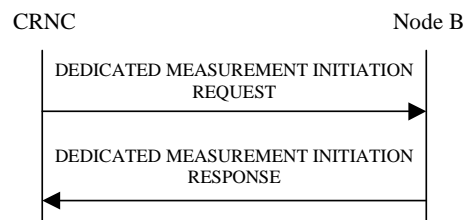


**Figure 38: Dedicated Measurement Initiation procedure, Successful Operation**

The procedure is initiated with a DEDICATED MEASUREMENT INITIATION REQUEST message sent from the CRNC to the Node B using the communication control port assigned to the Node B communication context.

Upon reception, the Node B 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.

If the *Node B Communication Context ID* IE equals the reserved value 'All NBCC', this measurement request shall apply for all current and future Node B Communication Contexts controlled via the Communication Control Port on which the DEDICATED MEASUREMENT INITIATION REQUEST message was received. Otherwise, this measurement request shall apply for the requested Node B Communication Context ID only.

If the *Node B Communication Context ID* IE equals the reserved value 'All NBCC', the measurement request shall be treated as a single measurement, despite applying to multiple contexts. This means that it may only be terminated or failed on 'All NBCC'.

If the *Node B Communication Context ID* IE equals the reserved value 'All NBCC', the measurement shall be initiated only for those Node B Communication Contexts handling a mode (FDD, 3.84Mcps TDD or 1.28Mcps TDD) for which the concerned measurement is specified in [4] and [5].

If the *Dedicated Measurement Object Type* IE is set to "RL", measurement results shall be reported for all indicated Radio Links.

[FDD – If the *Dedicated Measurement Object Type* IE is set to "RLS", measurement results shall be reported for all indicated Radio Link Sets.]

[FDD - If the *Dedicated Measurement Object Type* IE is set to "ALL RL", measurement results shall be reported for all current and future Radio Links within the Node B Communication Context.]

[TDD - If the *Dedicated Measurement Object Type* IE is set to "ALL RL", measurement results shall be reported for one existing DPCH per CCTrCH in each used time slot of current and future Radio Links within the Node B Communication Context, provided the measurement type is applicable to the respective DPCH.]

[FDD – If the *Dedicated Measurement Object Type* IE is set to "ALL RLS", measurement results shall be reported for all existing and future Radio Link Sets within the Node B Communication 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 and no *PUSCH Information* IE is provided within the RL Information the measurement request shall apply for one existing physical channel per CCTrCH in each used time slot of the Radio Link, provided the measurement type is applicable to this physical channel.]

[TDD – If the *PUSCH Information* IE is provided within the RL Information the measurement request shall apply for the requested physical channel individually.]

If the *CFN Reporting Indicator* IE is set to "FN Reporting Required", the *CFN* IE shall be included in the measurement report or in the measurement response, the latter only in the case the *Report Characteristics* IE is set to 'On-Demand'. The reported CFN shall be the CFN at the time when the measurement value was reported by the layer 3 filter, referred to as point C in the measurement model [25].

If the *CFN* IE is provided, it indicates the frame for which the first measurement 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 [25].

**Report characteristics**
The *Report Characteristics* IE is set to how the reporting of the measurement shall be performed. See also Annex B.

If the *Report Characteristics* IE is set to 'On-Demand', the Node B shall return the result of the measurement immediately.

If the *Report Characteristics* IE is set to 'Periodic', the Node B shall periodically initiate the Dedicated Measurement Report procedure for this measurement, with the requested report frequency.

If the *Report Characteristics* IE is set to 'Event A', the Node B shall initiate the Dedicated Measurement Reporting procedure when the measured entity rises above the requested threshold and stays there for the requested hysteresis time. If no hysteresis time is given, the Node B shall use the value zero for the hysteresis time.

If the *Report Characteristics* IE is set to 'Event B', the Node B shall initiate the Dedicated Measurement Reporting procedure when the measured entity falls below the requested threshold and stays there for the requested hysteresis time. If no hysteresis time is given, the Node B shall use the value zero for the hysteresis time.

If the *Report Characteristics* IE is set to 'Event C', the Node B shall initiate the Dedicated Measurement Reporting procedure when the measured entity rises by an amount greater than the requested threshold within the requested time. After having reported this type of event, the next C event reporting for the same measurement cannot be initiated before the rising/falling time has elapsed since the previous event reporting.

If the *Report Characteristics* IE is set to 'Event D', the Node B shall initiate the Dedicated Measurement Reporting procedure when the measured entity falls by an amount greater than the requested threshold within the requested time. After having reported this type of event, the next D event reporting for the same measurement cannot be initiated before the rising/falling time has elapsed since the previous event reporting.

If the *Report Characteristics* IE is set to 'Event E', the Node B shall initiate the Dedicated Measurement Reporting procedure when the measured entity rises above the 'Measurement Threshold 1' and stays there for the 'Measurement Hysteresis Time' (Report A). When the conditions for Report A are met and the *Report Periodicity* IE is provided the Node B shall also initiate the Dedicated Measurement Reporting procedure periodically. If the conditions for Report A have been met and the measured entity falls below the 'Measurement Threshold 2' and stays there for the 'Measurement Hysteresis Time', the Node B shall initiate the Dedicated Measurement Reporting procedure (Report B) as well as terminating any corresponding periodic reporting. If 'Measurement Threshold 2' is not present, the Node B shall use 'Measurement Threshold 1' instead. If no 'Measurement Hysteresis Time' is provided, the Node B 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 Node B shall initiate the Dedicated Measurement Reporting procedure when the measured entity falls below the 'Measurement Threshold 1' and stays there for the 'Measurement Hysteresis Time' (Report A). When the conditions for Report A are met and the *Report Periodicity* IE is provided the Node B shall also initiate the Dedicated Measurement Reporting procedure periodically. If the conditions for Report A have been met and the measured entity rises above the 'Measurement Threshold 2' and stays there for the 'Measurement

Hysteresis Time', the Node B shall initiate the Dedicated Measurement Reporting procedure (Report B) as well as terminating any corresponding periodic reporting. If 'Measurement Threshold 2' is not present, the Node B shall use 'Measurement Threshold 1' instead. If no 'Measurement Hysteresis Time' is provided, the Node B 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 Node B 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 Node B shall terminate the measurement locally, i.e. without reporting this to the CRNC.

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 Node B 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 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 Fn)

$a = 1/2^{(k/2)}$, 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.

**Response message**

If the Node B was able to initiate the measurement requested by the CRNC, it shall respond with the DEDICATED MEASUREMENT INITIATION RESPONSE message using the communication control port assigned to the Node B communication context. The message shall include the same Measurement ID that was used in the measurement request.

Only in the case when *Report Characteristics* IE is set to "On-Demand", the DEDICATED MEASUREMENT INITIATION RESPONSE message shall contain the measurement result. In this case also the *Dedicated Measurement Object* IE shall be included if it was included in the request message.

In the case that the *Node B Communication Context ID* IE is set to 'All NBCC', the *CRNC Communication Context ID* IE in the DEDICATED MEASUREMENT INITIATION RESPONSE shall be set to the value 'All CRNCCC', which is reserved for this purpose.

**Interaction with Reset Procedure**

If a measurement has been requested with the *Node B Communication Context ID* IE set to 'All NBCC', the Node B shall terminate the measurement locally if either the CRNC or the Node B initiates the Reset procedure for the relevant Communication Control Port or the entire Node B.

### 8.3.8.3 Unsuccessful Operation
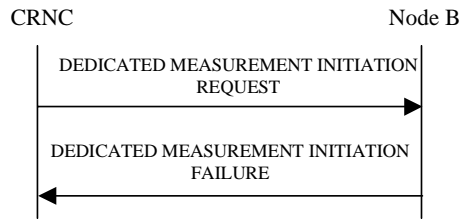


**Figure 39: Dedicated Measurement Request procedure: Unsuccessful Operation**

If the requested measurement cannot be initiated, the Node B shall send a DEDICATED MEASUREMENT INITIATION FAILURE message using the communication control port assigned to the Node B communication context. The message shall include the same Measurement ID that was used in the DEDICATED MEASUREMENT INITIATION REQUEST message and the *Cause* IE set to an appropriate value.

In the case that the *Node B Communication Context ID* IE is set to 'All NBCC' the *CRNC Communication Context ID* IE in the DEDICATED MEASUREMENT INITIATION FAILURE shall be set to the value 'All CRNCCC', which is reserved for this purpose.

Typical cause values are as follows:

**Radio Network Layer cause**

- Measurement not supported for the object

- Measurement Temporarily not Available

**Miscellaneous Cause**

- O&M Intervention

- Control processing overload

- HW failure

### 8.3.8.4 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 Node B shall regard the Dedicated Measurement Initiation procedure as failed.

**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 | X | X | |
| Round Trip Time | X | X | X | X | X | X | X | X | |

If the Dedicated Measurement Type received in the *Dedicated Measurement Type* IE is not defined in ref. [4] or [5] to be measured on the Dedicated Measurement Object Type received in the *Dedicated Measurement Object Type* IE in the

DEDICATED MEASUREMENT INITIATION REQUEST message, the Node B shall regard the Dedicated Measurement Initiation procedure as failed.

## 8.3.9 Dedicated Measurement Reporting

### 8.3.9.1 General

This procedure is used by the Node B to report the result of measurements requested by the CRNC with the Dedicated Measurement Initiation procedure. The Node B may initiate the Dedicated Measurement Reporting procedure at any time after establishing a Radio Link, as long as the Node B communication context exists.

### 8.3.9.2 Successful Operation

CRNC                                                              Node B

DEDICATED MEASUREMENT REPORT
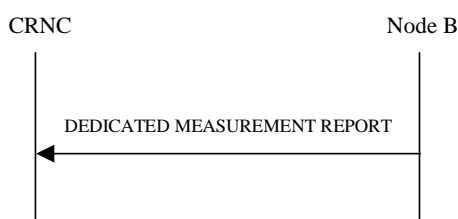
**Figure 40: Dedicated Measurement Reporting procedure, Successful Operation**

If the requested measurement reporting criteria are met, the Node B shall initiate the Dedicated Measurement Reporting procedure. The DEDICATED MEASUREMENT REPORT message shall use the communication control port assigned to the Node B communication context. If the measurement was initiated (by the Dedicated Measurement Initiation procedure) for multiple dedicated measurement objects, the Node B may include measurement values for multiple objects in the DEDICATED MEASUREMENT REPORT message. Unless specified below, the meaning of the parameters are given in other specifications.

The *Dedicated Measurement ID* IE shall be set to the Dedicated Measurement ID provided by the CRNC when initiating the measurement with the Dedicated Measurement Initiation procedure.

If the achieved measurement accuracy does not fulfil the given accuracy requirement, the Measurement not available shall be reported.

### 8.3.9.3 Abnormal Conditions

-

## 8.3.10 Dedicated Measurement Termination

### 8.3.10.1 General

This procedure is used by the CRNC to terminate a measurement previously requested by the Dedicated Measurement Initiation procedure.

The Dedicated Measurement Termination procedure shall not be initiated if a Prepared Reconfiguration exists, as defined in subclause 3.1.

### 8.3.10.2 Successful Operation

CRNC                                                          Node B

DEDICATED MEASUREMENT
TERMINATION REQUEST

**Figure 41: Dedicated Measurement Termination procedure, Successful Operation**

This procedure is initiated with a DEDICATED MEASUREMENT TERMINATION REQUEST message, sent from the CRNC to the Node B using the communication control port assigned to the Node B communication context.

Upon reception, the Node B shall terminate reporting of measurements corresponding to the received Dedicated Measurement ID.

### 8.3.10.3 Abnormal Conditions

-

## 8.3.11 Dedicated Measurement Failure

### 8.3.11.1 General

This procedure is used by the Node B to notify the CRNC that a measurement previously requested by the Dedicated Measurement Initiation procedure can no longer be reported. The Node B is allowed to initiate the DEDICATED MEASUREMENT FAILURE INDICATION message at any time after having sent the RADIO LINK SETUP RESPONSE message, as long as the Node B communication context exists.

### 8.3.11.2 Successful Operation

CRNC                                                          Node B

DEDICATED MEASUREMENT FAILURE
INDICATION

**Figure 42: Dedicated Measurement Failure procedure, Successful Operation**

This procedure is initiated with a DEDICATED MEASUREMENT FAILURE INDICATION message, sent from the Node B to the CRNC using the communication control port assigned to the Node B communication context, to inform the CRNC that a previously requested measurement can no longer be reported. The Node B has locally terminated the indicated measurement.

If the failed measurement was initiated with the *Node B Communication Context ID* IE set to the reserved value "All NBCC" and the Node B has terminated the measurement reporting of the measurement corresponding to the Measurement ID indicated in the DEDICATED MEASUREMENT FAILURE INDICATION message, the *CRNC Communication Context ID* IE shall be set to the value 'All CRNCCC'.

### 8.3.11.3 Abnormal Conditions

-

## 8.3.12    Radio Link Failure

### 8.3.12.1    General

This procedure is used by Node B to indicate a failure in one or more Radio Links [FDD - or Radio Link Sets][TDD or CCTrCHs within a Radio Link].

The Node B may initiate the Radio Link Failure procedure at any time after establishing a Radio Link.

### 8.3.12.2    Successful Operation

CRNC                                                    Node B

RADIO LINK FAILURE INDICATION
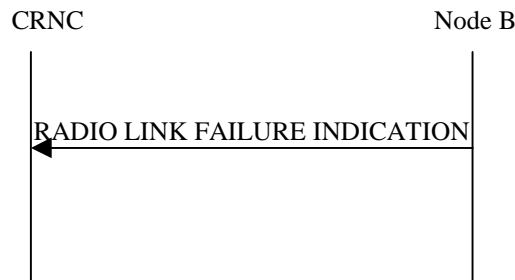
**Figure 43: Radio Link Failure procedure, Successful Operation**

When Node B detects that one or more Radio Link [FDD - or Radio Link Sets] [TDD – or CCTrCHs within a Radio Link] is no longer available, it sends the RADIO LINK FAILURE INDICATION message to CRNC indicating the failed Radio Links or Radio Link Sets or CCTrCHs with the most appropriate cause values in the *Cause* IE.  If the failure concerns one or more individual Radio Links the Node B shall indicate the affected Radio Link(s) using the *RL Information* IE. [FDD - The Node B shall indicate the affected Radio Link Set(s) using the *RL Set Information* IE.] [TDD – If the failure concerns only the failure of one or more CCTrCH's within in a radio link the Node B shall indicate the affected CCTrCH's using the *CCTrCH ID* IE.]

When the Radio Link Failure procedure is used to notify the loss of UL synchronisation of a [FDD – Radio Link Set] [TDD – Radio Link or CCTrCHs within a Radio Link] on the Uu, the message shall be sent, with the cause value 'Synchronisation Failure', when indicated by the UL out-of-sync algorithm defined in [10] and [21]. [FDD – The algorithm in [10] shall use the maximum value of the parameters N_OUTSYNC_IND and T_RLFAILURE, and the minimum value of the parameters N_INSYNC_IND, that are configured in the cells supporting the radio links of the RL Set.]

[FDD – When the Radio Link Failure procedure is used to indicate permanent failure in one or more Radio Links/Radio Link Sets due 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 'Invalid CM Settings'. After sending the RADIO LINK FAILURE INDICATION message to notify the permanent failure, the Node B shall not remove the Radio Link(s)/Radio Link Set(s) from the UE Context, or the UE Context itself.]

In the other cases Radio Link Failure procedure is used to indicate that one or more Radio Links/Radio Link Sets are permanently unavailable and cannot be restored. After sending the RADIO LINK FAILURE INDICATION message to notify the permanent failure, the Node B shall not remove the Radio Link/Radio Link Set from the UE Context, or the UE Context itself. When applicable, the retention priorities associated with the transport channels shall be used by the Node B to prioritise which Radio Links/Radio Link Sets to indicate as unavailable to the CRNC.

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

## 8.3.12.3 Abnormal Conditions

-

## 8.3.13 Radio Link Restoration

### 8.3.13.1 General

This procedure is used by the Node B to notify the achievement and re-achievement of uplink synchronisation of one or more [FDD - Radio Link Sets][TDD – Radio Links or CCTrCHs within a Radio Link] on the Uu.

The Node B may initiate the Radio Link Restoration procedure at any time after establishing a Radio Link.

### 8.3.13.2 Successful Operation

CRNC                                                    Node B

RADIO LINK RESTORE
INDICATION
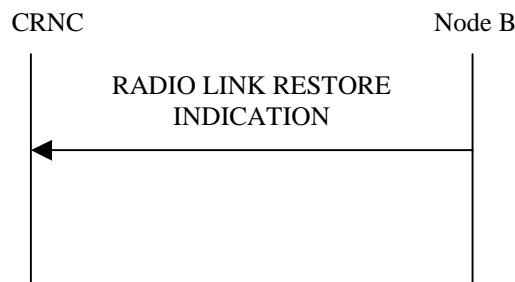
**Figure 44: Radio Link Restoration procedure, Successful Operation**

The Node B shall send the RADIO LINK RESTORE INDICATION message to the CRNC when indicated by the UL sync detection algorithm defined in ref. [10] and [21]. [FDD – The algorithm in ref. [10] shall use the minimum value of the parameters N_INSYNC_IND that are configured in the cells supporting the radio links of the RL Set.]

[TDD – If the re-established Uu synchronisation concerns one or more individual Radio Links the Node B shall indicate the affected Radio Link(s) using the *RL Information* IE.] [TDD – If the re-established Uu synchronization concerns one or more individual CCTrCHs within a radio link the Node B shall indicate the affected CCTrCHs using the *CCTrCH ID* IE.] [FDD – If the re-established Uu synchronisation concerns one or more Radio Link Sets the Node B shall indicate the affected Radio Link Set(s) using the *RL Set Information* IE.]

### 8.3.13.3 Abnormal Condition

-

## 8.3.14 Compressed Mode Command [FDD]

### 8.3.14.1 General

The Compressed Mode Command procedure is used to activate or deactivate the compressed mode in the Node B for one UE-UTRAN connection.

The Compressed Mode Command procedure shall not be initiated if a Prepared Reconfiguration exists, as defined in subclause 3.1.

### 8.3.14.2 Successful Operation

CRNC

Node B

COMPRESSED MODE COMMAND

**Figure 47: Compressed Mode Command procedure, Successful Operation**

The Node B shall deactivate all the ongoing Transmission Gap Pattern Sequences at the *CM Configuration Change CFN* IE requested by CRNC when receiving COMPRESSED MODE COMMAND message from the CRNC. 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 concerning 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.

### 8.3.14.3 Abnormal Conditions

-

## 8.3.15 Downlink Power Timeslot Control [TDD]

### 8.3.15.1 General

The purpose of this procedure is to enable the Node B to use the indicated DL Timeslot ISCP values when deciding the DL TX Power for each timeslot

The Downlink Power Timeslot Control procedure can be initiated by the CRNC at any time when the Node B communication context exists, irrespective of other ongoing CRNC initiated dedicated NBAP procedures towards this Node B communication context. The only exception occurs when the CRNC has requested the deletion of the last RL via this Node B, in which case the Downlink Power Timeslot Control procedure shall no longer be initiated.

### 8.3.15.2 Successful Operation

CRNC

Node B

DL POWER TIMESLOT CONTROL
REQUEST

**Figure 47A: Downlink Power Timeslot Control procedure, Successful Operation**

The procedure is initiated by the CRNC sending a DL POWER TIMESLOT CONTROL REQUEST message to the Node B.

Upon reception, the Node B shall use the indicated DL Timeslot ISCP value when deciding the DL TX Power for each timeslot as specified in ref. [21], 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.

If the *Primary CCPCH RSCP* IE is present, the Node B should use the indicated value for HS-DSCH scheduling and transmit power adjustment.

### 8.3.15.3 Abnormal Conditions

-

## 8.3.16 Radio Link Pre-emption

### 8.3.16.1 General

This procedure is started by the Node B when resources need to be freed.

The Node B may initiate the Radio Link Pre-emption procedure at any time after establishing a Radio Link.

### 8.3.16.2 Successful Operation
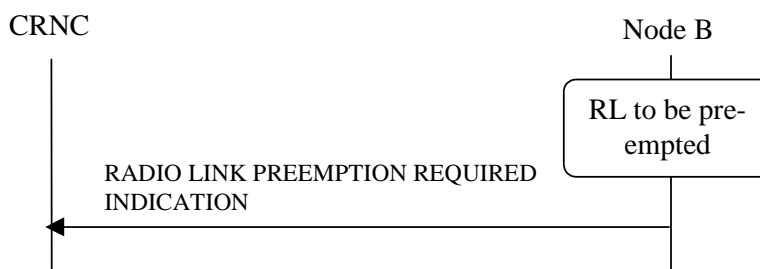
**Figure 47B: RL Pre-emption procedure, Successful Operation**

When Node B detects that a one or more Radio Links should be pre-empted, see Annex A, it shall send the RADIO LINK PREEMPTION REQUIRED INDICATION message to the CRNC. If all Radio Links for a CRNC Communication Context ID should be pre-empted, the *RL Information* IE shall be omitted. If one or several but not all Radio Links should be pre-empted for a CRNC Communication Context, the Radio Links 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 CRNC.

### 8.3.16.3 Abnormal Conditions

-

## 8.3.17 Bearer Re-arrangement

### 8.3.17.1 General

This procedure is started by the Node B when Bearers for the Node B Communication Context need to be rearranged.

The Node B may initiate the Bearer Rearrangement procedure at any time after establishing a Radio Link.

### 8.3.17.2 Successful Operation
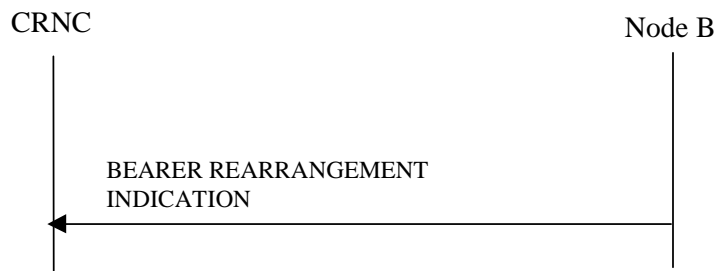


**Figure 47C: Bearer Re-arrangement Indication, Successful Operation**

When the Node B detects that a signaling bearer or a transport bearer or both need to be re-arranged for the Node B Communication Context, it shall send the BEARER REARRANGEMENT INDICATION message to the CRNC. The message shall use the Communication Control Port assigned for this Node B Communication Context.

If the signaling bearer for the control of the Node B Communication Context needs to be rearranged, the *Signalling Bearer Requested Indicator* IE shall be included in the BEARER REARRANGEMENT INDICATION message.

If the transport bearer for a transport channel needs to be rearranged, the ID of the transport channel for which a new transport bearer is required, shall be included in the BEARER REARRANGEMENT INDICATION message.

[FDD - If the TFCI2 bearer on which the DSCH TFCI Signaling control frames shall be received is required to be re-arranged, the *TFCI2 Bearer Request Indicator* IE shall be included in the BEARER REARRANGEMENT INDICATION message.]

### 8.3.17.3 Abnormal Conditions

-

## 8.3.18 Radio Link Activation

### 8.3.18.1 General

This procedure is used to activate or de-activate the DL transmission on the Uu interface regarding selected RLs.

### 8.3.18.2 Successful Operation



**Figure 47D: Radio Link Activation procedure**

This procedure is initiated by sending the RADIO LINK ACTIVATION COMMAND message from the CRNC to the Node B. The message shall use the Communication Control Port assigned for this Node B Communication Context.Upon reception, the Node B shall for each concerning 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 [16].]

- [TDD- start transmission on the new RL immediately as specified in [16].]

- 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 [16], 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 [16].]

    - [FDD- the Node B shall apply the power level indicated in the *Initial DL Tx Power* IE to the transmission on each DL 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. <u>During this period no</u> inner loop power control shall be performed <u>and, unless activated by the DL POWER CONTROL REQUEST message, no</u> 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 Node B 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 Node B 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 concerning RL shall be considered part of the first RLS established towards this UE. The *First RLS Indicator* IE shall be used by the Node B together with the value of the *DL TPC pattern 01 count* IE which the Node B has received in the Cell Setup procedure, to determine the initial TPC pattern in the DL of the concerning 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".

### 8.3.18.3 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 Node B shall initiate the ERROR INDICATION procedure.]

# 8.4 Error Handling Procedures

## 8.4.1 Error Indication

### 8.4.1.1 General

The Error Indication procedure is initiated by a node in orderto report detected errors in one incoming message, provided they cannot be reported by an appropriate response message.

### 8.4.1.2 Successful Operation

When the conditions defined in subclause 10 are fulfilled, the Error Indication procedure is initiated by an ERROR INDICATION message sent from the receiving node.

When the ERROR INDICATION message is sent from a Node B to its CRNC, the *CRNC Communication Context ID* IE shall be included in the message if available. When the ERROR INDICATION message is sent from a CRNC to a Node B, the *Node B Communication Context ID* IE shall be included in the message if available.

When a message for a dedicated procedure is received in the Node B with an invalid *Node B Communication Context ID* IE, the Node B shall include the unknown *Node B Communication Context ID* IE from the received message in the ERROR INDICATION message, unless another handling is specified in the procedure text for the affected procedure.

When a message for a dedicated procedure is received in the CRNC with an invalid *CRNC Communication Context ID* IE, the CRNC shall include the unknown *CRNC Communication Context ID* IE from the received message 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.

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
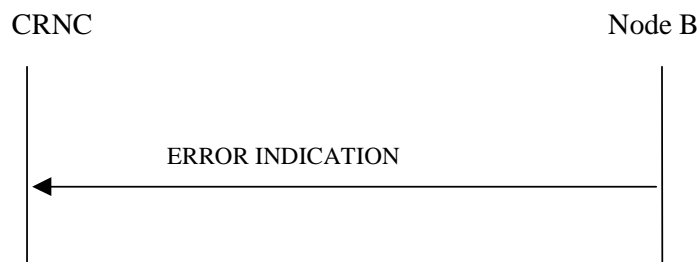


**Figure 49: Error Indication procedure (Node B to CRNC): Successful Operation**
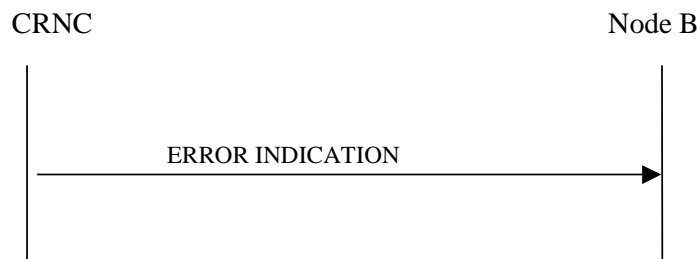


**Figure 50: Error Indication procedure (CRNC to Node B), Successful Operation**

## 8.4.1.3     Abnormal Conditions

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# 9 Elements for NBAP communication

## 9.1 Message Functional Definition and Content

### 9.1.1 General

Subclause 9.1 presents the contents of NBAP messages 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, where the tabular format shall take precedence.

NOTE: The messages have been defined in accordance to the guidelines specified in ref. [26].

### 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 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. 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 a 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.

#### 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 COMMON TRANSPORT CHANNEL SETUP REQUEST

### 9.1.3.1 FDD Message

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | reject |
| Transaction ID | M | | 9.2.1.62 | | – | |
| C-ID | M | | 9.2.1.9 | | YES | reject |
| Configuration Generation ID | M | | 9.2.1.16 | | YES | reject |
| CHOICE *Common Physical Channel To Be Configured* | M | | | | YES | ignore |
| >*Secondary CCPCH* | | | | | – | |
| **>>Secondary CCPCH** | | *1* | | | | |
| >>>Common Physical Channel ID | M | | 9.2.1.13 | | – | |
| >>>FDD SCCPCH Offset | M | | 9.2.2.15 | Corresponds to [7]: $s_{CCPCH,k}$ | – | |
| >>>DL Scrambling Code | C-PCH | | 9.2.2.13 | | – | |
| >>>FDD DL Channelisation Code Number | M | | 9.2.2.14 | | – | |
| >>>TFCS | M | | 9.2.1.58 | For the DL. | – | |
| >>>Secondary CCPCH Slot Format | M | | 9.2.2.43 | | – | |
| >>>TFCI Presence | C – SlotFormat | | 9.2.1.57 | Refer to TS [7] | – | |
| >>>Multiplexing Position | M | | 9.2.2.23 | | – | |
| **>>>Power Offset Information** | | 1 | | | – | |
| >>>>PO1 | M | | Power Offset 9.2.2.29 | Power offset for the TFCI bits | – | |
| >>>>PO3 | M | | Power Offset 9.2.2.29 | Power offset for the pilot bits | – | |
| >>>STTD Indicator | M | | 9.2.2.48 | | – | |
| **>>>FACH Parameters** | | *0..<maxnoofFACHs>* | | | GLOBAL | reject |
| >>>>Common Transport Channel ID | M | | 9.2.1.14 | | – | |
| >>>>Transport Format Set | M | | 9.2.1.59 | For the DL. | – | |
| >>>>ToAWS | M | | 9.2.1.61 | | – | |
| >>>>ToAWE | M | | 9.2.1.60 | | – | |
| >>>>Max FACH Power | M | | DL Power 9.2.1.21 | Maximum allowed power on the FACH. | – | |
| >>>>Binding ID | O | | 9.2.1.4 | Shall be ignored if bearer establishment with | YES | ignore |

| | | | | ALCAP. | | |
|---|---|---|---|---|---|---|
| >>>>Transport Layer Address | O | | 9.2.1.63 | Shall be ignored if bearer establishme nt with ALCAP. | YES | ignore |
| **>>>PCH Parameters** | | *0..1* | | | YES | reject |
| >>>>Common Transport Channel ID | M | | 9.2.1.14 | | – | |
| >>>>Transport Format Set | M | | 9.2.1.59 | For the DL. | – | |
| >>>>ToAWS | M | | 9.2.1.61 | | – | |
| >>>>ToAWE | M | | 9.2.1.60 | | – | |
| >>>>PCH Power | M | | DL Power 9.2.1.21 | | – | |
| **>>>>PICH Parameters** | | *1* | | | – | |
| >>>>>Common Physical Channel ID | M | | 9.2.1.13 | | – | |
| >>>>>FDD DL Channelisation Code Number | M | | 9.2.2.14 | | – | |
| >>>>>PICH Power | M | | 9.2.1.49A | | – | |
| >>>>>PICH Mode | M | | 9.2.2.26 | Number of PI  per frame | – | |
| >>>>>STTD Indicator | M | | 9.2.2.48 | | – | |
| >>>> Binding ID | O | | 9.2.1.4 | Shall be ignored if bearer establishme nt with ALCAP. | YES | ignore |
| >>>> Transport Layer Address | O | | 9.2.1.63 | Shall be ignored if bearer establishme nt with ALCAP. | YES | ignore |
| *>PRACH* | | | | | – | |
| **>>PRACH** | | *1* | | | | |
| >>>Common Physical Channel ID | M | | 9.2.1.13 | | – | |
| >>>Scrambling Code Number | M | | 9.2.2.42 | | – | |
| >>>TFCS | M | | 9.2.1.58 | For the UL. | – | |
| >>>Preamble Signatures | M | | 9.2.2.31 | | – | |
| **>>>Allowed Slot Format Information** | | *1..<Ma xnoofSl otForm atsPRA CH>* | | | – | |
| >>>>RACH Slot Format | M | | 9.2.2.37 | | – | |
| >>>RACH Sub Channel Numbers | M | | 9.2.2.38 | | – | |

*ETSI*

| | | | | | | |
|---|---|---|---|---|---|---|
| >>>Puncture Limit | M | | 9.2.1.50 | For the UL | – | |
| >>>Preamble Threshold | M | | 9.2.2.32 | | – | |
| **>>>RACH Parameters** | | 1 | | | YES | Reject |
| >>>>Common Transport Channel ID | M | | 9.2.1.14 | | – | |
| >>>>Transport Format Set | M | | 9.2.1.59 | For the UL. | – | |
| >>>> Binding ID | O | | 9.2.1.4 | Shall be ignored if bearer establishme nt with ALCAP. | YES | ignore |
| >>>> Transport Layer Address | O | | 9.2.1.63 | Shall be ignored if bearer establishme nt with ALCAP. | YES | ignore |
| **>>AICH Parameters** | | 1 | | | – | |
| >>>Common Physical Channel ID | M | | 9.2.1.13 | | – | |
| >>>AICH Transmission Timing | M | | 9.2.2.1 | | – | |
| >>>FDD DL Channelisation Code Number | M | | 9.2.2.14 | | – | |
| >>>AICH Power | M | | 9.2.2.D | | – | |
| >>>STTD Indicator | M | | 9.2.2.48 | | – | |
| *>PCPCHes* | | | | | – | |
| **>>CPCH Parameters** | | 1 | | | – | |
| >>>Common Transport Channel ID | M | | 9.2.1.14 | | – | |
| >>>Transport Format Set | M | | 9.2.1.59 | For the UL. | – | |
| >>>AP Preamble Scrambling Code | M | | CPCH Scrambling Code Number 9.2.2.4B | | – | |
| >>>CD Preamble Scrambling Code | M | | CPCH Scrambling Code Number 9.2.2.4B | | – | |
| >>>TFCS | M | | 9.2.1.58 | For the UL | – | |
| >>>CD Signatures | O | | Preamble Signatures 9.2.2.31 | Note: When not present, all CD signatures are to be used. | – | |
| >>>CD Sub Channel Numbers | | | 9.2.2.1C | | – | |
| >>>Puncture Limit | M | | 9.2.1.50 | For the UL | – | |
| >>>CPCH UL DPCCH Slot Format | M | | 9.2.2.4C | For UL CPCH message control part | – | |
| >>>UL SIR | M | | UL SIR | | – | |

| | | | 9.2.1.67A | | | |
|---|---|---|---|---|---|---|
| >>>Initial DL transmission Power | M | | DL Power 9.2.1.21 | | – | |
| >>>Maximum DL Power | M | | DL Power 9.2.1.21 | | – | |
| >>>Minimum DL Power | M | | DL Power 9.2.1.21 | | – | |
| >>>PO2 | M | | Power Offset 9.2.2.29 | Power offset for the TPC bits relative to the pilot bits. | – | |
| >>>FDD TPC DL Step Size | M | | 9.2.2.16 | | – | |
| >>>N_Start_Message | M | | 9.2.2.23C | | – | |
| >>>N_EOT | M | | 9.2.2.23A | | – | |
| >>>Channel Assignment Indication | M | | 9.2.2.1D | | – | |
| >>>CPCH Allowed Total Rate | M | | 9.2.2.4A | | – | |
| **>>>PCPCH Channel Information** | | *1..<ma xnoofP CPCHs >* | | | – | |
| >>>>Common Physical Channel ID | M | | 9.2.1.13 | | – | |
| >>>>CPCH Scrambling Code Number | M | | 9.2.2.4B | For UL PCPCH | – | |
| >>>>DL Scrambling Code | M | | 9.2.2.13 | For DL CPCH message part | – | |
| >>>>FDD DL Channelisation Code Number | M | | 9.2.2.14 | For DL CPCH message part | – | |
| >>>>PCP Length | M | | 9.2.2.24A | | – | |
| **>>>>UCSM Information** | C-NCA | *1* | | | – | |
| >>>>>Min UL Channelisation Code Length | M | | 9.2.2.22 | | – | |
| >>>>>NF_max | M | | 9.2.2.23B | | – | |
| **>>>>>Channel Request Parameters** | | *0..<ma xAPSig Num>* | | | – | |
| >>>>>>AP Preamble Signature | M | | 9.2.2.1A | | – | |
| >>>>>AP Sub Channel Number | O | | 9.2.2.1B | | – | |
| **>>>VCAM Mapping Information** | C-CA | *1..<ma xnoofL en>* | | Refer to TS [18] | – | |
| >>>>Min UL Channelisation Code Length | M | | 9.2.2.22 | | – | |
| >>>>NF_max | M | | 9.2.2.23B | | – | |
| >>>>Max Number of PCPCHes | M | | 9.2.2.20A | | – | |
| **>>>>SF Request** | | *1..<ma* | | | – | |

| Parameters | | *xAPSig Num>* | | | | |
|---|---|---|---|---|---|---|
| >>>>>AP Preamble Signature | M | | 9.2.2.1A | | – | |
| >>>>>AP Sub Channel Number | O | | 9.2.2.1B | | – | |
| **>>>AP-AICH Parameters** | | *1* | | | – | |
| >>>>Common Physical Channel ID | M | | 9.2.1.13 | | – | |
| >>>>FDD DL Channelisation Code Number | M | | 9.2.2.14 | | – | |
| >>>>AP-AICH Power | M | | AICH Power 9.2.2.D | | – | |
| >>>>CSICH Power | M | | AICH Power 9.2.2.D | For CSICH bits at end of AP-AICH slot | – | |
| >>>>STTD Indicator | M | | 9.2.2.48 | | – | |
| **>>>CD/CA-ICH Parameters** | | *1* | | | – | |
| >>>>Common Physical Channel ID | M | | 9.2.1.13 | | – | |
| >>>>FDD DL Channelisation Code Number | M | | 9.2.2.14 | | – | |
| >>>>CD/CA-ICH Power | M | | AICH Power 9.2.2.D | | – | |
| >>>>STTD Indicator | M | | 9.2.2.48 | | – | |
| >>>Binding ID | O | | 9.2.1.4 | Shall be ignored if bearer establishment with ALCAP. | YES | ignore |
| >>>Transport Layer Address | O | | 9.2.1.63 | Shall be ignored if bearer establishment with ALCAP. | YES | ignore |

| Condition | Explanation |
|---|---|
| SlotFormat | The IE shall be present if the *Secondary CCPCH Slot Format* IE is set to any of the values from 8 to 17. |
| CA | The IE shall be present if the *Channel Assignment Indication* IE is set to "CA Active". |
| NCA | The IE shall be present if the *Channel Assignment Indication* IE is set to "CA Inactive". |
| PCH | The IE shall be present if the *PCH parameters* IE is not present. |

| Range bound | Explanation |
|---|---|
| *MaxnoofFACHs* | Maximum number of FACHs that can be defined on a Secondary CCPCH. |
| *MaxnoofPCPCHs* | Maximum number of PCPCHs for a CPCH |
| *MaxnoofLen* | Maximum number of Min UL Channelisation Code Length |
| *MaxnoofSlotFormatsPRACH* | Maximum number of SF for a PRACH |
| *MaxAPSigNum* | Maximum number of AP Signatures. |

## 9.1.3.2 TDD Message

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | reject |
| Transaction ID | M | | 9.2.1.62 | | – | |
| C-ID | M | | 9.2.1.9 | | YES | reject |
| Configuration Generation ID | M | | 9.2.1.16 | | YES | reject |
| CHOICE *Common Physical Channel To Be Configured* | M | | | | YES | ignore |
| >*Secondary CCPCHs* | | | | | – | |
| >>SCCPCH CCTrCH ID | M | | CCTrCH ID 9.2.3.3 | For DL CCTrCH supporting one or several Secondary CCPCHs | – | |
| >>TFCS | M | | 9.2.1.58 | For DL CCTrCH supporting one or several Secondary CCPCHs | – | |
| >>TFCI Coding | M | | 9.2.3.22 | | – | |
| >>Puncture Limit | M | | 9.2.1.50 | | – | |
| **>>Secondary CCPCH** | | *0..<maxnoofSCCPCHs>* | | Mandatory For 3.84Mcps TDD only | GLOBAL | reject |
| >>>Common Physical Channel ID | M | | 9.2.1.13 | | – | |
| >>>TDD Channelisation Code | M | | 9.2.3.19 | | – | |
| >>>Time Slot | M | | 9.2.3.23 | | – | |
| >>>Midamble shift and Burst Type | M | | 9.2.3.7 | | – | |
| >>>TDD Physical Channel Offset | M | | 9.2.3.20 | | – | |
| >>>Repetition Period | M | | 9.2.3.16 | | – | |
| >>>Repetition Length | M | | 9.2.3.15 | | – | |
| >>>SCCPCH Power | M | | DL Power 9.2.1.21 | | – | |
| **>>FACH** | | *0..<maxnoofF* | | | GLOBAL | reject |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | *ACHs>* | | | | |
| >>>Common Transport Channel ID | M | | 9.2.1.14 | | – | |
| >>>FACH CCTrCH ID | M | | CCTrCH ID 9.2.3.3 | | – | |
| >>>Transport Format Set | M | | 9.2.1.59 | For the DL. | – | |
| >>>ToAWS | M | | 9.2.1.61 | | – | |
| >>>ToAWE | M | | 9.2.1.60 | | – | |
| >>>Max FACH Power | O | | DL Power 9.2.1.21 | For 1.28Mcps TDD only | YES | reject |
| >>>Binding ID | O | | 9.2.1.4 | Shall be ignored if bearer establishme nt with ALCAP. | YES | ignore |
| >>>Transport Layer Address | O | | 9.2.1.63 | Shall be ignored if bearer establishme nt with ALCAP. | YES | ignore |
| **>>PCH** | | *0..1* | | | YES | reject |
| >>>Common Transport Channel ID | M | | 9.2.1.14 | | – | |
| >>>PCH CCTrCH ID | M | | CCTrCH ID 9.2.3.3 | | – | |
| >>>Transport Format Set | M | | 9.2.1.59 | For the DL. | – | |
| >>>ToAWS | M | | 9.2.1.61 | | – | |
| >>>ToAWE | M | | 9.2.1.60 | | – | |
| **>>>PICH Parameters** | | *0..1* | | Mandatory For 3.84Mcps TDD only | YES | reject |
| >>>>Common Physical Channel ID | M | | 9.2.1.13 | | – | |
| >>>>TDD Channelisation Code | M | | 9.2.3.19 | | – | |
| >>>>Time Slot | M | | 9.2.3.23 | | – | |
| >>>>Midamble shift and Burst Type | M | | 9.2.3.7 | | – | |
| >>>>TDD Physical Channel Offset | M | | 9.2.3.20 | | – | |
| >>>>Repetition period | M | | 9.2.3.16 | | – | |
| >>>>Repetition length | M | | 9.2.3.15 | | – | |
| >>>>Paging Indicator Length | M | | 9.2.3.8 | | – | |
| >>>>PICH Power | M | | 9.2.1.49A | | – | |
| >>>PCH Power | O | | DL Power 9.2.1.21 | For 1.28Mcps TDD only | – | |

| | | | | | | |
|---|---|---|---|---|---|---|
| >>>**PICH Parameters LCR** | | *0..1* | | Mandatory For 1.28Mcps TDD only | YES | reject |
| >>>>Common Physical Channel ID | M | | 9.2.1.13 | | – | |
| >>>>TDD Channelisation Code LCR | M | | 9.2.3.19a | | – | |
| >>>>Time Slot LCR | M | | 9.2.3.24A | | – | |
| >>>>Midamble shift LCR | M | | 9.2.3.7A | | – | |
| >>>>TDD Physical Channel Offset | M | | 9.2.3.20 | | – | |
| >>>>Repetition period | M | | 9.2.3.16 | | – | |
| >>>>Repetition length | M | | 9.2.3.15 | | – | |
| >>>>Paging Indicator Length | M | | 9.2.3.8 | | – | |
| >>>>PICH Power | M | | 9.2.1.49A | | – | |
| >>>Binding ID | O | | 9.2.1.4 | Shall be ignored if bearer establishme nt with ALCAP. | YES | ignore |
| >>>Transport Layer Address | O | | 9.2.1.63 | Shall be ignored if bearer establishme nt with ALCAP. | YES | ignore |

| | | | | | | |
|---|---|---|---|---|---|---|
| **>>Secondary CCPCH LCR** | | *0..<maxnoofS-CCPCHLCRs>* | | Mandatory For 1.28Mcps TDD only | GLOBAL | reject |
| >>>Common Physical Channel ID | M | | 9.2.1.13 | | – | |
| >>>TDD Channelisation Code LCR | M | | 9.2.3.19a | | – | |
| >>>Time Slot LCR | M | | 9.2.3.24A | | – | |
| >>>Midamble shift LCR | M | | 9.2.3.7A | | – | |
| >>>TDD Physical Channel Offset | M | | 9.2.3.20 | | – | |
| >>>Repetition Period | M | | 9.2.3.16 | | – | |
| >>>Repetition Length | M | | 9.2.3.15 | | – | |
| >>>SCCPCH Power | M | | DL Power 9.2.1.21 | | – | |
| *>PRACH* | | | | | – | |
| **>>PRACH** | M | *0..1* | | Mandatory for 3.84Mcps TDD only | YES | reject |
| >>>Common Physical Channel ID | M | | 9.2.1.13 | | – | |
| >>>TFCS | M | | 9.2.1.58 | | – | |
| >>>Time Slot | M | | 9.2.3.23 | | – | |
| >>>TDD Channelisation Code | M | | 9.2.3.19 | | – | |
| >>>Max PRACH Midamble Shifts | M | | 9.2.3.6 | | – | |
| >>>PRACH Midamble | M | | 9.2.3.14 | | – | |
| **>>>RACH** | | *1* | | | YES | reject |
| >>>>Common Transport Channel ID | M | | 9.2.1.14 | | – | |
| >>>>Transport Format Set | M | | 9.2.1.59 | For the UL | – | |
| >>>>Binding ID | O | | 9.2.1.4 | Shall be ignored if bearer establishment with ALCAP. | YES | ignore |
| >>>>Transport Layer Address | O | | 9.2.1.63 | Shall be ignored if bearer establishment with ALCAP. | YES | ignore |
| **>>PRACH LCR** | | *0 ..<maxnoofPRACHLCRs>* | | Mandatory For 1.28Mcps TDD only | YES | reject |
| >>>Common Physical Channel ID | M | | 9.2.1.13 | | – | |
| >>>TFCS | M | | 9.2.1.58 | | – | |
| >>>Time Slot LCR | M | | 9.2.3.24A | | – | |

| | | | | | | |
|---|---|---|---|---|---|---|
| >>>TDD Channelisation Code LCR | M | | 9.2.3.19a | | – | |
| >>>Max PRACH Midamble Shifts | M | | 9.2.3.6 | | – | |
| >>>PRACH Midamble | M | | 9.2.3.14 | | – | |
| **>>>RACH** | | *1* | | | YES | reject |
| >>>>Common Transport Channel ID | M | | 9.2.1.14 | | – | |
| >>>>Transport Format Set | M | | 9.2.1.59 | For the UL | – | |
| >>>>Binding ID | O | | 9.2.1.4 | Shall be ignored if bearer establishme nt with ALCAP. | YES | ignore |
| >>>>Transport Layer Address | O | | 9.2.1.63 | Shall be ignored if bearer establishme nt with ALCAP. | YES | ignore |
| **>>FPACH** | | *0..1* | | Mandatory for 1.28Mcps TDD only | GLOBAL | reject |
| >>>Common Physical Channel ID | M | | 9.2.1.13 | | – | |
| >>>TDD Channelisation Code LCR | M | | 9.2.3.19a | | – | |
| >>>Time Slot LCR | M | | 9.2.3.24A | | – | |
| >>>Midamble shift LCR | M | | 9.2.3.7A | | – | |
| >>>Max FPACH Power | M | | 9.2.3.5$^E$ | | – | |

| Range bound | Explanation |
|---|---|
| *MaxnoofSCCPCHs* | Maximum number of Secondary CCPCHs per CCTrCH for 3.84Mcps TDD. |
| *MaxnoofS-CCPCHLCRs* | Maximum number of Secondary CCPCHs per CCTrCH for 1.28Mcps TDD. |
| *MaxnoofCCTrCHs* | Maximum number of CCTrCHs that can be defined in a cell. |
| *MaxnoofFACHs* | Maximum number of FACHs that can be defined on a Secondary CCPCH. |
| *MaxnoofPRACHLCRs* | Maximum number of PRACH LCR that can be defined on a RACH for 1.28Mcps TDD. |

## 9.1.4 COMMON TRANSPORT CHANNEL SETUP RESPONSE

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | reject |
| Transaction ID | M | | 9.2.1.62 | | – | |
| **FACH Parameters info** | | *0..<ma xnoofF ACHs>* | | The FACH Parameters may be combined with PCH Parameters | GLOBAL | ignore |
| >FACH Parameters | M | | Common Transport Channel Information Response 9.2.1.14A | | – | |
| PCH Parameters | O | | Common Transport Channel Information Response 9.2.1.14A | The PCH Parameters may be combined with FACH Parameters | YES | ignore |
| RACH parameters | O | | Common Transport Channel Information Response 9.2.1.14A | The RACH Parameters shall not be combined with FACH Parameters or PCH Parameters | YES | ignore |
| CPCH parameters | O | | Common Transport Channel Information Response 9.2.1.14A | The CPCH Parameters shall not be combined with FACH Parameters or PCH Parameters or RACH Parameters | YES | ignore |
| Criticality Diagnostics | O | | 9.2.1.17 | | YES | ignore |

| Range bound | Explanation |
|---|---|
| *MaxnoofFACHs* | Maximum number of FACHs that can be defined on a Secondary CCPCH[FDD] / a group of Secondary CCPCHs [TDD]. |

## 9.1.5 COMMON TRANSPORT CHANNEL SETUP FAILURE

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | – |
| Message Type | M | | 9.2.1.46 | | YES | reject |
| Transaction ID | M | | 9.2.1.62 | | – | – |
| Cause | M | | 9.2.1.6 | | YES | ignore |
| Criticality Diagnostics | O | | 9.2.1.17 | | YES | ignore |

## 9.1.6 COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST

### 9.1.6.1 FDD Message

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | reject |
| Transaction ID | M | | 9.2.1.62 | | – | |
| C-ID | M | | 9.2.1.9 | | YES | reject |
| Configuration Generation ID | M | | 9.2.1.16 | | YES | reject |
| CHOICE *Common Physical Channel To Be Configured* | M | | | | YES | reject |
| >*Secondary CCPCH* | | | | | – | |
| **>>FACH parameters** | | *0..<maxFACHCell>* | | | GLOBAL | reject |
| >>>Common Transport Channel ID | M | | 9.2.1.14 | | – | |
| >>>Max FACH Power | O | | DL Power 9.2.1.21 | Maximum allowed power on the FACH. | – | |
| >>>ToAWS | O | | 9.2.1.61 | | – | |
| >>>ToAWE | O | | 9.2.1.60 | | – | |
| **>>PCH Parameters** | | *0..1* | | | YES | reject |
| >>>Common Transport Channel ID | M | | 9.2.1.14 | | – | |
| >>>PCH Power | O | | DL Power 9.2.1.21 | Power to be used on the PCH. | – | |
| >>>ToAWS | O | | 9.2.1.61 | | – | |
| >>>ToAWE | O | | 9.2.1.60 | | – | |
| **>>PICH Parameters** | | *0..1* | | | YES | reject |
| >>>Common Physical Channel ID | M | | 9.2.1.13 | | – | |
| >>>PICH Power | O | | 9.2.1.49A | | – | |
| >*PRACH* | | | | | – | |
| **>>PRACH Parameters** | | *0..<MexPRACHCell>* | | | GLOBAL | reject |
| >>>Common Physical Channel ID | M | | 9.2.1.13 | | – | |
| >>>Preamble Signatures | O | | 9.2.2.31 | | – | |
| **>>>Allowed Slot Format Information** | | *0..<MaxnoofSlotFormatsPRACH>* | | | – | |
| >>>>RACH Slot Format | M | | 9.2.2.37 | | – | |
| >>>RACH Sub Channel Numbers | O | | 9.2.2.38 | | – | |
| **>>AICH Parameters** | | *0..<MaxPRACHCell>* | | | GLOBAL | reject |

| | | | | | | |
|---|---|---|---|---|---|---|
| >>>Common Physical Channel ID | M | | 9.2.1.13 | | – | |
| >>>AICH Power | O | | 9.2.2.D | | – | |
| >*CPCH* | | | | | – | |
| **>>CPCH Parameters** | | *0..<maxno ofCPCHs>* | | | GLOBAL | reject |
| >>>Common Transport Channel ID | M | | 9.2.1.14 | | – | |
| >>>UL SIR | O | | 9.2.1.67A | | – | |
| >>>Initial DL transmission Power | O | | DL Power 9.2.1.21 | | – | |
| >>>Maximum DL Power | O | | DL Power 9.2.1.21 | | – | |
| >>>Minimum DL Power | O | | DL Power 9.2.1.21 | | – | |
| **>>AP-AICH Parameters** | | *0..<maxno ofCPCHs>* | | | GLOBAL | reject |
| >>>Common Physical Channel ID | M | | 9.2.1.13 | | – | |
| >>>AP-AICH Power | O | | AICH Power 9.2.2.D | | – | |
| >>>CSICH Power | O | | AICH Power 9.2.2.D | For CSICH bits at end of AP-AICH slot | – | |
| **>>CD/CA-ICH Parameters** | | *0..<maxno ofCPCHs>* | | | GLOBAL | reject |
| >>>Common Physical Channel ID | M | | 9.2.1.13 | | – | |
| >>>CD/CA-ICH Power | O | | AICH Power 9.2.2.D | | – | |

| Range bound | Explanation |
|---|---|
| MaxFACHCell | Maximum number of FACHs that can be defined in a Cell |
| MaxnoofCPCHs | Maximum number of CPCHs that can be defined in a Cell |
| MaxPRACHCell | Maximum number of PRACHs and AICHe that can be defined in a Cell |
| MaxnoofSlotFormatsPRACH | Maximum number of SF for a PRACH |

### 9.1.6.2 TDD Message

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | reject |
| Transaction ID | M | | 9.2.1.62 | | – | |
| C-ID | M | | 9.2.1.9 | | YES | reject |
| Configuration Generation ID | M | | 9.2.1.16 | | YES | reject |
| **Secondary CCPCH parameters** | | 0 .. 1 | | | YES | reject |

| >CCTrCH ID | M | | 9.2.3.3 | For DL CCTrCH supporting one or several Secondary CCPCHs | – | |
|---|---|---|---|---|---|---|
| **>Secondary CCPCHs to be configured** | | 0.. <MaxnoofS CCPCHs> | | | GLOBAL | reject |
| >>Common Physical Channel ID | M | | 9.2.1.13 | | – | |
| >>SCCPCH Power | O | | DL power 9.2.1.21 | | – | |
| **PICH Parameters** | | 0 .. 1 | | | YES | reject |
| >Common Physical Channel ID | M | | 9.2.1.13 | | – | |
| >PICH Power | O | | 9.2.1.49A | | – | |
| **FACH parameters** | | *0..<Maxno ofFACHs>* | | | GLOBAL | reject |
| >Common Transport Channel ID | M | | 9.2.1.14 | | – | |
| >ToAWS | O | | 9.2.1.61 | | – | |
| >ToAWE | O | | 9.2.1.60 | | | |
| >Max FACH Power | O | | DL Power 9.2.1.21 | For 1.28Mcps TDD only | YES | reject |
| **PCH parameters** | | 0 .. 1 | | | YES | reject |
| >Common Transport Channel ID | M | | 9.2.1.14 | | – | |
| >ToAWS | O | | 9.2.1.61 | | – | |
| >ToAWE | O | | 9.2.1.60 | | – | |
| >PCH Power | O | | DL Power 9.2.1.21 | For 1.28Mcps TDD only | YES | reject |
| **FPACH parameters** | | 0..1 | | Mandatory for 1.28Mcps TDD only | YES | reject |
| >Common Physical Channel ID | M | | 9.2.1.13 | | – | |
| >Max FPACH Power | O | | 9.2.3.5E | | – | |

| Range bound | Explanation |
|---|---|
| MaxnoofSCCPCHs | Maximum number of SCCPCH that can be repeated in a Cell |
| MaxnoofFACHs | Maximum number of FACHs that can be repeated in a Cell |

## 9.1.7 COMMON TRANSPORT CHANNEL RECONFIGURATION RESPONSE

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | − | |
| Message Type | M | | 9.2.1.46 | | YES | reject |
| Transaction ID | M | | 9.2.1.62 | | − | |
| Criticality Diagnostics | O | | 9.2.1.17 | | YES | ignore |

## 9.1.8 COMMON TRANSPORT CHANNEL RECONFIGURATION FAILURE

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | − | |
| Message Type | M | | 9.2.1.46 | | YES | reject |
| Transaction ID | M | | 9.2.1.62 | | − | |
| Cause | M | | 9.2.1.6 | | YES | ignore |
| Criticality Diagnostics | O | | 9.2.1.17 | | YES | ignore |

## 9.1.9 COMMON TRANSPORT CHANNEL DELETION REQUEST

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | − | |
| Message Type | M | | 9.2.1.46 | | YES | reject |
| Transaction ID | M | | 9.2.1.62 | | − | |
| C-ID | M | | 9.2.1.9 | | YES | reject |
| Common Physical Channel ID | M | | 9.2.1.13 | Indicates the Common Physical Channel for which the Common Transport Channels (together with the Common Physical Channel) shall be deleted. | YES | reject |
| Configuration Generation ID | M | | 9.2.1.16 | | YES | reject |

## 9.1.10 COMMON TRANSPORT CHANNEL DELETION RESPONSE

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | reject |
| Transaction ID | M | | 9.2.1.62 | | – | |
| Criticality Diagnostics | O | | 9.2.1.17 | | YES | ignore |

## 9.1.11 BLOCK RESOURCE REQUEST

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | reject |
| Transaction ID | M | | 9.2.1.62 | | – | |
| C-ID | M | | 9.2.1.9 | | YES | reject |
| Blocking Priority Indicator | M | | 9.2.1.5 | | YES | reject |
| Shutdown Timer | C-*BlockNormal* | | 9.2.1.56 | | YES | reject |

| Condition | Explanation |
|---|---|
| BlockNormal | The IE shall be present if the *Blocking Priority Indicator* IE indicates "Normal Priority". |

## 9.1.12 BLOCK RESOURCE RESPONSE

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | reject |
| Transaction ID | M | | 9.2.1.62 | | – | |
| Criticality Diagnostics | O | | 9.2.1.17 | | YES | ignore |

## 9.1.13 BLOCK RESOURCE FAILURE

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | reject |
| Transaction ID | M | | 9.2.1.62 | | – | |
| Cause | M | | 9.2.1.6 | | YES | ignore |
| Criticality Diagnostics | O | | 9.2.1.17 | | YES | ignore |

## 9.1.14 UNBLOCK RESOURCE INDICATION

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | ignore |
| Transaction ID | M | | 9.2.1.62 | | – | |
| C-ID | M | | 9.2.1.9 | | YES | ignore |

## 9.1.15 AUDIT REQUIRED INDICATION

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | ignore |
| Transaction ID | M | | 9.2.1.62 | | – | |

## 9.1.16 AUDIT REQUEST

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | reject |
| Transaction ID | M | | 9.2.1.62 | | – | |
| Start Of Audit Sequence Indicator | M | | 9.2.1.56B | | YES | reject |

## 9.1.17   AUDIT RESPONSE

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | reject |
| Transaction ID | M | | 9.2.1.62 | | – | |
| End Of Audit Sequence Indicator | M | | 9.2.1.29A | | YES | ignore |
| **Cell Information** | | *0.. <maxCellin NodeB >* | | | EACH | ignore |
| >C-ID | M | | 9.2.1.9 | | – | |
| >Configuration Generation ID | M | | 9.2.1.16 | | – | |
| >Resource Operational State | M | | 9.2.1.52 | | – | |
| >Availability Status | M | | 9.2.1.2 | | – | |
| >Local Cell ID | M | | 9.2.1.38 | The local cell that the cell is configured on | – | |
| >Primary SCH Information | O | | Common Physical Channel Status Information 9.2.1.13A | | YES | ignore |
| >Secondary SCH Information | O | | Common Physical Channel Status Information 9.2.1.13A | | YES | ignore |
| >Primary CPICH Information | O | | Common Physical Channel Status Information 9.2.1.13A | | YES | ignore |
| **>Secondary CPICH Information** | | *0..<maxSC PICHCell>* | | | EACH | ignore |
| >>Secondary CPICH Individual Information | M | | Common Physical Channel Status Information 9.2.1.13A | | – | |
| >Primary CCPCH Information | O | | Common Physical Channel Status Information 9.2.1.13A | | YES | ignore |
| >BCH Information | O | | Common Transport Channel Status Information 9.2.1.13A | | YES | ignore |

| >Secondary CCPCH Information | | 0..<maxSCCPCHCell> | | | EACH | ignore |
|---|---|---|---|---|---|---|
| >>Secondary CCPCH Individual Information | M | | Common Physical Channel Status Information 9.2.1.13A | | – | |
| >PCH Information | O | | Common Transport Channel Status Information 9.2.1.14B | | YES | ignore |
| >PICH Information | O | | Common Physical Channel Status Information 9.2.1.13A | | YES | ignore |
| >FACH Information | | 0..<maxFACHCell> | | | EACH | ignore |
| >>FACH Individual Information | M | | Common Transport Channel Status Information 9.2.1.14B | | – | |
| >PRACH Information | | 0..<maxPRACHCell> | | | EACH | ignore |
| >>PRACH Individual Information | M | | Common Physical Channel Status Information 9.2.1.13A | | – | |
| >RACH Information | | 0..<maxRACHCell> | | | EACH | ignore |
| >>RACH Individual Information | M | | Common Transport Channel Status Information 9.2.1.14B | | – | |
| >AICH Information | | 0..<maxPRACHCell> | | | EACH | ignore |
| >>AICH Individual Information | M | | Common Physical Channel Status Information 9.2.1.13A | | – | |
| >PCPCH Information | | 0..<maxPCPCHCell> | | | EACH | ignore |
| >>PCPCH Individual Information | M | | Common Physical Channel Status Information | | – | |

| | | | 9.2.1.13A | | | |
|---|---|---|---|---|---|---|
| **>CPCH Information** | | *0..<maxCPCHCell>* | | | EACH | ignore |
| >>CPCH Individual Information | M | | Common Transport Channel Status Information 9.2.1.14B | | – | |
| **>AP-AICH Information** | | *0..<maxCPCHCell>* | | | EACH | ignore |
| >>AP-AICH Individual Information | M | | Common Physical Channel Status Information 9.2.1.13A | | – | |
| **>CD/CA-ICH Information** | | *0..<maxCPCHCell>* | | | EACH | ignore |
| >>CD/CA-ICH Individual Information | M | | Common Physical Channel Status Information 9.2.1.13A | | – | |
| >SCH Information | O | | Common Physical Channel Status Information 9.2.1.13A | TDD Sync Channel | YES | ignore |
| **>FPACH Information** | | *0..<maxFPACHCell>* | | For 1.28Mcps TDD only | EACH | ignore |
| >>FPACH Individual Information | M | | Common Physical Channel Status Information 9.2.1.13A | | - | |
| **>DwPCH Information** | O | | Common Physical Channel Status Information 9.2.1.13A | For 1.28Mcps TDD only | YES | ignore |
| **Communication Control Port Information** | | *0.. <maxCCPinNodeB>* | | | EACH | ignore |
| >Communication Control Port ID | M | | 9.2.1.15 | | – | |
| >Resource Operational State | M | | 9.2.1.52 | | – | |
| >Availability Status | M | | 9.2.1.2 | | – | |
| **Local Cell Information** | | *0.. <maxLocalCellinNodeB>* | | | EACH | ignore |
| >Local Cell ID | M | | 9.2.1.38 | | – | |

| | | | | | | |
|---|---|---|---|---|---|---|
| >DL or Global Capacity Credit | M | | 9.2.1.20B | | – | |
| >UL Capacity Credit | O | | 9.2.1.65A | | – | |
| >Common Channels Capacity Consumption Law | M | | 9.2.1.9A | | – | |
| >Dedicated Channels Capacity Consumption Law | M | | 9.2.1.20A | | – | |
| >Maximum DL Power Capability | O | | 9.2.1.39 | | – | |
| >Minimum Spreading Factor | O | | 9.2.1.47 | | – | |
| >Minimum DL Power Capability | O | | 9.2.1.46A | | – | |
| >Local Cell Group ID | O | | 9.2.1.37A | | – | |
| >Reference Clock availability | O | | 9.2.3.14A | TDD only | YES | ignore |
| >Power Local Cell Group ID | O | | 9.2.1.49B | | YES | ignore |
| **Local Cell Group Information** | | *0..<br><maxLocal<br>CellinNode<br>B>* | | | EACH | ignore |
| >Local Cell Group ID | M | | 9.2.1.37A | | – | |
| >DL or Global Capacity Credit | M | | 9.2.1.20B | | – | |
| >UL Capacity Credit | O | | 9.2.1.65A | | – | |
| >Common Channels Capacity Consumption Law | M | | 9.2.1.9A | | – | |
| >Dedicated Channels Capacity Consumption Law | M | | 9.2.1.20A | | – | |
| **Power Local Cell Group Information** | | *0..<br><maxLocal<br>CellinNode<br>B>* | | | EACH | ignore |
| >Power Local Cell Group ID | M | | 9.2.1.49B | | – | |
| >Maximum DL Power Capability | M | | 9.2.1.39 | | – | |
| Criticality Diagnostics | O | | 9.2.1.17 | | YES | ignore |

| Range bound | Explanation |
|---|---|
| MaxCellinNodeB | Maximum number of Cell that can be configured in Node B |
| MaxCCPinNodeB | Maximum number of communication control ports that can exist in the Node B |
| MaxCPCHCell | Maximum number of CPCHes that can be defined in a Cell |
| MaxLocalCellinNodeB | Maximum number of Local Cells that can exist in the Node B |
| MaxPCPCHCell | Maximum number of PCPCHes that can be defined in a Cell |
| MaxSCPICHCell | Maximum number of Secondary CPICH that can be defined in a Cell. |
| MaxSCCPCHCell | Maximum number of Secondary CCPCH that can be defined in a Cell. |
| MaxFACHCell | Maximum number of FACHes that can be defined in a Cell |
| MaxPRACHCell | Maximum number of PRACHes that can be defined in a Cell |
| MaxRACHCell | Maximum number of RACHes that can be defined in a Cell |
| MaxFPACHCell | Maximum number of FPACHes that can be defined in a Cell |

# 9.1.17A  AUDIT FAILURE

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | reject |
| Transaction ID | M | | 9.2.1.62 | | – | |
| Cause | M | | 9.2.1.6 | | YES | ignore |
| Criticality diagnostics | O | | 9.2.1.17 | | YES | ignore |

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## 9.1.18 COMMON MEASUREMENT INITIATION REQUEST

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | reject |
| Transaction ID | M | | 9.2.1.62 | | – | |
| Measurement ID | M | | 9.2.1.42 | | YES | reject |
| Common Measurement Object Type | M | | 9.2.1.10 | | YES | reject |
| CHOICE Common *Measurement Object Type* | M | | | | YES | reject |
| >*Cell* | | | | | – | |
| >>C-ID | M | | 9.2.1.9 | | – | |
| >>Time Slot | O | | 9.2.3.23 | For 3.84Mcps TDD only | – | |
| >>Time Slot LCR | O | | 9.2.3.24A | For 1.28Mcps TDD only | YES | reject |
| **>>Neighbouring Cell Measurement Information** | | 0..<maxno MeasNCell s> | | | GLOBAL | ignore |
| >>>CHOICE *Neighbouring Cell Measurement Information* | | | | | – | – |
| >>>> *Neighbouring FDD Cell Measurement Information* | | | | FDD only | – | – |
| >>>>>Neighbouring FDD Cell Measurement Information | M | | 9.2.1.47C | | – | – |
| >>>> *Neighbouring TDD Cell Measurement Information* | | | | 3.84Mcps TDD only | – | – |
| >>>>>Neighbouring TDD Cell Measurement Information | M | | 9.2.1.47D | | – | – |
| >>>>*Neighbouring TDD Cell Measurement InformationLCR* | | | | 1.28Mcps TDD only | – | – |
| >>>>>Neighbouring TDD Cell Measurement Information LCR | M | | 9.2.1.47E | | – | – |
| >*RACH* | | | | FDD only | – | |
| >>C-ID | M | | 9.2.1.9 | | – | |
| >>Common Transport Channel ID | M | | 9.2.1.14 | | – | |
| >*CPCH* | | | | FDD only | – | |
| >>C-ID | M | | 9.2.1.9 | | – | |
| >>Common Transport Channel ID | M | | 9.2.1.14 | | – | |
| >>Spreading Factor | O | | Minimum UL Channelisa | | – | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | tion Code Length 9.2.2.22 | | | |
| Common Measurement Type | M | | 9.2.1.11 | | YES | reject |
| Measurement Filter Coefficient | O | | 9.2.1.41 | | YES | reject |
| Report Characteristics | M | | 9.2.1.51 | | YES | reject |
| SFN reporting indicator | M | | FN reporting indicator 9.2.1.29B | | YES | reject |
| SFN | O | | 9.2.1.53A | | YES | reject |
| Common Measurement Accuracy | O | | 9.2.1.9B | | YES | reject |

| Range bound | Explanation |
|---|---|
| maxnoMeasNCells | Maximum number of neighbouring cells that can be measured on. |

## 9.1.19   COMMON MEASUREMENT INITIATION RESPONSE

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | reject |
| Transaction ID | M | | 9.2.1.62 | | – | |
| Measurement ID | M | | 9.2.1.42 | | YES | ignore |
| CHOICE Common *Measurement Object Type* | O | | | Common Measurement Object Type that the measurement was initiated with. | YES | ignore |
| >*Cell* | | | | | YES | |
| >>Common Measurement value | M | | 9.2.1.12 | | – | |
| >*RACH* | | | | FDD only | – | |
| >>Common Measurement Value | M | | 9.2.1.12 | | – | |
| >*CPCH* | | | | FDD only | – | |
| >>Common Measurement Value | M | | 9.2.1.12 | | – | |
| SFN | O | | 9.2.1.53A | Common Measurement Time Reference | YES | ignore |
| Criticality Diagnostics | O | | 9.2.1.17 | | YES | ignore |
| Common Measurement Achieved Accuracy | O | | Common Measurement Accuracy 9.2.1.9B | | YES | ignore |

## 9.1.20    COMMON MEASUREMENT INITIATION FAILURE

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | reject |
| Transaction ID | M | | 9.2.1.62 | | – | |
| Measurement ID | M | | 9.2.1.42 | | YES | Ignore |
| Cause | M | | 9.2.1.6 | | YES | Ignore |
| Criticality Diagnostics | O | | 9.2.1.17 | | YES | Ignore |

## 9.1.21    COMMON MEASUREMENT REPORT

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | ignore |
| Transaction ID | M | | 9.2.1.62 | | – | |
| Measurement ID | M | | 9.2.1.42 | | YES | ignore |
| CHOICE Common *Measurement Object Type* | M | | | Common Measurement Object Type that the measurement was initiated with. | YES | ignore |
| >*Cell* | | | | | – | |
| >>Common Measurement Value Information | M | | 9.2.1.12A | | – | |
| >*RACH* | | | | FDD only | – | |
| >>Common Measurement Value Information | M | | 9.2.1.12A | | – | |
| >*CPCH* | | | | FDD only | – | |
| >>Common Measurement Value Information | M | | 9.2.1.12A | | | |
| SFN | O | | 9.2.1.53A | Common Measurement Time Reference | YES | ignore |

## 9.1.22    COMMON MEASUREMENT TERMINATION REQUEST

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | ignore |
| Transaction ID | M | | 9.2.1.62 | | – | |
| Measurement ID | M | | 9.2.1.42 | | YES | ignore |

## 9.1.23    COMMON MEASUREMENT FAILURE INDICATION

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | ignore |
| Transaction ID | M | | 9.2.1.62 | | – | |
| Measurement ID | M | | 9.2.1.42 | | YES | ignore |
| Cause | M | | 9.2.1.6 | | YES | ignore |

## 9.1.24    CELL SETUP REQUEST

### 9.1.24.1    FDD Message

| IE/Group Name | Presence | Range | IE type and Reference | Semantics description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | reject |
| Transaction ID | M | | 9.2.1.62 | | – | |
| Local Cell ID | M | | 9.2.1.38 | | YES | reject |
| C-ID | M | | 9.2.1.9 | | YES | reject |
| Configuration Generation ID | M | | 9.2.1.16 | | YES | reject |
| T Cell | M | | 9.2.2.49 | | YES | reject |
| UARFCN | M | | 9.2.1.65 | Corresponds to Nu [14] | YES | reject |
| UARFCN | M | | 9.2.1.65 | Corresponds to Nd [14] | YES | reject |

| | | | | | | |
|---|---|---|---|---|---|---|
| Maximum Transmission Power | M | | 9.2.1.40 | | YES | reject |
| Closed Loop Timing Adjustment Mode | O | | 9.2.2.2A | | YES | reject |
| Primary Scrambling Code | M | | 9.2.2.34 | | YES | reject |
| **Synchronisation Configuration** | | 1 | | | YES | reject |
| >N_INSYNC_IND | M | | 9.2.1.47A | | – | |
| >N_OUTSYNC_IND | M | | 9.2.1.47B | | – | |
| >T_RLFAILURE | M | | 9.2.1.56A | | – | |
| DL TPC pattern 01 count | M | | 9.2.2.13A | | YES | reject |
| **Primary SCH Information** | | 1 | | | YES | reject |
| >Common Physical Channel ID | M | | 9.2.1.13 | | – | |
| >Primary SCH Power | M | | DL Power 9.2.1.21 | | – | |
| >TSTD Indicator | M | | 9.2.1.64 | | – | |
| **Secondary SCH Information** | | 1 | | | YES | reject |
| >Common Physical Channel ID | M | | 9.2.1.13 | | – | |
| >Secondary SCH power | M | | DL Power 9.2.1.21 | | – | |
| >TSTD Indicator | M | | 9.2.1.64 | | – | |
| **Primary CPICH Information** | | 1 | | | YES | reject |
| >Common Physical Channel ID | M | | 9.2.1.13 | | – | |
| >Primary CPICH power | M | | 9.2.2.33 | | – | |
| >Transmit Diversity Indicator | M | | 9.2.2.53 | | – | |
| **Secondary CPICH Information** | | 0..<*maxSC PICHCell*> | | | EACH | reject |
| >Common Physical Channel ID | M | | 9.2.1.13 | | – | |
| >DL Scrambling code | M | | 9.2.2.13 | | – | |
| >FDD DL Channelisation Code Number | M | | 9.2.2.14 | | – | |
| >Secondary CPICH Power | M | | DL Power 9.2.1.21 | | – | |
| >Transmit Diversity Indicator | M | | 9.2.2.53 | | – | |
| **Primary CCPCH Information** | | 1 | | | YES | reject |
| >Common Physical Channel ID | M | | 9.2.1.13 | | – | |
| >BCH Information | | 1 | | | – | |
| >>Common Transport Channel ID | M | | 9.2.1.14 | | – | |
| >>BCH Power | M | | DL Power 9.2.1.21 | | – | |
| >STTD Indicator | M | | 9.2.2.48 | | – | |
| **Limited power increase information** | | 1 | | | YES | reject |
| >Power_Raise_Limit | M | | 9.2.2.29A | | – | |
| >DL_power_averaging_window_size | M | | 9.2.2.12A | | – | |
| **IPDL Parameter Information** | | 0..1 | | | YES | reject |
| >IPDL FDD Parameters | M | | 9.2.2.18C | | – | |
| >IPDL Indicator | M | | 9.2.1.36F | | – | |
| **PDSCH information** | | 0..1 | | | YES | reject |
| >Maximum PDSCH Power | O | | 9.2.2.21A | | – | |

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| Range bound | Explanation |
|---|---|
| MaxSCPICHCell | Maximum number of Secondary CPICH that can be defined in a Cell. |

## 9.1.24.2 TDD Message

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | reject |
| Transaction ID | M | | 9.2.1.62 | | – | |
| Local Cell ID | M | | 9.2.1.38 | | YES | reject |
| C-ID | M | | 9.2.1.9 | | YES | reject |
| Configuration Generation Id | M | | 9.2.1.16 | | YES | reject |
| UARFCN | M | | 9.2.1.65 | Corresponds to Nt [15] | YES | reject |
| Cell Parameter ID | M | | 9.2.3.4 | | YES | reject |
| Maximum Transmission Power | M | | 9.2.1.40 | | YES | reject |
| Transmission Diversity Applied | M | | 9.2.3.26 | On DCHs | YES | reject |
| Sync Case | M | | 9.2.3.18 | | YES | reject |
| **Synchronisation Configuration** | | 1 | | | YES | reject |
| >N_INSYNC_IND | M | | 9.2.1.47A | | – | |
| >N_OUTSYNC_IND | M | | 9.2.1.47B | | – | |
| >T_RLFAILURE | M | | 9.2.1.56A | | – | |
| DPCH Constant Value | M | | Constant Value | | YES | reject |
| PUSCH Constant Value | M | | Constant Value | | YES | reject |
| PRACH Constant Value | M | | Constant Value | | YES | reject |
| Timing Advance Applied | M | | 9.2.3.22A | | YES | reject |
| **SCH Information** | | 0..1 | | Mandatory For 3.84Mcps TDD only | YES | reject |
| >Common Physical Channel ID | M | | 9.2.1.13 | | – | |
| >CHOICE *Sync Case* | M | | | | YES | reject |
| >>*Case 1* | | | | | – | |
| >>>Time Slot | M | | 9.2.3.23 | | – | |
| >>*Case 2* | | | | | – | |
| >>>SCH Time Slot | M | | 9.2.3.17 | | – | |
| >SCH Power | M | | DL Power 9.2.1.21 | | – | |
| >TSTD Indicator | M | | 9.2.1.64 | | – | |
| **PCCPCH Information** | | 0..1 | | Mandatory For 3.84Mcps TDD only | YES | reject |
| >Common Physical Channel ID | M | | 9.2.1.13 | | – | |
| >TDD Physical Channel Offset | M | | 9.2.3.20 | | – | |
| >Repetition Period | M | | 9.2.3.16 | | – | |
| >Repetition Length | M | | 9.2.3.15 | | – | |
| >PCCPCH Power | M | | 9.2.3.9 | | – | |
| >SCTD Indicator | M | | 9.2.3.30 | | – | |
| **Time Slot Configuration** | | 0 .. 15 | | Mandatory For 3.84Mcps TDD only | GLOBAL | reject |
| >Time Slot | M | | 9.2.3.23 | | – | |
| >Time Slot Status | M | | 9.2.3.25 | | – | |
| >Time Slot Direction | M | | 9.2.3.24 | | – | |

| | | | | | | |
|---|---|---|---|---|---|---|
| **Time Slot Configuration LCR** | | 0 .. 7 | | Mandatory For 1.28Mcps TDD only | GLOBAL | reject |
| >Time Slot LCR | M | | 9.2.3.24A | | – | |
| >Time Slot Status | M | | 9.2.3.25 | | – | |
| >Time Slot Direction | M | | 9.2.3.24 | | – | |
| **PCCPCH Information LCR** | | 0..1 | | Mandatory For 1.28Mcps TDD only | YES | reject |
| >Common physical channel ID | M | | 9.2.1.13 | | – | |
| >TDD Physical Channel Offset | M | | 9.2.3.20 | | – | |
| >Repetition Period | M | | 9.2.3.16 | | – | |
| >Repetition Length | M | | 9.2.3.15 | | – | |
| >PCCPCH Power | M | | 9.2.3.9 | | – | |
| >SCTD Indicator | M | | 9.2.3.30 | | – | |
| >TSTD Indicator | M | | 9.2.1.64 | | – | |
| **DwPCH Information** | | 0..1 | | Mandatory For 1.28Mcps TDD only | YES | reject |
| >Common Physical Channel ID | M | | 9.2.1.13 | | – | |
| >TSTD Indicator | M | | 9.2.1.64 | | – | |
| >SYNC_DL Code ID | M | | 9.2.3.18B | | – | |
| >DwPCH Power | M | | 9.2.3.5B | | – | |
| Reference SFN offset | O | | 9.2.3.14B | | YES | ignore |
| **IPDL Parameter Information** | | 0..1 | | For 3.84 Mcps TDD only | YES | reject |
| >IPDL TDD Parameters | M | | 9.2.3.5D | | – | |
| >IPDL Indicator | M | | 9.2.1.36F | | – | |
| **IPDL Parameter Information LCR** | | 0..1 | | For 1.28Mcps TDD only | YES | reject |
| >IPDL TDD Parameters LCR | M | | 9.2.3.5H | | – | |
| >IPDL Indicator | M | | 9.2.1.36F | | – | |

## 9.1.25   CELL SETUP RESPONSE

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | reject |
| Transaction ID | M | | 9.2.1.62 | | – | |
| Criticality Diagnostics | O | | 9.2.1.17 | | YES | ignore |

## 9.1.26   CELL SETUP FAILURE

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | reject |
| Transaction ID | M | | 9.2.1.62 | | – | |
| Cause | M | | 9.2.1.6 | | YES | ignore |
| Criticality Diagnostics | O | | 9.2.1.17 | | YES | ignore |

## 9.1.27 CELL RECONFIGURATION REQUEST

### 9.1.27.1 FDD Message

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | reject |
| Transaction ID | M | | 9.2.1.62 | | – | |
| C-ID | M | | 9.2.1.9 | | YES | reject |
| Configuration Generation ID | M | | 9.2.1.16 | | YES | reject |
| Maximum Transmission Power | O | | 9.2.1.40 | | YES | reject |
| **Synchronisation Configuration** | | 0,1 | | | YES | reject |
| >N_INSYNC_IND | M | | 9.2.1.47A | | – | |
| >N_OUTSYNC_IND | M | | 9.2.1.47B | | – | |
| >T_RLFAILURE | M | | 9.2.1.56A | | – | |
| **Primary SCH Information** | | 0,1 | | | YES | reject |
| >Common Physical Channel ID | M | | 9.2.1.13 | | – | |
| >Primary SCH power | M | | DL Power 9.2.1.21 | | – | |
| **Secondary SCH Information** | | 0,1 | | | YES | reject |
| >Common Physical Channel ID | M | | 9.2.1.13 | | – | |
| >Secondary SCH power | M | | DL Power 9.2.1.21 | | – | |
| **Primary CPICH Information** | | 0,1 | | | YES | reject |
| >Common Physical Channel ID | M | | 9.2.1.13 | | – | |
| >Primary CPICH power | M | | 9.2.2.33 | | – | |
| **Secondary CPICH Information** | | 0..*<maxSC PICHCell>* | | | YES | reject |
| >Common Physical Channel ID | M | | 9.2.1.13 | | – | |
| >Secondary CPICH Power | M | | DL Power 9.2.1.21 | | – | |
| **Primary CCPCH Information** | | 0,1 | | | YES | reject |
| >**BCH Information** | | 1 | | | – | |
| >>Common Transport Channel ID | M | | 9.2.1.14 | | – | |
| >>BCH Power | M | | DL Power 9.2.1.21 | | – | |
| **IPDL Parameter Information** | | 0..1 | | | YES | reject |
| >IPDL FDD Parameters | O | | 9.2.2.18C | | – | |
| >IPDL Indicator | M | | 9.2.1.36F | | – | |
| **PDSCH information** | | 0..1 | | | YES | reject |
| >Maximum PDSCH Power | O | | | | – | |

| Range bound | Explanation |
|---|---|
| MaxSCPICHCell | Maximum number of Secondary CPICH that can be defined in a Cell. |

### 9.1.27.2    TDD Message

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | reject |
| Transaction ID | M | | 9.2.1.62 | | – | |
| C-ID | M | | 9.2.1.9 | | YES | reject |
| Configuration Generation ID | M | | 9.2.1.16 | | YES | reject |
| **Synchronisation Configuration** | | 0,1 | | | YES | reject |
| >N_INSYNC_IND | M | | 9.2.1.47A | | – | |
| >N_OUTSYNC_IND | M | | 9.2.1.47B | | – | |
| >T_RLFAILURE | M | | 9.2.1.56A | | – | |
| Timing Advance Applied | O | | 9.2.3.22A | For 3.84Mcps TDD only | YES | reject |
| **SCH Information** | | 0,1 | | For 3.84Mcps TDD only | YES | reject |
| >Common Physical Channel ID | M | | 9.2.1.13 | | – | |
| >SCH Power | M | | DL Power 9.2.1.21 | | – | |
| **PCCPCH Information** | | 0,1 | | | YES | reject |
| >Common Physical Channel ID | M | | 9.2.1.13 | | – | |
| >PCCPCH Power | M | | 9.2.3.9 | | – | |
| Maximum Transmission Power | O | | 9.2.1.40 | | YES | reject |
| DPCH Constant Value | O | | Constant Value | | YES | reject |
| PUSCH Constant Value | O | | Constant Value | | YES | reject |
| PRACH Constant Value | O | | Constant Value | | YES | reject |
| **Time Slot Configuration** | | 0..15 | | Mandatory For 3.84Mcps TDD only | GLOBAL | reject |
| >Time Slot | M | | 9.2.3.23 | | – | |
| >Time Slot Status | M | | 9.2.3.25 | | – | |
| >Time Slot Direction | M | | 9.2.3.24 | | – | |
| **Time Slot Configuration LCR** | | 0 .. 7 | | Mandatory For 1.28Mcps TDD only | GLOBAL | reject |
| >Time Slot LCR | M | | 9.2.3.24A | | – | |
| >Time Slot Status | M | | 9.2.3.25 | | – | |
| >Time Slot Direction | M | | 9.2.3.24 | | – | |
| **DwPCH Information** | | 0 .. 1 | | Mandatory For 1.28Mcps TDD only | YES | reject |
| >Common Physical Channel ID | M | | 9.2.1.13 | | – | |
| >DwPCH Power | M | | 9.2.3.5B | | – | |
| **IPDL Parameter Information** | | 0..1 | | For 3.84Mcps TDD only | YES | reject |
| >IPDL TDD Parameters | O | | 9.2.3.5D | | – | |
| >IPDL Indicator | M | | 9.2.1.36F | | – | |
| **IPDL Parameter Information LCR** | | 0..1 | | For 1.28Mcps TDD only | YES | reject |

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| >IPDL TDD Parameters LCR | O | | 9.2.3.5H | | − | |
| >IPDL Indicator | M | | 9.2.1.36F | | − | |

## 9.1.28    CELL RECONFIGURATION RESPONSE

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | − | |
| Message Type | M | | 9.2.1.46 | | YES | reject |
| Transaction ID | M | | 9.2.1.62 | | − | |
| Criticality Diagnostics | O | | 9.2.1.17 | | YES | ignore |

## 9.1.29    CELL RECONFIGURATION FAILURE

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | − | |
| Message Type | M | | 9.2.1.46 | | YES | reject |
| Transaction ID | M | | 9.2.1.62 | | − | |
| Cause | M | | 9.2.1.6 | | YES | ignore |
| Criticality Diagnostics | O | | 9.2.1.17 | | YES | ignore |

## 9.1.30    CELL DELETION REQUEST

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | − | |
| Message Type | M | | 9.2.1.46 | | YES | reject |
| Transaction ID | M | | 9.2.1.62 | | − | |
| C-ID | M | | 9.2.1.9 | | YES | reject |

## 9.1.31    CELL DELETION RESPONSE

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | − | |
| Message Type | M | | 9.2.1.46 | | YES | reject |
| Transaction ID | M | | 9.2.1.62 | | − | |
| Criticality Diagnostics | O | | 9.2.1.17 | | YES | ignore |

## 9.1.32   RESOURCE STATUS INDICATION

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | ignore |
| Transaction ID | M | | 9.2.1.62 | | – | |
| Indication Type | M | | 9.2.1.36 | | YES | ignore |
| CHOICE *Indication Type* | M | | | | YES | ignore |
| >*No Failure* | | | | | – | |
| **>>Local Cell Information** | | *1.. <max LocalCellin NodeB >* | | | EACH | ignore |
| >>>Local Cell ID | M | | 9.2.1.38 | | – | |
| >>>Add/Delete Indicator | M | | 9.2.1.1 | | – | |
| >>>DL or Global Capacity Credit | C-add | | 9.2.1.20B | | – | |
| >>>UL Capacity Credit | O | | 9.2.1.65A | | – | |
| >>>Common Channels Capacity Consumption Law | C-add | | 9.2.1.9A | | – | |
| >>>Dedicated Channels Capacity Consumption Law | C-add | | 9.2.1.20A | | – | |
| >>>Maximum DL Power Capability | C-add | | 9.2.1.39 | | – | |
| >>>Minimum Spreading Factor | C-add | | 9.2.1.47 | | – | |
| >>>Minimum DL Power Capability | C-add | | 9.2.1.46A | | – | |
| >>>Reference Clock availability | C-add | | 9.2.3.14A | TDD only | YES | ignore |
| >>>Local Cell Group ID | O | | 9.2.1.37A | | – | |
| >>>Power Local Cell Group ID | O | | 9.2.1.49B | | YES | ignore |
| **>>Local Cell Group Information** | | *0.. <maxLocal CellinNode B>* | | | EACH | ignore |
| >>>Local Cell Group ID | M | | 9.2.1.37A | | – | |
| >>>DL or Global Capacity Credit | M | | 9.2.1.20B | | – | |
| >>>UL Capacity Credit | O | | 9.2.1.65A | | – | |
| >>>Common Channels Capacity Consumption Law | M | | 9.2.1.9A | | – | |
| >>>Dedicated Channels Capacity Consumption Law | M | | 9.2.1.20A | | – | |
| **>>Power Local Cell Group Information** | | *0.. <maxLocal CellinNode B>* | | | EACH | ignore |
| >>>Power Local Cell Group ID | M | | 9.2.1.49B | | – | |
| >>>Maximum DL | M | | 9.2.1.39 | | – | |

| | | | | | | |
|---|---|---|---|---|---|---|
| Power Capability | | | | | | |
| >*Service Impacting* | | | | | – | |
| **>>Local Cell Information** | | 0.. <*maxLocal CellinNode B*> | | | EACH | ignore |
| >>>Local Cell ID | M | | 9.2.1.38 | | – | |
| >>>DL or Global Capacity Credit | O | | 9.2.1.20B | | – | |
| >>>UL Capacity Credit | O | | 9.2.1.65A | | – | |
| >>>Common Channels Capacity Consumption Law | O | | 9.2.1.9A | | – | |
| >>>Dedicated Channels Capacity Consumption Law | O | | 9.2.1.20A | | – | |
| >>>Maximum DL Power Capability | O | | 9.2.1.39 | | – | |
| >>>Minimum Spreading Factor | O | | 9.2.1.47 | | – | |
| >>>Minimum DL Power Capability | O | | 9.2.1.46A | | – | |
| >>>Reference Clock availability | O | | 9.2.3.14A | TDD only | YES | ignore |
| **>>Local Cell Group Information** | | 0.. <*maxLocal CellinNode B*> | | | EACH | ignore |
| >>>Local Cell Group ID | M | | 9.2.1.37A | | – | |
| >>>DL or Global Capacity Credit | O | | 9.2.1.20B | | – | |
| >>>UL Capacity Credit | O | | 9.2.1.65A | | – | |
| >>>Common Channels Capacity Consumption Law | O | | 9.2.1.9A | | – | |
| >>>Dedicated Channels Capacity Consumption Law | O | | 9.2.1.20A | | – | |
| **>>Power Local Cell Group Information** | | 0.. <*maxLocal CellinNode B*> | | | EACH | ignore |
| >>>Power Local Cell Group ID | M | | 9.2.1.49B | | – | |
| >>>Maximum DL Power Capability | M | | 9.2.1.39 | | – | |
| **>>Communication Control Port Information** | | 0.. <*maxCCPi nNodeB*> | | | EACH | ignore |
| >>>Communication Control Port ID | M | | 9.2.1.15 | | – | |
| >>>Resource Operational State | M | | 9.2.1.52 | | – | |
| >>>Availability Status | M | | 9.2.1.2 | | – | |
| **>>Cell Information** | | 0.. <*maxCellin NodeB*> | | | EACH | ignore |
| >>>C-ID | M | | 9.2.1.9 | | – | |

| | | | | | | |
|---|---|---|---|---|---|---|
| >>>Resource Operational State | O | | 9.2.1.52 | | – | |
| >>>Availability Status | O | | 9.2.1.2 | | – | |
| >>>Primary SCH Information | O | | Common Physical Channel Status Information 9.2.1.13A | FDD only | YES | ignore |
| >>>Secondary SCH Information | O | | Common Physical Channel Status Information 9.2.1.13A | FDD only | YES | ignore |
| >>>Primary CPICH Information | O | | Common Physical Channel Status Information 9.2.1.13A | FDD only | YES | ignore |
| **>>>Secondary CPICH Information** | | *0..<maxSC PICHCell>* | | FDD only | EACH | ignore |
| >>>>Secondary CPICH Individual Information | M | | Common Physical Channel Status Information 9.2.1.13A | | – | |
| >>>Primary CCPCH Information | O | | Common Physical Channel Status Information 9.2.1.13A | | YES | ignore |
| >>>BCH Information | O | | Common Transport Channel Status Information 9.2.1.14B | | YES | ignore |
| **>>>Secondary CCPCH Information** | | *0..<maxSC CPCHCell >* | | | EACH | ignore |
| >>>>Secondary CCPCH Individual Information | M | | Common Physical Channel Status Information 9.2.1.13A | | – | |
| >>>PCH Information | O | | Common Transport Channel Status Information 9.2.1.14B | | YES | ignore |
| >>>PICH Information | O | | Common Physical Channel Status Information 9.2.1.13A | | YES | ignore |
| **>>>FACH Information** | | *0.. <maxFAC HCell>* | | | EACH | ignore |
| >>>>FACH Individual Information | M | | Common Transport | | – | |

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| | | | Channel Status Information 9.2.1.14B | | | |
|---|---|---|---|---|---|---|
| **>>>PRACH Information** | | *0..<maxPRACHCell>* | | | EACH | ignore |
| >>>>PRACH Individual Information | M | | Common Physical Channel Status Information 9.2.1.13A | | – | |
| **>>>RACH Information** | | *0.. <maxPRACHCell>* | | | EACH | ignore |
| >>>>RACH Individual Information | M | | Common Transport Channel Status Information 9.2.1.14B | | – | |
| **>>>AICH Information** | | *0.. <maxPRACHCell>* | | FDD only | EACH | ignore |
| >>>>AICH Individual Information | M | | Common Physical Channel Status Information 9.2.1.13A | | – | |
| **>>>PCPCH Information** | | *0..<maxPCPCHCell>* | | FDD only | EACH | ignore |
| >>>>PCPCH Individual Information | M | | Common Physical Channel Status Information 9.2.1.13A | | – | |
| **>>>CPCH Information** | | *0.. <maxCPCHCell>* | | FDD only | EACH | ignore |
| >>>>CPCH Individual Information | M | | Common Transport Channel Status Information 9.2.1.14B | | – | |
| **>>>AP-AICH Information** | | *0.. <maxCPCHCell>* | | FDD only | EACH | ignore |
| >>>>AP-AICH Individual Information | M | | Common Physical Channel Status Information 9.2.1.13A | | – | |
| **>>>CD/CA-ICH Information** | | *0.. <maxCPCHCell>* | | FDD only | EACH | ignore |
| >>>>CD/CA-ICH Individual Information | M | | Common Physical Channel Status Information 9.2.1.13A | | – | |
| >>>SCH Information | O | | Common Physical | 3.84Mcps TDD only | YES | ignore |

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| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| | | | Channel Status Information 9.2.1.13A | | | |
| **>>>FPACH Information** | | 0 .. <maxFPACHCell> | | For 1.28Mcps TDD only | EACH | ignore |
| >>>>FPACH Individual Information | M | | Common Physical Channel Status Information 9.2.1.13A | | – | |
| **>>>DwPCH Information** | O | | Common Physical Channel Status Information 9.2.1.13A | For 1.28Mcps TDD only | YES | ignore |
| Cause | O | | 9.2.1.6 | | YES | ignore |

| Condition | Explanation |
|---|---|
| add | The IE shall be present if the *Add/Delete Indicator* IE is set to "Add". |

| Range bound | Explanation |
|---|---|
| *MaxLocalCellinNodeB* | Maximum number of Local Cells that can exist in the Node B |
| *MaxCellinNodeB* | Maximum number of C ID that can be configured in Node B |
| *MaxCPCHCell* | Maximum number of CPCHes that can be defined in a Cell |
| *MaxSCPICHCell* | Maximum number of Secondary CPICH that can be defined in a Cell. |
| *MaxSCCPCHCell* | Maximum number of Secondary CCPCH that can be defined in a Cell. |
| *MaxFACHCell* | Maximum number of FACHes that can be defined in a Cell |
| *MaxPCPCHCell* | Maximum number of PCPCHes that can be defined in a Cell |
| MaxPRACHCell | Maximum number of PRACHes and AICHes that can be defined in a Cell |
| *MaxCCPinNodeB* | Maximum number of communication control ports that can exist in the Node B |
| *MaxFPACHCell* | Maximum number of FPACHes that can be defined in a Cell |

## 9.1.33 SYSTEM INFORMATION UPDATE REQUEST

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | reject |
| Transaction ID | M | | 9.2.1.62 | | – | |

| | | | | | | |
|---|---|---|---|---|---|---|
| C-ID | M | | 9.2.1.9 | | YES | reject |
| BCCH Modification Time | O | | 9.2.1.3 | | YES | reject |
| **MIB/SB/SIBInformation** | | *1.. maxIB* | | | GLOBAL | reject |
| >IB Type | M | | 9.2.1.35 | | – | |
| >IB OC ID | M | | 9.2.1.31A | In one message, every occurrence of IB Type can only be deleted once and/or added once. | – | |
| >CHOICE *IB DeletionIndicator* | M | | | | – | |
| >>*NoDeletion* | | | | | – | |
| >>>SIB Originator | C-SIB | | 9.2.1.55 | | – | |
| >>>IB SG REP | O | | 9.2.1.34 | | – | |
| **>>>Segment Information** | | *1.. maxIBSEG* | | | GLOBAL | reject |
| >>>>IB SG POS | O | | 9.2.1.33 | | – | |
| >>>>Segment type | C – CRNCOrigination | | 9.2.1.53B | | – | |
| >>>>IB SG DATA | C – CRNCOrigination | | 9.2.1.32 | | – | |
| >>*Deletion* | | | NULL | | – | |

| Range bound | Explanation |
|---|---|
| *1..maxIB* | Maximum number of information Blocks supported in one message. |
| *1..maxIBSEG* | Maximum number of segments for one Information Block |

| Condition | Explanation |
|---|---|
| CRNCOrigination | The IE shall be present if the *SIB Originator* IE is set to "CRNC" or if the *IB Type* IE is set to "MIB", "SB1" or "SB2". |
| SIB | Th IE shall be present if the *IB Type* IE is set to "SIB". |

## 9.1.34    SYSTEM INFORMATION UPDATE RESPONSE

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | reject |
| Transaction ID | M | | 9.2.1.62 | | – | |
| Criticality Diagnostics | O | | 9.2.1.17 | | YES | ignore |

## 9.1.35 SYSTEM INFORMATION UPDATE FAILURE

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | reject |
| Transaction ID | M | | 9.2.1.62 | | – | |
| Cause | M | | 9.2.1.6 | | YES | ignore |
| Criticality Diagnostics | O | | 9.2.1.17 | | YES | ignore |

## 9.1.36 RADIO LINK SETUP REQUEST

### 9.1.36.1 FDD message

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | reject |
| CRNC Communication Context ID | M | | 9.2.1.18 | The reserved value "All CRNCC C" shall not be used. | YES | reject |
| Transaction ID | M | | 9.2.1.62 | | – | |
| **UL DPCH Information** | | 1 | | | YES | reject |
| >UL Scrambling Code | M | | 9.2.2.59 | | – | |
| >Min UL Channelisation Code length | M | | 9.2.2.22 | | – | |
| >Max Number of UL DPDCHs | C – CodeLen | | 9.2.2.21 | | – | |
| >puncture Limit | M | | 9.2.1.50 | For UL | – | |
| >TFCS | M | | 9.2.1.58 | for UL | – | |
| >UL DPCCH Slot Format | M | | 9.2.2.57 | | – | |
| > UL SIR Target | M | | UL SIR 9.2.1.67A | | – | |
| >Diversity mode | M | | 9.2.2.9 | | – | |
| >SSDT cell ID Length | O | | 9.2.2.45 | | – | |
| >S Field Length | O | | 9.2.2.40 | | – | |
| >DPC mode | O | | 9.2.2.13C | | YES | reject |
| **DL DPCH Information** | | 1 | | | YES | reject |
| >TFCS | M | | 9.2.1.58 | For DL | – | |
| >DL DPCH Slot Format | M | | 9.2.2.10 | | – | |
| >TFCI signalling mode | M | | 9.2.2.50 | | – | |
| >TFCI presence | C-SlotFormat | | 9.2.1.57 | | – | |
| >Multiplexing Position | M | | 9.2.2.23 | | – | |
| >PDSCH RL ID | C-DSCH | | RL ID 9.2.1.53 | | – | |
| >PDSCH code mapping | C-DSCH | | 9.2.2.25 | | – | |
| **>Power Offset Information** | | 1 | | | – | |
| >>PO1 | M | | Power Offset 9.2.2.29 | Power offset for the TFCI bits | – | |
| >>PO2 | M | | Power Offset 9.2.2.29 | Power offset for the TPC bits | – | |
| >>PO3 | M | | Power Offset 9.2.2.29 | Power offset for the pilot bits | – | |
| >FDD TPC DL Step Size | M | | 9.2.2.16 | | – | |
| >Limited Power Increase | M | | 9.2.2.18A | | – | |
| >Inner Loop DL PC Status | M | | 9.2.2.18B | | – | |
| DCH Information | M | | DCH FDD Information 9.2.2.4D | | YES | reject |
| DSCH Information | O | | DSCH FDD Information 9.2.2.13B | | YES | reject |

| **TFCI2 bearer information** | | 0..1 | | | YES | ignore |
|---|---|---|---|---|---|---|
| >ToAWS | M | | 9.2.1.61 | | - | |
| >ToAWE | M | | 9.2.1.60 | | - | |
| **RL Information** | | 1 to <maxnoof RLs> | | | EACH | notify |
| >RL ID | M | | 9.2.1.53 | | – | |
| >C-ID | M | | 9.2.1.9 | | – | |
| >First RLS Indicator | M | | 9.2.2.16A | | – | |
| >Frame Offset | M | | 9.2.1.31 | | – | |
| >Chip Offset | M | | 9.2.2.2 | | – | |
| >Propagation Delay | O | | 9.2.2.35 | | – | |
| >Diversity Control Field | C – NotFirstRL | | 9.2.1.25 | | – | |
| >DL Code Information | M | | FDD DL Code Information 9.2.2.14A | | – | |
| >Initial DL transmission Power | M | | DL Power 9.2.1.21 | Initial power on DPCH | – | |
| >Maximum DL power | M | | DL Power 9.2.1.21 | Maximum allowed power on DPCH | – | |
| >Minimum DL power | M | | DL Power 9.2.1.21 | Minimum allowed power on DPCH | – | |
| >SSDT Cell Identity | O | | 9.2.2.44 | | – | |
| >Transmit Diversity Indicator | C – Diversity mode | | 9.2.2.53 | | – | |
| >SSDT Cell Identity for EDSCHPC | C-EDSCHPC | | 9.2.2.44A | | YES | ignore |
| >RL specific DCH Information | O | | 9.2.1.XXX | | YES | ignore |
| >Delayed Activation | O | | 9.2.1.24C | | YES | reject |
| Transmission Gap Pattern Sequence Information | O | | 9.2.2.53A | | YES | reject |
| Active Pattern Sequence Information | O | | 9.2.2.A | | YES | reject |
| DSCH Common Information | O | | DSCH FDD Common Information 9.2.2.13D | | YES | ignore |
| DL Power Balancing Information | O | | 9.2.2.12B | | YES | ignore |
| HS-DSCH Information | O | | HS-DSCH FDD Information 9.2.2.18D | | YES | reject |
| HS-DSCH-RNTI | O | | INTEGER 9.2.1.31J | | YES | reject |
| HS-PDSCH RL ID | C – InfoHSDSCH | | RL ID 9.2.1.53 | | YES | reject |

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| Condition | Explanation |
|---|---|
| CodeLen | The IE shall be present if *Min UL Channelisation Code Length* IE equals to 4. |
| NotFirstRL | The IE shall be present if the RL is not the first one in the *RL Information* IE. |
| DSCH | The IE shall be present if the *DSCH Information* IE is present. |
| SlotFormat | The IE shall be present if the *DL DPCH Slot Format* IE is equal to any of the values from 12 to 16. |
| Diversity mode | The IE shall be present if *Diversity Mode* IE in *UL DPCH Information* IE is not set to "none". |
| EDSCHPC | The IE shall be present if *Enhanced DSCH PC* IE is present in the *DSCH Common Information* IE. |
| InfoHSDSCH | The IE shall be present if *HS-DSCH FDD Information* IE is present as well |

| Range bound | Explanation |
|---|---|
| MaxnoofRLs | Maximum number of RLs for one UE. |

### 9.1.36.2 TDD message

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | reject |
| CRNC Communication Context ID | M | | 9.2.1.18 | The reserved value "All CRNCC C" shall not be used. | YES | reject |
| Transaction ID | M | | 9.2.1.62 | | – | |
| **UL CCTrCH Information** | | 0 to <maxno CCTrCH> | | | EACH | notify |
| >CCTrCH ID | M | | 9.2.3.3 | | – | |
| >TFCS | M | | 9.2.1.58 | | – | |
| >TFCI Coding | M | | 9.2.3.22 | | – | |
| >Puncture Limit | M | | 9.2.1.50 | | – | |
| > UL SIR Target | O | | UL SIR 9.2.1.67A | Mandatory for 1.28Mcps TDD; not applicable for 3.84Mcps TDD | YES | reject |
| **>UL DPCH Information** | | 0..1 | | For 3.84Mcps TDD only | YES | notify |
| >>Repetition Period | M | | 9.2.3.16 | | – | |
| >>Repetition Length | M | | 9.2.3.15 | | – | |
| >>TDD DPCH Offset | M | | 9.2.3.19A | | – | |
| >>UL Timeslot Information | M | | 9.2.3.26C | | – | |
| **>UL DPCH Information LCR** | | 0..1 | | For 1.28Mcps TDD only | YES | notify |
| >>Repetition Period | M | | 9.2.3.16 | | – | |
| >>Repetition Length | M | | 9.2.3.15 | | – | |
| >>TDD DPCH Offset | M | | 9.2.3.19A | | – | |
| >>UL Timeslot Information LCR | M | | 9.2.3.26E | | – | |
| **DL CCTrCH Information** | | 0 to <maxno CCTrCH> | | | EACH | notify |
| >CCTrCH ID | M | | 9.2.3.3 | | – | |
| >TFCS | M | | 9.2.1.58 | | – | |
| >TFCI Coding | M | | 9.2.3.22 | | – | |
| >Puncture Limit | M | | 9.2.1.50 | | – | |
| >TDD TPC DL Step Size | M | | 9.2.3.21 | | | |
| **>TPC CCTrCH List** | | 0 to <maxnoC CTrCH> | | List of uplink CCTrCH which provide TPC | – | |
| >>TPC CCTrCH ID | M | | CCTrCH ID 9.2.3.3 | | – | |
| **>DL DPCH information** | | 0..1 | | For 3.84Mcps TDD only | YES | notify |
| >>Repetition Period | M | | 9.2.3.16 | | – | |
| >>Repetition Length | M | | 9.2.3.15 | | – | |
| >>TDD DPCH Offset | M | | 9.2.3.19A | | – | |

| | | | | | | |
|---|---|---|---|---|---|---|
| >>DL Timeslot Information | M | | 9.2.3.4E | | – | |
| **>DL DPCH information LCR** | | 0..1 | | For 1.28Mcps TDD only | YES | notify |
| >>Repetition Period | M | | 9.2.3.16 | | – | |
| >>Repetition Length | M | | 9.2.3.15 | | – | |
| >>TDD DPCH Offset | M | | 9.2.3.19A | | – | |
| >>DL Timeslot Information LCR | M | | 9.2.3.4O | | – | |
| >>TSTD Indicator | M | | 9.2.1.64 | | – | |
| >CCTrCH Initial DL Transmission Power | O | | DL Power 9.2.1.21 | Initial power on DPCH | YES | ignore |
| DCH Information | O | | DCH TDD Information 9.2.3.4C | | YES | reject |
| DSCH Information | O | | DSCH TDD Information 9.2.3.5A | | YES | reject |
| USCH Information | O | | 9.2.3.28 | | YES | reject |
| **RL Information** | | 1 | | | YES | reject |
| >RL ID | M | | 9.2.1.53 | | – | |
| >C-ID | M | | 9.2.1.9 | | – | |
| >Frame Offset | M | | 9.2.1.31 | | – | |
| >Special Burst Scheduling | M | | 9.2.3.18A | | – | |
| >Initial DL transmission Power | M | | DL Power 9.2.1.21 | Initial power on DPCH | – | |
| >Maximum DL power | M | | DL Power 9.2.1.21 | Maximum allowed power on DPCH | – | |
| >Minimum DL power | M | | DL Power 9.2.1.21 | Minimum allowed power on DPCH | – | |
| >DL Time Slot ISCP Info | O | | 9.2.3.4F | For 3.84Mcps TDD only | – | |
| >DL Time Slot ISCP Info LCR | O | | 9.2.3.40A | For 1.28Mcps TDD only | YES | reject |
| >RL specific DCH Information | O | | 9.2.1.XXX | | YES | ignore |
| >Delayed Activation | O | | 9.2.1.24C | | YES | reject |
| HS-DSCH Information | O | | HS-DSCH TDD Information 9.2.3.5F | | YES | reject |
| HS-DSCH-RNTI | O | | INTEGER 9.2.1.31J | | YES | reject |
| HS-PDSCH RL ID | C – InfoHSDSCH | | RL ID 9.2.1.53 | | YES | reject |

| Range bound | Explanation |
|---|---|
| MaxnoCCTrCH | Number of CCTrCH for one UE. |

## 9.1.37 RADIO LINK SETUP RESPONSE

### 9.1.37.1 FDD message

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | reject |
| CRNC Communication Context ID | M | | 9.2.1.18 | The reserved value "All CRNCC C" shall not be used. | YES | ignore |
| Transaction ID | M | | 9.2.1.62 | | – | |
| Node B Communication Context ID | M | | 9.2.1.48 | The reserved value "All NBCC" shall not be used. | YES | ignore |
| Communication Control Port ID | M | | 9.2.1.15 | | YES | ignore |
| **RL Information Response** | | 1 to <maxnoofRLs> | | | EACH | ignore |
| >RL ID | M | | 9.2.1.53 | | – | |
| >RL Set ID | M | | 9.2.2.39 | | | |
| >Received total wide band power | M | | 9.2.2.39A | | – | |
| >Diversity Indication | C-NotFirstRL | | 9.2.1.26 | | – | |
| >CHOICE *diversity Indication* | M | | | | – | |
| >>*Combining* | | | | | – | |
| >>>RL ID | M | | 9.2.1.53 | Reference RL ID for the combining | – | |
| >>*Non Combining or First RL* | | | | | – | |
| >>>DCH Information Response | M | | 9.2.1.20C | | - | |
| >DSCH Information Response | O | | 9.2.1.27A | | YES | ignore |
| >SSDT Support Indicator | M | | 9.2.2.46 | | – | |
| >DL Power Balancing Activation Indicator | O | | 9.2.2.12C | | YES | ignore |
| >HS-DSCH Information Response | O | | HS-DSCH FDD Information Response 9.2.2.18E | | YES | ignore |
| TFCI2 Bearer Information Response | O | | 9.2.2.49A | | YES | ignore |
| Criticality Diagnostics | O | | 9.2.1.17 | | YES | ignore |

| Condition | Explanation |
|---|---|
| NotFirstRL | The IE shall be present if the RL is not the first one in the *RL Information Response* IE. |

| Range bound | Explanation |
|---|---|
| MaxnoofRLs | Maximum number of RLs for one UE. |

### 9.1.37.2 TDD Message

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | reject |
| CRNC Communication Context ID | M | | 9.2.1.18 | The reserved value "All CRNCC C" shall not be used. | YES | ignore |
| Transaction ID | M | | 9.2.1.62 | | – | |
| Node B Communication Context ID | M | | 9.2.1.48 | The reserved value "All NBCC" shall not be used. | YES | ignore |
| Communication Control Port ID | M | | 9.2.1.15 | | YES | ignore |
| **RL Information Response** | | 0..1 | | Mandatory For 3.84Mcps TDD only | YES | ignore |
| >RL ID | M | | 9.2.1.53 | | – | |
| >UL Time Slot ISCP Info | M | | 9.2.3.26D | | – | |
| >UL PhysCH SF Variation | M | | 9.2.3.26B | | – | |
| >DCH Information Response | O | | 9.2.1.20C | | YES | ignore |
| >DSCH Information Response | O | | 9.2.1.27A | | YES | ignore |
| >USCH Information Response | O | | 9.2.3.28 | | YES | ignore |
| >HS-DSCH Information Response | O | | HS-DSCH TDD Information Response 9.2.3.5G | | YES | ignore |
| **RL Information Response LCR** | | 0 .. 1 | | Mandatory For 1.28Mcps TDD only | YES | ignore |
| >RL ID | M | | 9.2.1.53 | | – | |
| >UL Time Slot ISCP Info LCR | M | | 9.2.3.26F | | – | |
| >UL PhysCH SF Variation | M | | 9.2.3.26B | | – | |
| >DCH Information Response | O | | 9.2.1.20C | | YES | ignore |
| >DSCH Information Response | O | | 9.2.1.27A | | YES | ignore |
| >USCH Information Response | O | | 9.2.3.28 | | YES | ignore |
| >HS-DSCH Information Response | O | | HS-DSCH TDD Information Response 9.2.3.5G | | YES | ignore |
| Criticality Diagnostics | O | | 9.2.1.17 | | YES | ignore |

## 9.1.38   RADIO LINK SETUP FAILURE

### 9.1.38.1     FDD Message

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | reject |
| CRNC Communication Context ID | M | | 9.2.1.18 | The reserved value "All CRNCC C" shall not be used. | YES | ignore |
| Transaction ID | M | | 9.2.1.62 | | – | |
| Node B Communication Context ID | C-Success | | 9.2.1.48 | The reserved value "All NBCC" shall not be used | YES | ignore |
| Communication Control Port ID | O | | 9.2.1.15 | | YES | ignore |
| CHOICE *Cause Level* | M | | | | YES | ignore |
| >*General* | | | | | – | |
| >>Cause | M | | 9.2.1.6 | | – | |
| >*RL specific* | | | | | – | |
| **>>Unsuccessful RL Information Response** | | 1 to <maxnoofRLs> | | | EACH | ignore |
| >>>RL ID | M | | 9.2.1.53 | | – | |
| >>>Cause | M | | 9.2.1.6 | | – | |
| **>>Successful RL Information Response** | | 0 to <maxnoofRLs–1> | | | EACH | ignore |
| >>>RL ID | M | | 9.2.1.53 | | – | |
| >>>RL Set ID | M | | 9.2.2.39 | | | |
| >>>Received total wide band power | M | | 9.2.2.39A | | – | |
| >>>Diversity Indication | C-NotFirstRL | | 9.2.1.26 | | – | |
| >>>CHOICE *Diversity Indication* | M | | | | – | |
| >>>>*Combining* | | | | | – | |
| >>>>>RL ID | M | | 9.2.1.53 | Reference RL ID for the combining | – | |
| >>>>*Non Combining or First RL* | | | | | – | |
| >>>>>DCH Information Response | M | | 9.2.1.20C | | - | |
| >>>DSCH Information Response | O | | 9.2.1.27A | | YES | ignore |
| >>>TFCI2 Bearer Information Response | O | | 9.2.2.49A | | - | |
| >>>SSDT Support Indicator | M | | 9.2.2.46 | | – | |
| >>>DL Power Balancing | O | | 9.2.2.12C | | YES | ignore |

| | | | | | | |
|---|---|---|---|---|---|---|
| Activation Indicator | | | | | | |
| >>>HS-DSCH Information Response | O | | HS-DSCH FDD Information Response 9.2.2.18E | | YES | ignore |
| Criticality Diagnostics | O | | 9.2.1.17 | | YES | ignore |

| Condition | Explanation |
|---|---|
| Success | The IE shall be present if at least one of the radio links has been successfully set up. |
| NotFirstRL | The IE shall be present if the RL is not the first one in the *Successful RL Information Response* IE. |

| Range bound | Explanation |
|---|---|
| MaxnoofRLs | Maximum number of RLs for one UE. |

## 9.1.38.2 TDD Message

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | reject |
| CRNC Communication Context ID | M | | 9.2.1.18 | The reserved value "All CRNCCC" shall not be used. | YES | ignore |
| Transaction ID | M | | 9.2.1.62 | | – | |
| CHOICE *Cause Level* | M | | | | YES | ignore |
| >*General* | | | | | – | |
| >>Cause | M | | 9.2.1.6 | | – | |
| >*RL specific* | | | | | – | |
| **>>Unsuccessful RL Information Response** | | 1 | | | YES | ignore |
| >>>RL ID | M | | 9.2.1.53 | | – | |
| >>>Cause | M | | 9.2.1.6 | | – | |
| Criticality Diagnostics | O | | 9.2.1.17 | | YES | ignore |

## 9.1.39 RADIO LINK ADDITION REQUEST

### 9.1.39.1 FDD Message

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | reject |
| Node B Communication Context ID | M | | 9.2.1.48 | The reserved value "All NBCC" shall not be used. | YES | reject |
| Transaction ID | M | | 9.2.1.62 | | – | |
| Compressed Mode Deactivation Flag | O | | 9.2.2.3A | | YES | reject |
| **RL Information** | | *1..<maxnoofRL-1>* | | | EACH | notify |
| >RL ID | M | | 9.2.1.53 | | – | |
| >C-ID | M | | 9.2.1.9 | | – | |
| >Frame Offset | M | | 9.2.1.31 | | – | |
| >Chip Offset | M | | 9.2.2.2 | | – | |
| >Diversity Control Field | M | | 9.2.1.25 | | – | |
| >DL Code Information | M | | FDD DL Code Information 9.2.2.14A | | – | |
| >Initial DL transmission power | O | | DL Power 9.2.1.21 | Initial power on DPCH | – | |
| >Maximum DL power | O | | DL Power 9.2.1.21 | Maximum allowed power on DPCH | – | |
| >Minimum DL power | O | | DL Power 9.2.1.21 | Minimum allowed power on DPCH | – | |
| >SSDT Cell Identity | O | | 9.2.2.44 | | – | |
| >Transmit Diversity Indicator | O | | 9.2.2.53 | | – | |
| >DL Reference Power | O | | DL power 9.2.1.21 | Power on DPCH | YES | ignore |
| >RL specific DCH Information | O | | 9.2.1.XXX | | YES | ignore |
| >Delayed Activation | O | | 9.2.1.24C | | YES | reject |

| Range bound | Explanation |
|---|---|
| *MaxnoofRL* | Maximum number of RLs for one UE |

### 9.1.39.2 TDD Message

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | reject |
| Node B Communication Context ID | M | | 9.2.1.48 | The reserved value "All NBCC" shall not be used. | YES | reject |
| Transaction ID | M | | 9.2.1.62 | | – | |
| **UL CCTrCH Information** | | 0 to <maxno CCTrCH> | | | GLOBAL | reject |
| >CCTrCH ID | M | | 9.2.3.3 | | – | |
| **>UL DPCH Information** | | 0..1 | | For 3.84Mcps TDD only | YES | notify |
| >>Repetition Period | M | | 9.2.3.16 | | – | |
| >>Repetition Length | M | | 9.2.3.15 | | – | |
| >>TDD DPCH Offset | M | | 9.2.3.19A | | – | |
| >>UL Timeslot Information | M | | 9.2.3.26C | | – | |
| **>UL DPCH Information LCR** | | 0..1 | | For 1.28Mcps TDD only | YES | notify |
| >>Repetition Period | M | | 9.2.3.16 | | – | |
| >>Repetition Length | M | | 9.2.3.15 | | – | |
| >>TDD DPCH Offset | M | | 9.2.3.19A | | – | |
| >>UL Timeslot Information LCR | M | | 9.2.3.26E | | – | |
| **DL CCTrCH Information** | | 0 to <maxno CCTrCH> | | | GLOBAL | reject |
| >CCTrCH ID | M | | 9.2.3.3 | | – | |
| **>DL DPCH information** | | 0..1 | | For 3.84Mcps TDD only | YES | notify |
| >>Repetition Period | M | | 9.2.3.16 | | – | |
| >>Repetition Length | M | | 9.2.3.15 | | – | |
| >>TDD DPCH Offset | M | | 9.2.3.19A | | – | |
| >>DL Timeslot Information | M | | 9.2.3.4E | | – | |
| **>DL DPCH information LCR** | | 0..1 | | For 1.28Mcps TDD only | YES | notify |
| >>Repetition Period | M | | 9.2.3.16 | | – | |
| >>Repetition Length | M | | 9.2.3.15 | | – | |
| >>TDD DPCH Offset | M | | 9.2.3.19A | | – | |
| >>DL Timeslot Information LCR | M | | 9.2.3.4O | | – | |
| >CCTrCH Initial DL Transmission Power | O | | DL Power 9.2.1.21 | Initial power on DPCH | YES | ignore |
| **RL Information** | | 1 | | | YES | reject |
| >RL ID | M | | 9.2.1.53 | | – | |
| >C-ID | M | | 9.2.1.9 | | – | |
| >Frame Offset | M | | 9.2.1.31 | | – | |
| >Diversity Control Field | M | | 9.2.1.25 | | – | |
| >Initial DL transmission Power | O | | DL Power | Initial power | – | |

| | | | 9.2.1.21 | on DPCH | | |
|---|---|---|---|---|---|---|
| >Maximum DL power | O | | DL Power 9.2.1.21 | Maximum allowed power on DPCH | – | |
| >Minimum DL power | O | | DL Power 9.2.1.21 | Minimum allowed power on DPCH | – | |
| >DL Time Slot ISCP Info | O | | 9.2.3.4F | For 3.84Mcps TDD only | – | |
| >DL Time Slot ISCP Info LCR | O | | 9.2.3.40A | For 1.28Mcps TDD only | YES | reject |
| >RL specific DCH Information | O | | 9.2.1.XXX | | YES | ignore |
| >Delayed Activation | O | | 9.2.1.24C | | YES | reject |

| Range bound | Explanation |
|---|---|
| MaxnoCCTrCH | Number of CCTrCH for one UE. |

## 9.1.40 RADIO LINK ADDITION RESPONSE

### 9.1.40.1 FDD message

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | reject |
| CRNC Communication Context ID | M | | 9.2.1.18 | The reserved value "All CRNCC C" shall not be used. | YES | ignore |
| Transaction ID | M | | 9.2.1.62 | | – | |
| **RL Information Response** | | 1..<*maxno ofRL-1*> | | | EACH | ignore |
| >RL ID | M | | 9.2.1.53 | | – | |
| >RL Set ID | M | | 9.2.2.39 | | – | |
| > Received total wide band power | M | | 9.2.2.39A | | – | |
| >Diversity Indication | M | | 9.2.1.26 | | – | |
| >CHOICE *Diversity Indication* | M | | | | – | |
| >>*Combining* | | | | | – | |
| >>>RL ID | M | | 9.2.1.53 | Reference RL | – | |
| >>*Non combining* | | | | | – | |
| >>>DCH Information Response | M | | 9.2.1.20C | | – | |
| >SSDT support indicator | M | | 9.2.2.46 | | – | |
| >DL Power Balancing Activation Indicator | O | | 9.2.2.12C | | YES | ignore |
| Criticality Diagnostics | O | | 9.2.1.17 | | YES | ignore |

| Range bound | Explanation |
|---|---|
| *MaxnoofRL* | Maximum number of RLs for one UE |

### 9.1.40.2 TDD Message

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | reject |
| CRNC Communication Context ID | M | | 9.2.1.18 | The reserved value "All CRNCC C" shall not be used. | YES | ignore |
| Transaction ID | M | | 9.2.1.62 | | – | |
| **RL Information response** | | 0..1 | | Mandatory for 3.84Mcps TDD only | YES | ignore |
| >RL ID | M | | 9.2.1.53 | | – | |
| >UL Time Slot ISCP Info | M | | 9.2.3.26D | | – | |
| >UL PhysCH SF Variation | M | | 9.2.3.26B | | – | |
| **>DCH Information** | | 0..1 | | | – | |
| >>Diversity Indication | M | | 9.2.1.26 | | – | |
| >>CHOICE *Diversity Indication* | M | | | | – | |
| >>>*Combining* | | | | In TDD it indicates whether the old Transport Bearer shall be reused or not | – | |
| >>>>RL ID | M | | 9.2.1.53 | Reference RL | – | |
| >>>*Non combining* | | | | | – | |
| >>>>DCH Information Response | M | | 9.2.1.20C | | – | |
| >DSCH Information Response | O | | 9.2.1.27A | | YES | ignore |
| >USCH Information Response | O | | 9.2.3.29 | | YES | ignore |
| Criticality Diagnostics | O | | 9.2.1.17 | | YES | ignore |
| **RL Information response LCR** | | 0..1 | | Mandatory for 1.28Mcps TDD only | YES | ignore |
| >RL ID | M | | 9.2.1.53 | | – | |
| >UL Time Slot ISCP Info LCR | M | | 9.2.3.26F | | – | |
| >UL PhysCH SF Variation | M | | 9.2.3.26B | | – | |
| **>DCH Information** | | 0..1 | | | – | |
| >>Diversity Indication | M | | 9.2.1.26 | | – | |
| >>CHOICE *diversity indication* | M | | | | – | |
| >>>*Combining* | | | | In TDD it indicates whether the old Transport Bearer shall be reused or not | – | |
| >>>>RL ID | M | | 9.2.1.53 | Reference RL | – | |
| >>>*Non combining* | | | | | – | |
| >>>>DCH Information Response | M | | 9.2.1.20C | | – | |
| >DSCH Information TDD Response | O | | 9.2.1.27A | | YES | ignore |
| >USCH Information Response | O | | 9.2.3.29 | | YES | ignore |

*ETSI*

## 9.1.41   RADIO LINK ADDITION FAILURE

### 9.1.41.1   FDD Message

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | reject |
| CRNC Communication Context ID | M | | 9.2.1.18 | The reserved value "All CRNCCC" shall not be used. | YES | ignore |
| Transaction ID | M | | 9.2.1.62 | | – | |
| CHOICE *Cause Level* | M | | | | YES | Ignore |
| >*General* | | | | | – | |
| >>Cause | M | | 9.2.1.6 | | – | |
| >*RL specific* | | | | | – | |
| **>>Unsuccessful RL Information Response** | | 1..<*maxnoofRL-1*> | | | EACH | ignore |
| >>>RL ID | M | | 9.2.1.53 | | – | |
| >>>Cause | M | | 9.2.1.6 | | – | |
| **>>Succcessful RL Information Response** | | 0..<*maxnoofRL-2*> | | | EACH | ignore |
| >>>RL ID | M | | 9.2.1.53 | | – | |
| >>>RL Set ID | M | | 9.2.2.39 | | | |
| >>> Received total wide band power | M | | 9.2.2.39A | | – | |
| >>>Diversity Indication | M | | 9.2.1.26 | | – | |
| >>>CHOICE *Diversity Indication* | M | | | | – | |
| >>>>*Combining* | | | | | – | |
| >>>>>RL ID | M | | 9.2.1.53 | Reference RL | – | |
| >>>>*Non combining* | | | | | – | |
| >>>>>DCH Information Response | M | | 9.2.1.20C | | – | |
| >>>SSDT support indicator | M | | 9.2.2.46 | | – | |
| >>>DL Power Balancing Activation Indicator | O | | 9.2.2.12C | | YES | ignore |
| Criticality Diagnostics | O | | 9.2.1.17 | | YES | ignore |

| Range bound | Explanation |
|---|---|
| *MaxnoofRL* | Maximum number of RLs for one UE |

## 9.1.41.2 TDD Message

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | reject |
| CRNC Communication Context ID | M | | 9.2.1.18 | The reserved value "All CRNCC C" shall not be used. | YES | ignore |
| Transaction ID | M | | 9.2.1.62 | | – | |
| CHOICE *Cause Level* | M | | | | YES | Ignore |
| >*General* | | | | | – | |
| >>Cause | M | | 9.2.1.6 | | – | |
| >*RL specific* | | | | | – | |
| **>>Unsuccessful RL Information Response** | | 1 | | | YES | ignore |
| >>>RL ID | M | | 9.2.1.53 | | – | |
| >>>Cause | M | | 9.2.1.6 | | – | |
| Criticality Diagnostics | O | | 9.2.1.17 | | YES | ignore |

## 9.1.42 RADIO LINK RECONFIGURATION PREPARE

### 9.1.42.1 FDD Message

| IE/Group Name | Presence | Range | IE Type and Reference | Semantic Description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | reject |
| Node B Communication Context ID | M | | 9.2.1.48 | The reserved value "All NBCC" shall not be used. | YES | reject |
| Transaction ID | M | | 9.2.1.62 | | – | |
| **UL DPCH Information** | | *0..1* | | | YES | reject |
| >UL Scrambling code | O | | 9.2.2.59 | | – | |
| >UL SIR Target | O | | UL SIR 9.2.1.67A | | – | |
| >Min UL Channelistion Code Length | O | | 9.2.2.22 | | – | |
| >Max Number of UL DPDCHs | C – CodeLen | | 9.2.2.21 | | – | |
| >Puncture Limit | O | | 9.2.1.50 | For UL | – | |
| >TFCS | O | | 9.2.1.58 | | – | |
| >UL DPCCH Slot Format | O | | 9.2.2.57 | | – | |
| >Diversity mode | O | | 9.2.2.9 | | – | |
| >SSDT Cell Identity Length | O | | 9.2.2.45 | | – | |
| >S-Field Length | O | | 9.2.2.40 | | – | |
| **DL DPCH Information** | | *0..1* | | | YES | reject |
| >TFCS | O | | 9.2.1.58 | | – | |
| >DL DPCH Slot Format | O | | 9.2.2.10 | | – | |
| >TFCI Signalling Mode | O | | 9.2.2.50 | | – | |
| >TFCI presence | C-Slot Format | | 9.2.1.57 | | – | |
| >Multiplexing Position | O | | 9.2.2.23 | | – | |
| >PDSCH code mapping | O | | 9.2.2.25 | | – | |
| >PDSCH RL ID | O | | RL ID 9.2.1.53 | | – | |
| >Limited Power Increase | O | | 9.2.2.18A | | – | |
| DCHs to Modify | O | | DCHs FDD to Modify 9.2.2.4E | | YES | reject |
| DCHs to Add | O | | DCH FDD Information 9.2.2.4D | | YES | reject |
| **DCHs to Delete** | | *0..<max noofDCHs>* | | | GLOBAL | reject |
| >DCH ID | M | | 9.2.1.20 | | – | |
| **DSCH to modify** | | *0..<max noofDSCHs>* | | | YES | reject |
| >DSCH ID | M | | 9.2.1.27 | | – | |
| >Transport Format Set | O | | 9.2.1.59 | For the DL. | – | |
| >Allocation/Retention Priority | O | | 9.2.1.1A | | – | |
| >Frame Handling Priority | O | | 9.2.1.30 | | – | |
| >ToAWS | O | | 9.2.1.61 | | – | |
| >ToAWE | O | | 9.2.1.60 | | – | |

| >Transport Bearer Request Indicator | M | | 9.2.1.62A | | – | |
|---|---|---|---|---|---|---|
| >Binding ID | O | | 9.2.1.4 | Shall be ignored if bearer establishme nt with ALCAP. | YES | ignore |
| >Transport Layer Address | O | | 9.2.1.63 | Shall be ignored if bearer establishme nt with ALCAP. | YES | ignore |
| DSCH to add | O | | DSCH FDD Information 9.2.2.13B | | YES | reject |
| **DSCH to Delete** | | *0..<max noofDS CHs>* | | | YES | reject |
| >DSCH ID | M | | 9.2.1.27 | | – | |
| **TFCI2 bearer specific information** | | 0..1 | | | YES | reject |
| **>**CHOICE *TFCI2 bearer action* | M | | | | – | |
| *>>Add or modify* | | | | | – | |
| >>>ToAWS | M | | 9.2.1.61 | | – | |
| >>>ToAWE | M | | 9.2.1.60 | | – | |
| >>> TFCI2 Bearer Request Indicator | O | | 9.2.1.56C | | YES | reject |
| *>>Delete* | | | NULL | | – | |
| **RL Information** | | *0..<max noofRLs >* | | | EACH | reject |
| >RL ID | M | | 9.2.1.53 | | – | |
| >DL Code Information | O | | FDD DL Code Information 9.2.2.14A | | – | |
| >Maximum DL Power | O | | DL Power 9.2.1.21 | Maximum allowed power on DPCH | – | |
| >Minimum DL Power | O | | DL Power 9.2.1.21 | Minimum allowed power on DPCH | – | |
| >SSDT Indication | O | | 9.2.2.47 | | – | |
| >SSDT Cell Identity | C–SSDTIndON | | 9.2.2.44 | | – | |
| >Transmit Diversity Indicator | C – Diversity mode | | 9.2.2.53 | | – | |
| >SSDT Cell Identity for EDSCHPC | C-EDSCHPC | | 9.2.2.44A | | YES | ignore |
| >DL Reference Power | O | | DL Power 9.2.1.21 | Power on DPCH | YES | ignore |
| > RL specific DCH Information | O | | 9.2.1.XXX | | YES | ignore |
| >DL DPCH Timing Adjustment | O | | 9.2.1.26A | Required RL Timing Adjustment | YES | reject |

| Transmission Gap Pattern Sequence Information | O | | 9.2.2.53A | | YES | reject |
|---|---|---|---|---|---|---|
| DSCH Common Information | O | | DSCH FDD Common Information 9.2.2.13D | | YES | ignore |
| Signalling Bearer Request Indicator | O | | 9.2.1.55A | | YES | reject |
| HS-DSCH Information to modify | O | | 9.2.1.x5 | | YES | reject |
| HS-DSCH Information to Add | O | | HS-DSCH FDD Information 9.2.2.18D | | YES | reject |
| **HS-DSCH Information to Delete** | | 0..<*Max NoOfM ACdFlo ws*> | | | GLOBAL | reject |
| > HS-DSCH MAC-D flow ID | M | | 9.2.1.31I | | - | |
| HS-DSCH-RNTI | O | | 9.2.1.31J | | YES | reject |
| HS-PDSCH RL ID | O | | RL ID 9.2.1.53 | | YES | reject |

| Condition | Explanation |
|---|---|
| SSDTIndON | The IE shall be present if the *SSDT Indication* IE is set to "SSDT Active in the UE". |
| CodeLen | The IE shall be present if the *Min UL Channelisation Code Length* IE is equals to 4. |
| SlotFormat | The IE shall be present if the *DL DPCH Slot Format* IE is equal to any of the values from 12 to 16. |
| | |
| Diversity mode | The IE shall be present if *Diversity Mode* IE is present in the *UL DPCH Information* IEand is not set to "none". |
| EDSCHPC | The IE shall be present if *Enhanced DSCH PC* IE is present in the *DSCH Common Information* IE. |

| Range Bound | Explanation |
|---|---|
| *MaxnoofDCHs* | Maximum number of DCHs for a UE. |
| *MaxnoofDSCHs* | Maximum number of DSCHs for a UE. |
| *MaxnoofRLs* | Maximum number of RLs for a UE. |
| *MaxnoofMACdFlows* | Maximum number of MAC-d Flows |

### 9.1.42.2 TDD Message

| IE/Group Name | Presence | Range | IE Type and Reference | Semantic Description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | reject |
| Node B Communication Context ID | M | | 9.2.1.48 | The reserved value "All NBCC" shall not be used. | YES | reject |
| Transaction ID | M | | 9.2.1.62 | | – | |
| **UL CCTrCH to Add** | | 0.. \<maxno of CCTrCHs> | | | GLOBAL | reject |
| >CCTrCH ID | M | | 9.2.3.3 | | – | |
| >TFCS | M | | 9.2.1.58 | | – | |
| >TFCI Coding | M | | 9.2.3.22 | | – | |
| >Puncture Limit | M | | 9.2.1.50 | | – | |
| > UL SIR Target | O | | UL SIR 9.2.1.67A | Mandatory for 1.28Mcps TDD; not applicable for 3.84Mcps TDD | YES | reject |
| **>UL DPCH Information** | | 0..1 | | For 3.84Mcps TDD only | YES | reject |
| >>Repetition Period | M | | 9.2.3.16 | | – | |
| >>Repetition Length | M | | 9.2.3.15 | | – | |
| >>TDD DPCH Offset | M | | 9.2.3.19A | | – | |
| >>UL Timeslot Information | M | | 9.2.3.26C | | – | |
| **>UL DPCH Information LCR** | | 0..1 | | For 1.28Mcps TDD only | YES | reject |
| >>Repetition Period | M | | 9.2.3.16 | | – | |
| >>Repetition Length | M | | 9.2.3.15 | | – | |
| >>TDD DPCH Offset | M | | 9.2.3.19A | | – | |
| >>UL Timeslot Information LCR | M | | 9.2.3.26E | | – | |
| **UL CCTrCH to Modify** | | 0.. \<maxno of CCTrCHs> | | | GLOBAL | reject |
| >CCTrCH ID | M | | 9.2.3.3 | | – | |
| >TFCS | O | | 9.2.1.58 | | – | |
| >TFCI Coding | O | | 9.2.3.22 | | – | |
| >Puncture Limit | O | | 9.2.1.50 | | – | |
| > UL SIR Target | O | | UL SIR 9.2.1.67A | For 1.28Mcps TDD only | YES | reject |
| **>UL DPCH to add** | | 0..1 | | For 3.84Mcps TDD only | YES | reject |
| >>Repetition Period | M | | 9.2.3.16 | | – | |
| >>Repetition Length | M | | 9.2.3.15 | | – | |
| >>TDD DPCH Offset | M | | 9.2.3.19A | | – | |
| >>UL Timeslot Information | M | | 9.2.3.26C | | – | |

| | | | | | | |
|---|---|---|---|---|---|---|
| **>UL DPCH to modify** | | *0..1* | | | YES | reject |
| >>Repetition Period | O | | 9.2.3.16 | | – | |
| >>Repetition Length | O | | 9.2.3.15 | | – | |
| >>TDD DPCH Offset | O | | 9.2.3.19A | | – | |
| **>>UL Timeslot Information** | | 0 to <maxnoofULts> | | For 3.84Mcps TDD only | – | |
| >>>Time Slot | M | | 9.2.3.23 | | – | |
| >>>Midamble Shift and Burst Type | O | | 9.2.3.7 | | – | |
| >>>TFCI Presence | O | | 9.2.1.57 | | – | |
| **>>>UL Code Information** | | 0 to <maxnoOfDPCH> | | | – | |
| >>>>DPCH ID | M | | 9.2.3.5 | | – | |
| >>>>TDD Channelisation Code | O | | 9.2.3.19 | | – | |
| **>>UL Timeslot Information LCR** | | 0 to <MaxnoofULtsLCR> | | For 1.28Mcps TDD only | GLOBAL | reject |
| >>>Time Slot LCR | M | | 9.2.3.24A | | – | |
| >>>Midamble shift LCR | O | | 9.2.3.7A | | – | |
| >>>TFCI Presence | O | | 9.2.1.57 | | – | |
| **>>>UL Code Information LCR** | | 0 to <maxnoOfDPCHLCR> | | | – | |
| >>>>DPCH ID | M | | 9.2.3.5 | | – | |
| >>>>TDD Channelisation Code LCR | O | | 9.2.3.19a | | – | |
| **>UL DPCH to delete** | | *0.. <maxno of DPCHs>* | | | GLOBAL | reject |
| >>DPCH ID | M | | 9.2.3.5 | | – | |
| **>UL DPCH to add LCR** | | *0..1* | | For 1.28Mcps TDD only | YES | reject |
| >>Repetition Period | M | | 9.2.3.16 | | – | |
| >>Repetition Length | M | | 9.2.3.15 | | – | |
| >>TDD DPCH Offset | M | | 9.2.3.19A | | – | |
| >>UL Timeslot Information LCR | M | | 9.2.3.26E | | – | |
| **UL CCTrCH to Delete** | | *0.. <maxno of CCTrCHs>* | | | GLOBAL | reject |
| >CCTrCH ID | M | | 9.2.3.3 | | – | |
| **DL CCTrCH to Add** | | *0.. <maxno of CCTrCHs>* | | | GLOBAL | reject |
| >CCTrCH ID | M | | 9.2.3.3 | | – | |
| >TFCS | M | | 9.2.1.58 | | – | |
| >TFCI Coding | M | | 9.2.3.22 | | – | |
| >PunctureLimit | M | | 9.2.1.50 | | – | |

| | | | | | | |
|---|---|---|---|---|---|---|
| **>TPC CCTrCH List** | | 0 to \<maxno CCTrCHs> | | List of uplink CCTrCH which provide TPC | – | |
| >>TPC CCTrCH ID | M | | CCTrCH ID 9.2.3.3 | | – | |
| **>DL DPCH Information** | | *0..1* | | For 3.84Mcps TDD only | YES | reject |
| >>Repetition Period | M | | 9.2.3.16 | | – | |
| >>Repetition Length | M | | 9.2.3.15 | | – | |
| >>TDD DPCH Offset | M | | 9.2.3.19A | | – | |
| >>DL Timeslot Information | M | | 9.2.3.4E | | – | |
| **>DL DPCH Information LCR** | | *0..1* | | For 1.28Mcps TDD only | YES | reject |
| >>Repetition Period | M | | 9.2.3.16 | | – | |
| >>Repetition Length | M | | 9.2.3.15 | | – | |
| >>TDD DPCH Offset | M | | 9.2.3.19A | | – | |
| >>DL Timeslot Information LCR | M | | 9.2.3.4O | | – | |
| >CCTrCH Initial DL Transmission Power | O | | DL Power 9.2.1.21 | Initial power on DPCH | YES | ignore |

| DL CCTrCH to Modify | | _0.._<br>_<maxno_<br>_of_<br>_CCTrC_<br>_Hs>_ | | | GLOBAL | reject |
|---|---|---|---|---|---|---|
| >CCTrCH ID | M | | 9.2.3.3. | | – | |
| >TFCS | O | | 9.2.1.58 | | – | |
| >TFCI Coding | O | | 9.2.3.22 | | – | |
| >PunctureLimit | O | | 9.2.1.50 | | – | |
| **>TPC CCTrCH List** | | 0 to<br><maxno<br>CCTrC<br>Hs> | | List of uplink<br>CCTrCH<br>which<br>provide TPC | **–** | |
| >>TPC CCTrCH ID | M | | CCTrCH<br>ID<br>9.2.3.3 | | – | |
| **>DL DPCH to add** | | _0..1_ | | For<br>3.84Mcps<br>TDD only | YES | reject |
| >>Repetition Period | M | | 9.2.3.16 | | – | |
| >>Repetition Length | M | | 9.2.3.15 | | – | |
| >>TDD DPCH Offset | M | | 9.2.3.19A | | – | |
| >>DL Timeslot Information | M | | 9.2.3.4E | | – | |
| **>DL DPCH to modify** | | _0..1_ | | | YES | reject |
| >>Repetition Period | O | | 9.2.3.16 | | – | |
| >>Repetition Length | O | | 9.2.3.15 | | – | |
| >>TDD DPCH Offset | O | | 9.2.3.19A | | – | |
| **>>DL Timeslot Information** | | 0 ..<br><maxno<br>ofDLts> | | For<br>3.84Mcps<br>TDD only | – | |
| >>>Time Slot | M | | 9.2.3.23 | | – | |
| >>>Midamble Shift and<br>Burst Type | O | | 9.2.3.7 | | – | |
| >>>TFCI Presence | O | | 9.2.1.57 | | – | |
| **>>>DL Code<br>Information** | | 0 ..<br><maxno<br>OfDPC<br>H> | | | – | |
| >>>>DPCH ID | M | | 9.2.3.5 | | – | |
| >>>>TDD<br>Channelisation Code | O | | 9.2.3.19 | | – | |
| **>>DL Timeslot Information<br>LCR** | | 0 ..<br><Maxno<br>ofDLtsL<br>CR> | | For<br>1.28Mcps<br>TDD only | GLOBAL | reject |
| >>>Time Slot LCR | M | | 9.2.3.24A | | – | |
| >>>Midamble shift LCR | O | | 9.2.3.7A | | | |
| >>>TFCI Presence | O | | 9.2.1.57 | | – | |
| **>>>DL Code<br>Information LCR** | | 0 ..<br><maxno<br>OfDPC<br>HLCRs<br>> | | | – | |
| >>>>DPCH ID | M | | 9.2.3.5 | | – | |
| >>>>TDD<br>Channelisation Code<br>LCR | O | | 9.2.3.19a | | – | |
| **>DL DPCH to delete** | | _0.._<br>_<maxno_<br>_of_<br>_DPCHs_<br>_>_ | | | GLOBAL | reject |

| | | | | | | |
|---|---|---|---|---|---|---|
| >>DPCH ID | M | | 9.2.3.5 | | – | |
| **>DL DPCH to add LCR** | | *0..1* | | For 1.28Mcps TDD only | YES | reject |
| >>Repetition Period | M | | 9.2.3.16 | | – | |
| >>Repetition Length | M | | 9.2.3.15 | | – | |
| >>TDD DPCH Offset | M | | 9.2.3.19A | | – | |
| >>DL Timeslot Information LCR | M | | 9.2.3.4O | | – | |
| **DL CCTrCH to Delete** | | 0.. <maxno of CCTrC Hs> | | | GLOBAL | reject |
| >CCTrCH ID | M | | 9.2.3.3 | | – | |
| DCHs to Modify | O | | DCHs TDD to Modify 9.2.3.4D | | YES | reject |
| DCHs to Add | O | | DCH TDD Information 9.2.3.4C | | YES | reject |
| **DCHs to Delete** | | *0..<max noofDC Hs>* | | | GLOBAL | reject |
| >DCH ID | M | | 9.2.1.20 | | – | |
| **DSCH Information to modify** | | 0 .. <Maxno of DSCHs > | | | GLOBAL | reject |
| >DSCH ID | M | | 9.2.1.27 | | – | |
| >CCTrCH ID | O | | 9.2.3.3 | DL CCTrCH in which the DSCH is mapped | – | |
| >Transport Format Set | O | | 9.2.1.59 | | – | |
| >Allocation/Retention Priority | O | | 9.2.1.1A | | – | |
| >Frame Handling Priority | O | | 9.2.1.30 | | – | |
| >ToAWS | O | | 9.2.1.61 | | – | |
| >ToAWE | O | | 9.2.1.60 | | – | |
| >Transport Bearer Request Indicator | M | | 9.2.1.62A | | – | |
| >Binding ID | O | | 9.2.1.4 | Shall be ignored if bearer establishme nt with ALCAP. | YES | ignore |
| >Transport Layer Address | O | | 9.2.1.63 | Shall be ignored if bearer establishme nt with ALCAP. | YES | ignore |
| DSCH Information to add | O | | DSCH TDD Information 9.2.3.5A | | YES | reject |
| **DSCH Information to delete** | | 0 .. <Maxno of DSCHs > | | | GLOBAL | reject |
| >DSCH ID | M | | 9.2.1.27 | | – | |

| | | | | | | |
|---|---|---|---|---|---|---|
| **USCH Information to modify** | | 0 ..<br><Maxno of USCHs > | | | GLOBAL | reject |
| >USCH ID | M | | 9.2.3.27 | | – | |
| >Transport Format Set | O | | 9.2.1.59 | | – | |
| > Allocation/Retention Priority | O | | 9.2.1.1A | | – | |
| >CCTrCH ID | O | | 9.2.3.2 | UL CCTrCH in which the USCH is mapped | – | |
| >Transport Bearer Request Indicator | M | | 9.2.1.62A | | – | |
| >Binding ID | O | | 9.2.1.4 | Shall be ignored if bearer establishment with ALCAP. | YES | ignore |
| >Transport Layer Address | O | | 9.2.1.63 | Shall be ignored if bearer establishment with ALCAP. | YES | ignore |
| USCH Information to add | O | | USCH Information 9.2.3.28 | | YES | reject |
| **USCH Information to delete** | | 0 ..<br><Maxno of USCHs > | | | GLOBAL | reject |
| >USCH ID | M | | 9.2.3.27 | | – | |
| **RL Information** | | *0..1* | | | YES | reject |
| >RL ID | M | | 9.2.1.53 | | – | |
| >Maximum Downlink Power | O | | DL Power 9.2.1.21 | Maximum allowed power on DPCH | – | |
| >Minimum Downlink Power | O | | DL Power 9.2.1.21 | Minimum allowed power on DPCH | – | |
| >Initial DL transmission Power | O | | DL Power 9.2.1.21 | Initial power on DPCH | YES | ignore |
| >RL specific DCH Information | O | | 9.2.1.XXX | | YES | ignore |
| Signalling Bearer Request Indicator | O | | 9.2.1.55A | | YES | reject |
| HS-DSCH Information to modify | O | | 9.2.1.31H | | YES | reject |
| HS-DSCH Information to Add | O | | HS-DSCH TDDInformation9.2.3.x2 | | YES | reject |
| **HS-DSCH Information to Delete** | | 0..<Max NoOfM ACdFlo ws> | | | GLOBAL | reject |
| > HS-DSCH MAC-D flow ID | M | | 9.2.1.31I | | - | |
| HS-DSCH-RNTI | O | | 9.2.1.31J | | YES | reject |
| HS-PDSCH RL ID | O | | RL ID 9.2.1.53 | | YES | reject |

| Range Bound | Explanation |
|---|---|
| *MaxnoofDCHs* | Maximum number of DCHs for a UE. |
| *MaxnoofCCTrCHs* | Maximum number of CCTrCHs for a UE. |
| *Maxnoof DPCHs* | Maximum number of DPCHs in one CCTrCH for 3.84Mcps TDD. |
| *MaxnoOfDPCHLCRs* | Maximum number of DPCHs in one CCTrCH for 1.28Mcps TDD. |
| *MaxnoofDSCHs* | Maximum number of DSCHs for one UE |
| *MaxnoofUSCHs* | Maximum number of USCHs for one UE |
| *MaxnoofDLts* | Maximum number of Downlink time slots per Radio Link for 3.84Mcps TDD. |
| *MaxnoofDLtsLCR* | Maximum number of Downlink time slots per Radio Link for 1.28Mcps TDD. |
| *MaxnoofULts* | Maximum number of Uplink time slots per Radio Link for 3.84Mcps TDD. |
| *MaxnoofULtsLCR* | Maximum number of Uplink time slots per Radio Link for 1.28Mcps TDD. |
| *MaxNoOfMACdFlows* | Maximum number of HS-DSCH MAC-d flows |

# 9.1.43 RADIO LINK RECONFIGURATION READY

| IE/Group name | Presence | Range | IE Type and Reference | Semantic Description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | reject |
| CRNC Communication Context ID | M | | 9.2.1.18 | The reserved value "All CRNCCC" shall not be used. | YES | ignore |
| Transaction ID | M | | 9.2.1.62 | | – | |
| **RL Information Response** | | *0..<max noofRLs>* | | Only one RL information response group for one group of combined RLs shall be present | EACH | ignore |
| >RL ID | M | | 9.2.1.53 | | – | |
| >DCH Information Response | O | | 9.2.1.20C | | YES | ignore |
| >DSCH Information Response | O | | 9.2.1.27A | | YES | ignore |
| >USCH Information Response | O | | 9.2.3.29 | TDD only | YES | ignore |
| >TFCI2 Bearer Information Response | O | | 9.2.2.49A | FDD only | – | |
| >DL Power Balancing Updated Indicator | O | | 9.2.2.12D | | YES | ignore |
| >HS-DSCH FDD Information Response | O | | 9.2.2.18E | | YES | ignore |
| >HS-DSCH TDD Information Response | O | | 9.2.318E | | YES | ignore |
| Criticality Diagnostics | O | | 9.2.1.17 | | YES | ignore |
| Target Communication Control Port ID | O | | 9.2.1.15 | | YES | ignore |

| Range Bound | Explanation |
|---|---|
| *MaxnoofRLs* | Maximum number of RLs for a UE. |

## 9.1.44   RADIO LINK RECONFIGURATION FAILURE

| IE/Group Name | Presence | Range | IE Type and Reference | Semantic Description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | reject |
| CRNC Communication Context ID | M | | 9.2.1.18 | The reserved value "All CRNCC C" shall not be used. | YES | ignore |
| Transaction ID | M | | 9.2.1.62 | | – | |
| CHOICE *Cause Level* | M | | | | YES | ignore |
| >*General* | | | | | – | |
| >>Cause | M | | 9.2.1.6 | | YES | ignore |
| >*RL specific* | | | | | – | |
| **>>RLs Causing Reconfiguration Failure** | | 0..<max noofRLs > | | | EACH | ignore |
| >>>RL ID | M | | 9.2.1.53 | | – | |
| >>>Cause | M | | 9.2.1.6 | | – | |
| Criticality Diagnostics | O | | 9.2.1.17 | | YES | ignore |

| Range Bound | Explanation |
|---|---|
| *MaxnoofRLs* | Maximum number of RLs for a UE. |

## 9.1.45   RADIO LINK RECONFIGURATION COMMIT

| IE/Group Name | Presence | Range | IE Type and Reference | Semantic Description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message type | M | | 9.2.1.46 | | YES | ignore |
| Node B Communication Context ID | M | | 9.2.1.48 | The reserved value "All NBCC" shall not be used. | YES | ignore |
| Transaction ID | M | | 9.2.1.62 | | – | |
| CFN | M | | 9.2.1.7 | | YES | ignore |
| Active Pattern Sequence Information | O | | 9.2.2.A | | YES | ignore |

## 9.1.46 RADIO LINK RECONFIGURATION CANCEL

| IE/Group Name | Presence | Range | IE Type and Reference | Semantic Description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message type | M | | 9.2.1.46 | | YES | ignore |
| Node B Communication Context ID | M | | 9.2.1.48 | The reserved value "All NBCC" shall not be used. | YES | ignore |
| Transaction ID | M | | 9.2.1.62 | | – | |

## 9.1.47 RADIO LINK RECONFIGURATION REQUEST

### 9.1.47.1 FDD Message

| IE/Group Name | Presence | Range | IE Type and Reference | Semantic Description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | reject |
| Node B Communication Context ID | M | | 9.2.1.48 | The reserved value "All NBCC" shall not be used. | YES | reject |
| Transaction ID | M | | 9.2.1.62 | | – | |
| **UL DPCH Information** | | *0..1* | | | YES | reject |
| >TFCS | O | | 9.2.1.58 | For the UL. | – | |
| **DL DPCH Information** | | *0..1* | | | YES | reject |
| >TFCS | O | | 9.2.1.58 | For the DL. | – | |
| >TFCI Signalling Mode | O | | 9.2.2.50 | | – | |
| >Limited Power Increase | O | | 9.2.2.18A | | – | |
| DCHs to Modify | O | | DCHs FDD to Modify 9.2.2.4E | | YES | reject |
| DCHs to Add | O | | DCH FDD Information 9.2.2.4D | | YES | reject |
| **DCHs to Delete** | | *0..<maxnoofDCHs>* | | | GLOBAL | reject |
| >DCH ID | M | | 9.2.1.20 | | – | |
| **Radio Link Information** | | *0..<maxnoofRLs>* | | | EACH | reject |
| >RL ID | M | | 9.2.1.53 | | – | |
| >Maximum DL Power | O | | DL Power 9.2.1.21 | Maximum allowed power on DPCH | – | |
| >Minimum DL Power | O | | DL Power 9.2.1.21 | Minimum allowed power on DPCH | – | |
| >DL Code Information | C-SF/2 | | FDD DL Code Information 9.2.2.14A | | – | |
| >DL Reference Power | O | | DL Power 9.2.1.21 | Power on DPCH | YES | ignore |
| >RL specific DCH Information | O | | 9.2.1.XXX | | YES | ignore |
| Transmission Gap Pattern Sequence Information | O | | 9.2.2.53A | | YES | reject |
| Signalling Bearer Request Indicator | O | | 9.2.1.55A | | YES | reject |

| Range Bound | Explanation |
|---|---|
| *MaxnoofDCHs* | Maximum number of DCHs for a UE. |
| *MaxnoofRLs* | Maximum number of RLs for a UE. |

| Condition | Explanation |
|---|---|
| SF/2 | The IE shall be present if the *Transmission Gap Pattern Sequence Information* IE is included and the indicated Downlink Compressed Mode method for at least one of the included Transmission Gap Pattern Sequence is set to "SF/2". |

## 9.1.47.2 TDD Message

| IE/Group Name | Presence | Range | IE Type and Reference | Semantic Description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | reject |
| Node B Communication Context ID | M | | 9.2.1.48 | The reserved value "All NBCC" shall not be used. | YES | reject |
| Transaction ID | M | | 9.2.1.62 | | – | |
| **UL CCTrCH to modify** | | *0..<maxnoofCCTrCHs>* | | | EACH | notify |
| >CCTrCH ID | M | | 9.2.3.3 | | – | |
| >TFCS | O | | 9.2.1.58 | | – | |
| >Puncture Limit | O | | 9.2.1.50 | | – | |
| **UL CCTrCH to delete** | | *0..<maxnoofCCTrCHs>* | | | EACH | notify |
| >CCTrCH ID | M | | 9.2.3.3 | | – | |
| **DL CCTrCH to modify** | | *0..<maxnoofCCTrCHs>* | | | EACH | notify |
| >CCTrCH ID | M | | 9.2.3.3 | | – | |
| >TFCS | O | | 9.2.1.58 | | – | |
| >Puncture Limit | O | | 9.2.1.50 | | – | |
| **DL CCTrCH to delete** | | *0..<maxnoofCCTrCHs>* | | | EACH | notify |
| >CCTrCH ID | M | | 9.2.3.3 | | – | |
| DCHs to Modify | O | | DCHs TDD to Modify 9.2.3.4D | | YES | reject |
| DCHs to Add | O | | DCH TDD Information 9.2.3.4C | | YES | reject |
| **DCHs to Delete** | | *0..<maxnoofDSCHs>* | | | GLOBAL | reject |
| >DCH ID | M | | 9.2.1.20 | | – | |
| **RL Information** | | *0..1* | | | YES | reject |
| >RL ID | M | | 9.2.1.53 | | – | |
| >Maximum Downlink Power | O | | DL Power 9.2.1.21 | Maximum allowed power on DPCH | – | |
| >Minimum Downlink Power | O | | DL Power 9.2.1.21 | Minimum allowed power on DPCH | – | |
| >RL specific DCH Information | O | | 9.2.1.XXX | | YES | ignore |
| Signalling Bearer Request Indicator | O | | 9.2.1.55A | | YES | reject |

| Range bound | Explanation |
|---|---|
| *MaxnoofCCTrCHs* | Maximum number of CCTrCHs for a UE. |

## 9.1.48 RADIO LINK RECONFIGURATION RESPONSE

| IE/Group Name | Presence | Range | IE Type and Reference | Semantic Description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | reject |
| CRNC Communication Context ID | M | | 9.2.1.18 | The reserved value "All CRNCC C" shall not be used. | YES | ignore |
| Transaction ID | M | | 9.2.1.62 | | – | |
| **RL Information Response** | | 0..<maxnoofRLs> | | Only one RL information response group for one group of combined RLs shall be present | EACH | ignore |
| >RL ID | M | | 9.2.1.53 | | – | |
| >DCH Information Response | O | | 9.2.1.20C | | YES | ignore |
| >DL Power Balancing Updated Indicator | O | | 9.2.2.12D | | YES | ignore |
| Criticality Diagnostics | O | | 9.2.1.17 | | YES | ignore |
| Target Communication Control Port ID | O | | 9.2.1.15 | | YES | ignore |

| Range bound | Explanation |
|---|---|
| *MaxnoofRLs* | Maximum number of RLs for a UE. |

## 9.1.49 RADIO LINK DELETION REQUEST

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | reject |
| Node B Communication Context ID | M | | 9.2.1.48 | The reserved value "All NBCC" shall not be used. | YES | reject |
| CRNC Communication Context ID | M | | 9.2.1.18 | | YES | reject |
| Transaction ID | M | | 9.2.1.62 | | – | |
| **RL Information** | | 1..<maxnoofRLs> | | | EACH | notify |
| >RL ID | M | | 9.2.1.53 | | – | |

| Range bound | Explanation |
|---|---|
| *MaxnoofRLs* | Maximum number of radio links for one UE |

## 9.1.50 RADIO LINK DELETION RESPONSE

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | reject |
| CRNC Communication Context ID | M | | 9.2.1.18 | The reserved value "All CRNCC C" shall not be used. | YES | ignore |
| Transaction ID | M | | 9.2.1.62 | | – | |
| Criticality Diagnostics | O | | 9.2.1.17 | | YES | ignore |

## 9.1.51 DL POWER CONTROL REQUEST [FDD]

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | ignore |
| Node B Communication Context ID | M | | 9.2.1.48 | The reserved value "All NBCC" shall not be used. | YES | ignore |
| Transaction ID | M | | 9.2.1.62 | | – | |
| Power Adjustment Type | M | | 9.2.2.27 | | YES | ignore |
| DL Reference Power | C-Common | | DL power 9.2.1.21 | Power on DPCH | YES | Ignore |
| Inner Loop DL PC Status | O | | 9.2.2.18B | | YES | ignore |
| **DL Reference Power Information** | C-Individual | 1..<maxnoof RLs> | | | GLOBAL | ignore |
| >RL ID | M | | 9.2.1.53 | | – | |
| >DL Reference Power | M | | DL power 9.2.1.21 | Power on DPCH | – | |
| Max Adjustment Step | C-CommonOrIndividual | | 9.2.2.20 | | YES | ignore |
| Adjustment Period | C-CommonOrIndividual | | 9.2.2.B | | YES | ignore |
| Adjustment Ratio | C-CommonOrIndividual | | 9.2.2.C | | YES | ignore |

| Condition | Explanation |
|---|---|
| Common | The IE shall be present if the '*Adjustment Type* IE is equal to "Common". |
| Individual | The IE shall be present if the *Adjustment Type* IE is equal to "Individual". |
| CommonOrIndividual | The IE shall be present if the *Adjustment Type* IE is equal to "Common' or 'Individual". |

| Range Bound | Explanation |
|---|---|
| MaxnoofRLs | Maximum number of Radio Links for a UE |

## 9.1.52 DEDICATED MEASUREMENT INITIATION REQUEST

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | reject |
| Node B Communication Context ID | M | | 9.2.1.48 | The reserved value "All NBCC" shall not be used when the Report characteristics type is set to "On-Demand". | YES | reject |
| Transaction ID | M | | 9.2.1.62 | | – | |
| Measurement ID | M | | 9.2.1.42 | | YES | reject |
| Dedicated Measurement Object Type | M | | 9.2.1.22 | | YES | reject |
| CHOICE *Dedicated Measurement Object Type* | M | | | | YES | reject |
| >*RL* | | | | | – | |
| **>>RL Information** | | 1..<maxnoofRLs> | | | EACH | reject |
| >>>RL ID | M | | 9.2.1.53 | | – | |
| >>>DPCH ID | O | | 9.2.3.5 | TDD only | – | |
| >>>**PUSCH Information** | | 0..<maxnoofPUSCHs> | | TDD only | EACH | reject |
| >>>>PUSCH ID | M | | 9.2.3.12 | | – | |
| >*RLS* | | | | FDD only | – | |
| **>>RL Set Information** | | 1..<maxnoofRLSets> | | | – | |
| >>>RL Set ID | M | | 9.2.2.39 | | – | |
| >*ALL RL* | | | NULL | | – | |
| >*ALL RLS* | | | NULL | FDD only | – | |
| Dedicated Measurement Type | M | | 9.2.1.23 | | YES | reject |
| Measurement Filter Coefficient | O | | 9.2.1.41 | | YES | reject |
| Report Characteristics | M | | 9.2.1.51 | | YES | reject |
| CFN reporting indicator | M | | FN reporting indicator 9.2.1.29B | | YES | reject |
| CFN | O | | 9.2.1.7 | | YES | reject |

| Range | Explanation |
|---|---|
| *MaxnoofRLs* | Maximum number of individual RL's a measurement can be started on. |
| *MaxnoofPUSCHs* | Maximum number of PUSCH per RL a measurement can be started on. |
| *MaxnoofRLSets* | Maximum number of individual RL Sets a measurement can be started on. |

## 9.1.53 DEDICATED MEASUREMENT INITIATION RESPONSE

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | reject |
| CRNC Communication Context ID | M | | 9.2.1.18 | | YES | ignore |
| Transaction ID | M | | 9.2.1.62 | | – | |
| Measurement ID | M | | 9.2.1.42 | | YES | ignore |
| CHOICE *Dedicated Measurement Object Type* | O | | | Dedicated Measurement Object Type the measurement was initiated with | YES | ignore |
| >*RL* or *ALL RL* | | | | | – | |
| >>**RL Information** | | 1..<maxnoofRLs> | | | EACH | ignore |
| >>>RL ID | M | | 9.2.1.53 | | – | |
| >>>DPCH ID | O | | 9.2.3.5 | TDD only | – | |
| >>>**PUSCH Information** | | 0..<maxnoofPUSCHs> | | TDD only | EACH | reject |
| >>>>PUSCH ID | M | | 9.2.3.12 | | – | |
| >>>Dedicated Measurement Value | M | | 9.2.1.24 | | – | |
| >>>CFN | O | | 9.2.1.7 | Dedicated Measurement Time Reference | _ | |
| >*RLS* or *ALL RLS* | | | | FDD only | – | |
| >>**RL Set Information** | | 1..<maxnoofRLSets> | | | – | |
| >>>RL Set ID | M | | 9.2.2.39 | | – | |
| >>>Dedicated Measurement Value | M | | 9.2.1.24 | | – | |
| >>>CFN | O | | 9.2.1.7 | Dedicated Measurement Time Reference | _ | |
| Criticality Diagnostics | O | | 9.2.1.17 | | YES | ignore |

| Range | Explanation |
|---|---|
| *MaxnoofRLs* | Maximum number of individual RL's the measurement can be started on. |
| *MaxnoofPUSCHs* | Maximum number of PUSCH per RL a measurement can be started on. |
| *MaxnoofRLSets* | Maximum number of individual RL Sets a measurement can be started on. |

## 9.1.54 DEDICATED MEASUREMENT INITIATION FAILURE

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | reject |
| CRNC Communication Context ID | M | | 9.2.1.18 | | YES | ignore |
| Transaction ID | M | | 9.2.1.62 | | – | |
| Measurement ID | M | | 9.2.1.42 | | YES | ignore |
| Cause | M | | 9.2.1.6 | | YES | ignore |
| Criticality Diagnostics | O | | 9.2.1.17 | | YES | ignore |

## 9.1.55 DEDICATED MEASUREMENT REPORT

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | ignore |
| CRNC Communication Context ID | M | | 9.2.1.18 | The reserved value "All CRNCCC" shall not be used. | YES | ignore |
| Transaction ID | M | | 9.2.1.62 | | – | |
| Measurement ID | M | | 9.2.1.42 | | YES | ignore |
| CHOICE *Dedicated Measurement Object Type* | M | | | Dedicated Measurement Object Type the measurement was initiated with | YES | ignore |
| >*RL* or *ALL RL* | | | | | – | |
| >>RL Information | | 1..<maxnoofRLs> | | | EACH | ignore |
| >>>RL ID | M | | 9.2.1.53 | | – | |
| >>>DPCH ID | O | | 9.2.3.5 | TDD only | – | |
| >>>**PUSCH Information** | | 0..<maxnoofPUSCHs> | | TDD only | EACH | reject |
| >>>>PUSCH ID | M | | 9.2.3.12 | | – | |
| >>>Dedicated Measurement Value Information | M | | 9.2.1.24A | | – | |
| >*RLS* or *ALL RLS* | | | | FDD only | – | |
| >>RL Set Information | | 1..<maxnoofRLSets> | | | EACH | ignore |
| >>>RL Set ID | M | | 9.2.1.39 | | – | |
| >>>Dedicated Measurement Value Information | M | | 9.2.1.24A | | – | |

| Range | Explanation |
|---|---|
| *MaxnoofRLs* | Maximum number of individual RL's the measurement can be started on. |
| *MaxnoofPUSCHs* | Maximum number of PUSCH per RL a measurement can be started on. |
| *MaxnoofRLSets* | Maximum number of individual RL Sets a measurement can be started on. |

## 9.1.56 DEDICATED MEASUREMENT TERMINATION REQUEST

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | ignore |
| Node B Communication Context ID | M | | 9.2.1.48 | The reserved value 'All NBCC' shall be used if this value was used when initiating the measurement. Otherwise, the reserved value 'All NBCC' shall not be used. | YES | ignore |
| Transaction ID | M | | 9.2.1.62 | | – | |
| Measurement ID | M | | 9.2.1.42 | | YES | ignore |

## 9.1.57 DEDICATED MEASUREMENT FAILURE INDICATION

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | ignore |
| CRNC Communication Context ID | M | | 9.2.1.18 | The reserved value 'All CRNCCC' shall be used if the Node B Communication Context ID was set to 'All NBCC' when initiating the measurement. Otherwise, the reserved value 'All CRNCCC' shall not be used. | YES | ignore |
| Transaction ID | M | | 9.2.1.62 | | – | |
| Measurement ID | M | | 9.2.1.42 | | YES | ignore |
| Cause | M | | 9.2.1.6 | | YES | ignore |

## 9.1.58 RADIO LINK FAILURE INDICATION

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | ignore |
| | | | | | | |
| CRNC Communication Context ID | M | | 9.2.1.18 | The reserved value "All CRNCCC" shall not be used. | YES | ignore |
| Transaction ID | M | | 9.2.1.62 | | – | |
| CHOICE *Reporting Object* | M | | | Object for which the Failure shall be reported. | YES | ignore |
| >*RL* | | | | | – | |
| **>>RL Information** | | 1 to <*MaxnoofRLs*> | | | EACH | ignore |
| >>>RL ID | M | | 9.2.1.53 | | – | |
| >>>Cause | M | | 9.2.1.6 | | – | |
| >*RL Set* | | | | FDD only | – | |
| **>>RL Set Information** | | 1 to <*MaxnoofRLSets*> | | | EACH | ignore |
| >>>RL Set ID | M | | 9.2.2.39 | | – | |
| >>>Cause | M | | 9.2.1.6 | | – | |
| >*CCTrCH* | | | | TDD only | | |
| >>RL ID | M | | 9.2.1.53 | | – | |
| **>>CCTrCH List** | | 1 to <*MaxnoCCTrCH*> | | | EACH | ignore |
| >>>CCTrCH ID | M | | CCTrCH ID 9.2.3.3 | | – | |
| >>>Cause | M | | 9.2.1.6 | | – | |

| Range bound | Explanation |
|---|---|
| *MaxnoofRLs* | Maximum number of RLs for one UE. |
| *MaxnoofRLSets* | Maximum number of RL Sets for one UE. |
| *MaxnoofCCTrCHs* | Maximum number of CCTrCHs for a UE. |

## 9.1.59 RADIO LINK RESTORE INDICATION

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | ignore |
| | | | | | | |
| CRNC Communication Context ID | M | | 9.2.1.18 | The reserved value "All CRNCC C" shall not be used. | YES | ignore |
| Transaction ID | M | | 9.2.1.62 | | – | |
| CHOICE *Reporting Object* | M | | | Object for which the Restoration shall be reported. | YES | ignore |
| >*RL* | | | | | – | |
| **>>Radio Link Information** | | *1 to <MaxnoofRLs>* | | | EACH | ignore |
| >>>RL ID | M | | 9.2.1.53 | | – | |
| >*RL Set* | | | | FDD only | – | |
| **>>RL Set Information** | | 1 to *<MaxnoofRLSets>* | | | EACH | ignore |
| >>>RL Set ID | M | | 9.2.2.39 | | – | |
| >*CCTrCH* | | | | TDD only | | |
| >>RL ID | M | | 9.2.1.53 | | | |
| **>>CCTrCH List** | | 1 to *<MaxnoCCTrCH>* | | | EACH | ignore |
| >>>CCTrCH ID | M | | CCTrCH ID 9.2.3.3 | | – | |

| Range bound | Explanation |
|---|---|
| *MaxnoofRLs* | Maximum number of RLs for one UE. |
| *MaxnoofRLSets* | Maximum number of RL Sets for one UE. |
| *MaxnoofCCTrCHs* | Maximum number of CCTrCHs for a UE. |

## 9.1.60 COMPRESSED MODE COMMAND [FDD]

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | ignore |
| Node B communication context ID | M | | 9.2.1.48 | The reserved value "All NBCC" shall not be used. | YES | ignore |
| Transaction ID | M | | 9.2.1.62 | | – | |
| Active Pattern Sequence Information | M | | 9.2.2.A | | YES | ignore |

## 9.1.61 ERROR INDICATION

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | ignore |
| CRNC Communication Context ID | O | | 9.2.1.18 | The reserved value "All CRNCCC" shall not be used. | YES | ignore |
| Node B Communication Context ID | O | | 9.2.1.48 | The reserved value "All NBCC" shall not be used. | YES | ignore |
| Transaction ID | M | | 9.2.1.62 | | – | |
| Cause | O | | 9.2.1.6 | | YES | ignore |
| Criticality Diagnostics | O | | 9.2.1.17 | | YES | ignore |

## 9.1.62 PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST

### 9.1.62.1 FDD Message

| IE/Group Name | Presence | Range | IE Type and Reference | Semantic Description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | - | |
| Message Type | M | | 9.2.1.46 | | YES | reject |
| Transaction ID | M | | 9.2.1.62 | | - | |
| C-ID | M | | 9.2.1.9 | | YES | reject |
| SFN | O | | 9.2.1.53A | | YES | reject |

| IE/Group Name | Presence | Range | IE Type and Reference | Semantic Description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| HS_PDSCH and HS-SCCH Total Power | O | | Maximum Transmission Power 9.2.1.40 | Maximum transmission power to be allowed for HS-PDSCH and HS-SCCH codes | YES | reject |
| HS-PDSCH and HS-SCCH Scrambling Code | O | | DL Scrambling Code 9.2.2.13 | Scrambling code on which HS-PDSCH and HS-SCCH is transmitted. 0= Primary scrambling code of the cell 1…15 = Secondary scrambling code | YES | reject |
| HS-PDSCH FDD Code Information | | *0..1* | 9.2.2.18F | | YES | reject |
| HS-SCCH FDD Code Information | | *0..1* | 9.2.2.x18G | | YES | reject |

## 9.1.62.2   TDD Message

| IE/Group Name | Presence | Range | IE Type and Reference | Semantic Description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | - | |
| Message Type | M | | 9.2.1.46 | | YES | reject |
| Transaction ID | M | | 9.2.1.62 | | - | |
| C-ID | M | | 9.2.1.9 | | YES | reject |
| SFN | O | | 9.2.1.53A | | YES | reject |
| **PDSCH Sets to add** | | *0..<maxnoof PDSCHSets>* | | | GLOBAL | reject |
| >PDSCH Set ID | M | | 9.2.3.11 | | - | |
| **>PDSCH to add Information** | | *0..1* | | Mandatory for 3.84Mcps TDD | YES | reject |
| >>Repetition Period | M | | 9.2.3.16 | | – | |
| >>Repetition Length | M | | 9.2.3.15 | | – | |
| >>TDD Physical Channel Offset | M | | 9.2.3.20 | | – | |
| **>>DL Timeslot Information** | | 1 .. <maxnoofDLts> | | | – | |
| >>>Time Slot | M | | 9.2.3.23 | | – | |
| >>>Midamble Shift and Burst Type | M | | 9.2.3.7 | | – | |
| >>>TFCI Presence | M | | 9.2.1.57 | | – | |
| **>>>DL Code Information** | | 1 .. <maxnoOfPDSCH> | | | – | |
| >>>>PDSCH ID | M | | 9.2.3.10 | | – | |
| >>>>TDD Channelisation Code | M | | 9.2.3.19 | | – | |
| **>PDSCH to add Information LCR** | | *0..1* | | Mandatory for 1.28Mcps TDD | YES | reject |
| >>Repetition Period | M | | 9.2.3.16 | | – | |

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Assigned Criticality | Criticality |
|---|---|---|---|---|---|---|
| >>Repetition Length | M | | 9.2.3.15 | | – | |
| >>TDD Physical Channel Offset | M | | 9.2.3.20 | | – | |
| **>>DL Timeslot Information LCR** | | 1 .. <MaxnoofDLtsLCR> | | | GLOBAL | reject |
| >>>Time Slot LCR | M | | 9.2.3.24A | | – | |
| >>>Midamble shift LCR | M | | 9.2.3.7A | | – | |
| >>>TFCI Presence | M | | 9.2.1.57 | | – | |
| **>>>DL Code Information LCR** | | 1 .. <maxnoOfPDSCH> | | | GLOBAL | reject |
| >>>>PDSCH ID | M | | 9.2.3.10 | | – | |
| >>>>TDD Channelisation Code LCR | M | | 9.2.3.19a | | – | |
| **PDSCH Sets to Modify** | | *0..<maxnoofPDSCHSets>* | | | GLOBAL | reject |
| >PDSCH Set ID | M | | 9.2.3.11 | | - | |
| **>PDSCH to modify Information** | | *0..1* | | Mandatory for 3.84Mcps TDD | YES | reject |
| >>Repetition Period | O | | 9.2.3.16 | | – | |
| >>Repetition Length | O | | 9.2.3.15 | | – | |
| >>TDD Physical Channel Offset | O | | 9.2.3.20 | | – | |
| **>>DL Timeslot Information** | | 0 .. <maxnoofDLts> | | | | – |
| >>>Time Slot | M | | 9.2.3.23 | | – | |
| >>>Midamble Shift and Burst Type | O | | 9.2.3.7 | | – | |
| >>>TFCI Presence | O | | 9.2.1.57 | | – | |
| **>>>DL Code Information** | | 0 .. <maxnoOfPDSCH> | | | | – |
| >>>>PDSCH ID | M | | 9.2.3.10 | | – | |
| >>>>TDD Channelisation Code | M | | 9.2.3.19 | | – | |
| **>PDSCH to modify Information LCR** | | 0..1 | | Mandatory for 1.28 Mcps TDD | YES | reject |
| >>Repetition Period | O | | 9.2.3.16 | | – | |
| >>Repetition Length | O | | 9.2.3.15 | | – | |
| >>TDD Physical Channel Offset | O | | 9.2.3.20 | | – | |
| **>>DL Timeslot Information LCR** | | 0 .. <MaxnoofDLtsLCR> | | | GLOBAL | reject |
| >>>Time Slot LCR | M | | 9.2.3.24A | | – | |
| >>>Midamble shift LCR | O | | 9.2.3.7A | | – | |
| >>>TFCI Presence | O | | 9.2.1.57 | | – | |
| **>>>DL Code Information LCR** | | 0 .. <maxnoOfPDSCHLCR> | | | GLOBAL | reject |
| >>>>PDSCH ID | M | | 9.2.3.10 | | – | |
| >>>>TDD Channelisation Code LCR | M | | 9.2.3.19a | | – | |

| | | | | | | |
|---|---|---|---|---|---|---|
| **PDSCH Sets to Delete** | | *0..<maxnoof PDSCHSets >* | | | GLOBAL | reject |
| >PDSCH Set ID | M | | 9.2.3.11 | | - | |
| **PUSCH Sets to add** | | *0..<maxnoof PUSCHSets >* | | | GLOBAL | reject |
| >PUSCH Set ID | M | | 9.2.3.13 | | - | |
| **>PUSCH to add Information** | | *0..1* | | Mandatory for 3.84Mcps TDD | YES | reject |
| >>Repetition Period | M | | 9.2.3.16 | | – | |
| >>Repetition Length | M | | 9.2.3.15 | | – | |
| >>TDD Physical Channel Offset | M | | 9.2.3.20 | | – | |
| **>>UL Timeslot Information** | | 1 .. <maxnoofUL ts> | | | – | |
| >>>Time Slot | M | | 9.2.3.23 | | – | |
| >>>Midamble Shift and Burst Type | M | | 9.2.3.7 | | – | |
| >>>TFCI Presence | M | | 9.2.1.57 | | – | |
| **>>>UL Code Information** | | 1 .. <maxnoOfP USCH> | | | – | |
| >>>>PUSCH ID | M | | 9.2.3.12 | | – | |
| >>>>TDD Channelisation Code | M | | 9.2.3.19 | | – | |
| **>PUSCH to add Information LCR** | O | 1 | | For 1.28Mcps TDD only | YES | reject |
| >>Repetition Period | M | | 9.2.3.16 | | – | |
| >>Repetition Length | M | | 9.2.3.15 | | – | |
| >>TDD Physical Channel Offset | M | | 9.2.3.20 | | – | |
| **>>UL Timeslot Information LCR** | | 1 .. <MaxnoofUL tsLCR> | | | GLOBAL | reject |
| >>>Time Slot LCR | M | | 9.2.3.24A | | – | |
| >>>Midamble shift LCR | M | | 9.2.3.7A | | | |
| >>>TFCI Presence | M | | 9.2.1.57 | | – | |
| **>>>UL Code Information LCR** | | 1 .. <maxnoOfP USCHLCR> | | | GLOBAL | reject |
| >>>>PUSCH ID | M | | 9.2.3.12 | | – | |
| >>>>TDD Channelisation Code LCR | M | | 9.2.3.19a | | – | |
| **PUSCH Sets to Modify** | | *0..<maxnoof PUSCHSets >* | | | GLOBAL | reject |
| >PUSCH Set ID | M | | 9.2.3.13 | | - | |
| **>PUSCH to modify Information** | | *0..1* | | For 3.84Mcps TDD only | YES | reject |
| >>Repetition Period | O | | 9.2.3.16 | | – | |
| >>Repetition Length | O | | 9.2.3.15 | | – | |
| >>TDD Physical Channel Offset | O | | 9.2.3.20 | | – | |
| **>>UL Timeslot Information** | | 0 .. <maxnoofUL ts> | | | – | |
| >>>Time Slot | M | | 9.2.3.23 | | – | |

| | | | | | | |
|---|---|---|---|---|---|---|
| >>>Midamble Shift and Burst Type | O | | 9.2.3.7 | | – | |
| >>>TFCI Presence | O | | 9.2.1.57 | | – | |
| **>>>UL Code Information** | | 0 .. <maxnoOfPDSCH> | | | – | |
| >>>>PUSCH ID | M | | 9.2.3.12 | | – | |
| >>>>TDD Channelisation Code | M | | 9.2.3.19 | | – | |
| **>PUSCH to modify Information LCR** | | 0..1 | | For 1.28Mcps TDD only | YES | reject |
| >>Repetition Period | O | | 9.2.3.16 | | – | |
| >>Repetition Length | O | | 9.2.3.15 | | – | |
| >>TDD Physical Channel Offset | O | | 9.2.3.20 | | – | |
| **>>UL Timeslot Information LCR** | | 0 .. <MaxnoofULtsLCR> | | For 1.28Mcps TDD only | GLOBAL | reject |
| >>>Time Slot LCR | M | | 9.2.3.24A | | – | |
| >>>Midamble shift LCR | O | | 9.2.3.7A | | | |
| >>>TFCI Presence | O | | 9.2.1.57 | | – | |
| **>>>UL Code Information LCR** | | 0 .. <maxnoOfPDSCHLCR> | | | GLOBAL | reject |
| >>>>PUSCH ID | M | | 9.2.3.12 | | – | |
| >>>>TDD Channelisation Code LCR | M | | 9.2.3.19a | | – | |
| **PUSCH Sets to Delete** | | 0..<maxnoofPUSCHSets> | | | GLOBAL | reject |
| >PUSCH Set ID | M | | 9.2.3.13 | | - | |
| **HS-PDSCH TDD Information** | | 0..1 | | | GLOBAL | reject |
| **>DL Timeslot Information** | | 0 .. <maxnoofDLts> | | For 3.84Mcps TDD only | – | |
| >>Time Slot | M | | 9.2.3.23 | | – | |
| >>Midamble Shift and Burst Type | M | | 9.2.3.7 | | – | |
| **>DL Timeslot Information LCR** | | 0 .. <maxnoofDLtsLCR> | | For 1.28Mcps TDD only | GLOBAL | reject |
| >>Time Slot LCR | M | | 9.2.3.24a | | – | |
| >>Midamble shift LCR | M | | 9.2.3.7A | | – | |
| **Add to HS-SCCH Resource Pool** | | 0..1 | | | GLOBAL | reject |

| | | | | | | |
|---|---|---|---|---|---|---|
| **>HS-SCCH Information** | | *0 .. <maxnoofHSSCCH>* | | For 3.84Mcps TDD only | – | |
| >>HS-SCCH ID | M | | 9.2.3.18H | | – | |
| >>Time Slot | M | | 9.2.3.23 | | – | |
| >>Midamble Shift and Burst Type | M | | 9.2.3.7 | | – | |
| >>TDD Channelisation Code | M | | 9.2.3.19 | | – | |
| >>Maximum HS-SCCH Power | M | | DL Power 9.2.1.21 | | – | |
| **>>HS-SICH Information** | | *1* | | | – | |
| >>>Time Slot | M | | 9.2.3.23 | | – | |
| >>>Midamble Shift and Burst Type | M | | 9.2.3.7 | | – | |
| >>>TDD Channelisation Code | M | | 9.2.3.19 | | – | |
| **>HS-SCCH Information LCR** | | *0 .. <maxnoofHSSCCH>* | | For 1.28Mcps TDD only | GLOBAL | reject |
| >>HS-SCCH ID | M | | 9.2.3.18H | | – | |
| >>Time Slot LCR | M | | 9.2.3.24a | | – | |
| >>Midamble shift LCR | M | | 9.2.3.7A | | – | |
| >>TDD Channelisation Code LCR | M | | 9.2.3.19a | | – | |
| >>Maximum HS-SCCH Power | M | | DL Power 9.2.1.21 | | – | |
| **>>HS-SICH Information LCR** | | *1* | | | – | |
| >>>Time Slot LCR | M | | 9.2.3.24a | | – | |
| >>>Midamble shift LCR | M | | 9.2.3.7A | | – | |
| >>>TDD Channelisation Code LCR | M | | 9.2.3.19a | | – | |
| **Modify HS-SCCH Resource Pool** | | *0..1* | | | GLOBAL | reject |

| | | | | | | |
|---|---|---|---|---|---|---|
| **>HS-SCCH Information** | | *0 .. <maxnoofHSSCCH>* | | For 3.84Mcps TDD only | – | |
| >>HS-SCCH ID | M | | 9.2.3.18H | | – | |
| >>Time Slot | O | | 9.2.3.23 | | – | |
| >>Midamble Shift and Burst Type | O | | 9.2.3.7 | | – | |
| >>TDD Channelisation Code | O | | 9.2.3.19 | | – | |
| >>Maximum HS-SCCH Power | O | | DL Power 9.2.1.21 | | – | |
| **>>HS-SICH Information** | | *0..1* | | | – | |
| >>>Time Slot | O | | 9.2.3.23 | | – | |
| >>>Midamble Shift and Burst Type | O | | 9.2.3.7 | | – | |
| >>>TDD Channelisation Code | O | | 9.2.3.19 | | – | |
| **>HS-SCCH Information LCR** | | *0 .. <maxnoofHSSCCH>* | | For 1.28Mcps TDD only | GLOBAL | reject |
| >>HS-SCCH ID | M | | 9.2.3.18H | | – | |
| >>Time Slot LCR | O | | 9.2.3.24a | | – | |
| >>Midamble shift LCR | O | | 9.2.3.7A | | – | |
| >>TDD Channelisation Code LCR | O | | 9.2.3.19a | | – | |
| >>Maximum HS-SCCH Power | O | | DL Power 9.2.1.21 | | – | |
| **>>HS-SICH Information LCR** | | *0..1* | | | – | |
| >>>Time Slot LCR | O | | 9.2.3.24a | | – | |
| >>Midamble shift LCR | O | | 9.2.3.7A | | – | |
| >>>TDD Channelisation Code LCR | O | | 9.2.3.19a | | – | |
| **Delete from HS-SCCH Resource Pool** | | *0..<maxnoofHSSCCHs>* | | | GLOBAL | reject |
| >HS-SCCH ID | M | | 9.2.3.18H | | - | |

| Range bound | Explanation |
|---|---|
| *Maxnoof PDSCH Sets* | Maximum number of PDSCH Sets in a cell. |
| *Maxnoof PDSCH* | Maximum number of PDSCH in a cell for 3.84Mcps TDD only. |
| MaxnoOfPDSCHLCR | Maximum number of PDSCH in a cell for 1.28Mcps TDD only. |
| *Maxnoof PUSCH Sets* | Maximum number of PUSCH Sets in a cell. |
| *Maxnoof PUSCH* | Maximum number of PUSCH in a cell for 3.84Mcps TDD. |
| Maxnoof PUSCHLCR | Maximum number of PUSCH in a cell for 1.28Mcps TDD. |

| | |
|---|---|
| *MaxnoofDLts* | Maximum number of Downlink time slots in a cell for 3.84Mcps TDD. |
| *MaxnoofULts* | Maximum number of Uplink time slots in a cell for 3.84Mcps TDD. |
| MaxnoofULtsLCR | Maximum number of Uplink time slots in a cell for 1.28Mcps TDD |
| *MaxnoofHSSCCHs* | Maximum number of HS-SCCHs in a Cell |

## 9.1.63 PHYSICAL SHARED CHANNEL RECONFIGURATION RESPONSE

| IE/Group Name | Presence | Range | IE Type and Reference | Semantic Description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | - | |
| Message Type | M | | 9.2.1.46 | | YES | reject |
| Transaction ID | M | | 9.2.1.62 | | - | |
| Criticality Diagnostics | O | | 9.2.1.17 | | YES | ignore |

## 9.1.64 PHYSICAL SHARED CHANNEL RECONFIGURATION FAILURE

| IE/Group Name | Presence | Range | IE Type and Reference | Semantic Description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | - | |
| Message Type | M | | 9.2.1.46 | | YES | reject |
| Transaction ID | M | | 9.2.1.62 | | - | |
| CHOICE *cause level* | M | | | | YES | ignore |
| >*General* | | | | | – | |
| >>Cause | M | | 9.2.1.6 | | – | |
| > *Set specific* | | | | TDD Only | – | |
| >>Unsuccessful DL Shared channel set | | 0..<maxnoof PDSCHSets > | | | EACH | ignore |
| >>>PDSCH Set ID | M | | 9.2.3.13 | | - | |
| >>>Cause | M | | 9.2.1.6 | | YES | ignore |
| >>Unsuccessful UL Shared channel set | | 0..<maxnoof PUSCHSets > | | | EACH | ignore |
| >>>PUSCH Set ID | M | | 9.2.3.13 | | - | |
| >>>Cause | M | | 9.2.1.6 | | - | |
| Criticality Diagnostics | O | | 9.2.1.17 | | YES | ignore |

| Range bound | Explanation |
|---|---|
| *Maxnoof PDSCH Sets* | Maximum number of PDSCH Sets in a cell. |
| *Maxnoof PUSCH Sets* | Maximum number of PUSCH Sets in a cell. |

## 9.1.65 RESET REQUEST

| IE/Group Name | Presence | Range | IE type and reference | Semantic Description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | reject |
| Transaction ID | M | | 9.2.1.62 | | – | |

| | | | | | | |
|---|---|---|---|---|---|---|
| CHOICE *Reset Indicator* | M | | | | YES | ignore |
| >*CommunicationContext* | | | | | – | |
| >>**Communication Context Information** | | *1..<maxCommunicationContext>* | | | EACH | reject |
| >>>CHOICE *Communication Context Type* | M | | | | – | |
| >>>>*CRNC Communication Context* | | | | | – | |
| >>>>>CRNC Communication Context ID | M | | 9.2.1.18 | | – | |
| >>>>*Node B Communication Context* | | | | | – | |
| >>>>>Node B Communication Context  ID | M | | 9.2.1.48 | | – | |
| >*CommunicationControl Port* | | | | | – | |
| >>**Communication Control Port Information** | | *1.. <maxCCPinNodeB>* | | | EACH | reject |
| >>>Communication Control Port ID | M | | 9.2.1.15 | | – | |
| >*Node B* | | | NULL | | – | |

| Range bound | Explanation |
|---|---|
| *maxCommunicationContext* | Maximum number of communication contexts that can exist  in the Node-B |
| *maxCCPinNodeB* | Maximum number of communication control ports that can exist in the Node B |

## 9.1.66   RESET RESPONSE

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | reject |
| Transaction ID | M | | 9.2.1.62 | | – | |
| Criticality Diagnostics | O | | 9.2.1.17 | | YES | ignore |

## 9.1.67    DL POWER TIMESLOT CONTROL REQUEST [TDD]

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | ignore |
| Node B Communication Context ID | M | | 9.2.1.48 | The reserved value "All NBCC" shall not be used. | YES | ignore |
| Transaction ID | M | | 9.2.1.62 | | – | |
| DL Time Slot ISCP Info | O | | 9.2.3.4F | Mandatory For 3.84Mcps TDD only | YES | ignore |
| DL Time Slot ISCP Info LCR | O | | 9.2.3.40A | Mandatory For 1.28Mcps TDD only | YES | ignore |
| Primary CCPCH RSCP | O | | 9.2.3.11A | | YES | ignore |

## 9.1.68    RADIO LINK PREEMPTION REQUIRED INDICATION

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Type | M | | 9.2.1.46 | | YES | ignore |
| Transaction ID | M | | 9.2.1.62 | | – | |
| CRNC Communication Context ID | M | | 9.2.1.18 | | YES | ignore |
| **RL Information** | | *0..<maxno ofRLs>* | | | EACH | ignore |
| >RL ID | M | | 9.2.1.53 | | – | |

| Range bound | Explanation |
|---|---|
| MaxnoofRLs | Maximum number of radio links for one UE |

## 9.1.69    INFORMATION EXCHANGE INITIATION REQUEST

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | reject |
| Transaction ID | M | | 9.2.1.62 | | – | |
| Information Exchange ID | M | | 9.2.1.36C | | YES | reject |
| Information Exchange Object Type | M | | 9.2.1.36A | | YES | reject |
| CHOICE *Information Exchange Object Type* | M | | | | YES | reject |
| >Cell | | | | | - | |
| >>C-ID | M | | 9.2.1.9 | | - | |
| Information Type | M | | 9.2.1.36D | | YES | reject |
| Information Report Characteristics | M | | 9.2.1.36B | | YES | reject |

## 9.1.70 INFORMATION EXCHANGE INITIATION RESPONSE

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | reject |
| Transaction ID | M | | 9.2.1.62 | | – | |
| Information Exchange ID | M | | 9.2.1.36C | | YES | ignore |
| CHOICE *Information Exchange Object Type* | O | | | | YES | ignore |
| >*Cell* | | | | | - | |
| >>Requested Data Value | M | | 9.2.1.51A | | - | |
| Criticality Diagnostics | O | | 9.2.1.17 | | YES | ignore |

## 9.1.71 INFORMATION EXCHANGE INITIATION FAILURE

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | reject |
| Transaction ID | M | | 9.2.1.62 | | – | |
| Information Exchange ID | M | | 9.2.1.36C | | YES | ignore |
| Cause | M | | 9.2.1.6 | | YES | ignore |
| Criticality Diagnostics | O | | 9.2.1.17 | | YES | ignore |

## 9.1.72 INFORMATION REPORT

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | ignore |
| Transaction ID | M | | 9.2.1.62 | | – | |
| Information Exchange ID | M | | 9.2.1.36C | | YES | ignore |
| CHOICE *Information Exchange Object Type* | M | | | | YES | ignore |
| >*Cell* | | | | | - | |
| >>Requested Data Value Information | M | | 9.2.1.51B | | - | |

## 9.1.73 INFORMATION EXCHANGE TERMINATION REQUEST

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | ignore |
| Transaction ID | M | | 9.2.1.62 | | – | |
| Information Exchange ID | M | | 9.2.1.36C | | YES | ignore |

## 9.1.74  INFORMATION EXCHANGE FAILURE INDICATION

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | ignore |
| Transaction ID | M | | 9.2.1.62 | | – | |
| Information Exchange ID | M | | 9.2.1.36C | | YES | ignore |
| Cause | M | | 9.2.1.6 | | YES | ignore |

## 9.1.75  CELL SYNCHRONISATION INITIATION REQUEST [TDD]

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | reject |
| Transaction ID | M | | 9.2.1.62 | | – | |
| C-ID | M | | 9.2.1.9 | | YES | reject |
| Cell Sync Burst Repetition Period | M | | 9.2.3.4J | | YES | reject |
| **Time Slot Information** | | 0..15 | | Mandatory for 3.84Mcps TDD only | GLOBAL | reject |
| >Time Slot | M | | 9.2.3.23 | | – | |
| **Cell Sync Burst Transmission Initiation Information** | | 0..1 | | 3.84Mcps TDD only | GLOBAL | reject |
| >CSB Transmission ID | M | | 9.2.3.4N | | | |
| >SFN | M | | 9.2.1.53A | | – | |
| >Cell Sync Burst Code | M | | 9.2.3.4G | | – | |
| >Cell Sync Burst Code shift | M | | 9.2.3.4H | | | |
| | | | | | | |
| >Initial DL transmission Power | M | | DL Power 9.2.1.21 | | – | |
| **Cell Sync Burst Measurement Initiation Information** | | 0..1 | | 3.84Mcps TDD only | GLOBAL | reject |
| >CSB Measurement ID | M | | 9.2.3.4I | | | |
| >Cell Sync Burst Code | M | | 9.2.3.4G | | – | |
| >Cell Sync Burst Code shift | M | | 9.2.3.4H | | | |
| >Synchronisation Report Type | M | | 9.2.3.18$^E$ | | – | |
| >SFN | O | | 9.2.1.53A | | – | |
| >Synchronisation Report Characteristics | M | | 9.2.3.18D | | – | |
| **SYNC_DL Code Transmission Initiation Information LCR** | | 0..1 | | 1.28Mcps TDD only | GLOBAL | reject |
| >CSB Transmission ID | M | | 9.2.3.4N | | – | |
| >SFN | M | | 9.2.1.53A | | – | |
| >UARFCN | M | | 9.2.1.65 | | – | |
| >SYNC_DL Code ID | M | | 9.2.3.18B | | – | |
| >DwPCH Power | M | | 9.2.3.5B | | – | |
| **SYNC_DL Code Measurement Initiation Information LCR** | | 0..1 | | 1.28Mcps TDD only | GLOBAL | reject |

| | | | | | | |
|---|---|---|---|---|---|---|
| >CSB Measurement ID | M | | 9.2.3.4I | | – | |
| >SFN | O | | 9.2.1.53A | | – | |
| >UARFCN | M | | 9.2.1.65 | | – | |
| >SYNC_DL Code ID | M | | 9.2.3.18B | | – | |
| >Synchronisation Report Type | M | | 9.2.3.18E | | – | |
| >Synchronisation Report Characteristics | M | | 9.2.3.18D | | – | |

## 9.1.76 CELL SYNCHRONISATION INITIATION RESPONSE [TDD]

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | reject |
| Transaction ID | M | | 9.2.1.62 | | – | |
| Criticality Diagnostics | O | | 9.2.1.17 | | YES | ignore |

## 9.1.77 CELL SYNCHRONISATION INITIATION FAILURE [TDD]

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | reject |
| Transaction ID | M | | 9.2.1.62 | | – | |
| Cause | M | | 9.2.1.6 | | YES | Ignore |
| Criticality Diagnostics | O | | 9.2.1.17 | | YES | Ignore |

## 9.1.78 CELL SYNCHRONISATION RECONFIGURATION REQUEST [TDD]

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | reject |
| Transaction ID | M | | 9.2.1.62 | | – | |
| C-ID | M | | 9.2.1.9 | | YES | reject |
| Time Slot | M | | 9.2.3.23 | 3.84Mcps TDD only. For 1.28Mcps TDD the CRNC should set this to 0 and the Node B shall ignore it | YES | reject |
| Number of cycles per SFN period | M | | 9.2.3.7B | | YES | reject |
| Number of repetitions per cycle period | M | | 9.2.3.7C | | YES | reject |
| **Cell Sync Burst Transmission Reconfiguration Information** | | 0 .. < maxnoofCellSyncBursts > | | 3.84Mcps TDD only | Global | reject |
| >CSB Transmission ID | M | | 9.2.3.4N | | – | |
| >Sync Frame number to transmit | M | | Sync Frame number 9.2.3.18C | | – | |
| >Cell Sync Burst Code | O | | 9.2.3.4G | | – | |
| >Cell Sync Burst Code shift | O | | 9.2.3.4H | | – | |
| >DL transmission Power | O | | DL Power 9.2.1.21 | | – | |
| **Cell Sync Burst Measurement Reconfiguration Information** | | 0..1 | | 3.84Mcps TDD only | YES | reject |
| **>Cell Sync Burst Measurement Information** | | 1 .. <maxnoof CellSyncBursts> | | | GLOBAL | reject |
| >>Sync Frame number to receive | M | | Sync Frame number 9.2.3.18C | | – | |
| **>>Cell Sync Burst Information** | | 1..< maxnoofreceptionsperSyncFrame> | | | – | |
| >>>CSB Measurement ID | M | | 9.2.3.4I | | – | |
| >>>Cell Sync Burst Code | M | | 9.2.3.4G | | – | |
| >>>Cell Sync Burst Code shift | M | | 9.2.3.4H | | – | |
| >Synchronisation Report | O | | 9.2.3.18E | | YES | reject |

| Type | | | | | | |
|---|---|---|---|---|---|---|
| >Synchronisation Report Characteristics | O | | 9.2.3.18D | | YES | reject |
| Number of subcycles per cycle period | O | | 9.2.3.7D | 1.28Mcps TDD only | YES | reject |
| **SYNC_DL Code Transmission Reconfiguration Information LCR** | | 0 .. <maxnoofS yncFrames LCR> | | 1.28Mcps TDD only | GLOBAL | reject |
| >CSB Transmission ID | M | | 9.2.3.4N | | – | |
| >Sync Frame number for transmission | M | | Sync Frame number 9.2.3.18C | | – | |
| >UARFCN | M | | 9.2.1.65 | | – | |
| >SYNC_DL Code ID | O | | 9.2.3.18B | | – | |
| >DwPCH Power | O | | 9.2.3.5B | | – | |
| **SYNC_DL Code Measurement Reconfiguration Information LCR** | | 0..1 | | 1.28Mcps TDD only | YES | reject |
| **>SYNC_DL Code Measurement Information LCR** | | 1 .. <maxnoofS yncDLCod esLCR> | | | GLOBAL | reject |
| >>Sync Frame number to receive | M | | Sync Frame number 9.2.3.18C | | – | |
| **>>Sync_DLCode Information LCR** | | 1..< maxnoofre ceptionspe rSyncFram eLCR> | | | – | |
| >>>CSB Measurement ID | M | | 9.2.3.4I | | – | |
| >>>SYNC_DL Code ID | M | | 9.2.3.18B | | – | |
| >>>UARFCN | M | | 9.2.1.65 | | – | |
| >>>Propagation Delay Compensation | O | | Timing Adjustment value 9.2.3.22a | | – | |
| >Synchronisation Report Type | O | | 9.2.3.18E | | YES | reject |
| >Synchronisation Report Characteristics | O | | 9.2.3.18D | | YES | reject |

| Range bound | Explanation |
|---|---|
| maxnoofCellSyncBursts | Maximum number of cell sync bursts per cycle for 3.84Mcps TDD |
| maxnoofreceptionsperSyncFrame | Maximum number of cell sync burst receptions per Sync Frame for 3.84Mcps TDD |
| maxnoofSyncFramesLCR | Maximum number of Sync Frames per subcycle for 1.28Mcps TDD |
| maxnoofreceptionsperSyncFrameLCR | Maximum number of SYNC_DL Code ID receptions per Sync Frame for 1.28Mcps TDD |

## 9.1.79 CELL SYNCHRONISATION RECONFIGURATION RESPONSE [TDD]

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | reject |
| Transaction ID | M | | 9.2.1.62 | | – | |
| Criticality Diagnostics | O | | 9.2.1.17 | | YES | ignore |

## 9.1.80 CELL SYNCHRONISATION RECONFIGURATION FAILURE [TDD]

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | reject |
| Transaction ID | M | | 9.2.1.62 | | – | |
| Cause | M | | 9.2.1.6 | | YES | Ignore |
| Criticality Diagnostics | O | | 9.2.1.17 | | YES | Ignore |

## 9.1.81 CELL SYNCHRONISATION REPORT [TDD]

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | ignore |
| Transaction ID | M | | 9.2.1.62 | | – | |
| **Cell Synchronisation Information** | | 0.. <maxCellin NodeB > | | Mandatory for 3.84Mcps TDD only | EACH | ignore |
| >C-ID | M | | 9.2.1.9 | | YES | ignore |
| >CHOICE *Synchronisation Report Type* | | | | | YES | ignore |
| >>*Initial Phase* or *Steady-State Phase* | | | | | – | |
| **>>>Cell Sync Burst Measured Information** | | 1 .. <maxnoof CellSyncB ursts> | | | – | |
| >>>>SFN | M | | 9.2.1.53A | | – | |
| **>>>>Cell Sync Burst Information** | | 1..<maxno ofreception sperSyncF rame> | | | – | |
| >>>>>CHOICE *Cell Sync Burst Availability Indicator* | M | | | | – | |
| >>>>>>*Cell Sync Burst Available* | | | | | – | |
| >>>>>>>Cell Sync Burst Timing | M | | 9.2.3.4L | | – | |
| >>>>>>>Cell Sync Burst SIR | M | | 9.2.3.4K | | – | |
| >>>>>>*Cell Sync Burst not Available* | | | NULL | | – | |

| | | | | | | |
|---|---|---|---|---|---|---|
| >>>Accumulated Clock update | O | | Timing Adjustment Value 9.2.3.22a | | – | |
| **>>>SYNC_DL Codes Measured Information** | | 0..<maxno ofSyncFra mesLCR> | | Mandatory for 1.28Mcps TDD only | YES | ignore |
| >>>>SFN | M | | 9.2.1.53A | | – | |
| **>>>>SYNC_DL Code Information** | | 1..<maxno ofreception sperSyncF rameLCR> | | | – | |
| >>>>>CHOICE SYNC_DL Code *Availability Indicator* | M | | | | – | |
| >>>>>>SYNC_D L Code *Available* | | | | | – | |
| >>>>>>>SYNC _DL Code ID Timing | M | | Cell Sync Burst Timing 9.2.3.4L | | – | |
| >>>>>>>SYNC _DL Code ID SIR | M | | Cell Sync Burst SIR 9.2.3.4K | | – | |
| >>>>>>SYNC_D L Code *not Available* | | | NULL | | – | |
| >>*Late-Entrant Cell* | | | NULL | | – | |
| >>*Frequency Acquisition* | | | NULL | | – | |

| Range bound | Explanation |
|---|---|
| maxCellinNodeB | Maximum number of Cells in a Node B |
| maxnoofCellSyncBursts | Maximum number of cell sync bursts per cylce for 3.84Mcps TDD |
| maxnoofreceptionsperSyncFrame | Maximum number of cell sync burst receptions per Sync Frame for 3.84Mcps TDD |
| maxnoofSyncFramesLCR | Maximum number of SYNCFrames per measurement reporting period for 1.28Mcps TDD |
| maxnoofreceptionsperSyncFrameLCR | Maximum number of SYNC_DL Code ID receptions per Sync Frame for 1.28Mcps TDD |

## 9.1.82 CELL SYNCHRONISATION TERMINATION REQUEST [TDD]

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | ignore |
| Transaction ID | M | | 9.2.1.62 | | – | |
| C-ID | M | | 9.2.1.9 | | YES | ignore |
| CSB Transmission ID | O | | 9.2.3.4N | | YES | ignore |
| CSB Measurement ID | O | | 9.2.3.4I | | YES | ignore |

## 9.1.83 CELL SYNCHRONISATION FAILURE INDICATION [TDD]

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | ignore |
| Transaction ID | M | | 9.2.1.62 | | – | |
| C-ID | M | | 9.2.1.9 | | YES | ignore |
| CSB Transmission ID | O | | 9.2.3.4N | | YES | ignore |
| CSB Measurement ID | O | | 9.2.3.4I | | YES | ignore |
| Cause | M | | 9.2.1.6 | | YES | ignore |

## 9.1.84 CELL SYNCHRONISATION ADJUSTMENT REQUEST [TDD]

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | ignore |
| Transaction ID | M | | 9.2.1.62 | | – | |
| **Cell Adjustment Information** | | 1.. <maxCellinNodeB> | | | EACH | ignore |
| >C-ID | M | | 9.2.1.9 | | – | |
| >Frame Adjustment value | O | | 9.2.3.5C | | – | |
| >Timing Adjustment value | O | | 9.2.3.22a | | – | |
| >DL Transmission Power | O | | 9.2.1.21 | | – | |
| >SFN | O | | 9.2.1.53A | | – | |
| >DwPCH Power | O | | 9.2.3.5B | 1.28Mcps TDD only | YES | ignore |

| Range bound | Explanation |
|---|---|
| MaxCellinNodeB | Maximum number of Cells in a Node B |

## 9.1.85 CELL SYNCHRONISATION ADJUSTMENT RESPONSE [TDD]

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | ignore |
| Transaction ID | M | | 9.2.1.62 | | – | |
| Criticality Diagnostics | O | | 9.2.1.17 | | YES | Ignore |

## 9.1.86    CELL SYNCHRONISATION ADJUSTMENT FAILURE [TDD]

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | ignore |
| Transaction ID | M | | 9.2.1.62 | | – | |
| CHOICE *cause level* | M | | | | YES | ignore |
| >*General* | | | | | – | |
| >>Cause | M | | 9.2.1.6 | | – | |
| >*Cell specific* | | | | | – | |
| **>>Unsuccessful Cell Information Response** | | 1.. <maxCelli nNodeB> | | | EACH | ignore |
| >>>C-ID | M | | 9.2.1.9 | | – | |
| >>>Cause | M | | 9.2.1.6 | | – | |
| Criticality Diagnostics | O | | 9.2.1.17 | | YES | Ignore |

| Range bound | Explanation |
|---|---|
| MaxCellinNodeB | Maximum number of Cells in a Node B |

## 9.1.87    BEARER REARRANGEMENT INDICATION

| IE/Group name | Presence | Range | IE Type and Reference | Semantic Description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | ignore |
| CRNC Communication Context ID | M | | 9.2.1.18 | The reserved value "All CRNCC C" shall not be used. | YES | ignore |
| Transaction ID | M | | 9.2.1.62 | | – | |
| Signalling Bearer Request Indicator | O | | 9.2.1.55A | | YES | ignore |
| **DCHs to Re-arrange** | | *0..<max noofDC Hs>* | | | GLOBAL | ignore |
| >DCH ID | M | | 9.2.1.20 | | – | |
| **DSCHs to Re-arrange** | | *0..<max noofDS CHs>* | | | GLOBAL | ignore |
| >DSCH ID | M | | 9.2.1.27 | | – | |
| **USCHs to Re-arrange** | | 0 .. <Maxno of USCHs > | | TDD only | GLOBAL | ignore |
| >USCH ID | M | | 9.2.3.27 | | – | |
| TFCI2 Bearer Request Indicator | O | | 9.2.1.56C | FDD only | YES | ignore |

## 9.1.88   RADIO LINK ACTIVATION COMMAND

### 9.1.88.1     FDD Message

| IE/Group Name | Presence | Range | IE type and reference | Semantics Description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | reject |
| Node B Communication Context ID | M | | 9.2.1.48 | | YES | reject |
| Transaction ID | M | | 9.2.1.62 | | – | |
| **Delayed activation Information** | | *1..<maxnoofRLs>* | | | EACH | reject |
| >RL ID | M | | 9.2.1.53 | | - | |
| >Delayed Activation Update | M | | 9.2.1.24D | | - | |

### 9.1.88.2     TDD Message

| IE/Group Name | Presence | Range | IE type and reference | Semantics Description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Message Discriminator | M | | 9.2.1.45 | | – | |
| Message Type | M | | 9.2.1.46 | | YES | reject |
| Node B Communication Context ID | M | | 9.2.1.48 | | YES | reject |
| Transaction ID | M | | 9.2.1.62 | | – | |
| **Delayed activation Information** | | *1..<maxnoofRLs>* | | | EACH | reject |
| >RL ID | M | | 9.2.1.53 | | - | |
| >Delayed Activation Update | M | | 9.2.1.24D | | - | |

# 9.2      Information Element Functional Definition and Contents

## 9.2.0     General

Subclause 9.2 presents the NBAP IE definitions 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 9.2 and the ASN.1 definition, the ASN.1 shall take precedence, except for the definition of conditions for the presence of conditional elements, where 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

### 9.2.1.1    Add/Delete Indicator

The add/delete indicator shall notify the RNC whether the associated resource has been added to or removed from the Node B.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Add/Delete Indicator | | | ENUMERAT ED(Add, Delete) | |

### 9.2.1.1A    Allocation/Retention Priority

This parameter indicates the priority level in the allocation and retention of Node B internal resources. See Annex A.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Priority Level | M | | INTEGER {spare (0), highest (1), .., lowest (14), no priority (15)} (0..15) | This IE indicates the priority of the request.<br><br>**Usage:**<br>Values between 1 and 14 are ordered in decreasing order of priority, '1' being the highest and '14' the lowest.<br>Value 0 shall be treated as a logical error if received. |
| Pre-emption Capability | M | | ENUMERAT ED(shall not trigger pre-emption, may trigger pre-emption) | |
| Pre-emption Vulnerability | M | | ENUMERAT ED (not pre-emtable, pre-emtable) | |

### 9.2.1.2    Availability Status

The availability status is used to indicate more detailed information of the availability of the resource. In accordance with ref. [6], following values are defined. If the value of this attribute is an empty set, this implies that none of the status conditions described in ref. [6] are present.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Availability Status | | | ENUMERAT ED (empty, in test, failed, power off, off line, off duty, dependency, degraded, not installed, log full, …) | |

### 9.2.1.3 BCCH Modification Time

Indicates the time after which the new system information shall be applied on BCCH.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| BCCH Modification Time | | | Integer (0..511) | All SFN values in which MIB may be mapped are allowed. The tabular description is presented in [18]. |

### 9.2.1.4 Binding ID

The Binding ID is the identifier of a user data stream.

In case of transport bearer establishment with ALCAP [2][31], this IE contains the identifier that is allocated at Node B and that is unique for each transport bearer under establishment to/from the Node B.

If the Transport Layer Address contains an IP address [29], this IE contains the UDP port [30] intended to be used for the user plane transport.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Binding ID | | | Octetstring (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. |

### 9.2.14A BLER

This Block Error Rate defines the target radio interface Transport Block Error Rate of the transport channel. BLER is used by the Node B 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 |

### 9.2.1.5 Blocking Priority Indicator

The Blocking priority indicator shall indicate the immediacy with which a resource should be blocked from use. The following priority classes shall be supported in the Blocking priority indicator.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Blocking Priority Indicator | | | ENUMERATED(High, Normal, Low,…) | High priority: Block resource immediately. Normal priority: Block resource when idle or upon timer expiry. Low priority: Block resource when idle. |

### 9.2.1.5A Burst mode parameters

The *Burst mode parameters* IE provides information to be applied for IPDL burst mode.

| IE/Group Name | Presence | Range | IE type and reference | Semantics descriptions | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Burst Start | M | | INTEGER (0..15) | See [10] and [21] | – | |
| Burst Length | M | | INTEGER (10..25) | See [10] and [21] | – | |
| Burst freq | M | | INTEGER (1..16) | See [10] and [21] | – | |

### 9.2.1.6 Cause

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| CHOICE *Cause Group* | | | | |
| >*Radio Network Layer* | | | | |
| >Radio Network Layer Cause | M | | Enumerated (unknown C-ID, Cell not available, Power level not supported, DL radio resources not available, UL radio resources not available, RL Already Activated/allocated, Node B Resources Unavailable, Measurement not supported for the object, Combining Resources not available, Requested configuration not supported, Synchronization failure, Priority transport channel established, SIB Origination in Node B not Supported, Requested Tx Diversity Mode not supported, Unspecified, BCCH scheduling error, Measurement Temporarily not Available, Invalid CM Setting, Reconfiguration CFN not elapsed, Number of DL codes not supported, S-CPICH not supported, Combining not supported, UL SF not supported, DL SF not supported, Common Transport Channel Type not supported, Dedicated Transport Channel Type not supported, Downlink Shared Channel Type not supported, Uplink Shared Channel Type not supported, CM not supported, Tx diversity no longer supported, Unknown Local Cell ID, …, Number of UL codes not supported, Information temporarily not available, Information Provision not supported for the object, Cell Synchronisation not supported, Cell Synchronisation Adjustment not supported, DPC Mode Change not Supported, | |

| | | | | |
|---|---|---|---|---|
| | | | IPDL already activated, IPDL not supported, IPDL parameters not available, Frequency Acquisition not supported, Power Balancing status not compatible, Requested type of Bearer Re-arrangement not supported, Signalling Bearer Re-arrangement not supported, Bearer Re-arrangement needed, Delayed Activation not Supported, RL Timing Adjustment not supported) | |
| >*Transport Layer* | | | | |
| >Transport Layer Cause | M | | Enumerated (Transport resource unavailable, Unspecified, …) | |
| >*Protocol* | | | | |
| >Protocol Cause | | | 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 concerning capability is missing. On the other hand, "not available" cause values indicate that the concerning capability is present, but insufficient resources were available to perform the requested action.

| **Radio Network Layer cause** | **Meaning** |
|---|---|
| BCCH scheduling error | The Node B has detected an illegal BCCH schedule update (see subclause 8.2.16.3) |
| Bearer Re-arrangement needed | The Node B can not perform the requested Radio Link Reconfiguration without bearer re-arrangement |

| Cell not Available, | The concerning cell or local cell is not available |
|---|---|
| Cell Synchronisation not supported | The concerning cell(s) do not support Cell Synchronisation |
| Combining not supported | The Node B does not support RL combining for the concerning cells |
| Combining Resources Not Available | The value of the received *Diversity Control Field* IE was set to 'Must', but the Node B cannot perform the requested combining |
| CM not supported | The concerning cell(s) do not support Compressed Mode |
| Common Transport Channel Type not supported | The concerning cell(s) do not support the RACH and/or FACH and/or CPCH Common Transport Channel Type |
| Dedicated Transport Channel Type not supported | The concerning cell(s) do not support the Dedicated Transport Channel Type |
| Delayed Activation not Supported | The concerning cell(s) do not support delayed activation of RLs |
| DL Radio Resources not Available | The Node B does not have sufficient DL radio resources available |
| DL SF not supported | The concerning cell(s) do not support the requested DL SF |
| DL Shared Channel Type not supported | The concerning cell(s) do not support the Downlink Shared Channel Type |
| DPC Mode Change not Supported | The concerning cells do not support DPC mode changes |
| Frequency Acquisition not supported | The concerning cell(s) do not support Frequency Acquisition |
| Information Provision not supported for the object | The requested information provision is not supported for the concerned object types |
| Information temporarily not available | The requested information can temporarily not be provided |
| Invalid CM Settings | The concerning cell(s) consider the requested Compressed Mode settings invalid |
| IPDL already activated | The concerning cell(s) have already active IPDL ongoing |
| IPDL not supported | The concerning cell(s) do not support the IPDL |
| IPDL parameters not available | The concerning cell(s) do not have IPDL parameters defining IPDL to be applied |
| Measurement not Supported For The Object | At least one of the concerning cell(s) does not support the requested measurement on the concerning object type |
| Measurement Temporarily not Available | The Node B can temporarily not provide the requested measurement value |
| Node B resources unavailable | The Node B does not have sufficient resources available |
| Number of DL codes not supported | The concerning cell(s) do not support the requested number of DL codes |
| Number of UL codes not supported | The concerning cell(s) do not support the requested number of UL codes |
| Power Level not Supported | A DL power level was requested which the concerning cell(s) do not support |
| Power Balancing status not compatible | The power balancing status in the SRNC is not compatible with that of the Node B. |
| Priority transport channel established | The CRNC cannot perform the requested blocking since a transport channel with a high priority is present |
| RL Timing Adjustment not Supported | The concerning 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 concerning CFN has not yet elapsed |
| Requested Configuration not Supported | The concerning cell(s) do not support the requested configuration i.e. power levels, Transport Formats, physical channel parameters |
| Requested Type of Bearer Re-arrangement not supported | The Node B does not support the requested type of bearer re-arrngement |
| Requested Tx Diversity mode not supported | The concerning cell(s) do not support the requested transmit diversity mode |
| RL already Activated/ allocated | The Node B has already allocated an RL with the requested RL-id for this UE context |
| S-CPICH not supported | The concerning cell(s) do not support S-CPICH |
| SIB Orgination in Node B not Supported | The Node B does not support the origination of the requested SIB for the concerning cell |
| Signalling Bearer Re-arrangement not supported | The Node B does not support the Signalling bearer re-arrangement |
| Synchronisation Failure | Loss of UL Uu synchronisation |
| Cell Synchronisation Adjustment not | The concerning cell(s) do not support Cell Synchronisation Adjustment |

| | |
|---|---|
| supported | |
| Tx diversity no longer supported | Tx diversity can no longer be supported in the concerning cell. |
| UL Radio Resources not Available | The Node B does not have sufficient UL radio resources available |
| UL SF not supported | The concerning cell(s) do not support the requested minimum UL SF |
| UL Shared Channel Type not supported | The concerning cell(s) do not support the Uplink Shared Channel Type |
| Unknown C-ID | The Node B is not aware of a cell with the provided C-ID |
| Unknown Local Cell ID | The Node B is not aware of a local cell with the provided Local Cell ID |
| 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 concerning criticality indicated "reject" (see subclause 10.3) |
| Abstract Syntax Error (Ignore and Notify) | The received message included an abstract syntax error and the concerning criticality indicated "ignore and notify" (see subclause 10.3) |
| Abstract syntax error (falsely constructed message) | The received message contained IEs 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 | Node B control processing overload |
| Hardware Failure | Node B hardware failure |
| Not enough User Plane Processing Resources | Node B has insufficient user plane processing resources available |
| O&M Intervention | Operation and Maintenance intervention related to Node B 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 |

### 9.2.1.7 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) | |

### 9.2.1.8 CFN Offset

Void

## 9.2.1.9    C-ID

The C-ID (Cell identifier) is the identifier of a cell in one RNC.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| C-ID | | | INTEGER (0…65535) | |

## 9.2.1.9A    Common Channels Capacity Consumption Law

The capacity consumption law indicates the CRNC how the Capacity Credit is consumed by NBAP set of procedures, depending on the allocated Spreading Factor. [FDD-  For the PRACH, the reference spreading factor shall be the minimum possible spreading factor amongst the ones defined by the 'RACH slot format' IE(s) in the Common Transport Channel Setup or Reconfiguration procedures. For the PCPCH, the reference spreading factor shall be the minimum spreading factor computed from the TFCS as described in [8].]

This capacity consumption law indicates the consumption law to be used with the following procedures :

- Common Transport Channel Setup

- Common Transport Channel Deletion

- [FDD- Common Transport Channel Reconfiguration]

For the Common Transport Channel Setup procedure, the cost given in the consumption law shall be debited from the Capacity Credit, whereas it shall be credited to the Capacity Credit for the Common Transport Channel Deletion one.

[FDD- For the Common Transport Channel Reconfiguration procedure, the difference of the consumption cost for the new spreading factor and the consumption cost for the old spreading factor shall be debited from the Capacity Credit (or credited if this difference is negative).]

If the modelling of the internal resource capability of the Node B is modelled independently for the Uplink and Downlink, the "DL cost" shall be applied to the "DL or Global Capacity Credit" and the "UL Cost" shall be applied to the "UL Capacity Credit". If it is modelled as shared resources, both the "DL cost" and the "UL cost" shall be applied to the "DL or Global Capacity Credit".

[FDD- When the Common Transport Channel Setup, Deletion or Reconfiguration procedures are used, the Capacity Credit shall be updated considering all physical channels related in these procedures (S-CCPCH, PICH, PRACH, AICH, PCPCH, CD/CA-ICH and AP-AICH), i.e. one cost shall be credited to or debited from the Capacity Credit per physical channel.]

[FDD- The costs given in the consumption law are the costs per channelization code. When multiple channelization codes are used by a physical channel, the cost credited to or debited from the Capacity Credit for this physical channel shall be taken as N times the cost given in the consumption law, where N is the number of channelization codes.]

[TDD - When the Common Transport Channel Setup, or Deletion procedures are used, the Capacity Credit shall be updated considering all physical channels related in these procedures (S-CCPCH, PICH, PRACH), i.e. one cost shall be credited to or debited from the Capacity Credit per physical channel.]

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| SF allocation law | | <MaxNumberOfSF> | | [FDD - For each SF, cost of its allocation: the first instance corresponds to SF = 4, the second to SF = 8, the third to SF = 16 and so on.] [TDD – For each SF, cost of its allocation: the first instance corresponds to SF = 1, the second to SF = 2, the third to SF = 4 and so on.] |
| >DL cost | M | | INTEGER (0..65535) | |
| >UL cost | M | | INTEGER (0..65535) | |

| Range bound | Explanation |
|---|---|
| *MaxNumberOfSF* | Maximum number of Spreading Factors |

## 9.2.1.9B    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 *Common Measurement Accuracy* | | | | |
| > $T_{UTRAN-GPS}$ *Measurement Accuracy Class* | | | | |
| >> $T_{UTRAN-GPS}$ Measurement Accuracy Class | M | | $T_{UTRAN-GPS}$ Accuracy Class 9.2.1.64C | |

## 9.2.1.10    Common Measurement Object Type

The Common Measurement Object type indicates the type of object that the measurement is to be performed on.

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description |
|---|---|---|---|---|
| Common Measurement Object Type | | | ENUMERATED (CELL, RACH, CPCH,…) | |

## 9.2.1.11    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 (Received total wide band power, Transmitted Carrier Power, Acknowledged PRACH preambles, UL Timeslot ISCP, Acknowledged PCPCH Access Preambles, Detected PCPCH Access Preambles, …, UTRAN GPS Timing of Cell Frames for LCS, SFN-SFN Observed Time Difference ) | UL Timeslot ISCP is used by TDD only, Acknowledged PRACH preambles, Acknowledged PCPCH Access Preambles, Detected PCPCH Access Preambles are used by FDD only |

### 9.2.1.12 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 |
|---|---|---|---|---|
| CHOICE *Common Measurement Value* | | | | |
| >*Transmitted Carrier Power* | | | | |
| >>Transmitted Carrier Power Value | M | | INTEGER(0..100) | According to mapping in [22] and [23] |
| >*Received Total Wide Band Power* | | | | |
| >>Received total wide band power Value | M | | INTEGER(0..621) | According to mapping in [22] and [23] |
| >*Acknowledged PRACH Preambles* | | | | FDD Only |
| >>Acknowledged PRACH Preamble Value | M | | INTEGER(0..240, …) | According to mapping in [22] |
| >*UL Timeslot ISCP* | | | | TDD Only |
| >>UL Timeslot ISCP | M | | INTEGER(0..127) | According to mapping in [23] |
| >*Acknowledged PCPCH Access Preambles* | | | | FDD Only |
| >>Acknowledged PCPCH Access Preambles | M | | INTEGER(0..15,…) | According to mapping in [22] |
| >*Detected PCPCH Access Preambles* | | | | FDD Only |
| >>Detected PCPCH Access Preambles | M | | INTEGER(0..240,…) | According to mapping in [22] |
| >*UTRAN GPS Timing of Cell Frames for LCS* | | | | |
| >>$T_{UTRAN-GPS}$ Measurement Value Information | M | | 9.2.1.64A | |
| >*SFN-SFN Observed Time Difference* | | | | |
| >> SFN-SFN Measurement Value Information | M | | 9.2.1.53E | |

## 9.2.1.12A    Common Measurement Value Information

The *Common Measurement Value Information* IE provides information both on whether or not 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 | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| CHOICE *Measurement Availability Indicator* | M | | | | – | |
| >*Measurement Available* | | | | | – | |
| >>Common Measurement value | M | | 9.2.1.12 | | – | |
| >*Measurement not Available* | | | NULL | | – | |

## 9.2.1.13    Common Physical Channel ID

Common Physical Channel ID is the unique identifier for one common physical channel within a cell.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Common Physical Channel ID | | | Integer(0..255) | |

### 9.2.1.13A    Common Physical Channel Status Information

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Common Physical Channel ID | M | | 9.2.1.13 | | – | |
| Resource Operational State | M | | 9.2.1.52 | | – | |
| Availability Status | M | | 9.2.1.2 | | – | |

### 9.2.1.14    Common Transport Channel ID

Common Transport Channel ID is the unique identifier for one common transport channel within a cell.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Common Transport Channel ID | | | Integer(0..255) | |

### 9.2.1.14A    Common Transport Channel Information Response

The *Common Transport Channel Information Response* IE provides information for Common Transport Channels that have been established or modified.

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Common Transport Channel ID | M | | 9.2.1.14 | | – | |
| Binding ID | O | | 9.2.1.4 | | – | |
| Transport Layer Address | O | | 9.2.1.63 | | – | |

### 9.2.1.14B    Common Transport Channel Status Information

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Common Transport Channel ID | M | | 9.2.1.14 | | – | |
| Resource Operational State | M | | 9.2.1.52 | | – | |
| Availability Status | M | | 9.2.1.2 | | – | |

### 9.2.1.15    Communication Control Port ID

A Communication Control Port corresponds to one signalling bearer between the RNC and Node B for the control of Node B Communication Contexts. Node B may have multiple Communication Control Ports (one per Traffic Termination Point). The Communication Control Port is selected at creation of the Node B Communication Context. The Communication Control Port ID is the identifier of the Communication Control Port.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Communication Control Port ID | | | INTEGER (0..65535) | |

### 9.2.1.16 Configuration Generation ID

The Configuration Generation ID describes the generation of the configuration of logical resources in a cell.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Configuration Generation ID | | | Integer(0.. 255) | Value '0' means "No configuration". At possible wraparound of the ID counter in CRNC the value '0' shall not be used. |

### 9.2.1.17 Criticality Diagnostics

The *Criticality Diagnostics* IE is sent by a Node B or the CRNC when parts of a received message have not been comprehended or are 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 |
|---|---|---|---|---|
| **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 | | ENUMERAT ED (FDD, TDD, Common) | Common = common to FDD and TDD. |
| Triggering Message | O | | ENUMERAT ED(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 | | ENUMERAT ED(reject, ignore, notify) | This Procedure Criticality is used for reporting the Criticality of the Triggering message (Procedure). |
| Transaction ID | O | | Transaction ID 9.2.1.62 | |
| **Information Element Criticality Diagnostics** | | 0 to <maxnoof errors> | | |
| >IE Criticality | M | | ENUMERAT ED(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 |
| >Repetition Number | O | | INTEGER (0..255) | The *Repetition Number* IE gives <br><br> • in case of a not understood IE: The number of occurrences of the reported IE up to and including the not understood occurrence <br><br> • in case of a missing IE: The number of occurrences up to but not including the missing occurrence. <br><br> Note: All the counted occurrences of the reported IE must have the same topdown hierachical message structure of IEs with assigned criticality above them. |
| >Message Structure | O | | 9.2.1.45A | The *Message Structure* IE describes the structure where the not understood or missing IE was detected. This IE is included if the not understood IE is not the top |

*ETSI*

| | | | | level of the message. |
|---|---|---|---|---|
| >Type of Error | M | | ENUMERAT ED(not understood, missing, …) | |

| Range bound | Explanation |
|---|---|
| *Maxnooferrors* | Maximum no. of IE errors allowed to be reported with a single message. |

## 9.2.1.18     CRNC Communication Context ID

The CRNC Communication Context ID is the identifier of the Communication Context in the CRNC.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| CRNC Communication Context ID | | | INTEGER (0..2^20 −1) | 2^20-1 is reserved value to indicate all the CRNC communication contexts that can be reached by the communication control port (All CRNCCC). |

## 9.2.1.19     DCH Combination Indicator

Void

## 9.2.1.20     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) | |

## 9.2.1.20A     Dedicated Channels Capacity Consumption Law

The capacity consumption law indicates the CRNC how the Capacity Credit is consumed by NBAP set of procedures, depending on the [FDD - allocated Spreading Factor and the RL/RLS situation] [TDD – allocated Spreading Factor on each DPCH and the assigned timeslot]. [FDD- In uplink, the reference spreading factor shall be the minimum spreading factor signalled in the Radio Link Setup Request message (*Min UL Channelisation Code length* IE).].

This capacity consumption law indicates the consumption law to be used with the following procedures :

-   Radio Link Setup

-   Radio Link Addition

-   Radio Link Reconfiguration

-   Radio Link Deletion

-   [TDD - Physical Shared Channel Reconfiguration]

For the Radio Link Setup and Radio Link Addition procedures, the cost given in the consumption law shall be debited from the Capacity Credit, whereas it shall credited to the Capacity Credit for the Radio Link Deletion procedure. For the Radio Link Reconfiguration procedure, the difference of the consumption cost for the new spreading factor and the

consumption cost for the old spreading factor shall be debited from the Capacity Credit (or credited when this difference is negative).

If the modelling of the internal resource capability of the Node B is modelled independently for the Uplink and Downlink, the DL cost shall be applied to the DL or Global Capacity Credit and the UL Cost shall be applied to the UL Capacity Credit. If it is modelled as shared resources, both the DL costs" and the UL costs shall be applied to the DL or Global Capacity Credit.

[FDD - For a Radio Link creating a Radio Link Set (first RL of a RLS), the cost for the RL (cost 2) and RLS (cost 1) shall be taken into account. When adding a Radio Link to a Radio Link Set, only the RL cost (cost 2) shall be taken into account.
In the case of multiple Radio Links are established in one procedure, for every created Radio Link Set the first Radio Link is always the Radio Link with the lowest repetition number.]

[FDD- When a PDSCH is allocated in the Radio Link Setup procedure, the processing cost associated to this PDSCH, equal to the DL cost RL, shall be debited from the Capacity Credit, in addition to the processing cost of the radio links. In a similar way, this cost shall be credited to the Capacity Credit, when a PDSCH is deleted and the difference between the new cost and the old cost shall be debited from the Capacity Credit (or credited if this difference is negative) when a PDSCH is reconfigured.]

[FDD- The costs given in the consumption law are the costs per channelization code. When multiple channelization codes are used by either the radio links or the PDSCH, the cost credited to or debited from the Capacity Credit shall be taken as N times the cost for one code, where N is the number of channelization codes.]

[TDD –The cost for a radio link is a sum of the costs for each DPCH. For the first DPCH assigned to any user in a cell within a timeslot, the initial cost for a DPCH in a timeslot (cost 1) and the cost for a DPCH (cost 2) shall be taken into account. For any DPCH that is not the first DPCH assigned for any user in a cell within a timeslot, only the cost for a DPCH (cost 2) shall be taken into account.

[TDD – The cost for shared channels is a sum of the costs for each PDSCH and PUSCH assigned to a PUSCH or PDSCH set. For the first PDSCH or PUSCH assigned to any user in a cell within a timeslot, the initial cost for a PDSCH/PUSCH in a timeslot (cost 1) and the cost for a PDSCH/PUSCH (cost 2) shall be taken into account. For any PDSCH/PUSCH that is not the first PDSCH/PUSCH assigned to any user in a cell within a timeslot, only the cost for a PDSCH/PUSCH (cost 2) shall be taken into account.

[TDD - In case of Physical Shared Channel Reconfiguration, the sum of the consumption cost of the each PDSCH/PUSCH of the previous configuration shall be credited to the capacity credit, and the sum of the consumption cost of each PDSCH/PUSCH of the new configuration shall be subtracted from the capacity credit.]

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| SF allocation law | | 1..<MaxNumberOf SF> | | [FDD - For each SF, cost of its allocation: the first instance corresponds to SF = 4, the second to SF = 8, the third to SF = 16 and so on.] [TDD – For each SF, cost of its allocation: the first instance corresponds to SF = 1, the second to SF = 2, the third to SF = 4 and so on.] |
| >DL cost 1 | M | | INTEGER (0..65535) | [FDD – This is the cost of a RLS,] [TDD – This is the additional cost of the first DPCH/PDSCH/PUSCH assigned to any user in a cell within a timeslot.] |
| >DL cost 2 | M | | INTEGER (0..65535) | [FDD – This is the cost of a RL,] [TDD – This is the cost of a DPCH/PDSCH/PUSCH] |
| >UL cost 1 | M | | INTEGER (0..65535) | FDD – This is the cost of a RLS,] [TDD – This is the additional cost of the first DPCH/PDSCH/PUSCH assigned to any user in a cell within a timeslot.] |
| >UL cost 2 | M | | INTEGER (0..65535) | [FDD – This is the cost of a RL,] [TDD – This is the cost of a DPCH/PDSCH/PUSCH.] |

| Range bound | Explanation |
|---|---|
| *MaxNumberOfSF* | Maximum number of Spreading Factors |

## 9.2.1.20B    DL or Global Capacity Credit

The capacity credit indicates to the CRNC the Downlink or global capacity of a Local Cell or a Local Cell Group.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| DL or Global Capacity Credit | | | INTEGER (0..65535) | |

## 9.2.1.20C    DCH Information Response

The *DCH Information Response* IE provides information for DCHs that have been established or modified.

| IE/Group Name | Presence | Range | IE type and reference | Semantics descriptions | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| **DCH Information Response** | | 1 to <maxnoofDCHs> | | Only one DCH per set of coordinated DCH shall be included | – | |
| >DCH ID | M | | 9.2.1.20 | | – | |
| >Binding ID | O | | 9.2.1.4 | | – | |
| >Transport Layer Address | O | | 9.2.1.63 | | – | |

| Range bound | Explanation |
|---|---|
| *MaxnoofDCHs* | Maximum number of DCH per UE. |

## 9.2.1.21     DL Power

The DL Power IE indicates a power level relative to the [FDD-primary CPICH power] [TDD-primary CCPCH power] configured in a cell [FDD-If referred to a DPCH, it indicates the power of the transmitted DPDCH symbols]. [FDD-If referred to a DL-DPCCH for CPCH, it indicates the power of the transmitted pilot symbols].

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| DL Power | | | Enumerated(-35..+15dB) | Step 0.1dB |

## 9.2.1.22     Dedicated Measurement Object Type

The Dedicated Measurement Object type indicates the type of object that the measurement is to be performed on.

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description |
|---|---|---|---|---|
| Dedicated Measurement Object Type | | | ENUMERATED (RL, RLS, ALL RL, ALL RLS,…) | |

## 9.2.1.23     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) | RSCP is used by TDD only, Rx Timing Deviation is used by 3.84Mcps TDD only, Rx Timing Deviation LCR is used by 1.28 Mcps 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 [4] and [5].

## 9.2.1.24    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 |
|---|---|---|---|---|
| CHOICE *Dedicated Measurement Value* | | | | |
| >*SIR Value* | | | | |
| >>SIR value | M | | INTEGER(0..63) | According to mapping in [22] and [23] |
| >*SIR Error Value* | | | | FDD only |
| >>SIR error Value | M | | INTEGER(0..125) | According to mapping in [22] |
| >*Transmitted Code Power Value* | | | | |
| >>Transmitted Code Power Value | M | | INTEGER(0..127) | According to mapping in [22] and [23] Values 0 to 9 and 123 to 127 shall not be used. |
| >*RSCP* | | | | TDD only |
| >>RSCP | M | | INTEGER(0..127) | According to mapping in [23] |
| >*Rx Timing Deviation Value* | | | | 3.84Mcps TDD only |
| >>Rx Timing Deviation | M | | INTEGER(0..8191) | According to mapping in [23] |
| >*Round Trip Time* | | | | FDD only |
| >>Round Trip Time | M | | INTEGER(0..32767) | According to mapping in [22] |
| >*Rx Timing Deviation Value LCR* | | | | 1.28Mcps TDD only |
| >>Rx Timing Deviation LCR | M | | INTEGER(0..255) | According to mapping in [23] |
| > *Angle Of Arrival Value LCR* | | | | 1.28Mcps TDD only |
| >> AOA LCR | M | | INTEGER(0..719) | According to mapping in [23] |
| >> AOA LCR Accuracy Class | M | | ENUMERATED(A, B, C, D, E, F, G, H,...) | According to mapping in [23] |

### 9.2.1.24A 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 or not and if provided also the Dedicated Measurement Value itself.

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| CHOICE *Measurement Availability Indicator* | M | | | | – | |
| >*Measurement Available* | | | | | – | |
| >>Dedicated Measurement Value | M | | 9.2.1.24 | | – | |
| >>CFN | O | | 9.2.1.7 | Dedicated Measurement Time Reference | – | |
| >*Measurement not Available* | | | NULL | | – | |

### 9.2.1.24B 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 [28].

| 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 Information** | | *1..<MaxNoSat>* | | |
| >SatID | M | | INTEGER (0..63) | Satellite ID |
| >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 ≤1.0m, 1.0m < UDRE ≤ 4.0m, 4.0m < UDRE ≤ 8.0m, 8.0m < UDRE) | User Differential Range Error. This field provides an estimate of the uncertainty (1-σ) 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) | Pseudo Range Correction Scaling factor 0.32 meters |
| >Range Correction Rate | M | | INTEGER (-127.. 127) | Scaling factor 0.032 m/s |

| Range Bound | Explanation |
|---|---|
| MaxNoSat | Maximum number of satellites for which information can be provided |

### 9.2.1.24C   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 *Delayed Activation* | M | | | |
| > *CFN* | | | | |
| >> Activation CFN | M | | CFN 9.2.1.7 | |
| > *Separate Indication* | | | NULL | |

## 9.2.1.24D    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 *Delayed Activation Update* | M | | | |
| > *Activate* | | | | |
| >> CHOICE *Activation Type* | | | | |
| >>> *Synchronised* | | | | |
| >>>> Activation CFN | M | | CFN 9.2.1.7 | |
| >>> *Unsynchronised* | | | 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 |
| > *Deactivate* | | | | |
| >> CHOICE *Deactivation type* | | | | |
| >>> *Synchronised* | | | | |
| >>>> Deactivation CFN | M | | CFN 9.2.1.7 | |
| >>> *Unsynchronised* | | | NULL | |

## 9.2.1.25    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) | |

## 9.2.1.26    Diversity Indication

The Diversity Indication indicates if the RL has been or has not been combined with another RL.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Diversity Indication | | | ENUMERATED (Combined, not combined) | |

## 9.2.1.26A    DL DPCH Timing Adjustment

The DL DPCH Timing Adjustment indicates that a timing adjustment of the related radio link is required. It also indicates whether the timing adjustment shall consist 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. |

### 9.2.1.27 DSCH ID

The DSCH ID uniquely identifies a DSCH within a Node B Communication Context.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| DSCH ID | | | INTEGER (0..255) | |

### 9.2.1.27A DSCH Information Response

The *DSCH Information Response* IE provides information for DSCHs that have been established or modified.

| IE/Group Name | Presence | Range | IE type and reference | Semantics descriptions | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| **DSCH Information Response** | | 1 to <Numof DSCH> | | | – | |
| >DSCH ID | M | | 9.2.1.27 | | – | |
| >Binding ID | O | | 9.2.1.4 | | – | |
| >Transport Layer Address | O | | 9.2.1.63 | | – | |

| Range bound | Explanation |
|---|---|
| *MaxnoofDSCHs* | Maximum number of DSCHs for one UE. |

### 9.2.1.28 DSCH Transport Format Set

Void

### 9.2.1.29 DSCH Transport Format Combination Set

Void

### 9.2.1.29A End Of Audit Sequence Indicator

Indicates if the AUDIT RESPONSE message ends an audit sequence or not.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| End Of Audit Sequence Indicator | | | ENUMERATED(end of audit sequence, not end of audit sequence) | End of audit sequence = all audit information has been provided by the Node B; Not end of audit sequence = more audit information is available; |

### 9.2.1.29B 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) | |

## 9.2.1.30    Frame Handling Priority

This parameter indicates the priority level to be used during the lifetime of the DCH/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=lower priority, 15=higher priority |

## 9.2.1.31    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 |

## 9.2.1.31A    IB_OC_ID

The IB OC ID identifies the occurrence of a specific Information Block.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| IB OC ID | | | INTEGER (1.. 16) | |

## 9.2.1.31B    GPS Navigation Model & Time Recovery

This IE contains subframes 1 to 3 of the GPS navigation message. For further details on the meaning of parameters, see [27].

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description |
|---|---|---|---|---|
| **Navigation Message 1to3** | | 1..<MaxNoSat> | | |
| >Transmission TOW | M | | INTEGER (0..1048575) | Time of the Week when the message is broadcast. |
| >SatID | M | | INTEGER (0..63) | Satellite ID of the satellite from which the information is obtained |
| >TLM Message | M | | Bit string(14) | |
| >Tlm 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) | |
| >$\Delta n$ | 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) | |
| >$\omega$ | M | | Bit string(32) | |
| >OMEGAdot | M | | Bit string(24) | |
| >Idot | M | | Bit string(14) | |
| >Spare/zero fill | M | | Bit string(20) | |

| Range Bound | Explanation |
|---|---|
| MaxNoSat | Maximum number of satellites for which information can be provided |

### 9.2.1.31C    GPS Ionospheric Model

This IE provides the information regarding the GPS Ionospheric Model. For further details on the meaning of parameters, see [27].

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description |
|---|---|---|---|---|
| $\alpha_0$ | M | | Bit string(8) | |
| $\alpha_1$ | M | | Bit string(8) | |
| $\alpha_2$ | M | | Bit string(8) | |
| $\alpha_3$ | M | | Bit string(8) | |
| $\beta_0$ | M | | Bit string(8) | |
| $\beta_1$ | M | | Bit string(8) | |
| $\beta_2$ | M | | Bit string(8) | |
| $\beta_3$ | M | | Bit string(8) | |

### 9.2.1.31D    GPS UTC Model

This IE provides the information regarding the GPS UTC Model. For further details on the meaning of parameters, see [27].

| 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) | |
| $\Delta t_{LS}$ | M | | Bit string(8) | |
| $WN_t$ | M | | Bit string(8) | |
| $WN_{LSF}$ | M | | Bit string(8) | |
| DN | M | | Bit string(8) | |
| $\Delta t_{LSF}$ | M | | Bit string(8) | |

### 9.2.1.31E    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 [27].

| IE/Group name | Presence | Range | IE Type and Reference | Semantics description |
|---|---|---|---|---|
| CHOICE *Bad Satellites Presence* | M | | | |
| *>Bad Satellites* | | | | |
| **>>Satellite information** | | *1..<MaxNoSat>* | | |
| *>>>BadSatID* | M | | INTEGER (0..63) | Satellite ID |
| *>No Bad Satellites* | | | NULL | |

| Range Bound | Explanation |
|---|---|
| MaxNoSat | Maximum number of satellites for which information can be provided |

### 9.2.1.31F    GPS Almanac

This IE provides the information regarding the GPS Almanac. For further details on the meaning of parameters, see [27].

| IE/Group name | Presence | Range | IE Type and Reference | Semantics description |
|---|---|---|---|---|
| $WN_a$ | M | | Bit string(8) | |
| **Satellite information** | M | *1,,<MaxNoSat>* | | |
| >DataID | M | | INTEGER (0..3) | |
| >SatID | M | | INTEGER (0..63) | Satellite ID |
| >e | M | | Bit string(16) | |
| $>t_{oa}$ | M | | Bit string(8) | |
| $>\delta i$ | 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) | |
| $>\omega$ | 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 |
|---|---|
| MaxNoSat | Maximum number of satellites for which information can be provided |

## 9.2.1.31G 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 |
|---|---|---|---|---|
| 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°) |
| 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). |

## 9.2.1.31H HS-DSCH Information to modify

The HS-DSCH Information to modify provides information for HS-DSCH to be modified.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| **HS-DSCH MAC-d Flow Specific Information** | | *0..<Maxno ofMACdFl ows>* | | | – | |
| >HS-DSCH MAC-d Flow ID | M | | 9.2.131I | | – | |
| >BLER | O | | 9.2.1.4A | | – | |
| >Allocation/Retention Priority | O | | 9.2.1.1A | | – | |
| **>Priority Queue Information** | | *0..<Maxno ofPrioQue ues>* | | | – | |
| >>Priority Queue ID | M | | 9.2.1.49C | | – | |
| >>Scheduling Priority Indicator | O | | 9.2.1.53H | | – | |
| **>>MAC-d PDU Size Index** | | *0..<Maxno ofMACdP DUindexes >* | | | – | |
| >>>SID | M | | 9.2.1.53I | | – | |
| >>>MAC-d PDU Size | O | | 9.2.1.38A | | – | |
| >Transport Bearer Request Indicator | M | | 9.2.1.62A | | – | |
| Measurement Reporting cycle | O | | ENUMERA TED (k1, k2) | For FDD only | – | |

## 9.2.1.31I     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) | |

## 9.2.1.31J     HS-DSCH RNTI

The HS-DSCH RNTI is used 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) | |

## 9.2.1.32     IB_SG_DATA

Segment as defined in ref. [18].

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| IB_SG_DATA | | | Bit String | Contains "SIB data fixed" or "SIB data variable" in segment as encoded in ref: [18]. |

## 9.2.1.33     IB_SG_POS

The lowest position of a specific Information Block segment in the SFN cycle (IB_SG_POS < IB_SG_REP).

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| IB_SG_POS | | | INTEGER (0.. 4094) | Only even positions allowed. See ref. [18] |

## 9.2.1.34    IB_SG_REP

Repetition distance for an Information Block segment. The segment shall be transmitted when SFN mod IB_SG_REP = IB_SG_POS.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| IB_SG_REP | | | ENUMERATED (4, 8, 16, 32, 64, 128, 256, 512, 1024, 2048, 4096) | Repetition period for the IB segment in frames |

## 9.2.1.35    IB Type

The IB Type identifies a specific system information block.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| IB Type | | | Enumerated (MIB, SB1, SB2, SIB1, SIB2 SIB3, SIB4, SIB5, SIB6, SIB7, SIB8, SIB9, SIB10, SIB11, SIB12, SIB13, SIB13.1 SIB13.2, SIB13.3, SIB13.4, SIB14, SIB15, SIB15.1, SIB15.2, SIB15.3, SIB16, …, SIB17, SIB15.4, SIB18) | |

## 9.2.1.36    Indication Type

The indication type shall indicate the category of a failure with respect to its impact on the logical resources supported at Node B.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Indication Type | | | ENUMERATED (No Failure, Service Impacting, …) | Service Impacting – The failure has impacted on the logical resources supported at Node B. |

### 9.2.1.36A   Information Exchange Object Type

The Information Exchange Object type indicates the type of object that the requested information shall be valid for.

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description |
|---|---|---|---|---|
| Information Exchange Object Type | | | ENUMERATED (Cell, …) | |

### 9.2.1.36B   Information Report Characteristics

The information report characteristics defines how the reporting shall be performed.

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description |
|---|---|---|---|---|
| CHOICE *Information Report Characteristics Type* | | | | |
| >*OnDemand* | | | NULL | |
| | | | | |
| >*Periodic* | | | | |
| >>Information Report Periodicity | M | | ENUMERATED (1min…1hr, …) step 1min, (1hr…24hr, …) step 1hr, … | The frequency with which the Node B shall send information reports. |
| | | | | |
| >*On Modification* | | | | |
| >>Information Threshold | O | | 9.2.1.36E | |

### 9.2.1.36C   Information Exchange ID

The Information Exchange ID uniquely identifies any requested information per Node B.

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description |
|---|---|---|---|---|
| Information Exchange ID | M | | INTEGER (0 .. 2^20-1) | |

### 9.2.1.36D   Information Type

The Information Type indicates which kind of information the Node B shall provide.

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description |
|---|---|---|---|---|
| Information Type Item | M | | ENUMERATED (GPS Information, DGPS Corrections, GPS RX Pos, …) | |
| **GPS Information** | C-GPS | *0..<MaxNoGPSItems>* | | |
| > GPS Information Item | | | ENUMERATED (GPS Navigation Model & Time Recovery, GPS Ionospheric Model, GPS UTC Model, GPS Almanac, GPS Real-Time Integrity, …) | |

| Condition | Explanation |
|---|---|
| GPS | The IE shall be present if the *Information Type Item* IE indicates "GPS Information". |

| Range Bound | Explanation |
|---|---|
| MaxNoGPSItems | Maximum number of GPS Information Items supported in one Information Exchange |

## 9.2.1.36E    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 |
|---|---|---|---|---|
| CHOICE *Information Type Item* | M | | | |
| >*DGPS* | | | | |
| >>PRC Deviation | M | | ENUMERATED (1, 2, 5, 10, …) | PRC deviation in meters from the previously reported value, which shall trigger a report |

## 9.2.1.36F    IPDL Indicator

Indicates if IPDL periods shall be active or not.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| IPDL Indicator | | | ENUMERATED(active, inactive) | |

## 9.2.1.37    Limited Power Increase

Void.

## 9.2.1.37A    Local Cell Group ID

The Local Cell Group ID represents resources in the Node B, which has been pooled from a capacity point of view.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Local Cell Group ID | | | Local Cell ID 9.2.1.38 | |

## 9.2.1.38    Local Cell ID

The local cell ID represents resources in Node B that can be used for the configuration of a cell.

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description |
|---|---|---|---|---|
| Local Cell ID | | | INTEGER(0…268435455) | |

## 9.2.1.38A    MAC-d PDU Size

The *MAC-d PDU Size* 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,…) | |

## 9.2.1.39    Maximum DL Power Capability

This parameter indicates the maximum DL power capability for a local cell or a Power Local Cell Group within Node B. The reference point  is the antenna connector.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Maximum DL Power Capability | | | ENUMERATED(0…500) | dBm, granularity 0.1 dB<br>0: 0 dBm<br>1: 0.1 dBm<br>…<br>499: 49.9 dBm<br>500: 50.0 dBm |

## 9.2.1.40    Maximum Transmission Power

Maximum Transmission Power is maximum power for all downlink channels added together, that is allowed to be used simultaneously in a cell. The reference point  is the antenna connector.

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description |
|---|---|---|---|---|
| Maximum transmission Power | | | ENUMERATED(0,..500) | Unit dBm<br><br>Granularity  0.1 dB<br>0: 0 dBm<br>1: 0.1 dBm<br>…<br>499: 49.9 dBm<br>500: 50.0 dBm |

### 9.2.1.40A    Measurement Availability Indicator

Indicates if measurement is available or not.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Measurement Availability Indicator | | | ENUMERATED(measurement available, measurement not available ) | |

### 9.2.1.41    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, ...) | |

### 9.2.1.42    Measurement ID

The Measurement ID uniquely identifies any measurement per (Node B- or communication) control port.

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description |
|---|---|---|---|---|
| Measurement ID | | | Integer(0 .. 2^20-1) | |

### 9.2.1.43    Measurement Increase/Decrease Threshold

The Measurement Increase/Decrease Threshold defines the threshold that shall trigger Event C or D.

| Information Element / Group Name | Presence | Range | IE Type and Reference | Semantics Description |
|---|---|---|---|---|
| CHOICE *Measurement Increase/Decrease Threshold* | | | | |
| >*Received Total Wide Band Power* | | | | |
| >>Received total wide band power | M | | INTEGER(0 ..620) | 0: 0 dB 1: 0.1 dB 2: 0.2 dB … 620: 62dB |
| >*Transmitted Carrier Power* | | | | |
| >>Transmitted Carrier Power | M | | INTEGER(0 ..100) | According to mapping in [22] and [23] |
| >*Acknowledged PRACH Preambles* | | | | FDD only |
| >>Acknowledged PRACH Preambles | M | | INTEGER(0 ..240,…) | According to mapping in [22] |
| >*UL Timeslot ISCP* | | | | TDD only |
| >>UL Timeslot ISCP | M | | INTEGER(0 ..126) | 0: 0 dB 1: 0.5 dB 2: 1 dB … 126: 63 dB, [TDD only] |
| >*SIR* | | | | |
| >>SIR | M | | INTEGER(0 ..62) | 0: 0 dB 1: 0.5 dB 2: 1 dB … 62: 31dB |
| >*SIR Error* | | | | FDD only |
| >>SIR Error | M | | INTEGER(0 ..124) | 0: 0 dB 1: 0.5 dB 2: 1 dB … 124: 62 dB |
| >*Transmitted Code Power* | | | | |
| >>Transmitted Code Power | M | | INTEGER(0 ..112,…) | 0: 0 dB 1: 0.5 dB 2: 1 dB … 112: 56 dB |
| >*RSCP* | | | | TDD only |
| >>RSCP | M | | INTEGER(0 ..126) | 0: 0 dB 1: 0.5 dB 2: 1 dB … 126: 63 dB |
| >*Round Trip Time* | | | | FDD only |
| >>Round Trip Time | M | | INTEGER(0 ..32766) | 0: 0 chips 1: 0.0625 chips 2: 0.1250 chips … 32766: 2047.875 chips |
| >*Acknowledged PCPCH Access Preambles* | | | | FDD only |
| >>Acknowledged PCPCH Access Preambles | M | | INTEGER(0 ..15,…) | According to mapping in [22] |
| >*Detected PCPCH Access Preambles* | | | | FDD only |
| >>Detected PCPCH Access Preambles | M | | INTEGER(0 ..240,…) | According to mapping in [22] |

### 9.2.1.44 Measurement Threshold

The Measurement Threshold defines which threshold that shall trigger Event A, B, E, F or On Modification.

| Information Element / Group Name | Presence | Range | IE Type and Reference | Semantics Description |
|---|---|---|---|---|
| CHOICE *Measurement Threshold* | | | | |
| >*Received Total Wide Band* | | | | |
| >>Received total wide band power | M | | INTEGER(0..621) | According to mapping in [22] and [23] |
| >*Transmitted Carrier Power* | | | | |
| >>Transmitted Carrier Power | M | | INTEGER(0..100) | According to mapping in [22] and [23] |
| >*Acknowledged PRACH Preambles* | | | | FDD only |
| >>Acknowledged PRACH Preambles | M | | INTEGER(0..240,…) | According to mapping in [22] |
| >*UL Timeslot ISCP* | | | | TDD only |
| >>UL Timeslot ISCP | M | | INTEGER(0..127) | According to mapping in [23] |
| >*SIR* | | | | |
| >>SIR | M | | INTEGER(0..63) | According to mapping in [22] and [23] |
| >*SIR Error* | | | | FDD only |
| >>SIR Error | M | | INTEGER(0..125) | According to mapping in [22] |
| >*Transmitted Code Power* | | | | |
| >>Transmitted Code Power | M | | INTEGER(0..127) | According to mapping in  [22] and [23] |
| >*RSCP* | | | | TDD only |
| >>RSCP | M | | INTEGER(0..127) | According to mapping in [23] |
| >*Rx Timing Deviation* | | | | 3.84Mcps TDD only |
| >>Rx Timing Deviation | M | | INTEGER(0..8191) | According to mapping in [23] |
| >*Round Trip Time* | | | | FDD only |
| >>Round Trip Time | M | | INTEGER(0..32767) | According to mapping in [22] |
| >*Acknowledged PCPCH Access Preambles* | | | | FDD only |
| >>Acknowledged PCPCH Access Preambles | M | | INTEGER(0..15,…) | According to mapping in [22] |
| >*Detected PCPCH Access Preambles* | | | | FDD only |
| >>Detected PCPCH Access Preambles | M | | INTEGER(0..240,…) | According to mapping in [22] |
| >*UTRAN GPS Timing of Cell Frames for LCS* | | | | |
| >>T$_{UTRAN-GPS}$ Measurement Threshold Information | M | | 9.2.1.64B | |
| >*SFN-SFN Observed Time Difference* | | | | |
| >>SFN-SFN Measurement Threshold Information | M | | 9.2.1.53C | |

### 9.2.1.45 Message Discriminator

This field is used to discriminate between Dedicated NBAP and Common NBAP messages.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Message Discriminator | | | ENUMERATED(Common,Dedicated) | |

## 9.2.1.45A    Message Structure

The *Message Structure* IE gives information for each level with assigned criticality in an hierachical message structure from top level down to the lowest level above the reported level for the occured 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 to <maxnooflevels> | | The first repetition of the *Message Structure* IE corresponds to the top level of the message. The last repetition of the *Message Structure* IE corresponds to the level above the reported level for the occured error of the message. | GLOBAL | ignore |
| >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 *Repetition Number* IE gives, if applicable, the number of occurrences of this level's reported IE up to and including the occurrence containing the not understood or missing IE.<br><br>Note: All the counted occurrences of the reported IE must have the same topdown hierachical 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. |

## 9.2.1.46    Message Type

The Message Type uniquely identifies the message being sent.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| **Procedure ID** | M | 1 | | |
| >Procedure Code | M | | ENUMERATED ( COMMON TRANSPORT CHANNEL SETUP, COMMON TRANSPORT CHANNEL RECONFIGURATION, COMMON TRANSPORT CHANNEL DELETION, BLOCK RESOURCE, UNBLOCK RESOURCE, AUDIT REQUIRED, AUDIT, COMMON MEASUREMENT INITIATION, COMMON MEASUREMENT REPORTING, COMMON MEASUREMENT TERMINATION, COMMON MEASUREMENT FAILURE, CELL SETUP, CELL RECONFIGURATION, CELL DELETION, RESOURCE STATUS INDICATION, SYSTEM INFORMATION UPDATE, RL SETUP, RL ADDITION, SYNCHRONISED RL RECONFIGURATION PREPARATION, SYNCHRONISED RL RECONFIGURATION COMMIT, SYNCHRONISED RL RECONFIGURATION CANCELLATION, UNSYNCHRONISED RL RECONFIGURATION, RL DELETION, DL POWER CONTROL, DL POWER TIMESLOT CONTROL, DEDICATED MEASUREMENT INITIATION, DEDICATED MEASUREMENT REPORTING, DEDICATED MEASUREMENT TERMINATION, DEDICATED MEASUREMENT FAILURE, RL FAILURE, RL RESTORATION, COMPRESSED MODE COMMAND, ERROR INDICATION, PHYSICAL SHARED CHANNEL RECONFIGURATION, RESET, …, INFORMATION EXCHANGE INITIATION, INFORMATION REPORTING, INFORMATION EXCHANGE TERMINATION, INFORMATION EXCHANGE FAILURE, CELL SYNCHRONISATION INITIATION, CELL SYNCHRONISATION RECONFIGURATION, CELL SYNCHRONISATION REPORTING, CELL SYNCHRONISATION TERMINATION, CELL SYNCHRONISATION FAILURE, CELL SYNCHRONISATION ADJUSTMENT) | |
| >Ddmode | M | | ENUMERATED (FDD, TDD, Common, …) | Common = common to FDD and TDD. |
| Type of Message | M | | ENUMERATED (Initiating Message, Successful Outcome, Unsuccessful Outcome, Outcome) | |

### 9.2.1.46A    Minimum DL Power Capability

This parameter indicates the minimum DL power capability for a local cell within Node B. The reference point is the antenna connector.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Minimum DL Power Capability | | | ENUMERATED(0..800) | dBm, granularity 0.1 dB<br>0: -30.0 dBm<br>1: -29.9 dBm<br>…<br>799: 49.9 dBm<br>800: 50.0 dBm |

### 9.2.1.47 Minimum Spreading Factor

This parameter indicates the minimum spreading factor supported at a cell within the Node B.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Minimum Spreading Factor | | | Enumerated(4, 8, 16, 32, 64, 128, 256, 512) | |

### 9.2.1.47A N_INSYNC_IND

This parameter defines the number of successive in-sync indications after which the Node B shall trigger the Radio Link Restore procedure (see also ref. [10] and [21]).

| Information Element/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| N_INSYNC_IND | | | Integer (1, 2, .., 256) | |

### 9.2.1.47B N_OUTSYNC_IND

This parameter defines the number of consecutive out-of-sync indications after which the timer T_RLFAILURE shall be started (see also ref. [10] and [21]).

| Information Element/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| N_OUTSYNC_IND | | | Integer (1, 2, .., 256) | |

### 9.2.1.47C 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 |
|---|---|---|---|---|
| UC-Id | M | | 9.2.1.65B | |
| UARFCN | M | | 9.2.1.65 | Corresponds to Nd [14] |
| Primary Scrambling Code | M | | 9.2.2.34 | |

### 9.2.1.47D Neighbouring TDD Cell Measurement Information

This IE provides information on the 3.84Mcps TDD neighbouring cells used for the purpose of measurements.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| UC-Id | M | | 9.2.1.65B | |
| UARFCN | M | | 9.2.1.65 | Corresponds to Nt [15] |
| Cell Parameter ID | M | | 9.2.3.4 | |
| Time slot | O | | 9.2.3.23 | |
| Midamble shift and burst type | O | | 9.2.3.7 | |

## 9.2.1.47E    Neighbouring TDD Cell Measurement Information LCR

This IE provides information on the neighbouring 1.28Mcps TDD 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 |
|---|---|---|---|---|
| UC-Id | M | | 9.2.1.65B | |
| UARFCN | M | | 9.2.1.65 | Corresponds to Nt [15] |
| Cell Parameter ID | M | | 9.2.3.4 | |
| Time Slot LCR | O | | 9.2.3.24A | |
| Midamble shift LCR | O | | 9.2.3.7A | |

## 9.2.1.48    Node B Communication Context ID

The Node B Communication Context ID is the identifier of the Communication Context in the Node B, it corresponds to the dedicated resources which are necessary for an UE using one or more dedicated channels in a given Node B.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Node B Communication Context ID | | | INTEGER (0..2^20-1) | 2^20-1 is reserved value to indicate all the existing and future Node B communication contexts that can be reached by the communication control port (All NBCC). |

## 9.2.1.49    Payload CRC Presence 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) | |

## 9.2.1.49A    PICH Power

The PICH Power IE indicates a power level relative to the [FDD-primary CPICH power] [TDD-primary CCPCH power] configured in a cell.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| PICH Power | | | Enumerated( -10..+5dB) | Step 1dB |

### 9.2.1.49B Power Local Cell Group ID

The Power Local Cell Group ID represents resources in the Node B which have been pooled from a DL power capability point of view.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Power Local Cell Group ID | | | Local Cell ID 9.2.1.38 | |

### 9.2.1.49C Priority Queue ID

The Priority Queue ID provides the identity of the Priority Queue.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Priority Queue ID | | | INTEGER (0..7) | |

### 9.2.1.50 Puncture Limit

The Puncture limit limits the amount of puncturing that can be applied in order to minimise the number of dedicated physical channels.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Puncture limit | | | INTEGER (0..15) | 0: 40% <br> 1: 44 % <br> … <br> 14: 96% <br> 15: 100% (no puncturing) |

### 9.2.1.50A 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) | |

### 9.2.1.51 Report Characteristics

The report characteristics, defines how the reporting shall be performed.

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description |
|---|---|---|---|---|
| CHOICE *Report Characteristics* | | | | |
| >*OnDemand* | | | NULL | |
| >*Periodic* | | | | |
| >>Report Periodicity | M | | ENUMERATED (10ms…1min,…) step 10ms, (1min…1hr, …) step 1min,… | The frequency with which the Node B shall send measurement reports. |
| >*Event A* | | | | |
| >>Measurement Threshold | M | | Measurement Threshold 9.2.1.44 | The threshold for which the Node B shall trigger a measurement report. |
| >>Measurement Hysteresis Time | O | | ENUMERATED (10ms…1min,…) step 10ms,… | |
| >*Event B* | | | | |
| >>Measurement Threshold | M | | Measurement Threshold 9.2.1.44 | The threshold for which the Node B shall trigger a measurement report. |
| >>Measurement Hysteresis Time | O | | ENUMERATED (10ms…1min,…) step 10ms,… | |
| >*Event C* | | | | |
| >>Measurement Increase/Decrease Threshold | M | | Measurement Increase/Decrease Threshold 9.2.1.43 | |
| >>Measurement Change Time | M | | ENUMERATED (10ms…1min,…) step 10ms,… | The time the measurement entity shall rise on (in ms), in order to trigger a measurement report. |
| >*Event D* | | | | |
| >>Measurement Increase/Decrease Threshold | M | | Measurement Increase/Decrease Threshold 9.2.1.43 | |
| >>Measurement Change Time | M | | ENUMERATED (10ms…1min,…) step 10ms,… | The time the measurement entity shall fall (in ms), in order to trigger a measurement report. |
| >*Event E* | | | | |
| >>Measurement Threshold 1 | M | | Measurement Threshold 9.2.1.44 | |
| >>Measurement Threshold 2 | O | | Measurement Threshold 9.2.1.44 | |
| >>Measurement Hysteresis Time | O | | ENUMERATED (10ms…1mi | The hysteresis time in ms |

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description |
|---|---|---|---|---|
| | | | n,…) step 10ms,… | |
| >>Report Periodicity | O | | ENUMERATED (10ms…1min,…) step 10ms, (1min…1hr,…) step 1min,… | The frequency with which the Node B shall send measurement reports. |
| >Event F | | | | |
| >>Measurement Threshold 1 | M | | Measurement Threshold 9.2.1.44 | |
| >>Measurement Threshold 2 | O | | Measurement Threshold 9.2.1.44 | |
| >>Measurement Hysteresis Time | O | | ENUMERATED (10ms…1min,…) step 10ms,… | The hysteresis time in ms |
| >>Report Periodicity | O | | ENUMERATED (10ms…1min,…) step 10ms, (1min…1hr,…) step 1min,… | The frequency with which the Node B shall send measurement reports. |
| >On Modification | | | | |
| >>Measurement Threshold | M | | Measurement Threshold 9.2.1.44 | |

### 9.2.1.51A    Requested Data Value

The *Requested Data Value* IE contains the relevant data concerning 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 |
|---|---|---|---|---|
| DGPS Corrections | O | | 9.2.1.24B | |
| GPS Navigation Model & Time Recovery | O | | 9.2.1.31B | |
| GPS Ionospheric Model | O | | 9.2.1.31C | |
| GPS UTC Model | O | | 9.2.1.31D | |
| GPS Almanac | O | | 9.2.1.31F | |
| GPS Real-Time Integrity | O | | 9.2.1.31E | |
| GPS RX Pos | O | | 9.2.1.31G | |

### 9.2.1.51B    Requested Data Value Information

The *Requested Data Value Information* IE provides information both on whether or not the Requested Data Value is provided in the message or not and if provided also the Requested Data Value itself. In case of periodic 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 *Information Availability Indicator* | M | | | | – | |
| >*Information Available* | | | | | – | |
| >>Requested Data Value | M | | 9.2.1.51A | | – | |
| >*Information not Available* | | | NULL | | – | |

### 9.2.1.52 Resource Operational State

The resource operational state is used to indicate the current operational state of the associated resource following a Node B failure.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Resource Operational State | | | ENUMERATED(Enabled, Disabled) | When a resource is marked as disabled, then its child resources are implicitly disabled. Cell Resource hierarchy can be referred to [6]. |

### 9.2.1.52A Retention Priority

Void.

### 9.2.1.53 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) | |

### 9.2.1.53a 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) | |

### 9.2.1.53A 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) | |

### 9.2.1.53B Segment type

Segment type as defined in [18].

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Segment type | | | Enumerated( First segment, First segment short, Subsequent segment, Last segment, Last segment short, Complete SIB, Complete SIB short,…) | |

### 9.2.1.53C    SFN-SFN Measurement Threshold Information

The SFN-SFN Measurement Threshold Information defines the related thresholds SFN-SFN Observed Time Difference measurments 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 of the predicated SFN-SFN from the latest measurement result, which shall trigger a new report. Unit in 1/16 chip. |

### 9.2.1.53D    SFN-SFN Measurement Time Stamp

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| CHOICE *Mode* | | | | |
| >FDD | | | | |
| >>SFN | M | | 9.2.1.53A | Indicates the SFN of the reference cell at which the measurement has been performed. |
| >TDD | | | | |
| >>SFN | M | | 9.2.1.53A | Indicates the SFN of the reference cell at which the measurement has been performed. |
| >>Time Slot | M | | 9.2.3.23 | Indicates the Time Slot of the reference cell at which this measurement has been performed. |

### 9.2.1.53E    SFN-SFN Measurement Value Information

The SFN-SFN Measurement Value Information IE indicates the measurement result related to SFN-SFN Observed Time Difference measurements.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| **Successful Neighbouring cell SFN-SFN Observed Time Difference Measurement Information** | | 1..<maxnoMeasN Cell> | | |
| >UC-Id | M | | 9.2.1.65B | |
| >SFN-SFN Value | M | | 9.2.1.53F | |
| >SFN-SFN Quality | O | | INTEGER(0. .256) | Indicates the standard deviation of the SFN-SFN otd (observed time difference) measurements in 1/16 chip. |
| >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 | M | | INTEGER(0. . 100) | Indicates the standard deviation of the SFN-SFN drift rate measurements in 1/256 chip per second. |
| >SFN-SFN Measurement Time Stamp | M | | 9.2.1.53D | |
| **Unsuccessful Neighbouring cell SFN-SFN Observed Time Difference Measurement Information** | | 0..<maxnoMeasN Cell-1> | | |
| >UC-Id | M | | 9.2.1.65B | |

| Range bound | Explanation |
|---|---|
| *maxnoMeasNCell* | Maximum number of neighbouring cells that can be measured on. |

## 9.2.1.53F    SFN-SFN Value

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| CHOICE *Mode* | | | | |
| >FDD | | | | |
| >>SFN-SFN | M | | INTEGER(0. . 614399) | According to mapping in [22]. |
| >TDD | | | | |
| >>SFN-SFN | M | | INTEGER(0. . 40961) | According to mapping in [23]. |

## 9.2.1.53G    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 Iub, 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 ofDCHs> | | | – | |
| >DCH ID | M | | 9.2.1.20 | | – | |
| >Binding ID | O | | 9.2.1.4 | Shall be ignored if bearer establishme nt with ALCAP. | – | |
| >Transport Layer Address | O | | 9.2.1.63 | Shall be ignored if bearer establishme nt with ALCAP. | – | |

| Range bound | Explanation |
|---|---|
| MaxnoofDCHs | Maximum number of DCHs for one UE. |

### 9.2.1.53H    Scheduling Priority Indicator

Indicates the relative priority of the HS-DSCH data frame. Used by the Node B when scheduling HS-DSCH.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Scheduling Priority Indicator | | | INTEGER (0..15) | Relative priority of the HS-DSCH data frame: 0=Lowest Priority … 15=Highest Priority |

### 9.2.1.53I    SID

The *SID* provides the identity of the Size Index.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| SID | | | INTEGER (0..7) | |

### 9.2.1.54    SIB Deletion Indicator

Void.

### 9.2.1.55    SIB Originator

Indicates if the Node B shall fill in the SIB information or not.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| SIB Originator | | | Enumerated( Node B, CRNC,…) | |

### 9.2.1.55A    Signalling Bearer Request Indicator

*Signalling Bearer Request Indicator* IE indicates if a new signalling bearer needs to be established for the control of Node B Communication Context.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Signalling Bearer Request Indicator | | | ENUMERATED(Bearer Requested) | |

### 9.2.1.56    Shutdown Timer

The shutdown timer shall indicate the length of time available to the CRNC to perform the block of a resource when a Normal priority block is requested.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Shutdown Timer | | | *INTEGER(1..3600)* | Value in seconds |

### 9.2.1.56A    T_RLFAILURE

The Radio Link Failure procedure shall be triggered after a period of time T_RLFAILURE has elapsed with a persisting out-of-sync indication (see also ref. [10] and [21]).

| Information Element/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| T_RLFAILURE | | | ENUMERATED (0, 0.1, 0.2, .., 25.5) | In seconds |

### 9.2.1.56B    Start Of Audit Sequence Indicator

Indicates if the AUDIT REQUEST message initiates a new audit sequence or not.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Start Of Audit Sequence Indicator | | | ENUMERATED(start of audit sequence, not start of audit sequence) | |

### 9.2.1.56C    TFCI2 Bearer Request Indicator

*TFCI2 Bearer Request Indicator* IE indicates if a new transport bearer on which the DSCH TFCI Signaling control frames shall be received is required.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| TFCI2 Bearer Request Indicator | | | ENUMERATED(New Bearer Requested) | |

### 9.2.1.57 TFCI Presence

The TFCI Presence parameter indicates whether the TFCI shall be included. In TDD if it is present in the timeslot, it will be included within the first Channelization code listed.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| TFCI presence | | | ENUMERATED (Present, not present) | |

### 9.2.1.58 TFCS (Transport Format Combination Set)

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 for DL Transport Channels.

[FDD - Where the UE is assigned access to one or more DSCH transport channels then the UTRAN has the choice of two methods for signalling the mapping between TFCI(field 2) values and the corresponding TFC:

Method #1 - TFCI range

The mapping is described in terms of a number of groups, each group corresponding to a given transport format combination (value of CTFC(field2)). The CTFC(field2) value specified in the first group applies for all values of TFCI(field 2) between 0 and the specified 'Max TFCI(field2) value'. The CTFC(field2) value specified in the second group applies for all values of TFCI(field 2) between the 'Max TFCI(field2) value' specified in the last group plus one and the specified 'Max TFCI(field2) value' in the second group.   The process continues in the same way for the following groups with the TFCI(field 2) value used by the UE in constructing its mapping table starting at the largest value reached in the previous group plus one.

Method #2 - Explicit

The mapping between TFCI(field 2) value and CTFC(field2) is spelt out explicitly for each value of TFCI (field2) ]

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| CHOICE *DSCH* | | | | |
| >*No split in TFCI* | | | | This choice is made if :<br>a) The TFCS refers to the uplink OR<br>b) The mode is FDD and none of the Radio Links of the concerned UE are assigned any DSCH transport channels OR<br>c) The mode is TDD |
| **>>TFCS** | | 1 to <maxnoofTFCs> | | The first instance of the parameter corresponds to TFCI zero, the second to 1 and so on. |
| >>>CTFC | M | | INTEGER(0..MaxCTFC) | See Note 1. |
| >>>CHOICE *Gain Factors* | C-PhysChan | | | |
| >>>>Signalled Gain Factors | | | | |
| >>>>>CHOICE *Mode* | | | | |
| >>>>>>FDD | | | | |
| >>>>>>>Gain Factor $\beta_C$ | M | | Integer (0..15) | For UL DPCCH or control part of PRACH or control part of PCPCH in FDD; mapping in accordance to [9] |
| >>>>>>>Gain Factor $\beta_D$ | M | | Integer (0..15) | For UL DPDCH or data part of PRACH or data part of PCPCH in FDD: mapping in accordance to [9] |
| >>>>>>TDD | | | | |
| >>>>>>>Gain Factor $\beta$ | M | | Integer (0..15) | For UL DPCH in TDD; mapping in accordance to [20] |
| >>>>>Reference TFC nr | O | | Integer (0..3) | If this TFC is a reference TFC, this IE indicates the reference number |
| >>>>Computed Gain Factors | | | | |
| >>>>>Reference TFC nr | M | | Integer (0..3) | Indicates the reference TFC to be used to calculate the gain factors for this TFC |
| >*There is a split in the TFCI* | | | | This choice is made if :<br>a) The TFCS refers to the downlink AND<br>b) The mode is FDD and one of the Radio Links of the concerned UE assigned one or more DSCH transport channels |
| **>>Transport format combination_DCH** | | 1 to <MaxTFCI_1_Combs> | | The first instance of the parameter *Transport format combination_DCH* corresponds to TFCI (field 1) = 0, the second to TFCI (field 1) = 1 and so on. |
| >>>CTFC(field1) | M | | Integer(0..MaxCTFC) | See Note 1. |
| >>Choice *Signalling method* | | | | |
| >>>*TFCI range* | | | | |
| **>>>>TFC mapping on DSCH** | | 1 to <MaxNoTFCIGroups> | | |
| >>>>>Max TFCI(field2) value | M | | Integer(1..1023) | This is the Maximum value in the range of TFCI(field2) values for which the specified |

| | | | | CTFC(field2) applies |
|---|---|---|---|---|
| >>>>>CTFC(field2) | M | | Integer(0..MaxCTFC) | See Note 1. |
| >>>*Explicit* | | | | |
| >>>>**Transport format combination_DSCH** | | 1 to <MaxTFCI_2_Combs> | | The first instance of the parameter *Transport format combination_DSCH* corresponds to TFCI (field2) = 0, the second to TFCI (field 2) = 1 and so on. |
| >>>>>CTFC(field2) | M | | Integer(0..MaxCTFC) | See Note 1. |

| Condition | Explanation |
|---|---|
| PhysChan | The IE shall be present if the TFCS concerns a UL DPCH or PRACH channel [FDD – PCPCH channel]. |

| Range bound | Explanation |
|---|---|
| MaxnoofTFCs | The maximum number of Transport Format Combinations. |
| MaxTFCI_1_Combs | Maximum number of TFCI (field 1) combinations (given by 2 raised to the power of the length of the TFCI (field 1)) |
| MaxTFCI_2_Combs | Maximum number of TFCI (field 2) combinations (given by 2 raised to the power of the length of the TFCI (field 2)) |
| MaxNoTFCIGroups | Maximum number of groups, each group described in terms of a range of TFCI(field 2) values for which a single value of CTFC(field2) applies |
| 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. [18] |

Note 1:

The CTFC is an integer number calculated in accordance with [18], 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.

### 9.2.1.59 Transport Format Set

The Transport Format Set is defined as the set of Transport Formats associated to a Transport Channel, e.g. DCH.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| **Dynamic Transport Format Information** | | 1 to <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) | Bits |
| >CHOICE *Mode* | M | | | |
| >>*TDD* | | | | |
| >>>**Transmission Time interval Information** | C-TTIdynamic | 1 to <maxTTIcount> | | |
| >>>>Transmission time interval | M | | Enumerated(10, 20, 40, 80,…) | ms |
| **Semi-static Transport Format Information** | | 1 | | |
| >Transmission time interval | M | | ENUMERATED (10, 20, 40, 80, dynamic,…,5) | ms; Value "dynamic" for TDD only; Value "5" for LCR TDD only |
| >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* | | | | |
| >>>2nd interleaving mode | M | | Enumerated(Frame related, Timeslot related,…) | |

| Condition | Explanation |
|---|---|
| Blocks | The IE shall be present if the *Number of Transport Blocks* IE is set to a value greater than 0. |
| Coding | The IE shall be present if the *Type of channel coding* IE is set to "Convolutional" or "Turbo". |
| TTIdynamic | The IE shall be present if the *Transmission Time Interval* IE in the *Semi-static Transport Format Information* IE is set to "dynamic". |

| Range bound | Explanation |
|---|---|
| MaxTFcount | Maximum number of different transport formats that can be included in the Transport format set for one transport channel. |
| MaxRM | Maximum number that could be set as rate matching attribute for a transport channel. |
| *MaxTTIcount* | The amount of different TTI that are possible for that transport format. |

## 9.2.1.60 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) | ms. |

## 9.2.1.61 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) | ms. |

## 9.2.1.62 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 common procedures the transaction ID shall uniquely identify a procedure within all ongoing parallel procedures initiated by one protocol peer, using the same procedure code and signalled over the same Node B control port. For dedicated procedures the transaction ID shall uniquely identify a procedure within all ongoing parallel procedures initiated by one protocol peer, using the same procedure code and initiated towards the same Node B/CRNC context.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Transaction ID | | | CHOICE INTEGER (0..127) or INTEGER (0..32767) | The Transaction ID shall be interpreted for its integer value, not for the type of encoding ("short" or "long"). |

## 9.2.1.62A Transport Bearer Request Indicator

Indicates whether a new transport bearer needs to be established for carrying the concerning transport channel.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Transport Bearer Request Indicator | | | ENUMERATED(Bearer Requested, Bearer not Requested, …) | |

## 9.2.1.63 Transport Layer Address

In case of transport bearer establishment with ALCAP [2][31], this IE contains the address to be used for Transport Network Control Plane signalling to establish the transport bearer according to [2][31].

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 ref. [2][31].

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Transport Layer Address | | | Bit string(1… 160, …) | |

## 9.2.1.64 TSTD Indicator

Indicates if TSTD shall be active or not.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| TSTD Indicator | | | ENUMERAT ED(active, inactive) | |

## 9.2.1.64A $T_{UTRAN-GPS}$ Measurement Value Information

The $T_{UTRAN-GPS}$ *Measurement Value Information* IE indicates the measurement results related to the UTRAN GPS Timing of Cell Frame for LCS measurements.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| **$T_{UTRAN-GPS}$** | | 1 | | Indicates the UTRAN GPS Timing of Cell Frame for LCS. According to mapping in [22]. Significant values range from 0 to 37158911999999. |
| >MS | M | | INTEGER (0..16383) | Most Significant Part |
| >LS | M | | INTEGER (0..4294967 295) | Least Significant Part |
| $T_{UTRAN-GPS}$ Quality | M | | INTEGER(0. .255) | Indicates the standard deviation of the $T_{UTRAN-GPS}$ measurements in 1/16 chip. |
| $T_{UTRAN-GPS}$ 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 | M | | INTEGER(0. .50) | Indicates the standard deviation of the $T_{UTRAN-GPS}$ drift rate measurements in 1/256 chip per second. |

## 9.2.1.64B $T_{UTRAN-GPS}$ Measurement Threshold Information

The $T_{UTRAN-GPS}$ Measurement Threshold Information defines the related thresholds for UTRAN GPS Timing of Cell Frame for LCS measurements shall trigger the event On Modification.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| T<sub>UTRAN-GPS</sub> Change Limit | O | | INTEGER(1..256) | Change of T<sub>UTRAN-GPS</sub> value compared to previously reported value, which shall trigger a new report. Unit in 1/16 chip. |
| Predicted T<sub>UTRAN-GPS</sub> Deviation Limit | O | | INTEGER(1..256) | Deviation of the predicated T<sub>UTRAN-GPS</sub> from the latest measurement result, which shall trigger a new report. Unit in 1/16 chip. |

## 9.2.1.64C T$_{UTRAN-GPS}$ Accuracy Class

The T$_{UTRAN-GPS}$ Accuracy Class IE indicates the accuracy class of the UTRAN GPS Timing of Cell Frame for LCS measurement.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| T<sub>UTRAN-GPS</sub> Accuracy Class | | | ENUMERATED(Accuracy Class A, Accuracy Class B, Accuracy Class C,…) | More information about T<sub>UTRAN-GPS</sub> Measurement Accuracy Class is included in [22]. |

## 9.2.1.65 UARFCN

Designate the central frequency of the channel number.

| Information Element / Group Name | Presence | Range | IE Type and Reference | Semantics Description |
|---|---|---|---|---|
| UARFCN | | | INTEGER (0..16383, …) | corresponds to 0.0Hz.. 3276.6MHz (subclause 5.4.3 in [14] and [15]) |

## 9.2.1.65A UL Capacity Credit

The capacity credit indicates to the CRNC the Uplink capacity of a Local Cell or a Local Cell Group.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| UL Capacity Credit | | | INTEGER (0..65535) | |

## 9.2.1.65B 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 | | 9.2.1.53a | |
| C-Id | M | | 9.2.1.9 | |

### 9.2.1.66    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,…) | |

### 9.2.1.67    UL interference level

Void.

### 9.2.1.67A    UL SIR

The UL SIR indicates a received UL SIR.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| UL SIR | | | ENUMERATED (-8.2 .. 17.3) | Step 0.1 dB |

## 9.2.2    FDD specific parameters

### 9.2.2.A    Active Pattern Sequence Information

Defines the parameters for the compressed mode gap pattern sequence activation. For details see ref. [18].

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| CM Configuration Change CFN | M | | CFN 9.2.1.7 | |
| **Transmission Gap Pattern Sequence Status** | | 0 to <MaxTGPS> | | |
| >TGPSI Identifier | M | | Integer(1..< MaxTGPS>) | If the group is not present, none of the pattern sequences are activated. References an already defined sequence. |
| >TGPRC | M | | Integer (0..511) | The number of transmission gap patterns within the Transmission Gap Pattern Sequence. 0=Infinity |
| >TGCFN | M | | CFN 9.2.1.7 | 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) | 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<br><br>0 -> 0.00<br>1 -> 0.01<br>...<br>100 -> 1.00 |

## 9.2.2.D     AICH Power

The AICH Power IE indicates a power level (measured as the power per transmitted acquisition indicator when several AIs are transmitted in parallel) relative to the primary CPICH power configured in a cell.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| AICH Power | | | Integer(-22..+5) | Offset in dB |

## 9.2.2.1     AICH Transmission Timing

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| AICH Transmission Timing | | | ENUMERATED (0, 1) | See parameter AICH_Transmission_Timing in ref. [7]. |

## 9.2.2.1A     AP Preamble Signature

| Information Element/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| AP Preamble Signature | | | INTEGER (0..15) | Described in ref. [9] |

## 9.2.2.1B     AP Sub Channel Number

| Information Element/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| AP Sub Channel Number | | | INTEGER (0..11) | Described in ref. [10] |

### 9.2.2.1C    CD Sub Channel Numbers

| Information Element/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| CD Sub Channel Numbers | | | BIT STRING (12) | Each bit indicates availability for a subchannel, where the subchannels are numbered "subchannel 0" to "subchannel 11". The value 1 of a bit indicates that the corresponding subchannel is available and the value 0 indicates that it is not available. The order of bits is to be interpreted according to subclause 9.3.4. See also [10]. |

### 9.2.2.1D    Channel Assignment Indication

The Channel Assingment Indication indicates whether CA is active or inactive. When CA is active, CPCH is in Versatile Channel Assingment Method (VCAM) mode  and when CA is inactive, CPCH is in UE Channel Selection Method (UCSM) mode. In VCAM mode (CA active), CA message in CD/CA-ICH shall be sent.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Channel Assignment Indication | | | ENUMERATED (CA Active, CA Inactive) | |

### 9.2.2.2    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.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Chip Offset | | | INTEGER (0..38399) | Chips |

### 9.2.2.2A    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.

| Information Element/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Closed Loop Timing Adjustment Mode | | | ENUMERATED (Offset1, Offset2,…) | According to ref. [10] subclause 7.1:<br>Offset1 = slot(j+1)mod15<br>Offset2 = slot(j+2)mod15 |

### 9.2.2.3    Common Channels Capacity Consumption Law

Void

### 9.2.2.3A    Compressed Mode Deactivation Flag

Compressed Mode Deactivation Flag indicates whether Compressed Mode shall be deactivated or not in the new RL.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Compressed Mode Deactivation flag | | | ENUMERATED(Deactivate, Maintain Active) | |

### 9.2.2.4 Compressed Mode Method

Void.

### 9.2.2.4A CPCH Allowed Total Rate

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| CPCH Allowed Total Rate | | | ENUMERATED (15, 30, 60, 120, 240, 480, 960, 1920, 2880, 3840, 4800, 5760,…) | Channel Symbol Rate (ksps) |

### 9.2.2.4B CPCH Scrambling Code Number

| Information Element/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| CPCH Scrambling Code Number | | | INTEGER (0..79) | Described in ref. [9] |

### 9.2.2.4C CPCH UL DPCCH Slot Format

Indicates the slot format used in UL CPCH message control part, accordingly to ref. [7]

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| CPCH UL DPCCH slot format | | | INTEGER (0..2,…) | |

### 9.2.2.4D 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 descriptions | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| **DCH FDD Information** | | *1 to <maxnoof DCHs>* | | | – | |
| >Payload CRC Presence Indicator | M | | 9.2.1.49 | | – | |
| >UL FP mode | M | | 9.2.1.66 | | – | |
| >ToAWS | M | | 9.2.1.61 | | – | |
| >ToAWE | M | | 9.2.1.60 | | – | |
| **>DCH Specific Info** | | *1..<maxno ofDCHs>* | | | – | |
| >>DCH ID | M | | 9.2.1.20 | | – | |
| >>Transport Format Set | M | | 9.2.1.59 | For UL | – | |
| >>Transport Format Set | M | | 9.2.1.59 | For DL | – | |
| >>Allocation/Retention Priority | M | | 9.2.1.1A | | – | |
| >>Frame Handling Priority | M | | 9.2.1.30 | | – | |
| >>QE-Selector | M | | 9.2.1.50A | | – | |

| Range bound | Explanation |
|---|---|
| *MaxnoofDCHs* | Maximum number of DCHs for one UE. |

## 9.2.2.4E DCHs FDD to Modify

The *DCHs FDD to Modify* IE provides information for DCHs to be modified.

| IE/Group Name | Presence | Range | IE type and reference | Semantics descriptions | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| **DCHs FDD to Modify** | | *1..<max noofDC Hs>* | | | – | |
| >UL FP Mode | O | | 9.2.1.66 | | – | |
| >ToAWS | O | | 9.2.1.61 | | – | |
| >ToAWE | O | | 9.2.1.60 | | – | |
| >Transport Bearer Request Indicator | M | | 9.2.1.62A | | – | |
| **>DCH Specific Info** | | *1..<max noofDC Hs>* | | | – | |
| >>DCH ID | M | | 9.2.1.20 | | – | |
| >>Transport Format Set | O | | 9.2.1.59 | For the UL. | – | |
| >>Transport Format Set | O | | 9.2.1.59 | For the DL. | – | |
| >>Allocation/Retention Priority | O | | 9.2.1.1A | | – | |
| >>Frame Handling Priority | O | | 9.2.1.20 | | – | |

| Range bound | Explanation |
|---|---|
| *MaxnoofDCHs* | Maximum number of DCHs for one UE. |

## 9.2.2.5 D-Field Length

Void.

### 9.2.2.6 Dedicated Channels Capacity Consumption Law

Void

### 9.2.2.7 Diversity Control Field

Void.

### 9.2.2.8 Diversity Indication

Void.

### 9.2.2.9 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, Closed loop mode2,…) | |

### 9.2.2.10 DL DPCH Slot Format

Indicates the slot format used in DPCH in DL, accordingly to ref. [7].

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| DL DPCH slot format | | | INTEGER (0..16,…) | |

### 9.2.2.11 DL frame type

Void.

### 9.2.2.12 DL or Global Capacity Credit

Void

### 9.2.2.12A DL_power_averaging_window_size

*DL_power_averaging_window_size* IE defines the window size when Limited Power Increase is used [10].

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| DL_power_averaging_window_size | | | INTEGER (1..60) | 1-60 inner loop power adjustments, step size 1 adjustment |

### 9.2.2.12B 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 | | 9.2.2.27 | | – | |
| DL Reference Power | C-Common | | DL power 9.2.1.21 | Power on DPCH | – | |
| **DL Reference Power Information** | C-Individual | 1..<maxnoof RLs> | | | – | |
| >RL ID | M | | 9.2.1.53 | | – | |
| >DL Reference Power | M | | DL power 9.2.1.21 | Power on DPCH | – | |
| Max Adjustment Step | C-CommonOrIndividual | | 9.2.2.20 | | – | |
| Adjustment Period | C-CommonOrIndividual | | 9.2.2.A | | – | |
| Adjustment Ratio | C-CommonOrIndividual | | 9.2.2.B | | – | |

| Condition | Explanation |
|---|---|
| Common | The IE shall be present if the *Power Adjustment Type* IE is set to "Common". |
| Individual | The IE shall be present if the *Power Adjustment Type* IE is set to "Individual". |
| CommonOrIndividual | The IE shall be present if the *Power Adjustment Type* IE is set to "Common' or 'Individual". |

| Range Bound | Explanation |
|---|---|
| MaxnoofRLs | Maximum number of Radio Links for a UE. |

### 9.2.2.12C 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). | |

### 9.2.2.12D 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 Activated). | |

### 9.2.2.13 DL Scrambling Code

DL scrambling code to be used by the RL. One cell may have multiple DL scrambling codes available.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| DL Scrambling Code | | | INTEGER (0..15) | 0= Primary scrambling code of the cell<br>1…15= Secondary scrambling code |

## 9.2.2.13A    DL TPC pattern 01 count

The *DL TPC pattern 01 count* IE contains the value of the parameter n, which is used for determining the DL TPC pattern on Radio Links marked with "first RLS" by the *First RLS indicator* IE before UL synchronisation is achieved.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| DL TPC pattern 01 count | | | INTEGER(0..30,…) | |

## 9.2.2.13B    DSCH FDD Information

The *DSCH FDD Information* IE provides information for DSCHs to be established.

| IE/Group Name | Presence | Range | IE type and reference | Semantics descriptions | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| **DSCH FDD Information** | | 1 to <maxnoof DSCHs> | | | – | |
| >DSCH ID | M | | 9.2.1.27 | | – | |
| >Transport Format Set | M | | 9.2.1.59 | For DSCH | – | |
| >Allocation/Retention Priority | M | | 9.2.1.1A | | – | |
| >Frame Handling Priority | M | | 9.2.1.30 | | – | |
| >ToAWS | M | | 9.2.1.61 | | – | |
| >ToAWE | M | | 9.2.1.60 | | – | |
| >Binding ID | O | | 9.2.1.4 | Shall be ignored if bearer establishment with ALCAP. | YES | ignore |
| >Transport Layer Address | O | | 9.2.1.63 | Shall be ignored if bearer establishment with ALCAP. | YES | ignore |

| Range bound | Explanation |
|---|---|
| *MaxnoofDSCHs* | Maximum number of DSCHs for one UE. |

## 9.2.2.13C    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 | | | ENUMERATTED (Mode0, Mode1, …) | Mode0: The Node B shall estimate the UE transmitted TPC command and update the DL power in every slot<br><br>Mode1: The Node B shall estimate the UE transmitted TPC command over three slots and shall update the DL power in every three slots |

## 9.2.2.13D    DSCH FDD Common Information

The DSCH Common Information includes common information for all DSCHs for one UE.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Enhanced DSCH PC Indicator | O | | 9.2.2.13G | | – | |
| Enhanced DSCH PC | C-EDSCHPC On | | 9.2.2.13E | | – | |

| Condition | Explanation |
|---|---|
| EDSCHPCOn | The IE shall be present if the *Enhanced DSCH PC Indicator* IE is set to "Enhanced DSCH PC Active in the UE". |

## 9.2.2.13E    Enhanced DSCH PC

The Enhanced DSCH PC includes all the parameters which are needed for DSCH power control improvement during soft handover.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Enhanced DSCH PC Wnd | M | | 9.2.2.13H | |
| Enhanced DSCH PC Counter | M | | 9.2.2.13F | |
| Enhanced DSCH Power Offset | M | | 9.2.2.13I | |

## 9.2.2.13F    Enhanced DSCH PC Counter

The Enhanced DSCH PC Counter parameter gives the number of correct cell ID command to receive in the averaging window, *Enhance DSCH PC Wnd* IE, see ref. [10] subclause 5.2.2.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Enhanced DSCH PC Counter | | | INTEGER(1..50) | |

## 9.2.2.13G    Enhanced DSCH PC Indicator

The Enhanced DSCH PC Indicator indicates whether Enhanced DSCH PC is in use by the UE or not.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Enhanced DSCH PC Indicator | | | ENUMERATED(Enhanced DSCH PC Active in the UE, Enhanced DSCH PC not Active in the UE) | |

## 9.2.2.13H    Enhanced DSCH PC Wnd

The Enhanced DSCH PC Wnd parameter shows the window size to decide primary or non-primary cell, see ref. [10] subclause 5.2.2.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Enhanced DSCH PC Wnd | | | INTEGER(1..10) | |

## 9.2.2.13I    Enhanced DSCH Power Offset

The Enhanced DSCH Power Offset parameter gives the power offset to be added on DSCH when cell is decided to be primary.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Enhanced DSCH Power Offset | | | INTEGER(-15..0) | Unit dB, step 1 dB |

## 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 ChannelisationCode Number | | | INTEGER(0.. 511) | According to the mapping in [9]. 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 DL Code information for the RL.

| IE/Group Name | Presence | Range | IE type and reference | Semantics descriptions | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| **FDD DL Code Information** | | *1 to <maxnoof-Codes>* | | | – | |
| >DL Scrambling Code | M | | 9.2.2.13 | | – | |
| >FDD DL Channelisation Code Number | M | | 9.2.2.14 | | – | |
| >Transmission Gap Pattern Sequence Code Information | O | | 9.2.2.53B | | – | |

| Range bound | Explanation |
|---|---|
| *MaxnoofCodes* | Maximum number of DL code information. |

## 9.2.2.15    FDD SCCPCH Offset

The Secondary CCPCH offset is defined as the time offset towards the Primary CCPCH in the cell. The offset is a multiple of 256 chips.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| FDD SCCPCH Offset | | | INTEGER(0.. 149) | 0: 0 chip<br>1: 256 chip<br>2: 512 chip<br><br>..<br>149: 38144 chip<br>[7] |

## 9.2.2.16    FDD TPC DL 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,…) | Step: db |

## 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 Period

Void.

## 9.2.2.18 Gap Position Mode

Void.

## 9.2.2.18A 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, Node B 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 ) | |

## 9.2.2.18B 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 associated with the context identified by the *Node B Communication Context Id* IE.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Inner Loop DL PC Status | | | ENUMERATED(Active, Inactive) | |

## 9.2.2.18C IPDL FDD Parameters

The *IPDL FDD Parameters* IE provides information about IPDL to be applied for FDD when activated.

| IE/Group Name | Presence | Range | IE type and reference | Semantics descriptions | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| IP spacingFDD | M | | ENUMERATED (5,7,10,15, 20,30,40,50) | See [10] | – | |
| IP length | M | | ENUMERATED (5,10) | See [10] | – | |
| Seed | M | | INTEGER (0..63) | See [10] | – | |
| Burst mode parameters | O | | 9.2.1.5A | | | |

## 9.2.2.18D HS-DSCH FDD Information

The HS-DSCH Information provides information for HS-DSCH MAC-d flows to be established.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| **HS-DSCH MAC-d Flow Specific Information** | | *1..<Maxno ofMACdFl ows>* | | | – | |
| >HS-DSCH MAC-d Flow ID | M | | 9.2.1.31I | | – | |
| >BLER | M | | 9.2.1.4A | | – | |
| >Allocation/Retention Priority | M | | 9.2.1.1A | | – | |
| **>Priority Queue Information** | M | *1..<Maxno ofPrioQue ues>* | | | – | |
| >>Priority Queue ID | M | | 9.2.1.49C | | – | |
| >>Scheduling Priority Indicator | M | | 9.2.1.53H | | – | |
| **>>MAC-d PDU Size Index** | | *1..<Maxno ofMACdP DUindexes >* | | | – | |
| >>>SID | M | | 9.2.1.53I | | – | |
| >>>MAC-d PDU Size | M | | 9.2.1.38A | | – | |
| **UE Capabilities information** | | *1* | | | – | |
| >Max TrCH Bits per HS-DSCH TTI | M | | ENUMERA TED (7300, 14600, 20456, 28800,...) | | – | |
| >HS-DSCH multi-code capability | M | | ENUMERA TED (5, 10, 15,...) | | – | |
| >Min Inter-TTI Interval | M | | INTEGER (1.. 3,...) | | – | |
| >MAC-hs reordering buffer size | M | | INTEGER (1..300,...) | Total combined receiving buffer capability in RLC and MAC-hs in kBytes | – | |
| **HARQ memory partitioning** | | *1..<Maxno ofHARQpr ocesses>* | | | – | |
| >Process memory size | M | | INTEGER (1..172800, ...) | | – | |
| Measurement feedback offset | M | | INTEGER (0..79,...) | | – | |

| Range bound | Explanation |
|---|---|
| *MaxnoofMACdFlows* | Maximum number of HS-DSCH MAC-d flows |
| *MaxnoofPrioQueues* | Maximum number of Priority Queues |
| *MaxnoofHARQprocesses* | Maximum number of HARQ processes for one UE. |
| *MaxnoofMACdPDUindexes* | Maximum number of different MAC-d PDU SIDs |
| *MaxAllowedinterTTI* | Maximum Inter-TTI Interval that should be supported by any UE. |
| *MaxRecordBuffSize* | Maximum MAC-hs re-ordering buffer size. |
| *MaxProcessMemSize* | Maximum HARQ process memory size. |

## 9.2.2.18E    HS-DSCH FDD Information Response

The HS-DSCH Information Response provides information for HS-DSCH that have been established or modified.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| **HS-DSCH MAC-d Flow Specific Information Response** | | *1..<Maxno ofMACdFl ows>* | | | – | |
| >HS-DSCH MAC-d Flow ID | M | | 9.2.1.31I | | – | |
| >Binding ID | O | | 9.2.1.4 | | – | |
| >Transport Layer Address | O | | 9.2.1.63 | | – | |
| **HS-SCCH Code** | | *1..<Maxno ofHSSCC Hcodes>* | | | | |
| >Code Number | M | | INTEGER (0..127) | | | |
| Measurement feedback reporting cycle k1 | M | | Measurem ent Feedback Reporting Cycle 9.2.2.21B | employed by the UE when not in soft handover | - | |
| Measurement feedback reporting cycle k2 | M | | Measurem ent Feedback Reporting Cycle 9.2.2.21B | employed by the UE when in soft handover | - | |

| Range bound | Explanation |
|---|---|
| *MaxnoofMACdFlows* | Maximum number of HS-DSCH MAC-d flows. |
| *MaxnoofPrioQueues* | Maximum number of Priority Queues |
| *MaxnoofMACdPDUindexes* | Maximum number of MAC-d PDU Size Indexes |
| *MaxnoofHSSCCHcodes* | Maximum number of HS-SCCH codes. |
| MaxCodeNumComp | Maximum number of codes at the defined spreading factor, within the complete code tree. |

## 9.2.2.18F    HS-PDSCH FDD Code Information

This parameter defines the codes which will be assigned for HS-PDSCHs.

| Information Element/Group name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Number of HS-PDSCH Codes | M | | INTEGER (0..maxCode NumComp-1) | . |
| Start Code Number | C-NumCodes | | INTEGER (0..maxCode NumComp-1) | |

| Condition | Explanation |
|---|---|
| NumCodes | The IE shall be present if the *Number of HS-PDSCH Codes* IE is set to a value greater than 0. |

| Range bound | Explanation |
|---|---|
| MaxCodeNumComp | Maximum number of codes at the defined spreading factor, within the complete code tree. |

## 9.2.2.18G    HS-SCCH FDD Code Information

This parameter defines the codes which will be assigned for HS-SCCH. The Node B will assign codes for HS-SCCHs among these codes when it sets up a HS-DSCH.

| Information Element/Group name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| **HS_SCCH Code** | | *0..< MaxnoofH SSCCHs >* | | |
| >Code Number | M | | INTEGER (0..maxCode NumComp- 1) | |

| Range bound | Explanation |
|---|---|
| MaxnoofHSSCCHs | Maximum number of HS-SCCHs for one cell. . |
| MaxCodeNumComp | Maximum number of codes at the defined spreading factor, within the complete code tree. |

## 9.2.2.18G    HS-SCCH FDD Code Information

### 9.2.2.18H    HS-SCCH ID

The HS-SCCH ID identifies unambiguously a HS-SCCH and its paired HS-SICH within the set of HS-SCCHs.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| HS SCCH ID | | | INTEGER (0..31) | |

### 9.2.2.19    Max Adjustment Period

Void.

### 9.2.2.20    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 adjustment shall be maximum 1dB. 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 |

### 9.2.2.20A    Max Number of PCPCHes

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Max Number of PCPCHes | | | INTEGER(1..64, …) | |

### 9.2.2.21    Maximum Number of UL DPDCHs

Maximum number of uplink DPDCHs to be used 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) | |

### 9.2.2.21A    Maximum PDSCH Power

The *Maximum PDSCH Power* IE can contain for each a PDSCH SF a maximum PDSCH power. The maximum PDSCH power shall be applied for each individual channelisation code at the concerning SF when used for a PDSCH.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Maximum PDSCH Power SF4 | O | | DL Power 9.2.1.21 | |
| Maximum PDSCH Power SF8 | O | | DL Power 9.2.1.21 | |
| Maximum PDSCH Power SF16 | O | | DL Power 9.2.1.21 | |
| Maximum PDSCH Power SF32 | O | | DL Power 9.2.1.21 | |
| Maximum PDSCH Power SF64 | O | | DL Power 9.2.1.21 | |
| Maximum PDSCH Power | O | | DL Power | |

| | | | | |
|---|---|---|---|---|
| SF128 | | | 9.2.1.21 | |
| Maximum PDSCH Power SF256 | O | | DL Power 9.2.1.21 | |

### 9.2.2.21B Measurement Feedback Reporting Cycle

The *Measurement Feedback Reporting Cycle* IE provides the duration of the measurement feedback reporting cycle.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Measurement Feedback Reporting Cycle | | | ENUMERATED (0, 1, 5, 10, 20, 40, 80,…) | Multiples of 2 ms intervals; |

### 9.2.2.22 Minimum UL Channelisation Code Length

Minimum UL channelisation code length (spreading factor) of a DPDCH which is used 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) | |

### 9.2.2.23 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) | |

### 9.2.2.23A N_EOT

The N_EOT is defined as number of End of Transmission for release of PCPCH transmission.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| N_EOT | | | INTEGER (0..8) | TTI Value 8 is never used in this release. |

### 9.2.2.23B NF_max

The NF_max is defined as maximum number of Frame in a PCPCH message data part.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| NF_max | | | INTEGER (1..64,…) | |

### 9.2.2.23C    N_Start_Message

The N_Start_Message is defined as number of Frames for start message of DL DPDCHes for a CPCH.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| N_Start_Message | | | INTEGER (1..8) | |

### 9.2.2.24    Pattern Duration (PD)

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| PD | | | INTEGER(0. .2047, …) | Frames<br>If the value is set to '0', the Pattern Duration shall be interpreted as 'infinite' |

### 9.2.2.24A    PCP Length

Indicates CPCH power control preamble length.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| PCP Length | | | ENUMERAT ED(0,8) | |

### 9.2.2.25    PDSCH code mapping

This IE indicates the association between each possible value of TFCI(field 2) and the corresponding PDSCH channelisation code(s). There are three fundamentally different ways that the UTRAN must choose between in order to signal the mapping information, these are described below. The signalling capacity consumed by the different methods will vary depending on the way in which the UTRAN configures usage of the DSCH. A fourth option is also provided which allows the UTRAN to replace individual entries in the TFCI(field 2) to PDSCH code mapping table with new PDSCH code values.

Method #1 - Using code range

The mapping is described in terms of a number of groups, each group associated with a given spreading factor. Each TFCI(field2) value corresponds to a given PDSCH channelisation code or set of PDSCH codes for multi-code. The Node B maps TFCI(field2) values to PDSCH codes in the following way:

- The PDSCH codes used for TFCI(field 2) = 0 are given by the SF of the Code Group 1 (i.e. first instance in *PDSCH code mapping*) and the code numbers between CodeNumber$_0$ (where CodeNumber$_0$ = "Start code number" of Code Group 1) and CodeNumber$_0$ + "multi-code info" - 1.

- This continues with unit increments in the value of TFCI (Field2) mapped to either unit increments in code numbers or groups of contiguous code numbers in case of multi-code, this until "Stop code number" is reached: So the PDSCH codes used for TFCI(field 2) = k (for k > 0 and k < ("Stop code number"– "Start code number"+ 1) DIV k) are given by the SF of the Code Group 1 and the code numbers between CodeNumber$_k$ = CodeNumber$_{k-1}$ + "multi-code info" and CodeNumber$_k$ + "multi-code info" - 1.
  If "Stop code number" = "Start code number"+ "multi-code info" – 1 then this is to be interpreted as defining the mapping between the channelisation code(s) and a single TFCI.

- The Node B constructs its mapping table by repeating this process for all the Code Groups in the order they are instantiated in *PDSCH code mapping*. The first TFCI(field 2) value used in each group is the largest TFCI(field 2) value reached in the previous group incremented by one.

Note: This imposes that "Stop code number"– "Start code number"+ 1 is a multiple of the value "multi-code info" for each instance of *PDSCH code mapping*. Furthermore, in the case where multi-code is not used, then "multi-code info" = 1 and the process above also applies.

Method #2 - Using TFCI range

The mapping is described in terms of a number of groups, each group corresponding to a given PDSCH channelisation code or codes for multicode.

- The set of PDSCH codes specified in the first instance applies for all values of TFCI(field 2) between 0 and the specified "Max TFCI(field2)".

- The process continues in the same way for the following groups with the TFCI(field 2) value starting at the largest value reached in the previous instance incremented by one.
  So the set of PDSCH codes specified in a given instance apply for all the values of TFCI(field 2) between the "Max TFCI(field2) value" specified in the previous instance incremented by one and the specified "Max TFCI(field2)" of the considered instance.

A set of PDSCH codes is composed of all the codes between "Code Number" and "Code Number" + "multicode" – 1. So if multi-code is not used, the set of PDSCH codes is reduced to one element indicated by the *Code Number* IE.

Method #3 - Explicit

The mapping between TFCI(field 2) value and PDSCH channelisation code (or a set of PDSCH codes for multicode) is spelt out explicitly for each value of TFCI (field2).

A set of PDSCH codes is composed of all the codes between "Code Number" and "Code Number" + "multicode" – 1. So if multi-code is not used, the set of PDSCH codes is reduced to one element indicated by the *Code Number* IE.

Method #4 - Replace

The "TFCI (field2)" value(s) for which the mapping to PDSCH channelisation code (or a set of PDSCH codes for multicode) is changed are explicitely signalled. Furthermore, the new mapping between TFCI(field 2) value and PDSCH channelisation code(s) is spelt out explicitly for each value of TFCI (field2).

A set of PDSCH codes is composed of all the codes between "Code Number" and "Code Number" + "multicode" – 1. So if multi-code is not used, the set of PDSCH codes is reduced to one element indicated by the *Code Number* IE.

| Information Element/Group name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| DL Scrambling Code | M | | INTEGER (0..15) | Scrambling code on which PDSCH is transmitted. 0= Primary scrambling code of the cell 1…15 = Secondary scrambling code |

| CHOICE *Signalling Method* | | | | |
|---|---|---|---|---|
| >*Code Range* | | | | |
| >>**PDSCH code mapping** | | 1..<*MaxNo CodeGroups*> | | |
| >>>Spreading factor | M | | Enumerated( 4, 8, 16, 32, 64, 128, 256) | |
| >>>multi-code info | M | | Integer(1..16 ) | |
| >>>Start code number | M | | Integer(0..m axCodeNum Comp-1) | PDSCH code start, Numbering as described in  [18] |
| >>>Stop code number | M | | Integer(0..m axCodeNum Comp-1) | PDSCH code stop, Numbering as described in  [18] |
| >*TFCI range* | | | | |
| >>**DSCH mapping** | | 1..<*MaxNo TFCIGroup s*> | | |
| >>>Max TFCI(field2) value | M | | Integer(1..10 23) | This is the maximum value in the range of TFCI(field 2) values for which the specified PDSCH code applies |
| >>>Spreading factor | M | | Enumerated( 4, 8, 16, 32, 64, 128, 256) | SF of PDSCH code |
| >>>multi-code info | M | | Integer(1..16 ) | |
| >>>Code number | M | | Integer(0..m axCodeNum Comp-1) | Code number of PDSCH code. Numbering as described in [18] |
| >*Explicit* | | | | |
| >>**PDSCH code** | | 1..<*MaxTF CI_2_Com bs*> | | The first instance of the parameter PDSCH code corresponds to TFCI (field2) = 0, the second to TFCI(field 2) = 1 and so on. |
| >>>Spreading factor | M | | Enumerated( 4, 8, 16, 32, 64, 128, 256) | SF of PDSCH code |
| >>>multi-code info | M | | Integer(1..16 ) | |
| >>>Code number | M | | Integer(0..m axCodeNum Comp-1) | Code number of PDSCH code. Numbering as described in [18] |
| >Replace | | | | |
| >>**Replaced PDSCH code** | | 1..<MaxTF CI_2_Com bs> | | |
| >>>TFCI (field2) | M | | Integer (0..1023) | Value of TFCI(field 2) for which PDSCH code mapping will be changed |
| >>>Spreading factor | M | | Enumerated( 4, 8, 16, 32, 64, 128, 256) | SF of PDSCH code |
| >>>multi-code info | M | | Integer(1..16 ) | |
| >>>Code number | M | | Integer(0..m axCodeNum Comp-1) | Code number of PDSCH code. Numbering as described in [18] |

| Range Bound | Explanation |
|---|---|
| MaxCodeNumComp | Maximum number of codes at the defined spreading factor, within the complete code tree. |
| MaxTFCI_2_Combs | Maximum number of TFCI (field 2) combinations (given by 2 raised to the power of the length of the TFCI field 2) |
| MaxNoTFCIGroups | Maximum number of groups, each group described in terms of a range of TFCI(field 2) values for which a single PDSCH code applies. |
| MaxNoCodeGroups | Maximum number of groups, each group described in terms of a range of PDSCH channelisation code values for which a single spreading factor applies. |

## 9.2.2.26 PICH Mode

The number of paging indicators (PIs) in a PICH frame.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| PICH Mode | | | Enumerated( 18, 36, 72, 144) | Number of PI per frame |

## 9.2.2.27 Power Adjustment Type

Defines the characteristic of the power adjustment.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Power Adjustment Type | | | ENUMERAT ED (None, Common, Individual) | |

## 9.2.2.28 Power Control Mode

Void.

## 9.2.2.29 Power Offset

This IE defines a power offset relative to the Downlink transmission power of a DPDCH or a Secondary CCPCH data field or a DL-DPCCH for CPCH pilot field..

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Power Offset | | | INTEGER (0…24) | Step 0.25 dB, range 0-6 dB |

## 9.2.2.29A Power_Raise_Limit

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Power_Raise_Limit | | | INTEGER (0..10) | 0-10 dB, step size 1 dB |

### 9.2.2.30 Power Resume Mode

Void.

### 9.2.2.31 Preamble Signature

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Preamble Signatures | | | BIT STRING (16) | Each bit indicates availability for a signature, where the signatures are numbered "signature 0" up to "signature 15". The value 1 of a bit indicates that the corresponding signature is available and the value 0 that it is not available.The order of bits is to be interpreted according to subclause 9.3.4. See also [9]. |

### 9.2.2.32 Preamble Threshold

The IE sets the threshold for preamble detection. The ratio between received preamble power during the preamble period and interference level shall be above this threshold in order to be acknowledged.

| Information Element/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Preamble Threshold | | | INTEGER (0 , 1, ..,72) | 0: - 36.0 dB<br>1: - 35.5 dB<br>2: - 35.0 dB<br>..<br>72: 0.0 dB |

### 9.2.2.33 Primary CPICH Power

Primary CPICH power is the power that shall be used for transmitting the P-CPICH in a cell. The reference point is the antenna connector.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Primary CPICH power | | | Enumerated (-10, .., 50) | Unit dBm<br><br>Granularity 0.1 dB |

### 9.2.2.34 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) | |

### 9.2.2.35 Propagation Delay

Propagation delay is the one-way propagation delay of the radio signal from the MS to the Node B.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Propagation Delay | | | INTEGER (0..255) | Chips. Step size is 3 chips. 0=0 chips, 1=3 chips, … |

### 9.2.2.36    QE-Selector

Void.

### 9.2.2.37    RACH Slot Format

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| RACH Slot Format | | | ENUMERATED(0..3, ...) | See ref. [7]. |

### 9.2.2.38    RACH sub Channel numbers

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| RACH Sub Channel Numbers | | | BIT STRING (12) | Each bit indicates availability for a subchannel, where the subchannels are numbered "subchannel 0" to "subchannel 11". The value 1 of a bit indicates that the corresponding subchannel is available and the value 0 indicates that it is not available.The order of bits is to be interpreted according to subclause 9.3.4. |

### 9.2.2.39    RL Set ID

The RL Set ID uniquely identifies one RL Set within a Node B Communication Context.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| RL Set ID | | | INTEGER (0..31) | |

### 9.2.2.39A    Received total wide band power

The Received total wide band power indicates the UL interference at a certain cell under CRNC, see ref. [4].

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Received total wide band power | | | INTEGER(0..621) | According to mapping in [22]. |

### 9.2.2.40    S-Field Length

The UE uses the S Field of the UL DPCCH slot to send the SSDT Cell ID to the network.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| S Field Length | | | ENUMERATED (1, 2,…) | |

## 9.2.2.41 Scrambling Code Change

Void.

## 9.2.2.42 Scrambling Code Number

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Scrambling Code Word Number | | | INTEGER (0..15) | Identification of scrambling code see ref. [9]. |

## 9.2.2.43 Secondary CCPCH Slot Format

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Secondary CCPCH Slot Format | | | INTEGER(0. .17,…) | |

## 9.2.2.44 SSDT Cell Identity

The SSDT Cell ID is a temporary ID for SSDT assigned to a cell.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| SSDT Cell Identity | | | ENUMERATED (a, b.., h) | |

## 9.2.2.44A SSDT Cell Identity for EDSCHPC

The SSDT Cell Identity for EDSCHPC is a temporary ID for enhanced DSCH power control assigned to a cell.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| SSDT Cell Identity for EDSCHPC | | | SSDT Cell Identity 9.2.2.44 | |

## 9.2.2.45 SSDT Cell ID Length

The SSDT Cell ID Length parameter shows the length of the SSDT Cell ID.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Cell ID Length | | | ENUMERATED(Short, Medium, Long) | |

### 9.2.2.46 SSDT Support Indicator

The SSDT Support Indicator indicates whether a RL supports SSDT or not.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| SSDT Support Indicator | | | ENUMERATED (SSDT Supported, SSDT not supported). | |

### 9.2.2.47 SSDT Indication

The SSDT Indication indicates whether SSDT is in use by the UE or not.

| IE/Group name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| SSDT Indication | | | ENUMERATED(SSDT Active in the UE, SSDT not Active in the UE) | |

### 9.2.2.48 STTD Indicator

Indicates if STTD shall be active or not.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| STTD Indicator | | | ENUMERATED(active, inactive) | |

### 9.2.2.49 T Cell

Timing delay used for defining start of SCH, CPICH and the DL scrambling code(s) in a cell relative BFN. Resolution 256 chips.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| T Cell | | | Enumerated (0 , 1, ..,9) | 0: 0 chip<br><br>1: 256 chip<br><br>..<br><br>9: 2304 chip<br><br>[17] |

### 9.2.2.49A TFCI2 Bearer Information Response

The *TFCI2 Bearer Information Response* IE provides information for TFCI2 bearer that have been established or modified.

| IE/Group Name | Presence | Range | IE type and reference | Semantics descriptions | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| Binding ID | M | | 9.2.1.4 | | - | |
| Transport Layer Address | M | | 9.2.1.63 | | - | |

### 9.2.2.50 TFCI signalling mode

This parameter indicates if the normal or split mode is used for the TFCI. In the event that the split mode is to be used then the IE indicates whether the split is 'Hard' or 'Logical', and in the event that the split is 'Logical' the IE indicates the number of bits in TFCI (field 2).

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| TFCI signalling option | M | | ENUMERATED (Normal, Split) | 'Normal' : meaning no split in the TFCI field (either 'Logical' or 'Hard') <br> 'Split' : meaning there is a split in the TFCI field (either 'Logical' or 'Hard') |
| Split type | C-IfSplit | | Enumerated (Hard, Logical) | 'Hard' : meaning that TFCI (field 1) and TFCI (field 2) are block coded separately. <br><br> 'Logical' : meaning that on the physical layer TFCI (field 1) and TFCI (field 2) are concatenated, field 1 taking the most significant bits and field 2 taking the least significant bits).  The whole is then encoded with a single block code. |
| Length of TFCI2 | O | | Integer (1..10) | This IE indicates the length measured in number of bits of TFCI (field2). |

| Condition | Explanation |
|---|---|
| IfSplit | The IE shall be present if the *TFCI signalling option* IE is set to "Split". |

### 9.2.2.51 TGD

Void.

### 9.2.2.52 TGL

Void.

### 9.2.2.53 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) | |

## 9.2.2.53A    Transmission Gap Pattern Sequence Information

Defines the parameters for the compressed mode gap pattern sequence. For details see ref. [18].

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| **Transmission gap pattern Sequence Information** | | 1 to <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. |
| >TGPL2 | O | | Integer (1..144,…) | The duration of transmission gap pattern 2 in frames. If omitted, then TGPL2=TGPL1. |
| >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 (puncturing, SF/2, higher layer scheduling, …) | Method for generating downlink compressed mode gap None means that compressed mode pattern is stopped. |
| >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 structure 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 Node B during the frame containing the start of the first transmission gap in the transmission gap pattern (without including the effect of the bit-rate increase)<br><br>Step 0.1 dB, Range 0-3dB |
| >DeltaSIRafter1 | M | | Integer | Delta in SIR target value to be |

*ETSI*

| | | | | |
|---|---|---|---|---|
| | | | (0..30) | set in the Node B one frame after the frame containing the start of the first transmission gap in the transmission gap pattern,.<br><br>Step 0.1 dB, Range 0-3dB |
| >DeltaSIR2 | O | | Integer (0..30) | Delta in SIR target value to be set in the Node B during the frame containing the start of the second transmission gap in the transmission gap pattern (without including the effect of the bit-rate increase)<br>When omitted, DeltaSIR2 = DeltaSIR1.<br><br>Step 0.1 dB, Range 0-3dB |
| >DeltaSIRafter2 | O | | Integer (0..30) | Delta in SIR target value to be set in the Node B one frame after the frame containing the start of the second transmission gap in the transmission gap pattern.<br>When omitted, DeltaSIRafter2 = DeltaSIRafter1.<br><br>Step 0.1 dB, Range 0-3dB |

| Condition | Explanation |
|---|---|
| UL | The IE shall be present if the *UL/DL mode* IE is set to "UL only" or "UL/DL". |
| DL | The IE shall be present if the *UL/DL mode* IE is set to "DL only" or "UL/DL". |

| Range bound | Explanation |
|---|---|
| MaxTGPS | Maximum number of transmission gap pattern sequences. |

## 9.2.2.53B Transmission Gap Pattern Sequence Code Information

This IE indicates whether the alternative scrambling code shall used for the Downlink compressed mode method or not in the Transmission Gap Pattern Sequence. For details see [18].

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Scrambling code change | | | Enumerated (Code Change, No Code Change) | Indicates whether the alternative scrambling code is used for compressed mode method 'SF/2'. |

## 9.2.2.54 UL/DL compressed mode selection:

Void.

## 9.2.2.55 UL delta SIR

Void.

### 9.2.2.56 UL delta SIR after

Void.

### 9.2.2.57 UL DPCCH Slot Format

Indicates the slot format used in DPCCH in UL, accordingly to ref. [7].

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| UL DPCCH slot format | | | INTEGER (0..5,…) | |

### 9.2.2.58 UL SIR

Void

### 9.2.2.59 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) | |

### 9.2.2.60 UL Capacity Credit

Void

## 9.2.3 TDD specific Parameters

### 9.2.3.1 Block STTD Indicator

Void.

### 9.2.3.2 Burst Type

Void.

### 9.2.3.3 CCTrCH ID

The CCTrCH ID for dedicated and shared channels identifies unambiguously an uplink or downlink CCTrCH inside a Radio Link,. for S-CCPCH it identifies unambiguously a downlink CCTrCH within a cell.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| CCTrCH ID | | | INTEGER (0..15) | |

## 9.2.3.4 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,…) | |

## 9.2.3.4A Constant Value

The Constant Value is the power margin used by a UE to set the proper uplink power for a DCH, USCH, or a RACH.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Constant Value | | | INTEGER (-10...10,…) | Unit dB Granularity 1 dB. |

## 9.2.3.4B DL Timeslot ISCP

DL Timeslot ISCP is the measured interference in a downlink timeslot at the UE, see ref. [5].

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| DL Timeslot ISCP | | | INTEGER ( 0..91) | According to mapping in ref. [5]. |

## 9.2.3.4C 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 descriptions | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| **DCH TDD Information** | | *1 to <maxnoof DCHs>* | | | – | |
| >Payload CRC Presence Indicator | M | | 9.2.1.49 | | – | |
| >UL FP mode | M | | 9.2.1.66 | | – | |
| >ToAWS | M | | 9.2.1.61 | | – | |
| >ToAWE | M | | 9.2.1.60 | | – | |
| **>DCH Specific Info** | | *1..<maxno ofDCHs>* | | | – | |
| >>DCH ID | M | | 9.2.1.20 | | – | |
| >>CCTrCH ID | M | | 9.2.3.3 | UL CCTrCH in which the DCH is mapped | – | |
| >>CCTrCH ID | M | | 9.2.3.3 | DL CCTrCH in which the DCH is mapped | – | |
| >>Transport Format Set | M | | 9.2.1.59 | For UL | – | |
| >>Transport Format Set | M | | 9.2.1.59 | For DL | – | |
| >>Allocation/Retention Priority | M | | 9.2.1.1A | | – | |
| >>Frame Handling Priority | M | | 9.2.1.30 | | – | |
| >>QE-Selector | C-CoorDCH | | 9.2.1.50A | | – | |

| Condition | Explanation |
|---|---|
| CoorDCH | The IE shall be present if this DCH is part of a set of coordinated DCHs (number of instances of the *DCH Specific Info* IE is greater than 1). |

| Range bound | Explanation |
|---|---|
| *MaxnoofDCHs* | Maximum number of DCHs for one UE |

### 9.2.3.4D    DCHs TDD to Modify

The *DCHs TDD to Modify* IE provides information for DCHs to be modified.

| IE/Group Name | Presence | Range | IE type and reference | Semantics descriptions | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| **DCHs TDD to Modify** | | _1..<maxnoofDCHs>_ | | | GLOBAL | reject |
| >UL FP Mode | O | | 9.2.1.66 | | – | |
| >ToAWS | O | | 9.2.1.61 | | – | |
| >ToAWE | O | | 9.2.1.60 | | – | |
| >Transport Bearer Request Indicator | M | | 9.2.1.62A | | – | |
| **>DCH Specific Info** | | _1..<maxnoofDCHs>_ | | | – | |
| >>DCH ID | M | | 9.2.1.20 | | – | |
| >>CCTrCH ID | O | | 9.2.3.3 | UL CCTrCH in which the DCH is mapped. | – | |
| >>CCTrCH ID | O | | 9.2.3.3 | DL CCTrCH in which the DCH is mapped | – | |
| >>Transport Format Set | O | | 9.2.1.59 | For the UL. | – | |
| >>Transport Format Set | O | | 9.2.1.59 | For the DL. | – | |
| >>Allocation/Retention Priority | O | | 9.2.1.1A | | – | |
| >>Frame Handling Priority | O | | 9.2.1.30 | | – | |

| \Range bound | Explanation |
|---|---|
| _MaxnoofDCHs_ | Maximum number of DCHs for one UE |

## 9.2.3.4E    DL Timeslot Information

The _DL Timeslot Information_ IE provides information for DL Time slot to be established.

| IE/Group Name | Presence | Range | IE type and reference | Semantics descriptions | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| **DL Timeslot Information** | | _1 .. <maxnoofDLts>_ | | | – | |
| >Time Slot | M | | 9.2.3.23 | | – | |
| >Midamble Shift and Burst Type | M | | 9.2.3.7 | | – | |
| >TFCI Presence | M | | 9.2.1.57 | | – | |
| >DL Code Information | M | | TDD DL Code Information 9.2.3.19B | | – | |

| Range bound | Explanation |
|---|---|
| _MaxnoofDLts_ | Maximum number of Downlink time slots per Radio Link |

## 9.2.3.4F    DL Time Slot ISCP Info

The _DL Time Slot ISCP Info_ IE provides information for DL Interference level for each time slot within the Radio Link.

| IE/Group Name | Presence | Range | IE type and reference | Semantics descriptions | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| **DL Time Slot ISCP Info** | | *1 .. <maxnoofDLts>* | | | – | |
| >Time Slot | M | | 9.2.3.23 | | – | |
| >DL Timeslot ISCP | M | | 9.2.3.4B | | – | |

| Range bound | Explanation |
|---|---|
| *MaxnoofDLts* | Maximum number of Downlink time slots per Radio Link for 3.84Mcps TDD. |

## 9.2.3.4G    Cell Sync Burst Code

The *Cell Sync Burst Code* IE indicates which Code is used for a given Cell Sync Burst.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Cell Sync Burst Code | | | INTEGER (0..7,..) | |

## 9.2.3.4H    Cell Sync Burst Code Shift

The *Cell Sync Burst Code Shift* IE indicates the number of code shifts used for a given Cell Sync Burst.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Cell Sync Burst Code Shift | | | INTEGER (0..7) | |

## 9.2.3.4I    CSB Measurement ID

The *Cell Sync Burst Measurement ID* IE uniquely identifies any cell sync burst measurement per Node B - control port.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| CSB Measurement ID | | | Integer(0 .. 65535) | |

## 9.2.3.4J    Cell Sync Burst Repetition Period

The *Cell Sync Burst Repetition Period* IE represents the number of consecutive Radio Frames after which the cell sync burst transmission/measurement is repeated. This means that if the Time Slot *K* is assigned to the cell sync burst transmission/measurements in the Radio Frame *J*, the cell sync burst transmission/measurement is also in all the Radio Frames *J+n\*Repetition Period*.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Cell Sync Burst Repetition Period | | | INTEGER (0..4095) | |

## 9.2.3.4K    Cell Sync Burst SIR

Indicates the Signal to Interference Ratio of the cell sync burst measurement according definition in [5].

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Cell Sync Burst SIR | | | INTEGER (0..31) | According to mapping in [23] |

### 9.2.3.4L Cell Sync Burst Timing

The *Cell sync burst timing* IE defines the time of start (defined by the first detected path in time) of the cell sync burst of a neighbouring cell see [5].

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Cell Sync Burst Timing | | | CHOICE INTEGER (0..255) or INTEGER (0..1048575) | According to mapping in [23] |

### 9.2.3.4M Cell Sync Burst Timing Threshold

The *Cell Sync Burst Timing Threshold* IE defines the threshold that shall trigger a Cell Synchronisation Report message.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Cell Sync Burst Timing Threshold | | | INTEGER (0..254) | 0: 0 chips<br>1: 0.125 chips<br>2: 0.250 chips<br>…<br>254: 31.75 chips |

### 9.2.3.4N CSB Transmission ID

The *Cell Sync Burst Transmisson ID* IE uniquely identifies any cell sync burst transmission per Node B-control port.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| CSB Transmission ID | | | Integer(0 .. 65535) | |

### 9.2.3.4O DL Timeslot Information LCR

The *DL Timeslot Information LCR* IE provides information for DL Time slot to be established.

| IE/Group Name | Presence | Range | IE type and reference | Semantics descriptions | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| **DL Timeslot Information LCR** | | *1 .. <Maxnoof DLtsLCR>* | | | – | |
| >Time Slot LCR | M | | 9.2.3.24A | | – | |
| >Midamble Shift LCR | M | | 9.2.3.7A | | – | |
| >TFCI Presence | M | | 9.2.1.57 | | – | |
| >DL Code Information | M | | TDD DL Code Information LCR 9.2.3.19C | | – | |

| Range bound | Explanation |
|---|---|
| *MaxnoofDLtsLCR* | Maximum number of Downlink time slots per Radio Link for 1.28Mcps TDD. |

### 9.2.3.40A    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.

| IE/Group Name | Presence | Range | IE type and reference | Semantics descriptions | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| **DL Time Slot ISCP Info LCR** | | *1 .. <maxnoofDL LCRs>* | | | – | |
| >Time Slot LCR | M | | 9.2.3.24A | | – | |
| >DL Timeslot ISCP | M | | 9.2.3.4B | | – | |

| Range bound | Explanation |
|---|---|
| *MaxnoofDLLCRs* | Maximum number of Downlink time slots per Radio Link for 1.28Mcps TDD. |

### 9.2.3.5    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) | |

### 9.2.3.5A    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 descriptions | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| **DSCH TDD Information** | | *1 to <Maxnoof DSCHs>* | | | – | |
| >DSCH ID | M | | 9.2.1.27 | | – | |
| >CCTrCH ID | M | | 9.2.3.2 | DL CCTrCH in which the DSCH is mapped | – | |
| >Transport Format Set | M | | 9.2.1.59 | For DSCH | – | |
| >Allocation/Retention Priority | M | | 9.2.1.1A | | – | |
| >Frame handling Priority | M | | 9.2.1.30 | | – | |
| >ToAWS | M | | 9.2.1.61 | | – | |
| >ToAWE | M | | 9.2.1.60 | | – | |
| >Binding ID | O | | 9.2.1.4 | Shall be ignored if bearer establishment with ALCAP. | YES | ignore |
| >Transport Layer Address | O | | 9.2.1.63 | Shall be ignored if bearer establishment with ALCAP. | YES | ignore |

| Range bound | Explanation |
|---|---|
| *MaxnoofDSCHs* | Maximum number of DSCH for one UE |

## 9.2.3.5B    DwPCH Power

DwPCH Power is the power that shall be used for transmitting the DwPCH in a cell.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| DwPCH Power | | | INTEGER(-15..+40,…) | Unit dBm Granularity 0.1 dB |

## 9.2.3.5C    Frame Adjustment value

The *Frame Adjustment value* IE represents the frame number correction within the initial synchronisation phase.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Frame Adjustment value | | | INTEGER (0..4095) | $SFN_{new}=(SFN_{old}+Frame\ Adjustment\ value)\ mod\ 4096$ |

## 9.2.3.5D    IPDL TDD Parameter

The *IPDL TDD Parameter* IE provides information about IPDL to be applied for TDD 3.84Mcps when activated.

| IE/Group Name | Presence | Range | IE type and reference | Semantics descriptions | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| IP spacingTDD | M | | ENUMERATED(30, 40, 50, 70, | See [21] | – | |

| | | | 100, ...) | | | |
|---|---|---|---|---|---|---|
| IP Start | M | | Integer(0.. 4095) | See [21] | – | |
| IP Slot | M | | Integer(0.. 14) | See [21] | – | |
| IP PCCPCH | M | | ENUMERA TED(Switc h off 1 frame, Switch off 2 frames) | See [21] | – | |
| Burst mode parameters | O | | 9.2.1.5A | | | |

## 9.2.3.5E    Max FPACH Power

Max FPACH Power is the maximum power that shall be used for transmitting the FPACH in a cell.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| FPACH Power | | | INTEGER(- 15..+40,…) | Unit dBm Granularity 0.1 dB |

## 9.2.3.5F    HS-DSCH TDD Information

The HS-DSCH TDD Information provides information for HS-DSCH MAC-d flows to be established.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| **HS-DSCH MAC-d Flow Specific Information** | | *1..<Maxno ofMACdFl ows>* | | | – | |
| >HS-DSCH MAC-d Flow ID | M | | 9.2.1.31I | | – | |
| >BLER | M | | 9.2.1.4A | | – | |
| >Allocation/Retention Priority | M | | 9.2.1.1A | | – | |
| **>Priority Queue Information** | M | *1..<Maxno ofPrioQue ues>* | | | - | |
| >>Priority Queue ID | M | | 9.2.1.49C | | - | |
| >>Scheduling Priority Indicator | M | | 9.2.1.53H | | – | |
| **>>MAC-d PDU Size Index** | | *1..<Maxno ofMACdP DUindexes >* | | | - | |
| >>>SID | M | | 9.2.1.53I | | - | |
| >>>MAC-d PDU Size | M | | 9.2.1.38A | | - | |
| **UE Capabilities information** | | *1* | | | - | |
| >HS-DSCH TrCh Bits per TTI | M | | ENUMERA TED (7040, 10228, 14080,...) | | - | |
| >HS-DSCH multi-code capability | M | | ENUMERA TED (8, 12, 16,...) | | - | |
| >MAC-hs reordering buffer size | M | | INTEGER (1..300,...) | Total combined receiving buffer capability in RLC and MAC-hs in kBytes | - | |
| **HARQ Memory partitioning** | | *1..<Maxno ofHARQpr ocesses>* | | | - | |
| >Process memory size | M | | INTEGER (1..168960, ...) | | - | |

| Range bound | Explanation |
|---|---|
| *MaxnoofMACdFlows* | Maximum number of HS-DSCH MAC-d flows |
| *MaxnoofPrioQueues* | Maximum number of Priority Queues |
| *MaxnoofHARQprocesses* | Maximum number of HARQ processes for one UE. |
| *MaxnoofMACdPDUindexes* | Maximum number of different MAC-d PDU SIDs |
| *MaxNoOfHSDSCHTrChBitsPerTTI* | Maximum Number of HS-DSCH Transport Channel Bits per TTI |

## 9.2.3.5G    HS-DSCH TDD Information Response

The HS-DSCH TDD Information Response provides information for HS-DSCH MAC-d flows that have been established or modified.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| **HS-DSCH MAC-d Flow Specific Information Response** | | 1..<Maxno ofMACdFl ows> | | | – | |
| >HS-DSCH MAC-d Flow ID | M | | 9.2.1.31I | | – | |
| >Binding ID | O | | 9.2.1.4 | | – | |
| >Transport Layer Address | O | | 9.2.1.63 | | – | |
| **HS-SCCH Specific Information Response** | | 0..<MaxNo OfHSSCCH codes> | | | GLOBAL | reject |
| >Time Slot | M | | 9.2.3.23 | | | |
| >Midamble Shift and Burst Type | M | | 9.2.3.7 | | - | |
| >TDD Channelisation Code | M | | 9.2.3.19 | | - | |
| **>HS-SICH Information** | | 1 | | | - | |
| >>Time Slot | M | | 9.2.3.23 | | - | |
| >>Midamble Shift and Burst Type | M | | 9.2.3.7 | | - | |
| >>TDD Channelisation Code | M | | 9.2.3.19 | | - | |
| **HS-SCCH Specific Information Response LCR** | | 0..<MaxNo OfHSSCCH codes> | | | GLOBAL | reject |
| >Time Slot LCR | M | | 9.2.3.24A | | - | |
| >Midamble Shift LCR | M | | 9.2.3.7a | | - | |
| >TDD Channelisation Code LCR | M | | 9.2.3.19a | | - | |
| **>HS-SICH Information LCR** | | 1 | | | - | |
| >>Time Slot LCR | M | | 9.2.3.24A | | - | |
| >>Midamble Shift LCR | M | | 9.2.3.7a | | - | |
| >>TDD Channelisation Code LCR | M | | 9.2.3.19a | | - | |

| Range bound | Explanation |
|---|---|
| *MaxnoofMACdFlows* | Maximum number of HS-DSCH MAC-d flows. |
| *MaxnoofPrioQueues* | Maximum number of Priority Queues |
| *MaxnoofMACdPDUindexes* | Maximum number of different MAC-d Size Indexes (SIDs) |
| *MaxnoofHSSCCHcodes* | Maximum number of HS-SCCH codes |

## 9.2.3.5H    IPDL TDD Parameters LCR

The *IPDL TDD Parameters LCR* IE provides information about IPDL to be applied for 1.28Mcps TDD when activated.

| IE/Group Name | Presence | Range | IE type and reference | Semantics descriptions | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| IP spacingTDD | M | | ENUMERA TED(30, 40, 50, 70, 100, ...) | See [21] | – | |
| IP Start | M | | Integer(0.. 4095) | See [21] | – | |
| IP_Sub | M | | ENUMERA TED(First,s econd,Both ) | See [21] | – | |
| Burst mode parameters | O | | 9.2.1.5A | | | |

### 9.2.3.6 Max PRACH Midamble shift

Indicates the maximum number of Midamble shifts to be used in a cell.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Max PRACH Midamble Shifts | | | ENUMERATED (4, 8,…) | |

### 9.2.3.7 Midamble shift and burst type

This information element indicates burst type and midamble allocation.

The 256 chip midamble supports 3 different time shifts, the 512 chips midamble may support 8 or even 16 time shifts.

Three different midamble allocation schemes exist:

Default midamble: the midamble shift is selected by layer 1 depending on the associated channelisation code (DL and UL)

Common midamble: the midamble shift is chosen 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 *Burst Type* | | | | |
| >*Type1* | | | | |
| >>Midamble Allocation Mode | M | | Enumerated (Default midamble, Common midamble, UE specific midamble) | |
| >> Midamble Configuration Burst Type 1 And 3 | M | | Integer(4, 8, 16) | As defined in [19] |
| >>Midamble Shift | C-UE | | Integer(0..15) | |
| >*Type2* | | | | |
| >>Midamble Allocation Mode | M | | Enumerated (Default midamble, Common midamble, UE specific midamble) | |
| >> Midamble Configuration Burst Type 2 | M | | Integer(3,6) | As defined in [19] |
| >>Midamble Shift | C-UE | | INTEGER (0..5) | |
| >*Type3* | | | | UL only |
| >>Midamble Allocation Mode | M | | Enumerated (Default midamble, UE specific midamble) | |
| >> Midamble Configuration Burst Type 1 And 3 | M | | Integer(4, 8, 16) | As defined in [19] |
| >>Midamble Shift | C-UE | | Integer(0..15) | |

| Condition | Explanation |
|---|---|
| UE | The IE shall be present if the *Midamble Allocation Mode* IE is set to "UE-specific midamble". |

### 9.2.3.7A    Midamble shift LCR

This information element indicates midamble allocation in 1.28Mcps TDD.

| 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 LCR | C-UE | | Integer(0..15) | |

| Condition | Explanation |
|---|---|
| *UE* | The IE shall be present if the *Midamble Allocation Mode* IE is set to "UE-specific midamble". |

### 9.2.3.7B    Number of cycles per SFN period

The *Number of cycles per SFN period* IE indicates the number of repetitions per SFN period where the same schedule shall apply.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Number of cycles per SFN period | | | ENUMERATED (1, 2, 4, 8, ..., 16, 32, 64) | |

### 9.2.3.7C    Number of repetitions per cycle period

The *Number of repetitions per cycle period* IE indicates the number of Sync frames per Cycle Length where the [3.84Mcps TDD - cell sync bursts] [1.28Mcps TDD – Sync_DL Codes] shall be transmitted or the cell sync bursts from the neighbouring cells shall be measured.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Number of repetitions per cycle period | | | INTEGER (2..10) | |

### 9.2.3.7D    Number of subcycles per cycle period

The *Number of subcycles per cycle period* IE indicates the number of subcycles within a Synchronisation Cycle. Within each subcycle, the same sequence of SYNC_DL Code transmissions and receptions is performed.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Number of subcycles per cycle period | | | INTEGER (1..16,...) | |

### 9.2.3.8 Paging Indicator Length

The Paging Indicator Length indicates the number of symbols for Page Indication transmitted in one timeslot (see ref [19]).

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Paging Indicator Length | | | ENUMERATED (2, 4, 8,…) | |

### 9.2.3.9 PCCPCH Power

Primary CCPCH power is the power that shall be used for transmitting the P CCPCH in a cell. The P CCPCH power is the reference power in a TDD-cell. The reference point is the antenna connector.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| PCCPCH Power | | | INTEGER(-15..+40,…) | Unit dBm<br>Granularity 0.1 dB |

### 9.2.3.10 PDSCH ID

The PDSCH ID identifies unambiguously a PDSCH inside a cell.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| PDSCH ID | | | INTEGER (0..255) | |

### 9.2.3.11 PDSCH Set ID

The PDSCH Set Id identifies unambiguously a PDSCH Set inside a cell.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| PDSCH Set ID | | | INTEGER (0..255) | See ref. [6] |

### 9.2.3.11A 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.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Primary CCPCH RSCP | | | INTEGER ( 0..91) | |

### 9.2.3.12 PUSCH ID

The PUSCH ID identifies unambiguously a PUSCH inside a cell.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| PUSCH ID | | | INTEGER (0..255) | |

### 9.2.3.13    PUSCH Set ID

The PUSCH Set ID identifies unambiguously a PUSCH Set inside a cell.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| PUSCH Set ID | | | INTEGER (0..255) | See ref. [6] |

### 9.2.3.14    PRACH Midamble

The PRACH Midamble indicates if only the Basic Midamble Sequence or also the time-inverted Midamble Sequence is used.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| PRACH Midamble | | | ENUMERATED (Inverted, Direct) | |

### 9.2.3.14A    Reference Clock availability

The *Reference Clock availability* IE is used to indicate the presence and operating of a Reference Clock connected to a TDD cell for cell synchronisation purpose.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Reference Clock availability | | | ENUMERATED(Available, Not Available) | |

### 9.2.3.14B    Reference SFN offset

The *Reference SFN offset* IE indicates the number of frames the reference SFN shall be shifted compared to the SFN derived from the synchronisation port.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Reference SFN offset | | | INTEGER(0 .. 255) | |

### 9.2.3.15    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. [18].

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Repetition Length | | | INTEGER(1..63) | |

### 9.2.3.16    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. [18].

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Repetition Period | | | ENUMERATED(1, 2, 4, 8, 16, 32, 64) | |

## 9.2.3.17    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 shall be 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) | |

## 9.2.3.18    Sync case

The SCH and PCCPCH are mapped on one or two downlink slots per frame. There are two cases of SCH and PCCPCH allocation 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 CRNC to Node B used for 1.28Mcps TDD, the CRNC should indicate Sync Case 1 and the Node B shall ignore it.]

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Sync Case | | | Integer (1..2,…) | |

## 9.2.3.18A    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 | | | Integer (1, 2, .., 256) | Number of frames between special burst transmission during DTX |

## 9.2.3.18B    SYNC_DL Code ID

The SYNC_DL Code ID identifies the SYNC_DL Code which used by DwPCH.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| SYNC_DL Code ID | | | INTEGER (1..32,...) | |

## 9.2.3.18C    Sync Frame number

The *Sync Frame Number* IE indicates the number of the Sync frame within a Synchronisation Cycle or Subcycle, respectively, where the cell sync bursts shall be transmitted or the cell sync bursts from the neighbouring cells shall be measured.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Sync Frame number | | | INTEGER (1..10) | |

## 9.2.3.18D    Synchronisation Report Characteristics

The *Synchronisation Report Characteristics* IE defines how the reporting on measured [3.84Mcps TDD - cell sync bursts] [1.28Mcps TDD – Sync_DL Codes] shall be performed

Different methods shall apply for the measured [3.84Mcps TDD - cell sync burst] [1.28Mcps TDD – Sync_DL Codes] reports. [3.84Mcps TDD - In the frequency acquisition phase the measurement report shall be sent when the frequency locking is completed.] In the initial phase and for the measurement on late-entrant cells an immediate report after the measured frame is expected.

In the steady-state phase measurement reports may be given after every measured frame, after every SFN period, after every cycle length or only when the requested threshold is exceeded.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Synchronisation Report characteristics type | M | | ENUMERATED (Frame related, SFN period related, Cycle length related, Threshold exceeding, Frequency Acquisition completed, ...) | |
| **Threshold exceeding** | C-Threshold exceeding | | | Applies only to the Steady State Phase |
| **>Cell Sync Burst Threshold Information** | | 0 .. <maxnoofCellSyncBursts> | | Mandatory for 3.84Mcps TDD only |
| >>Sync Frame number to receive | M | | Sync Frame number 9.2.3.18C | |
| **>>Cell Sync Burst Information** | | 1..<maxnoofreceptionsperSyncFrame> | | |
| >>>Cell Sync Burst Code | M | | 9.2.3.4G | |
| >>>Cell Sync Burst Code shift | M | | 9.2.3.4H | |
| >>>Cell Sync Burst Arrival Time | O | | Cell Sync Burst Timing 9.2.3.4L | |
| >>>Cell Sync Burst Timing Threshold | O | | 9.2.3.4M | |
| **>SYNC_DL Code Threshold Information LCR** | | 0..<maxnoofSyncFramesLCR> | | Mandatory for 1.28Mcps TDD only |
| >>Sync Frame number to | M | | Sync Frame number | |

| | | | | |
|---|---|---|---|---|
| receive | | | 9.2.3.18C | |
| **>>SYNC_DL Code Information LCR** | | 1..<maxnoofrece ptionsperSyncFram eLCR> | | |
| >>>SYNC_DL Code ID | M | | 9.2.3.18B | |
| >>>SYNC_DL Code ID Arrival Time | O | | Cell Sync Burst Timing 9.2.3.4L | |
| >>>SYNC_DL Code ID Timing Threshold | O | | Cell Sync Burst Timing Threshold 9.2.3.4M | |

| Range bound | Explanation |
|---|---|
| maxnoofCellSyncBursts | Maximum number of cell sync burst per cycle for 3.84Mcps TDD |
| maxnoofreceptionsperSyncFrame | Maximum number of cell sync burst receptions per Sync Frame for 3.84Mcps TDD |
| maxnoofSyncFramesLCR | Maximum number of SYNC Frames per repetition period for 1.28Mcps TDD |
| maxnoofreceptionsperSyncFrameLCR | Maximum number of SYNC_DL Code ID receptions per Sync Frame for 1.28Mcps TDD |

### 9.2.3.18E    Synchronisation Report Type

The *Synchronisationt Report Type* IE represents the individual types of synchronisation reports that shall apply within the individual synchronisation phases. (see [17]).

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Synchronisation Report Type | | | ENUMERAT ED (Initial Phase, Steady-State Phase, Late-Entrant Cell, Frequency Acquisition, ... ) | |

### 9.2.3.19    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 | | | ENUMERAT ED ((1/1), (2/1), (2/2), (4/1), .. (4/4), (8/1), .. (8/8), (16/1), .. (16/16) ,… ) | |

### 9.2.3.19a    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 | | | ENUMERAT ED ((1/1), (2/1), (2/2), (4/1),..(4/4), (8/1), .. (8/8), (16/1).. (16/16) ,… ) | |
| Modulation | | | ENUMERAT ED (QPSK, 8PSK, …) | Modulation options for 1.28Mcps TDD in contrast to 3.84Mcps TDD |

### 9.2.3.19A    TDD DPCH Offset

The Offset represents the phase information for the allocation of a group of dedicated physical channels. The first range 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 second range is used when a starting offset is required. The TDD DPCH Offset shall map to the CFN and the TDD Physical Channel Offet for each DPCH in this CCTrCH shall calculated by TDD DPCH Offset *mod* Repetition period, see ref. [18].

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| TDD DPCH Offset | | | CHOICE INTEGER (0..63) or INTEGER (0..255) | |

### 9.2.3.19B    TDD DL Code Information

The *TDD DL Code Information* IE provides DL Code information for the RL.

| IE/Group Name | Presence | Range | IE type and reference | Semantics descriptions | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| **TDD DL Code Information** | | *1 .. <maxnoOf DPCH>* | | | – | |
| >DPCH ID | M | | 9.2.3.5 | | – | |
| >TDD Channelisation Code | M | | 9.2.3.19 | | – | |

| Range bound | Explanation |
|---|---|
| *maxnoOfDPCH* | Maximum number of DPCH in one CCTrCH |

### 9.2.3.19C    TDD DL Code Information LCR

The *TDD DL Code Information LCR* IE provides DL Code information for the RL.

| IE/Group Name | Presence | Range | IE type and reference | Semantics descriptions | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| **TDD DL Code Information LCR** | | *1 .. <maxnoOf DPCHLCR >* | | | – | |
| >DPCH ID | M | | 9.2.3.5 | | – | |
| >TDD Channelisation Code LCR | M | | 9.2.3.19a | | – | |

| Range bound | Explanation |
|---|---|
| *maxnoOfDPCHLCR* | Maximum number of DPCH in one CCTrCH for 1.28Mcps TDD |

## 9.2.3.20 TDD Physical Channel Offset

The Offset represents the phase information for the allocation of a physical channel. (SFN mod Repetition Period = Offset) see ref. [18].

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| TDD Physical Channel Offset | | | INTEGER (0..63) | |

## 9.2.3.21 TDD TPC DL step size

This parameter indicates step size for the DL power adjustment.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| TDD TPC Downlink step size | | | ENUMERAT ED (1, 2, 3,…) | |

## 9.2.3.21A TDD UL Code Information

The *TDD UL Code Information* IE provides information for UL Code to be established.

| IE/Group Name | Presence | Range | IE type and reference | Semantics descriptions | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| **TDD UL Code Information** | | *1 .. <maxno OfDPCH >* | | | – | |
| >DPCH ID | M | | 9.2.3.5 | | – | |
| >TDD Channelisation Code | M | | 9.2.3.19 | | – | |

| Range bound | Explanation |
|---|---|
| *MaxnoOfDPCH* | Maximum number of DPCH in one CCTrCH |

## 9.2.3.21B TDD UL Code Information LCR

The *TDD UL Code Information LCR* IE provides information for UL Code to be established.

| IE/Group Name | Presence | Range | IE type and reference | Semantics descriptions | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| **TDD UL Code Information LCR** | | *1 .. <maxno OfDPCH LCR>* | | | – | |
| >DPCH ID | M | | 9.2.3.5 | | – | |
| >TDD Channelisation Code LCR | M | | 9.2.3.19a | | – | |

| Range bound | Explanation |
|---|---|
| *MaxnoOfDPCHLCR* | Maximum number of DPCH in one CCTrCH for 1.28Mcps TDD. |

## 9.2.3.22    TFCI Coding

The TFCI Coding describes the way how the TFCI bits are coded. By default 1 TFCI bit is coded with 4 bits, 2 TFCI bits are coded with 8 bits, 3-5 TFCI bits are coded with 16 bits and 6-10 TFCI bits are coded with 32 bits.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| TFCI Coding | | | Enumerated (4, 8, 16, 32,…) | |

## 9.2.3.22a    Timing Adjustment value

The *Timing Adjustment value* IE indicates the timing correction within a Frame. Type 1 is used for the initial phase of Node B synchronisation. Type 2 is used for the steady-state phase of Node B synchronisation.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Timing Adjustment value | | | CHOICE INTEGER (0..255) or INTEGER (0..1048575) | According to mapping in [23] |

## 9.2.3.22A    Timing Advance Applied

Defines the need for Rx Timing Deviation measurement results to be reported in a particular cell.

For 1.28Mcps TDD this IE must be set "No"

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Timing Advance Applied | | | ENUMERAT ED (Yes, No) | |

## 9.2.3.23    Time Slot

The Time Slot represents the minimum time interval inside a Radio Frame that can be assigned to a Physical Channel.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Time Slot | | | INTEGER (0..14) | |

### 9.2.3.24 Time Slot Direction

This parameter indicates whether the TS in the cell is used in Uplink or Downlink direction.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Time Slot Direction | | | Enumerated (UL, DL,…) | |

### 9.2.3.24A 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) | |

### 9.2.3.25 Time Slot Status

This parameter indicates whether the TS in the cell is active or not.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Time Slot Status | | | Enumerated (active, notActive,…) | |

### 9.2.3.26 Transmission Diversity Applied

Defines if Transmission Diversity on DCHs to be applied in a cell (see ref. [19]).

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| Transmission Diversity Applied | | | Boolean | |

### 9.2.3.26A UL Timeslot ISCP

UL Timeslot ISCP is the measured interference in a uplink timeslot at the Node B, see ref. [5].

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| UL Timeslot ISCP | | | INTEGER ( 0..127) | According to mapping in [23]. |

### 9.2.3.26B 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) | |

## 9.2.3.26C    UL Timeslot Information

The *UL Timeslot Information* IE provides information on the time slot allocation for an UL DPCH.

| IE/Group Name | Presence | Range | IE type and reference | Semantics descriptions | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| **UL Timeslot Information** | | *1 .. <maxnoofULts>* | | | – | |
| >Time Slot | M | | 9.2.3.23 | | – | |
| >Midamble Shift and Burst Type | M | | 9.2.3.7 | | – | |
| >TFCI Presence | M | | 9.2.1.57 | | – | |
| > UL Code Information | M | | TDD UL Code Information 9.2.3.21A | | | |

| Range bound | Explanation |
|---|---|
| *MaxnoofULts* | Maximum number of Uplink time slots per Radio Link |

## 9.2.3.26D    UL Time Slot ISCP Info

The *UL Time Slot ISCP Info* IE provides information for UL Interfernce level for each time slot within the Radio Link.

| IE/Group Name | Presence | Range | IE type and reference | Semantics descriptions | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| **UL Time Slot ISCP Info** | | *1 .. <maxnoofULts>* | | | | |
| >Time Slot | M | | 9.2.3.23 | | | |
| >UL Timeslot ISCP | M | | 9.2.3.26A | | | |

| Range bound | Explanation |
|---|---|
| *MaxnoofULts* | Maximum number of Uplink time slots per Radio Link |

## 9.2.3.26E    UL Timeslot Information LCR

The *UL Timeslot Information* IE provides information on the time slot allocation for an UL DPCH.

| IE/Group Name | Presence | Range | IE type and reference | Semantics descriptions | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| **UL Timeslot Information LCR** | | *1 .. <Maxn oofULts LCR>* | | | – | |
| >Time Slot LCR | M | | 9.2.3.24A | | – | |
| >Midamble Shift LCR | M | | 9.2.3.7A | | – | |
| >TFCI Presence | M | | 9.2.1.57 | | – | |
| > UL Code Information | M | | TDD UL Code Information LCR 9.2.3.21B | | | |

| Range bound | Explanation |
|---|---|
| *MaxnoofULtsLCR* | Maximum number of Uplink time slots per Radio Link for 1.28Mcps TDD. |

## 9.2.3.26F    UL Time Slot ISCP Info LCR

The *UL Time Slot ISCP Info LCR* IE provides information for UL Interfernce level for each time slot within the Radio Link.

| IE/Group Name | Presence | Range | IE type and reference | Semantics descriptions | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| **UL Time Slot ISCP Info LCR** | | *1 .. <MaxnoofUL tsLCR>* | | | – | |
| >Time Slot LCR | M | | 9.2.3.24A | | – | |
| >UL Timeslot ISCP | M | | 9.2.3.26A | | – | |

| Range bound | Explanation |
|---|---|
| *MaxnoofULtsLCR* | Maximum number of Uplink time slots per Radio Link for 1.28Mcps TDD |

## 9.2.3.27    USCH ID

The USCH ID uniquely identifies a USCH within a Node B Communication Context.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| USCH ID | | | INTEGER (0..255) | |

## 9.2.3.28    USCH Information

The *USCH Information* IE provides information for USCHs to be established.

| IE/Group Name | Presence | Range | IE type and reference | Semantics descriptions | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| **USCH Information** | | *1 to <Maxnoof USCHs>* | | | – | |
| >USCH ID | M | | 9.2.3.27 | | – | |
| >CCTrCH ID | M | | 9.2.3.3 | UL CCTrCH in which the USCH is mapped | – | |
| >Transport Format Set | M | | 9.2.1.59 | For USCH | – | |
| >Allocation/Retention Priority | M | | 9.2.1.1A | | – | |
| >Binding ID | O | | 9.2.1.4 | Shall be ignored if bearer establishment with ALCAP. | YES | ignore |
| >Transport Layer Address | O | | 9.2.1.63 | Shall be ignored if bearer establishment with ALCAP. | YES | ignore |

| Range bound | Explanation |
|---|---|
| *MaxnoofUSCHs* | Maximum number of USCH for one UE |

### 9.2.3.29     USCH Information Response

The *USCH Information Response* IE provides information for USCHs that have been established or modified.

| IE/Group Name | Presence | Range | IE type and reference | Semantics descriptions | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| **USCH Information Response** | | *1 .. <Maxnoof USCHs>* | | | – | |
| >USCH ID | M | | 9.2.3.27 | | – | |
| >Binding ID | O | | 9.2.1.4 | | – | |
| >Transport Layer Address | O | | 9.2.1.63 | | – | |

| Range bound | Explanation |
|---|---|
| *MaxnoofUSCHs* | Maximum number of USCHs for one UE |

### 9.2.3.30     SCTD Indicator

Indicates if SCTD antenna diversity is applied or not to the PCCPCH and PICH [3.84Mcps TDD].

| Information Element/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| SCTD Indicator | | | ENUMERATED(active, inactive) | |

# 9.3 Message and Information element abstract syntax (with ASN.1)

## 9.3.0 General

Subclause 9.3 presents the Abstract Syntax of NBAP protocol with ASN.1. In case there is contradiction between the ASN.1 definition in this subclause and the tabular format in subclauses 9.1 and 9.2, the ASN.1 shall take precedence, except for the definition of conditions for the presence of conditional elements, where the tabular format shall take precedence.

The ASN.1 definition specifies the structure and content of NBAP messages. NBAP 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 NBAP 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 where 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 NBAP 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 multi-vendor 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
--
-- **************************************************************

NBAP-PDU-Discriptions {
```

```
itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
umts-Access (20) modules (3) nbap (2) version1 (1) nbap-PDU-Descriptions (0) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

-- **************************************************************
--
-- IE parameter types from other modules.
--
-- **************************************************************

IMPORTS
    Criticality,
    ProcedureID,
    MessageDiscriminator,
    TransactionID
FROM NBAP-CommonDataTypes

    CommonTransportChannelSetupRequestFDD,
    CommonTransportChannelSetupRequestTDD,
    CommonTransportChannelSetupResponse,
    CommonTransportChannelSetupFailure,
    CommonTransportChannelReconfigurationRequestFDD,
    CommonTransportChannelReconfigurationRequestTDD,
    CommonTransportChannelReconfigurationResponse,
    CommonTransportChannelReconfigurationFailure,
    CommonTransportChannelDeletionRequest,
    CommonTransportChannelDeletionResponse,
    BlockResourceRequest,
    BlockResourceResponse,
    BlockResourceFailure,
    UnblockResourceIndication,
    AuditFailure,
    AuditRequiredIndication,
    AuditRequest,
    AuditResponse,
    CommonMeasurementInitiationRequest,
    CommonMeasurementInitiationResponse,
    CommonMeasurementInitiationFailure,
    CommonMeasurementReport,
    CommonMeasurementTerminationRequest,
    CommonMeasurementFailureIndication,
    CellSetupRequestFDD,
    CellSetupRequestTDD,
    CellSetupResponse,
    CellSetupFailure,
    CellReconfigurationRequestFDD,
    CellReconfigurationRequestTDD,
    CellReconfigurationResponse,
    CellReconfigurationFailure,
    CellDeletionRequest,
    CellDeletionResponse,
```

*ETSI*

```
        InformationExchangeInitiationRequest,
        InformationExchangeInitiationResponse,
        InformationExchangeInitiationFailure,
        InformationReport,
        InformationExchangeTerminationRequest,
        InformationExchangeFailureIndication,
        BearerRearrangementIndication,
        ResourceStatusIndication,
        SystemInformationUpdateRequest,
        SystemInformationUpdateResponse,
        SystemInformationUpdateFailure,
        ResetRequest,
        ResetResponse,
        RadioLinkActivationCommandFDD,
        RadioLinkActivationCommandTDD,
        RadioLinkPreemptionRequiredIndication,
        RadioLinkSetupRequestFDD,
        RadioLinkSetupRequestTDD,
        RadioLinkSetupResponseFDD,
        RadioLinkSetupResponseTDD,
        RadioLinkSetupFailureFDD,
        RadioLinkSetupFailureTDD,
        RadioLinkAdditionRequestFDD,
        RadioLinkAdditionRequestTDD,
        RadioLinkAdditionResponseFDD,
        RadioLinkAdditionResponseTDD,
        RadioLinkAdditionFailureFDD,
        RadioLinkAdditionFailureTDD,
        RadioLinkReconfigurationPrepareFDD,
        RadioLinkReconfigurationPrepareTDD,
        RadioLinkReconfigurationReady,
        RadioLinkReconfigurationFailure,
        RadioLinkReconfigurationCommit,
        RadioLinkReconfigurationCancel,
        RadioLinkReconfigurationRequestFDD,
        RadioLinkReconfigurationRequestTDD,
        RadioLinkReconfigurationResponse,
        RadioLinkDeletionRequest,
        RadioLinkDeletionResponse,
        DL-PowerControlRequest,
        DL-PowerTimeslotControlRequest,
        DedicatedMeasurementInitiationRequest,
        DedicatedMeasurementInitiationResponse,
        DedicatedMeasurementInitiationFailure,
        DedicatedMeasurementReport,
        DedicatedMeasurementTerminationRequest,
        DedicatedMeasurementFailureIndication,
        RadioLinkFailureIndication,
        RadioLinkRestoreIndication,
        CompressedModeCommand,
        ErrorIndication,
        PrivateMessage,
        PhysicalSharedChannelReconfigurationRequestTDD,
        PhysicalSharedChannelReconfigurationRequestFDD,
```

```
        PhysicalSharedChannelReconfigurationResponse,
        PhysicalSharedChannelReconfigurationFailure,
        CellSynchronisationInitiationRequestTDD,
        CellSynchronisationInitiationResponseTDD,
        CellSynchronisationInitiationFailureTDD,
        CellSynchronisationReconfigurationRequestTDD,
        CellSynchronisationReconfigurationResponseTDD,
        CellSynchronisationReconfigurationFailureTDD,
        CellSynchronisationAdjustmentRequestTDD,
        CellSynchronisationAdjustmentResponseTDD,
        CellSynchronisationAdjustmentFailureTDD,
        CellSynchronisationReportTDD,
        CellSynchronisationTerminationRequestTDD,
        CellSynchronisationFailureIndicationTDD
FROM NBAP-PDU-Contents

        id-audit,
        id-auditRequired,
        id-blockResource,
        id-cellDeletion,
        id-cellReconfiguration,
        id-cellSetup,
        id-cellSynchronisationInitiation,
        id-cellSynchronisationReconfiguration,
        id-cellSynchronisationReporting,
        id-cellSynchronisationTermination,
        id-cellSynchronisationFailure,
        id-commonMeasurementFailure,
        id-commonMeasurementInitiation,
        id-commonMeasurementReport,
        id-commonMeasurementTermination,
        id-commonTransportChannelDelete,
        id-commonTransportChannelReconfigure,
        id-commonTransportChannelSetup,
        id-compressedModeCommand,
        id-dedicatedMeasurementFailure,
        id-dedicatedMeasurementInitiation,
        id-dedicatedMeasurementReport,
        id-dedicatedMeasurementTermination,
        id-downlinkPowerControl,
        id-downlinkPowerTimeslotControl,
        id-errorIndicationForDedicated,
        id-errorIndicationForCommon,
        id-informationExchangeFailure,
        id-informationExchangeInitiation,
        id-informationReporting,
        id-informationExchangeTermination,
        id-BearerRearrangement,
        id-physicalSharedChannelReconfiguration,
        id-privateMessageForDedicated,
        id-privateMessageForCommon,
        id-radioLinkActivation,
        id-radioLinkAddition,
        id-radioLinkDeletion,
```

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```
    id-radioLinkFailure,
    id-radioLinkPreemption,
    id-radioLinkRestoration,
    id-radioLinkSetup,
    id-reset,
    id-resourceStatusIndication,
    id-cellSynchronisationAdjustment,
    id-synchronisedRadioLinkReconfigurationCancellation,
    id-synchronisedRadioLinkReconfigurationCommit,
    id-synchronisedRadioLinkReconfigurationPreparation,
    id-systemInformationUpdate,
    id-unblockResource,
    id-unSynchronisedRadioLinkReconfiguration
FROM NBAP-Constants;

-- ***************************************************************
--
-- Interface Elementary Procedure Class
--
-- ***************************************************************

NBAP-ELEMENTARY-PROCEDURE ::= CLASS {
    &InitiatingMessage                  ,
    &SuccessfulOutcome                  OPTIONAL,
    &UnsuccessfulOutcome                OPTIONAL,
    &Outcome                            OPTIONAL,
    &messageDiscriminator               MessageDiscriminator,
    &procedureID                        ProcedureID    UNIQUE,
    &criticality                        Criticality    DEFAULT ignore
}

WITH SYNTAX {
    INITIATING MESSAGE                  &InitiatingMessage
    [SUCCESSFUL OUTCOME                 &SuccessfulOutcome]
    [UNSUCCESSFUL OUTCOME               &UnsuccessfulOutcome]
    [OUTCOME                            &Outcome]
    MESSAGE DISCRIMINATOR               &messageDiscriminator
    PROCEDURE ID                        &procedureID
    [CRITICALITY                        &criticality]
}

-- ***************************************************************
--
-- Interface PDU Definition
--
-- ***************************************************************

NBAP-PDU ::= CHOICE {
    initiatingMessage       InitiatingMessage,
    succesfulOutcome        SuccessfulOutcome,
    unsuccesfulOutcome      UnsuccessfulOutcome,
    outcome                 Outcome,
    ...
}
```

*ETSI*

```
InitiatingMessage ::= SEQUENCE {
    procedureID            NBAP-ELEMENTARY-PROCEDURE.&procedureID  ({NBAP-ELEMENTARY-PROCEDURES}),
    criticality            NBAP-ELEMENTARY-PROCEDURE.&criticality  ({NBAP-ELEMENTARY-PROCEDURES}{@procedureID}),
    messageDiscriminator   NBAP-ELEMENTARY-PROCEDURE.&messageDiscriminator({NBAP-ELEMENTARY-PROCEDURES}{@procedureID}),
    transactionID          TransactionID,
    value                  NBAP-ELEMENTARY-PROCEDURE.&InitiatingMessage({NBAP-ELEMENTARY-PROCEDURES}{@procedureID})
}

SuccessfulOutcome ::= SEQUENCE {
    procedureID            NBAP-ELEMENTARY-PROCEDURE.&procedureID  ({NBAP-ELEMENTARY-PROCEDURES}),
    criticality            NBAP-ELEMENTARY-PROCEDURE.&criticality  ({NBAP-ELEMENTARY-PROCEDURES}{@procedureID}),
    messageDiscriminator   NBAP-ELEMENTARY-PROCEDURE.&messageDiscriminator({NBAP-ELEMENTARY-PROCEDURES}{@procedureID}),
    transactionID          TransactionID,
    value                  NBAP-ELEMENTARY-PROCEDURE.&SuccessfulOutcome({NBAP-ELEMENTARY-PROCEDURES}{@procedureID})
}

UnsuccessfulOutcome ::= SEQUENCE {
    procedureID            NBAP-ELEMENTARY-PROCEDURE.&procedureID  ({NBAP-ELEMENTARY-PROCEDURES}),
    criticality            NBAP-ELEMENTARY-PROCEDURE.&criticality  ({NBAP-ELEMENTARY-PROCEDURES}{@procedureID}),
    messageDiscriminator   NBAP-ELEMENTARY-PROCEDURE.&messageDiscriminator({NBAP-ELEMENTARY-PROCEDURES}{@procedureID}),
    transactionID          TransactionID,
    value                  NBAP-ELEMENTARY-PROCEDURE.&UnsuccessfulOutcome({NBAP-ELEMENTARY-PROCEDURES}{@procedureID})
}

Outcome ::= SEQUENCE {
    procedureID            NBAP-ELEMENTARY-PROCEDURE.&procedureID  ({NBAP-ELEMENTARY-PROCEDURES}),
    criticality            NBAP-ELEMENTARY-PROCEDURE.&criticality  ({NBAP-ELEMENTARY-PROCEDURES}{@procedureID}),
    messageDiscriminator   NBAP-ELEMENTARY-PROCEDURE.&messageDiscriminator({NBAP-ELEMENTARY-PROCEDURES}{@procedureID}),
    transactionID          TransactionID,
    value                  NBAP-ELEMENTARY-PROCEDURE.&Outcome  ({NBAP-ELEMENTARY-PROCEDURES}{@procedureID})
}

-- **************************************************************
--
-- Interface Elementary Procedure List
--
-- **************************************************************

NBAP-ELEMENTARY-PROCEDURES NBAP-ELEMENTARY-PROCEDURE ::= {
    NBAP-ELEMENTARY-PROCEDURES-CLASS-1        |
    NBAP-ELEMENTARY-PROCEDURES-CLASS-2        ,
    ...
}

NBAP-ELEMENTARY-PROCEDURES-CLASS-1 NBAP-ELEMENTARY-PROCEDURE ::= {
    cellSetupFDD                               |
    cellSetupTDD                               |
    cellReconfigurationFDD                     |
    cellReconfigurationTDD                     |
    cellDeletion                               |
    commonTransportChannelSetupFDD             |
    commonTransportChannelSetupTDD             |
    commonTransportChannelReconfigureFDD       |
```

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```
    commonTransportChannelReconfigureTDD             |
    commonTransportChannelDelete                     |
    audit                                            |
    blockResource                                    |
    radioLinkSetupFDD                                |
    radioLinkSetupTDD                                |
    systemInformationUpdate                          |
    commonMeasurementInitiation                      |
    radioLinkAdditionFDD                             |
    radioLinkAdditionTDD                             |
    radioLinkDeletion                                |
    reset                                            |
    synchronisedRadioLinkReconfigurationPreparationFDD |
    synchronisedRadioLinkReconfigurationPreparationTDD |
    unSynchronisedRadioLinkReconfigurationFDD        |
    unSynchronisedRadioLinkReconfigurationTDD        |
    dedicatedMeasurementInitiation                   |
    physicalSharedChannelReconfigurationTDD          ,
    ...,
    informationExchangeInitiation                    |
    cellSynchronisationInitiationTDD                 |
    cellSynchronisationReconfigurationTDD            |
    cellSynchronisationAdjustmentTDD                 |
    physicalSharedChannelReconfigurationFDD
}

NBAP-ELEMENTARY-PROCEDURES-CLASS-2 NBAP-ELEMENTARY-PROCEDURE ::= {
    resourceStatusIndication                         |
    auditRequired                                    |
    commonMeasurementReport                          |
    commonMeasurementTermination                     |
    commonMeasurementFailure                         |
    synchronisedRadioLinkReconfigurationCommit       |
    synchronisedRadioLinkReconfigurationCancellation |
    radioLinkFailure                                 |
    radioLinkPreemption                              |
    radioLinkRestoration                             |
    dedicatedMeasurementReport                       |
    dedicatedMeasurementTermination                  |
    dedicatedMeasurementFailure                      |
    downlinkPowerControlFDD                          |
    downlinkPowerTimeslotControl                     |
    compressedModeCommand                            |
    unblockResource                                  |
    errorIndicationForDedicated                      |
    errorIndicationForCommon                         |
    privateMessageForDedicated                       |
    privateMessageForCommon                          ,
    ...,
    informationReporting                             |
    informationExchangeTermination                   |
    informationExchangeFailure                       |
    cellSynchronisationReportingTDD                  |
    cellSynchronisationTerminationTDD                |
```

```
    cellSynchronisationFailureTDD                            |
    BearerRearrangement                                      |
    radioLinkActivationFDD                                   |
    radioLinkActivationTDD
}

-- ***************************************************************
--
-- Interface Elementary Procedures
--
-- ***************************************************************

-- Class 1

-- *** CellSetup (FDD) ***
cellSetupFDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      CellSetupRequestFDD
    SUCCESSFUL OUTCOME      CellSetupResponse
    UNSUCCESSFUL OUTCOME    CellSetupFailure
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID            { procedureCode id-cellSetup, ddMode fdd }
    CRITICALITY             reject
}

-- *** CellSetup (TDD) ***
cellSetupTDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      CellSetupRequestTDD
    SUCCESSFUL OUTCOME      CellSetupResponse
    UNSUCCESSFUL OUTCOME    CellSetupFailure
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID            { procedureCode id-cellSetup, ddMode tdd }
    CRITICALITY             reject
}

-- *** CellReconfiguration(FDD) ***
cellReconfigurationFDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      CellReconfigurationRequestFDD
    SUCCESSFUL OUTCOME      CellReconfigurationResponse
    UNSUCCESSFUL OUTCOME    CellReconfigurationFailure
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID            { procedureCode id-cellReconfiguration, ddMode fdd }
    CRITICALITY             reject
}

-- *** CellReconfiguration(TDD) ***
cellReconfigurationTDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      CellReconfigurationRequestTDD
    SUCCESSFUL OUTCOME      CellReconfigurationResponse
    UNSUCCESSFUL OUTCOME    CellReconfigurationFailure
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID            { procedureCode id-cellReconfiguration, ddMode tdd }
    CRITICALITY             reject
}
```

```
-- *** CellDeletion ***
cellDeletion NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE       CellDeletionRequest
    SUCCESSFUL OUTCOME       CellDeletionResponse
    MESSAGE DISCRIMINATOR    common
    PROCEDURE ID             { procedureCode id-cellDeletion, ddMode common }
    CRITICALITY              reject
}

-- *** CommonTransportChannelSetup (FDD) ***
commonTransportChannelSetupFDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE       CommonTransportChannelSetupRequestFDD
    SUCCESSFUL OUTCOME       CommonTransportChannelSetupResponse
    UNSUCCESSFUL OUTCOME     CommonTransportChannelSetupFailure
    MESSAGE DISCRIMINATOR    common
    PROCEDURE ID             { procedureCode id-commonTransportChannelSetup, ddMode fdd }
    CRITICALITY              reject
}

-- *** CommonTransportChannelSetup (TDD) ***
commonTransportChannelSetupTDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE       CommonTransportChannelSetupRequestTDD
    SUCCESSFUL OUTCOME       CommonTransportChannelSetupResponse
    UNSUCCESSFUL OUTCOME     CommonTransportChannelSetupFailure
    MESSAGE DISCRIMINATOR    common
    PROCEDURE ID             { procedureCode id-commonTransportChannelSetup, ddMode tdd }
    CRITICALITY              reject
}

-- *** CommonTransportChannelReconfigure (FDD) ***
commonTransportChannelReconfigureFDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE       CommonTransportChannelReconfigurationRequestFDD
    SUCCESSFUL OUTCOME       CommonTransportChannelReconfigurationResponse
    UNSUCCESSFUL OUTCOME     CommonTransportChannelReconfigurationFailure
    MESSAGE DISCRIMINATOR    common
    PROCEDURE ID             { procedureCode id-commonTransportChannelReconfigure, ddMode fdd }
    CRITICALITY              reject
}

-- *** CommonTransportChannelReconfigure (TDD) ***
commonTransportChannelReconfigureTDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE       CommonTransportChannelReconfigurationRequestTDD
    SUCCESSFUL OUTCOME       CommonTransportChannelReconfigurationResponse
    UNSUCCESSFUL OUTCOME     CommonTransportChannelReconfigurationFailure
    MESSAGE DISCRIMINATOR    common
    PROCEDURE ID             { procedureCode id-commonTransportChannelReconfigure, ddMode tdd }
    CRITICALITY              reject
}

-- *** CommonTransportChannelDelete ***
commonTransportChannelDelete NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE       CommonTransportChannelDeletionRequest
    SUCCESSFUL OUTCOME       CommonTransportChannelDeletionResponse
    MESSAGE DISCRIMINATOR    common
```

```
    PROCEDURE ID              { procedureCode id-commonTransportChannelDelete, ddMode common }
    CRITICALITY               reject
}

-- *** Audit ***
audit NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE        AuditRequest
    SUCCESSFUL OUTCOME        AuditResponse
    UNSUCCESSFUL OUTCOME      AuditFailure
    MESSAGE DISCRIMINATOR     common
    PROCEDURE ID              { procedureCode id-audit, ddMode common }
    CRITICALITY               reject
}

-- *** BlockResourceRequest ***
blockResource NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE        BlockResourceRequest
    SUCCESSFUL OUTCOME        BlockResourceResponse
    UNSUCCESSFUL OUTCOME      BlockResourceFailure
    MESSAGE DISCRIMINATOR     common
    PROCEDURE ID              { procedureCode id-blockResource, ddMode common }
    CRITICALITY               reject
}

-- *** RadioLinkSetup (FDD) ***
radioLinkSetupFDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE        RadioLinkSetupRequestFDD
    SUCCESSFUL OUTCOME        RadioLinkSetupResponseFDD
    UNSUCCESSFUL OUTCOME      RadioLinkSetupFailureFDD
    MESSAGE DISCRIMINATOR     common
    PROCEDURE ID              { procedureCode id-radioLinkSetup, ddMode fdd }
    CRITICALITY               reject
}

-- *** RadioLinkSetup (TDD) ***
radioLinkSetupTDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE        RadioLinkSetupRequestTDD
    SUCCESSFUL OUTCOME        RadioLinkSetupResponseTDD
    UNSUCCESSFUL OUTCOME      RadioLinkSetupFailureTDD
    MESSAGE DISCRIMINATOR     common
    PROCEDURE ID              { procedureCode id-radioLinkSetup, ddMode tdd }
    CRITICALITY               reject
}

-- *** SystemInformationUpdate ***
systemInformationUpdate NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE        SystemInformationUpdateRequest
    SUCCESSFUL OUTCOME        SystemInformationUpdateResponse
    UNSUCCESSFUL OUTCOME      SystemInformationUpdateFailure
    MESSAGE DISCRIMINATOR     common
    PROCEDURE ID              { procedureCode id-systemInformationUpdate, ddMode common }
    CRITICALITY               reject
}
```

```
-- *** Reset ***
reset NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      ResetRequest
    SUCCESSFUL OUTCOME      ResetResponse
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID            { procedureCode id-reset, ddMode common }
    CRITICALITY             reject
}

-- *** CommonMeasurementInitiation ***
commonMeasurementInitiation NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      CommonMeasurementInitiationRequest
    SUCCESSFUL OUTCOME      CommonMeasurementInitiationResponse
    UNSUCCESSFUL OUTCOME    CommonMeasurementInitiationFailure
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID            { procedureCode id-commonMeasurementInitiation, ddMode common }
    CRITICALITY             reject
}

-- *** RadioLinkAddition (FDD) ***
radioLinkAdditionFDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      RadioLinkAdditionRequestFDD
    SUCCESSFUL OUTCOME      RadioLinkAdditionResponseFDD
    UNSUCCESSFUL OUTCOME    RadioLinkAdditionFailureFDD
    MESSAGE DISCRIMINATOR   dedicated
    PROCEDURE ID            { procedureCode id-radioLinkAddition, ddMode fdd }
    CRITICALITY             reject
}

-- *** RadioLinkAddition (TDD) ***
radioLinkAdditionTDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      RadioLinkAdditionRequestTDD
    SUCCESSFUL OUTCOME      RadioLinkAdditionResponseTDD
    UNSUCCESSFUL OUTCOME    RadioLinkAdditionFailureTDD
    MESSAGE DISCRIMINATOR   dedicated
    PROCEDURE ID            { procedureCode id-radioLinkAddition, ddMode tdd }
    CRITICALITY             reject
}

-- *** RadioLinkDeletion     ***
radioLinkDeletion NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      RadioLinkDeletionRequest
    SUCCESSFUL OUTCOME      RadioLinkDeletionResponse
    MESSAGE DISCRIMINATOR   dedicated
    PROCEDURE ID            { procedureCode id-radioLinkDeletion, ddMode common }
    CRITICALITY             reject
}

-- *** SynchronisedRadioLinkReconfigurationPreparation (FDD) ***
synchronisedRadioLinkReconfigurationPreparationFDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      RadioLinkReconfigurationPrepareFDD
    SUCCESSFUL OUTCOME      RadioLinkReconfigurationReady
```

*ETSI*

```
    UNSUCCESSFUL OUTCOME    RadioLinkReconfigurationFailure
    MESSAGE DISCRIMINATOR   dedicated
    PROCEDURE ID            { procedureCode id-synchronisedRadioLinkReconfigurationPreparation, ddMode fdd }
    CRITICALITY             reject
}

-- *** SynchronisedRadioLinkReconfigurationPreparation (TDD) ***
synchronisedRadioLinkReconfigurationPreparationTDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      RadioLinkReconfigurationPrepareTDD
    SUCCESSFUL OUTCOME      RadioLinkReconfigurationReady
    UNSUCCESSFUL OUTCOME    RadioLinkReconfigurationFailure
    MESSAGE DISCRIMINATOR   dedicated
    PROCEDURE ID            { procedureCode id-synchronisedRadioLinkReconfigurationPreparation, ddMode tdd }
    CRITICALITY             reject
}

-- *** UnSynchronisedRadioLinkReconfiguration (FDD) ***
unSynchronisedRadioLinkReconfigurationFDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      RadioLinkReconfigurationRequestFDD
    SUCCESSFUL OUTCOME      RadioLinkReconfigurationResponse
    UNSUCCESSFUL OUTCOME    RadioLinkReconfigurationFailure
    MESSAGE DISCRIMINATOR   dedicated
    PROCEDURE ID            { procedureCode id-unSynchronisedRadioLinkReconfiguration, ddMode fdd }
    CRITICALITY             reject
}

-- *** UnSynchronisedRadioLinkReconfiguration (TDD) ***
unSynchronisedRadioLinkReconfigurationTDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      RadioLinkReconfigurationRequestTDD
    SUCCESSFUL OUTCOME      RadioLinkReconfigurationResponse
    UNSUCCESSFUL OUTCOME    RadioLinkReconfigurationFailure
    MESSAGE DISCRIMINATOR   dedicated
    PROCEDURE ID            { procedureCode id-unSynchronisedRadioLinkReconfiguration, ddMode tdd }
    CRITICALITY             reject
}

-- *** DedicatedMeasurementInitiation  ***
dedicatedMeasurementInitiation NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      DedicatedMeasurementInitiationRequest
    SUCCESSFUL OUTCOME      DedicatedMeasurementInitiationResponse
    UNSUCCESSFUL OUTCOME    DedicatedMeasurementInitiationFailure
    MESSAGE DISCRIMINATOR   dedicated
    PROCEDURE ID            { procedureCode id-dedicatedMeasurementInitiation, ddMode common }
    CRITICALITY             reject
}

-- *** PhysicalSharedChannelReconfiguration (FDD) ***
physicalSharedChannelReconfigurationFDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE  PhysicalSharedChannelReconfigurationRequestFDD
    SUCCESSFUL OUTCOME  PhysicalSharedChannelReconfigurationResponse
    UNSUCCESSFUL OUTCOME    PhysicalSharedChannelReconfigurationFailure
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID            { procedureCode id-physicalSharedChannelReconfiguration, ddMode fdd }
    CRITICALITY         reject
```

```
}

-- *** PhysicalSharedChannelReconfiguration (TDD) ***
physicalSharedChannelReconfiguration NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE  PhysicalSharedChannelReconfigurationRequestTDD
    SUCCESSFUL OUTCOME  PhysicalSharedChannelReconfigurationResponseTDD
    UNSUCCESSFUL OUTCOME    PhysicalSharedChannelReconfigurationFailureTDD
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID        { procedureCode id-physicalSharedChannelReconfiguration, ddMode tdd }
    CRITICALITY         reject
}

--*** InformationExchangeInitiation ***
informationExchangeInitiation NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      InformationExchangeInitiationRequest
    SUCCESSFUL OUTCOME      InformationExchangeInitiationResponse
    UNSUCCESSFUL OUTCOME    InformationExchangeInitiationFailure
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID            { procedureCode id-informationExchangeInitiation,   ddMode common }
    CRITICALITY             reject
}

-- *** CellSynchronisationInitiation (TDD only) ***
cellSynchronisationInitiationTDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE  CellSynchronisationInitiationRequestTDD
    SUCCESSFUL OUTCOME  CellSynchronisationInitiationResponseTDD
    UNSUCCESSFUL OUTCOME    CellSynchronisationInitiationFailureTDD
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID        { procedureCode id-cellSynchronisationInitiation, ddMode tdd }
    CRITICALITY         reject
}

-- *** CellSynchronisationReconfiguration (TDD only) ***
cellSynchronisationReconfigurationTDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE  CellSynchronisationReconfigurationRequestTDD
    SUCCESSFUL OUTCOME  CellSynchronisationReconfigurationResponseTDD
    UNSUCCESSFUL OUTCOME    CellSynchronisationReconfigurationFailureTDD
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID        { procedureCode id-cellSynchronisationReconfiguration, ddMode tdd }
    CRITICALITY         reject
}

-- *** CellSynchronisationAdjustment (TDD only) ***
cellSynchronisationAdjustmentTDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE  CellSynchronisationAdjustmentRequestTDD
    SUCCESSFUL OUTCOME  CellSynchronisationAdjustmentResponseTDD
    UNSUCCESSFUL OUTCOME    CellSynchronisationAdjustmentFailureTDD
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID        { procedureCode id-cellSynchronisationAdjustment, ddMode tdd }
    CRITICALITY         reject
}

-- Class 2
```

```
-- *** ResourceStatusIndication ***
resourceStatusIndication NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      ResourceStatusIndication
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID            { procedureCode id-resourceStatusIndication, ddMode common }
    CRITICALITY             ignore
}

-- *** AuditRequired ***
auditRequired NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      AuditRequiredIndication
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID            { procedureCode id-auditRequired, ddMode common }
    CRITICALITY             ignore
}

-- *** CommonMeasurementReport ***
commonMeasurementReport NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      CommonMeasurementReport
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID            { procedureCode id-commonMeasurementReport, ddMode common }
    CRITICALITY             ignore
}

-- *** CommonMeasurementTermination ***
commonMeasurementTermination NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      CommonMeasurementTerminationRequest
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID            { procedureCode id-commonMeasurementTermination, ddMode common }
    CRITICALITY             ignore
}

-- *** CommonMeasurementFailure ***
commonMeasurementFailure NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      CommonMeasurementFailureIndication
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID            { procedureCode id-commonMeasurementFailure, ddMode common }
    CRITICALITY             ignore
}

-- *** SynchronisedRadioLinkReconfirurationCommit ***
synchronisedRadioLinkReconfigurationCommit NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      RadioLinkReconfigurationCommit
    MESSAGE DISCRIMINATOR   dedicated
    PROCEDURE ID            { procedureCode id-synchronisedRadioLinkReconfigurationCommit, ddMode common }
    CRITICALITY             ignore
}

-- *** SynchronisedRadioReconfigurationCancellation ***
synchronisedRadioLinkReconfigurationCancellation NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      RadioLinkReconfigurationCancel
    MESSAGE DISCRIMINATOR   dedicated
    PROCEDURE ID            { procedureCode id-synchronisedRadioLinkReconfigurationCancellation, ddMode common }
    CRITICALITY             ignore
```

```
}

-- *** RadioLinkFailure ***
radioLinkFailure NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      RadioLinkFailureIndication
    MESSAGE DISCRIMINATOR   dedicated
    PROCEDURE ID            { procedureCode id-radioLinkFailure, ddMode common }
    CRITICALITY             ignore
}

-- *** RadioLinkPreemption ***
radioLinkPreemption NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE  RadioLinkPreemptionRequiredIndication
    MESSAGE DISCRIMINATOR   dedicated
    PROCEDURE ID        { procedureCode id-radioLinkPreemption, ddMode common }
    CRITICALITY     ignore
}

-- *** RadioLinkRestoration ***
radioLinkRestoration NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      RadioLinkRestoreIndication
    MESSAGE DISCRIMINATOR   dedicated
    PROCEDURE ID            { procedureCode id-radioLinkRestoration, ddMode common }
    CRITICALITY             ignore
}

-- *** DedicatedMeasurementReport ***
dedicatedMeasurementReport NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      DedicatedMeasurementReport
    MESSAGE DISCRIMINATOR   dedicated
    PROCEDURE ID            { procedureCode id-dedicatedMeasurementReport, ddMode common }
    CRITICALITY             ignore
}

-- *** DedicatedMeasurementTermination  ***
dedicatedMeasurementTermination NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      DedicatedMeasurementTerminationRequest
    MESSAGE DISCRIMINATOR   dedicated
    PROCEDURE ID            { procedureCode id-dedicatedMeasurementTermination, ddMode common }
    CRITICALITY             ignore
}

-- *** DedicatedMeasurementFailure ***
dedicatedMeasurementFailure NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      DedicatedMeasurementFailureIndication
    MESSAGE DISCRIMINATOR   dedicated
    PROCEDURE ID            { procedureCode id-dedicatedMeasurementFailure, ddMode common }
    CRITICALITY             ignore
}

-- *** DLPowerControl (FDD only) ***
downlinkPowerControlFDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      DL-PowerControlRequest
    MESSAGE DISCRIMINATOR   dedicated
```

```
    PROCEDURE ID            { procedureCode id-downlinkPowerControl, ddMode fdd }
    CRITICALITY             ignore
}

-- *** DLPowerTimeslotControl (TDD only) ***
downlinkPowerTimeslotControl NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      DL-PowerTimeslotControlRequest
    MESSAGE DISCRIMINATOR   dedicated
    PROCEDURE ID            { procedureCode id-downlinkPowerTimeslotControl, ddMode tdd }
    CRITICALITY             ignore
}

-- *** CompressedModeCommand (FDD only) ***
compressedModeCommand NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      CompressedModeCommand
    MESSAGE DISCRIMINATOR   dedicated
    PROCEDURE ID            { procedureCode id-compressedModeCommand, ddMode fdd }
    CRITICALITY             ignore
}

-- *** UnblockResourceIndication ***
unblockResource NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      UnblockResourceIndication
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID            { procedureCode id-unblockResource, ddMode common }
    CRITICALITY             ignore
}

-- *** ErrorIndication for Dedicated procedures ***
errorIndicationForDedicated NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      ErrorIndication
    MESSAGE DISCRIMINATOR   dedicated
    PROCEDURE ID            { procedureCode id-errorIndicationForDedicated, ddMode common }
    CRITICALITY             ignore
}

-- *** ErrorIndication for Common procedures ***
errorIndicationForCommon NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      ErrorIndication
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID            { procedureCode id-errorIndicationForCommon, ddMode common }
    CRITICALITY             ignore
}

-- *** CellSynchronisationReporting (TDD only) ***
cellSynchronisationReportingTDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      CellSynchronisationReportTDD
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID            { procedureCode id-cellSynchronisationReporting, ddMode tdd }
    CRITICALITY             ignore
}

-- *** CellSynchronisationTermination (TDD only) ***
cellSynchronisationTerminationTDD NBAP-ELEMENTARY-PROCEDURE ::= {
```

```
    INITIATING MESSAGE      CellSynchronisationTerminationRequestTDD
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID            { procedureCode id-cellSynchronisationTermination, ddMode tdd }
    CRITICALITY             ignore
}

-- *** CellSynchronisationFailure (TDD only) ***
cellSynchronisationFailureTDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      CellSynchronisationFailureIndicationTDD
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID            { procedureCode id-cellSynchronisationFailure, ddMode tdd }
    CRITICALITY             ignore
}

-- *** PrivateMessage for Dedicated procedures ***
privateMessageForDedicated NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      PrivateMessage
    MESSAGE DISCRIMINATOR   dedicated
    PROCEDURE ID            { procedureCode id-privateMessageForDedicated, ddMode common }
    CRITICALITY             ignore
}

-- *** PrivateMessage for Common procedures ***
privateMessageForCommon NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      PrivateMessage
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID            { procedureCode id-privateMessageForCommon, ddMode common }
    CRITICALITY             ignore
}

-- *** InformationReporting ***
informationReporting NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      InformationReport
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID            { procedureCode id-informationReporting, ddMode common }
    CRITICALITY             ignore
}

-- *** InformationExchangeTermination ***
informationExchangeTermination NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      InformationExchangeTerminationRequest
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID            { procedureCode id-informationExchangeTermination, ddMode common }
    CRITICALITY             ignore
}

-- *** InformationExchangeFailure ***
informationExchangeFailure NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      InformationExchangeFailureIndication
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID            { procedureCode id-informationExchangeFailure, ddMode common }
    CRITICALITY             ignore
}
```

```
-- *** BearerRearrangement ***
BearerRearrangement NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      BearerRearrangementIndication
    MESSAGE DISCRIMINATOR   dedicated
    PROCEDURE ID            { procedureCode id-BearerRearrangement, ddMode common }
    CRITICALITY             ignore
}

-- *** RadioLinkActivation (FDD) ***
radioLinkActivationFDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      RadioLinkActivationCommandFDD
    MESSAGE DISCRIMINATOR   dedicated
    PROCEDURE ID            { procedureCode id-radioLinkActivation, ddMode fdd }
    CRITICALITY             ignore
}

-- *** RadioLinkActivation (TDD) ***
radioLinkActivationTDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      RadioLinkActivationCommandTDD
    MESSAGE DISCRIMINATOR   dedicated
    PROCEDURE ID            { procedureCode id-radioLinkActivation, ddMode tdd }
    CRITICALITY             ignore
}

END
```

## 9.3.3    PDU Definitions

```
-- ***************************************************************
--
-- PDU definitions for NBAP.
--
-- ***************************************************************

NBAP-PDU-Contents {
itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
umts-Access (20) modules (3) nbap (2) version1 (1) nbap-PDU-Contents (1) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

-- ***************************************************************
--
-- IE parameter types from other modules.
--
-- ***************************************************************

IMPORTS
    Active-Pattern-Sequence-Information,
    AddorDeleteIndicator,
    AICH-Power,
```

```
        AICH-TransmissionTiming,
        AllocationRetentionPriority,
        APPreambleSignature,
        APSubChannelNumber,
        AvailabilityStatus,
        BCCH-ModificationTime,
        BindingID,
        BlockingPriorityIndicator,
        SCTD-Indicator,
        Cause,
        CCTrCH-ID,
        CDSubChannelNumbers,
        CellParameterID,
        CellSyncBurstAvailabilityIndicator,
        CellSyncBurstCode,
        CellSyncBurstCodeShift,
        CellSyncBurstRepetitionPeriod,
        CellSyncBurstSIR,
        CellSyncBurstTiming,
        CellSyncBurstTimingThreshold,
        CFN,
        Channel-Assignment-Indication,
        ChipOffset,
        C-ID,
        Closedlooptimingadjustmentmode,
        CommonChannelsCapacityConsumptionLaw,
        Compressed-Mode-Deactivation-Flag,
        CommonMeasurementAccuracy,
        CommonMeasurementType,
        CommonMeasurementValue,
        CommonMeasurementValueInformation,
        CommonPhysicalChannelID,
        Common-PhysicalChannel-Status-Information,
        Common-TransportChannel-Status-Information,
        CommonTransportChannelID,
        CommonTransportChannel-InformationResponse,
        CommunicationControlPortID,
        ConfigurationGenerationID,
        ConstantValue,
        CriticalityDiagnostics,
        CPCH-Allowed-Total-Rate,
        CPCHScramblingCodeNumber,
        CPCH-UL-DPCCH-SlotFormat,
        CRNC-CommunicationContextID,
        CSBMeasurementID,
        CSBTransmissionID,
        DCH-FDD-Information,
        DCH-InformationResponse,
        DCH-ID,
        FDD-DCHs-to-Modify,
        TDD-DCHs-to-Modify,
        DCH-TDD-Information,
        DedicatedChannelsCapacityConsumptionLaw,
        DedicatedMeasurementType,
```

```
    DedicatedMeasurementValue,
    DedicatedMeasurementValueInformation,
    DelayedActivation,
    DelayedActivationUpdate,
    DiversityControlField,
    DiversityMode,
    DL-DPCH-SlotFormat,
    DL-DPCH-TimingAdjustment,
    DL-or-Global-CapacityCredit,
    DL-Power,
    DL-PowerBalancing-Information,
    DL-PowerBalancing-ActivationIndicator,
    DLPowerAveragingWindowSize,
    DL-PowerBalancing-UpdatedIndicator,
    DL-ScramblingCode,
    DL-TimeslotISCP,
    DL-Timeslot-Information,
    DL-TimeslotLCR-Information,
    DL-TimeslotISCPInfo,
    DL-TimeslotISCPInfoLCR,
    DL-TPC-Pattern01Count,
    DPC-Mode,
    DPCH-ID,
    DSCH-ID,
    DSCH-FDD-Common-Information,
    DSCH-FDD-Information,
    DSCH-InformationResponse,
    DSCH-TDD-Information,
    DwPCH-Power,
    End-Of-Audit-Sequence-Indicator,
    EnhancedDSCHPC,
    EnhancedDSCHPCCounter,
    EnhancedDSCHPCIndicator,
    EnhancedDSCHPCWnd,
    EnhancedDSCHPowerOffset,
    FDD-DL-ChannelisationCodeNumber,
    FDD-DL-CodeInformation,
    FDD-S-CCPCH-Offset,
    FDD-TPC-DownlinkStepSize,
    FirstRLS-Indicator,
    FNReportingIndicator,
    FPACH-Power,
    FrameAdjustmentValue,
    FrameHandlingPriority,
    FrameOffset,
    HS-PDSCH-FDD-Code-Information,
    HS-SCCH-ID,
    HS-SCCH-FDD-Code-Information,
    IB-OC-ID,
    IB-SG-DATA,
    IB-SG-POS,
    IB-SG-REP,
    IB-Type,
    IndicationType,
```

```
InformationExchangeID,
InformationReportCharacteristics,
InformationType,
InnerLoopDLPCStatus,
IPDL-FDD-Parameters,
IPDL-TDD-Parameters,
IPDL-Indicator,
LimitedPowerIncrease,
Local-Cell-ID,
MaximumDL-PowerCapability,
Maximum-PDSCH-Power,
MaximumTransmissionPower,
Max-Number-of-PCPCHes,
MaxNrOfUL-DPDCHs,
MaxPRACH-MidambleShifts,
MeasurementFilterCoefficient,
MeasurementID,
MidambleAllocationMode,
MidambleShiftAndBurstType,
MidambleShiftLCR,
MinimumDL-PowerCapability,
MinSpreadingFactor,
MinUL-ChannelisationCodeLength,
MultiplexingPosition,
NEOT,
NCyclesPerSFNperiod,
NFmax,
NRepetitionsPerCyclePeriod,
N-INSYNC-IND,
N-OUTSYNC-IND,
NeighbouringCellMeasurementInformation,
NeighbouringFDDCellMeasurementInformation,
NeighbouringTDDCellMeasurementInformation,
NodeB-CommunicationContextID,
NStartMessage,
PagingIndicatorLength,
PayloadCRC-PresenceIndicator,
PCCPCH-Power,
PCP-Length,
PDSCH-CodeMapping,
PDSCHSet-ID,
PDSCH-ID,
PICH-Mode,
PICH-Power,
PowerAdjustmentType,
PowerOffset,
PowerRaiseLimit,
PRACH-Midamble,
PreambleSignatures,
PreambleThreshold,
PredictedSFNSFNDeviationLimit,
PredictedTUTRANGPSDeviationLimit,
PrimaryCPICH-Power,
PrimaryScramblingCode,
```

```
    PropagationDelay,
    SCH-TimeSlot,
    PunctureLimit,
    PUSCHSet-ID,
    PUSCH-ID,
    QE-Selector,
    RACH-SlotFormat,
    RACH-SubChannelNumbers,
    ReferenceClockAvailability,
    ReferenceSFNoffset,
    RepetitionLength,
    RepetitionPeriod,
    ReportCharacteristics,
    RequestedDataValue,
    RequestedDataValueInformation,
    ResourceOperationalState,
    RL-Set-ID,
    RL-ID,
    RL-Specific-DCH-Info,
    Received-total-wide-band-power-Value,
    AdjustmentPeriod,
    ScaledAdjustmentRatio,
    MaxAdjustmentStep,
    RNC-ID,
    ScramblingCodeNumber,
    SecondaryCCPCH-SlotFormat,
    Segment-Type,
    S-FieldLength,
    SFN,
    SFNSFNChangeLimit,
    SFNSFNDriftRate,
    SFNSFNDriftRateQuality,
    SFNSFNQuality,
    ShutdownTimer,
    SIB-Originator,
    SpecialBurstScheduling,
    SignallingBearerRequestIndicator,
    SSDT-Cell-Identity,
    SSDT-CellID-Length,
    SSDT-Indication,
    Start-Of-Audit-Sequence-Indicator,
    STTD-Indicator,
    SSDT-SupportIndicator,
    SyncCase,
    SYNCDlCodeId,
    SyncFrameNumber,
    SynchronisationReportCharacteristics,
    SynchronisationReportType,
    T-Cell,
    T-RLFAILURE,
    TDD-ChannelisationCode,
    TDD-ChannelisationCodeLCR,
    TDD-DL-Code-LCR-Information,
    TDD-DPCHOffset,
```

```
       TDD-TPC-DownlinkStepSize,
       TDD-PhysicalChannelOffset,
       TDD-UL-Code-LCR-Information,
       TFCI2-BearerInformationResponse,
       TFCI2BearerRequestIndicator,
       TFCI-Coding,
       TFCI-Presence,
       TFCI-SignallingMode,
       TFCS,
       TimeSlot,
       TimeSlotLCR,
       TimeSlotDirection,
       TimeSlotStatus,
       TimingAdjustmentValue,
       TimingAdvanceApplied,
       ToAWE,
       ToAWS,
       TransmissionDiversityApplied,
       TransmitDiversityIndicator,

       TransmissionGapPatternSequenceCodeInformation,
       Transmission-Gap-Pattern-Sequence-Information,
       TransportBearerRequestIndicator,
       TransportFormatSet,
       TransportLayerAddress,
       TSTD-Indicator,
       TUTRANGPS,
       TUTRANGPSChangeLimit,
       TUTRANGPSDriftRate,
       TUTRANGPSDriftRateQuality,
       TUTRANGPSQuality,
       UARFCN,
       UC-Id,
       USCH-Information,
       USCH-InformationResponse,
       UL-CapacityCredit,
       UL-DPCCH-SlotFormat,
       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,
       UL-TimeslotISCP-Value,
       UL-TimeslotISCP-Value-IncrDecrThres,
       USCH-ID,
       HSDSCH-FDD-Information,
       HSDSCH-FDD-Information-Response,
       HSDSCH-Information-to-Modify,
       HSDSCH-MACdFlow-ID,
       HSDSCH-RNTI,
       HSDSCH-TDD-Information,
       HSDSCH-TDD-Information-Response,
```

```
    PrimaryCCPCH-RSCP
FROM NBAP-IEs

    PrivateIE-Container{},
    ProtocolExtensionContainer{},
    ProtocolIE-Container{},
    ProtocolIE-Single-Container{},
    ProtocolIE-ContainerList{},
    NBAP-PRIVATE-IES,
    NBAP-PROTOCOL-IES,
    NBAP-PROTOCOL-EXTENSION
FROM NBAP-Containers

    id-Active-Pattern-Sequence-Information,
    id-AdjustmentRatio,
    id-AICH-Information,
    id-AICH-ParametersListIE-CTCH-ReconfRqstFDD,
    id-AP-AICH-Information,
    id-AP-AICH-ParametersListIE-CTCH-ReconfRqstFDD,
    id-BCH-Information,
    id-BCCH-ModificationTime,
    id-bindingID,
    id-BlockingPriorityIndicator,
    id-Cause,
    id-CauseLevel-PSCH-ReconfFailureTDD,
    id-CauseLevel-RL-AdditionFailureFDD,
    id-CauseLevel-RL-AdditionFailureTDD,
    id-CauseLevel-RL-ReconfFailure,
    id-CauseLevel-RL-SetupFailureFDD,
    id-CauseLevel-RL-SetupFailureTDD,
    id-CauseLevel-SyncAdjustmntFailureTDD,
    id-CCP-InformationItem-AuditRsp,
    id-CCP-InformationList-AuditRsp,
    id-CCP-InformationItem-ResourceStatusInd,
    id-CCTrCH-InformationItem-RL-FailureInd,
    id-CCTrCH-InformationItem-RL-RestoreInd,
    id-CCTrCH-Initial-DL-Power-RL-AdditionRqstTDD,
    id-CCTrCH-Initial-DL-Power-RL-ReconfPrepTDD,
    id-CCTrCH-Initial-DL-Power-RL-SetupRqstTDD,
    id-CDCA-ICH-Information,
    id-CDCA-ICH-ParametersListIE-CTCH-ReconfRqstFDD,
    id-CellAdjustmentInfo-SyncAdjustmntRqstTDD,
    id-CellAdjustmentInfoItem-SyncAdjustmentRqstTDD,
    id-Cell-InformationItem-AuditRsp,
    id-Cell-InformationItem-ResourceStatusInd,
    id-Cell-InformationList-AuditRsp,
    id-CellParameterID,
    id-CellSyncBurstTransInit-CellSyncInitiationRqstTDD,
    id-CellSyncBurstMeasureInit-CellSyncInitiationRqstTDD,
    id-cellSyncBurstRepetitionPeriod,
    id-CellSyncBurstTransReconfiguration-CellSyncReconfRqstTDD,
    id-CellSyncBurstTransReconfInfo-CellSyncReconfRqstTDD,
    id-CellSyncBurstMeasReconfiguration-CellSyncReconfRqstTDD,
    id-CellSyncBurstMeasInfoList-CellSyncReconfRqstTDD,
```

```
id-CellSyncBurstInfoList-CellSyncReconfRqstTDD,
id-CellSyncInfo-CellSyncReprtTDD,
id-CFN,
id-CFNReportingIndicator,
id-C-ID,
id-Closed-Loop-Timing-Adjustment-Mode,
id-CommonMeasurementAccuracy,
id-CommonMeasurementObjectType-CM-Rprt,
id-CommonMeasurementObjectType-CM-Rqst,
id-CommonMeasurementObjectType-CM-Rsp,
id-CommonMeasurementType,
id-CommonPhysicalChannelID,
id-CommonPhysicalChannelType-CTCH-ReconfRqstFDD,
id-CommonPhysicalChannelType-CTCH-SetupRqstFDD,
id-CommonPhysicalChannelType-CTCH-SetupRqstTDD,
id-CommunicationContextInfoItem-Reset,
id-CommunicationControlPortID,
id-CommunicationControlPortInfoItem-Reset,
id-Compressed-Mode-Deactivation-Flag,
id-ConfigurationGenerationID,
id-CPCH-Information,
id-CPCH-Parameters-CTCH-SetupRsp,
id-CPCH-ParametersListIE-CTCH-ReconfRqstFDD,
id-CRNC-CommunicationContextID,
id-CriticalityDiagnostics,
id-CSBTransmissionID,
id-CSBMeasurementID,
id-DCHs-to-Add-FDD,
id-DCHs-to-Add-TDD,
id-DCH-AddList-RL-ReconfPrepTDD,
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-InformationResponse,
id-DCH-RearrangeList-Bearer-RearrangeInd,
id-DSCH-RearrangeList-Bearer-RearrangeInd,
id-FDD-DCHs-to-Modify,
id-TDD-DCHs-to-Modify,
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-DL-CCTrCH-InformationAddList-RL-ReconfPrepTDD,
id-DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD,
id-DL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD,
id-DL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD,
```

```
        id-DL-CCTrCH-InformationItem-RL-SetupRqstTDD,
        id-DL-CCTrCH-InformationList-RL-AdditionRqstTDD,
        id-DL-CCTrCH-InformationList-RL-SetupRqstTDD,
        id-DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD,
        id-DL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD,
        id-DL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD,
        id-DL-DPCH-InformationAddListIE-RL-ReconfPrepTDD,
        id-DL-DPCH-InformationItem-RL-AdditionRqstTDD,
        id-DL-DPCH-InformationList-RL-SetupRqstTDD,
        id-DL-DPCH-InformationModify-AddListIE-RL-ReconfPrepTDD,
        id-DL-DPCH-InformationModify-DeleteListIE-RL-ReconfPrepTDD,
        id-DL-DPCH-InformationModify-ModifyListIE-RL-ReconfPrepTDD,
        id-DL-DPCH-Information-RL-ReconfPrepFDD,
        id-DL-DPCH-Information-RL-ReconfRqstFDD,
        id-DL-DPCH-Information-RL-SetupRqstFDD,
        id-DL-DPCH-TimingAdjustment,
        id-DL-PowerBalancing-Information,
        id-DL-PowerBalancing-ActivationIndicator,
        id-DL-ReferencePowerInformationItem-DL-PC-Rqst,
        id-DL-PowerBalancing-UpdatedIndicator,
        id-DLReferencePower,
        id-DLReferencePowerList-DL-PC-Rqst,
        id-DL-TPC-Pattern01Count,
        id-DPC-Mode,
        id-DPCHConstant,
        id-DSCH-AddItem-RL-ReconfPrepFDD,
        id-DSCHs-to-Add-FDD,
        id-DSCH-DeleteItem-RL-ReconfPrepFDD,
        id-DSCH-DeleteList-RL-ReconfPrepFDD,
        id-DSCHs-to-Add-TDD,
        id-DSCH-Information-DeleteList-RL-ReconfPrepTDD,
        id-DSCH-Information-ModifyList-RL-ReconfPrepTDD,
        id-DSCH-InformationResponse,
        id-DSCH-FDD-Information,
        id-DSCH-FDD-Common-Information,
        id-DSCH-TDD-Information,
        id-DSCH-ModifyItem-RL-ReconfPrepFDD,
        id-DSCH-ModifyList-RL-ReconfPrepFDD,
        id-End-Of-Audit-Sequence-Indicator,
        id-EnhancedDSCHPC,
        id-EnhancedDSCHPCIndicator,
        id-FACH-Information,
        id-FACH-ParametersList-CTCH-ReconfRqstTDD,
        id-FACH-ParametersList-CTCH-SetupRsp,
        id-FACH-ParametersListIE-CTCH-ReconfRqstFDD,
        id-FACH-ParametersListIE-CTCH-SetupRqstFDD,
        id-FACH-ParametersListIE-CTCH-SetupRqstTDD,
        id-IndicationType-ResourceStatusInd,
        id-InformationExchangeID,
        id-InformationExchangeObjectType-InfEx-Rqst,
        id-InformationExchangeObjectType-InfEx-Rsp,
        id-InformationExchangeObjectType-InfEx-Rprt,
        id-InformationReportCharacteristics,
        id-InformationType,
```

```
    id-InitDL-Power,
    id-InnerLoopDLPCStatus,
    id-IntStdPhCellSyncInfoItem-CellSyncReprtTDD,
    id-IPDLParameter-Information-Cell-ReconfRqstFDD,
    id-IPDLParameter-Information-Cell-SetupRqstFDD,
    id-IPDLParameter-Information-Cell-ReconfRqstTDD,
    id-IPDLParameter-Information-Cell-SetupRqstTDD,
    id-LateEntranceCellSyncInfoItem-CellSyncReprtTDD,
    id-Limited-power-increase-information-Cell-SetupRqstFDD,
    id-Local-Cell-ID,
    id-Local-Cell-Group-InformationItem-AuditRsp,
    id-Local-Cell-Group-InformationItem-ResourceStatusInd,
    id-Local-Cell-Group-InformationItem2-ResourceStatusInd,
    id-Local-Cell-Group-InformationList-AuditRsp,
    id-Local-Cell-InformationItem-AuditRsp,
    id-Local-Cell-InformationItem-ResourceStatusInd,
    id-Local-Cell-InformationItem2-ResourceStatusInd,
    id-Local-Cell-InformationList-AuditRsp,
    id-AdjustmentPeriod,
    id-MaxAdjustmentStep,
    id-MaximumTransmissionPower,
    id-MeasurementFilterCoefficient,
    id-MeasurementID,
    id-MIB-SB-SIB-InformationList-SystemInfoUpdateRqst,
    id-NCyclesPerSFNperiod,
    id-NeighbouringCellMeasurementInformation,
    id-NodeB-CommunicationContextID,
    id-NRepetitionsPerCyclePeriod,
    id-P-CCPCH-Information,
    id-P-CPICH-Information,
    id-P-SCH-Information,
    id-PCCPCH-Information-Cell-ReconfRqstTDD,
    id-PCCPCH-Information-Cell-SetupRqstTDD,
    id-PCH-Parameters-CTCH-ReconfRqstTDD,
    id-PCH-Parameters-CTCH-SetupRsp,
    id-PCH-ParametersItem-CTCH-ReconfRqstFDD,
    id-PCH-ParametersItem-CTCH-SetupRqstFDD,
    id-PCH-ParametersItem-CTCH-SetupRqstTDD,
    id-PCH-Information,
    id-PCPCH-Information,
    id-PICH-ParametersItem-CTCH-ReconfRqstFDD,
    id-PDSCH-Information-AddListIE-PSCH-ReconfRqst,
    id-PDSCH-Information-Cell-SetupRqstFDD,
    id-PDSCH-Information-Cell-ReconfRqstFDD,
    id-PDSCH-Information-ModifyListIE-PSCH-ReconfRqst,
    id-PDSCHSets-AddList-PSCH-ReconfRqst,
    id-PDSCHSets-DeleteList-PSCH-ReconfRqst,
    id-PDSCHSets-ModifyList-PSCH-ReconfRqst,
    id-PICH-Information,
    id-PICH-Parameters-CTCH-ReconfRqstTDD,
    id-PICH-ParametersItem-CTCH-SetupRqstTDD,
    id-PowerAdjustmentType,
    id-Power-Local-Cell-Group-InformationItem-AuditRsp,
    id-Power-Local-Cell-Group-InformationItem-ResourceStatusInd,
```

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        id-Power-Local-Cell-Group-InformationItem2-ResourceStatusInd,
        id-Power-Local-Cell-Group-InformationList-AuditRsp,
        id-Power-Local-Cell-Group-InformationList-ResourceStatusInd,
        id-Power-Local-Cell-Group-InformationList2-ResourceStatusInd,
        id-Power-Local-Cell-Group-ID,
        id-PRACH-Information,
        id-PRACHConstant,
        id-PRACH-ParametersItem-CTCH-SetupRqstTDD,
        id-PRACH-ParametersListIE-CTCH-ReconfRqstFDD,
        id-PrimaryCCPCH-Information-Cell-ReconfRqstFDD,
        id-PrimaryCCPCH-Information-Cell-SetupRqstFDD,
        id-PrimaryCPICH-Information-Cell-ReconfRqstFDD,
        id-PrimaryCPICH-Information-Cell-SetupRqstFDD,
        id-PrimarySCH-Information-Cell-ReconfRqstFDD,
        id-PrimarySCH-Information-Cell-SetupRqstFDD,
        id-PrimaryScramblingCode,
        id-SCH-Information-Cell-ReconfRqstTDD,
        id-SCH-Information-Cell-SetupRqstTDD,
        id-PUSCH-Information-AddListIE-PSCH-ReconfRqst,
        id-PUSCH-Information-ModifyListIE-PSCH-ReconfRqst,
        id-PUSCHConstant,
        id-PUSCHSets-AddList-PSCH-ReconfRqst,
        id-PUSCHSets-DeleteList-PSCH-ReconfRqst,
        id-PUSCHSets-ModifyList-PSCH-ReconfRqst,
        id-RACH-Information,
        id-RACH-Parameters-CTCH-SetupRsp,
        id-RACH-ParametersItem-CTCH-SetupRqstFDD,
        id-RACH-ParameterItem-CTCH-SetupRqstTDD,
        id-ReferenceClockAvailability,
        id-ReferenceSFNoffset,
        id-ReportCharacteristics,
        id-Reporting-Object-RL-FailureInd,
        id-Reporting-Object-RL-RestoreInd,
        id-ResetIndicator,
        id-RL-InformationItem-DM-Rprt,
        id-RL-InformationItem-DM-Rqst,
        id-RL-InformationItem-DM-Rsp,
        id-RL-InformationItem-RL-AdditionRqstFDD,
        id-RL-informationItem-RL-DeletionRqst,
        id-RL-InformationItem-RL-FailureInd,
        id-RL-InformationItem-RL-PreemptRequiredInd,
        id-RL-InformationItem-RL-ReconfPrepFDD,
        id-RL-InformationItem-RL-ReconfRqstFDD,
        id-RL-InformationItem-RL-RestoreInd,
        id-RL-InformationItem-RL-SetupRqstFDD,
        id-RL-InformationList-RL-AdditionRqstFDD,
        id-RL-informationList-RL-DeletionRqst,
        id-RL-InformationList-RL-PreemptRequiredInd,
        id-RL-InformationList-RL-ReconfPrepFDD,
        id-RL-InformationList-RL-ReconfRqstFDD,
        id-RL-InformationList-RL-SetupRqstFDD,
        id-RL-InformationResponseItem-RL-AdditionRspFDD,
        id-RL-InformationResponseItem-RL-ReconfReady,
        id-RL-InformationResponseItem-RL-ReconfRsp,
```

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        id-RL-InformationResponseItem-RL-SetupRspFDD,
        id-RL-InformationResponseList-RL-AdditionRspFDD,
        id-RL-InformationResponseList-RL-ReconfReady,
        id-RL-InformationResponseList-RL-ReconfRsp,
        id-RL-InformationResponseList-RL-SetupRspFDD,
        id-RL-InformationResponse-RL-AdditionRspTDD,
        id-RL-InformationResponse-RL-SetupRspTDD,
        id-RL-Information-RL-AdditionRqstTDD,
        id-RL-Information-RL-ReconfRqstTDD,
        id-RL-Information-RL-ReconfPrepTDD,
        id-RL-Information-RL-SetupRqstTDD,
        id-RL-ReconfigurationFailureItem-RL-ReconfFailure,
        id-RL-Set-InformationItem-DM-Rprt,
        id-RL-Set-InformationItem-DM-Rsp,
        id-RL-Set-InformationItem-RL-FailureInd,
        id-RL-Set-InformationItem-RL-RestoreInd,
        id-RL-Specific-DCH-Info,
        id-S-CCPCH-Information,
        id-S-CPICH-Information,
        id-SCH-Information,
        id-S-SCH-Information,
        id-Secondary-CCPCHListIE-CTCH-ReconfRqstTDD,
        id-Secondary-CCPCH-parameterListIE-CTCH-SetupRqstTDD,
        id-Secondary-CCPCH-Parameters-CTCH-ReconfRqstTDD,
        id-SecondaryCPICH-InformationItem-Cell-ReconfRqstFDD,
        id-SecondaryCPICH-InformationItem-Cell-SetupRqstFDD,
        id-SecondaryCPICH-InformationList-Cell-ReconfRqstFDD,
        id-SecondaryCPICH-InformationList-Cell-SetupRqstFDD,
        id-SecondarySCH-Information-Cell-ReconfRqstFDD,
        id-SecondarySCH-Information-Cell-SetupRqstFDD,
        id-SegmentInformationListIE-SystemInfoUpdate,
        id-SFN,
        id-SFNReportingIndicator,
        id-ShutdownTimer,
        id-SignallingBearerRequestIndicator,
        id-SSDT-CellIDforEDSCHPC,
        id-Start-Of-Audit-Sequence-Indicator,
        id-Successful-RL-InformationRespItem-RL-AdditionFailureFDD,
        id-Successful-RL-InformationRespItem-RL-SetupFailureFDD,
        id-Synchronisation-Configuration-Cell-ReconfRqst,
        id-Synchronisation-Configuration-Cell-SetupRqst,
        id-SyncCase,
        id-SyncCaseIndicatorItem-Cell-SetupRqstTDD-PSCH,
        id-SyncFrameNumber,
        id-SynchronisationReportType,
        id-SynchronisationReportCharacteristics,
        id-SyncReportType-CellSyncReprtTDD,
        id-T-Cell,
        id-TargetCommunicationControlPortID,
        id-TFCI2-Bearer-Information-RL-SetupRqstFDD,
        id-TFCI2-BearerInformationResponse,
        id-TFCI2BearerRequestIndicator,
        id-TFCI2-BearerSpecificInformation-RL-ReconfPrepFDD,
        id-Transmission-Gap-Pattern-Sequence-Information,
```

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id-TimeSlotConfigurationList-Cell-ReconfRqstTDD,
id-TimeSlotConfigurationList-Cell-SetupRqstTDD,
id-timeslotInfo-CellSyncInitiationRqstTDD,
id-TimeslotISCPInfo,
id-TimingAdvanceApplied,
id-TransmissionDiversityApplied,
id-transportlayeraddress,
id-UARFCNforNt,
id-UARFCNforNd,
id-UARFCNforNu,
id-UL-CCTrCH-InformationAddList-RL-ReconfPrepTDD,
id-UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD,
id-UL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD,
id-UL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD,
id-UL-CCTrCH-InformationItem-RL-SetupRqstTDD,
id-UL-CCTrCH-InformationList-RL-AdditionRqstTDD,
id-UL-CCTrCH-InformationList-RL-SetupRqstTDD,
id-UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD,
id-UL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD,
id-UL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD,
id-UL-DPCH-InformationAddListIE-RL-ReconfPrepTDD,
id-UL-DPCH-InformationItem-RL-AdditionRqstTDD,
id-UL-DPCH-InformationList-RL-SetupRqstTDD,
id-UL-DPCH-InformationModify-AddListIE-RL-ReconfPrepTDD,
id-UL-DPCH-InformationModify-DeleteListIE-RL-ReconfPrepTDD,
id-UL-DPCH-InformationModify-ModifyListIE-RL-ReconfPrepTDD,
id-UL-DPCH-Information-RL-ReconfPrepFDD,
id-UL-DPCH-Information-RL-ReconfRqstFDD,
id-UL-DPCH-Information-RL-SetupRqstFDD,
id-Unsuccessful-cell-InformationRespItem-SyncAdjustmntFailureTDD,
id-Unsuccessful-PDSCHSetItem-PSCH-ReconfFailureTDD,
id-Unsuccessful-PUSCHSetItem-PSCH-ReconfFailureTDD,
id-Unsuccessful-RL-InformationRespItem-RL-AdditionFailureFDD,
id-Unsuccessful-RL-InformationRespItem-RL-SetupFailureFDD,
id-Unsuccessful-RL-InformationResp-RL-AdditionFailureTDD,
id-Unsuccessful-RL-InformationResp-RL-SetupFailureTDD,
id-USCH-Information-Add,
id-USCH-Information-DeleteList-RL-ReconfPrepTDD,
id-USCH-Information-ModifyList-RL-ReconfPrepTDD,
id-USCH-InformationResponse,
id-USCH-Information,
id-USCH-RearrangeList-Bearer-RearrangeInd,
id-DL-DPCH-LCR-Information-RL-SetupRqstTDD,
id-DL-DPCH-LCR-InformationList-RL-SetupRqstTDD,
id-DwPCH-LCR-Information,
id-DwPCH-LCR-Information-AuditRsp,
id-DwPCH-LCR-InformationList-AuditRsp,
id-DwPCH-LCR-Information-Cell-SetupRqstTDD,
id-DwPCH-LCR-Information-Cell-ReconfRqstTDD,
id-DwPCH-LCR-Information-ResourceStatusInd,
id-maxFACH-Power-LCR-CTCH-SetupRqstTDD,
id-maxFACH-Power-LCR-CTCH-ReconfRqstTDD,
id-FPACH-LCR-Information,
id-FPACH-LCR-Information-AuditRsp,
```

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    id-FPACH-LCR-InformationList-AuditRsp,
    id-FPACH-LCR-InformationList-ResourceStatusInd,
    id-FPACH-LCR-Parameters-CTCH-SetupRqstTDD,
    id-FPACH-LCR-ParametersItem-CTCH-SetupRqstTDD,
    id-FPACH-LCR-Parameters-CTCH-ReconfRqstTDD,
    id-PCCPCH-LCR-Information-Cell-SetupRqstTDD,
    id-PCH-Power-LCR-CTCH-SetupRqstTDD,
    id-PCH-Power-LCR-CTCH-ReconfRqstTDD,
    id-PICH-LCR-Parameters-CTCH-SetupRqstTDD,
    id-PICH-LCR-ParametersItem-CTCH-SetupRqstTDD,
    id-PRACH-LCR-ParametersList-CTCH-SetupRqstTDD,
    id-PRACH-LCR-ParametersListIE-CTCH-SetupRqstTDD,
    id-RL-InformationResponse-LCR-RL-SetupRspTDD,
    id-Secondary-CCPCH-LCR-parameterListIE-CTCH-SetupRqstTDD,
    id-Secondary-CCPCH-LCR-parameterList-CTCH-SetupRqstTDD,
    id-TimeSlot,
    id-TimeSlotConfigurationList-LCR-Cell-ReconfRqstTDD,
    id-TimeSlotConfigurationList-LCR-Cell-SetupRqstTDD,
    id-TimeslotISCP-LCR-InfoList-RL-SetupRqstTDD,
    id-TimeSlotLCR-CM-Rqst,
    id-UL-DPCH-LCR-Information-RL-SetupRqstTDD,
    id-UL-DPCH-LCR-InformationList-RL-SetupRqstTDD,
    id-DL-DPCH-InformationItem-LCR-RL-AdditionRqstTDD,
    id-UL-DPCH-InformationItem-LCR-RL-AdditionRqstTDD,
    id-TimeslotISCP-InformationList-LCR-RL-AdditionRqstTDD,
    id-DL-DPCH-LCR-InformationAddList-RL-ReconfPrepTDD,
    id-DL-DPCH-LCR-InformationAddListIE-RL-ReconfPrepTDD,
    id-DL-DPCH-LCR-InformationModify-AddList-RL-ReconfPrepTDD,
    id-DL-DPCH-LCR-InformationModify-AddListIE-RL-ReconfPrepTDD,
    id-DL-Timeslot-LCR-InformationModify-ModifyList-RL-ReconfPrepTDD,
    id-TimeslotISCPInfoList-LCR-DL-PC-RqstTDD,
    id-UL-DPCH-LCR-InformationAddListIE-RL-ReconfPrepTDD,
    id-UL-DPCH-LCR-InformationModify-AddList,
    id-UL-DPCH-LCR-InformationModify-AddListIE-RL-ReconfPrepTDD,
    id-UL-TimeslotLCR-Information-RL-ReconfPrepTDD,
    id-UL-SIRTarget,
    id-PDSCH-AddInformation-LCR-PSCH-ReconfRqst,
    id-PDSCH-AddInformation-LCR-AddListIE-PSCH-ReconfRqst,
    id-PDSCH-ModifyInformation-LCR-PSCH-ReconfRqst,
    id-PDSCH-ModifyInformation-LCR-ModifyListIE-PSCH-ReconfRqst,
    id-PUSCH-AddInformation-LCR-PSCH-ReconfRqst,
    id-PUSCH-AddInformation-LCR-AddListIE-PSCH-ReconfRqst,
    id-PUSCH-ModifyInformation-LCR-PSCH-ReconfRqst,
    id-PUSCH-ModifyInformation-LCR-ModifyListIE-PSCH-ReconfRqst,
    id-PUSCH-Info-DM-Rqst,
    id-PUSCH-Info-DM-Rsp,
    id-PUSCH-Info-DM-Rprt,
    id-RL-InformationResponse-LCR-RL-AdditionRspTDD,
    id-IPDLParameter-Information-LCR-Cell-SetupRqstTDD,
    id-IPDLParameter-Information-LCR-Cell-ReconfRqstTDD,
    id-HS-PDSCH-HS-SCCH-MaxPower-PSCH-ReconfRqst,
    id-HS-PDSCH-HS-SCCH-ScramblingCode-PSCH-ReconfRqst,
    id-HS-PDSCH-FDD-Code-Information-PSCH-ReconfRqst,
    id-HS-SCCH-FDD-Code-Information-PSCH-ReconfRqst,
```

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       id-HS-PDSCH-TDD-Information-PSCH-ReconfRqst,
       id-Add-To-HS-SCCH-Resource-Pool-PSCH-ReconfRqst,
       id-Modify-HS-SCCH-Resource-Pool-PSCH-ReconfRqst,
       id-Delete-From-HS-SCCH-Resource-Pool-PSCH-ReconfRqst,
       id-neighbouringTDDCellMeasurementInformationLCR,
       id-SYNCDlCodeId-TransInitLCR-CellSyncInitiationRqstTDD,
       id-SYNCDlCodeId-MeasureInitLCR-CellSyncInitiationRqstTDD,
       id-SYNCDlCodeIdTransReconfInfoLCR-CellSyncReconfRqstTDD,
       id-SYNCDlCodeIdMeasReconfigurationLCR-CellSyncReconfRqstTDD,
       id-SYNCDlCodeIdMeasInfoList-CellSyncReconfRqstTDD,
       id-SyncDLCodeIdsMeasInfoList-CellSyncReprtTDD,
       id-SyncDLCodeIdThreInfoLCR,
       id-NSubCyclesPerCyclePeriod-CellSyncReconfRqstTDD,
       id-DwPCH-Power,
       id-Angle-Of-Arrival-Value-LCR,
       id-HSDSCH-FDD-Information,
       id-HSDSCH-FDD-Information-Response,
       id-HSDSCH-FDD-Information-to-Add,
       id-HSDSCH-FDD-Information-to-Delete,
       id-HSDSCH-Information-to-Modify,
       id-HSDSCH-RNTI,
       id-HSDSCH-TDD-Information,
       id-HSDSCH-TDD-Information-Response,
       id-HSDSCH-TDD-Information-Response-LCR,
       id-HSDSCH-TDD-Information-to-Add,
       id-HSDSCH-TDD-Information-to-Delete,
       id-HSPDSCH-RL-ID,
       id-PrimCCPCH-RSCP-DL-PC-RqstTDD,

       maxNrOfCCTrCHs,
       maxNrOfCellSyncBursts,
       maxNrOfCodes,
       maxNrOfCPCHs,
       maxNrOfDCHs,
       maxNrOfDLTSs,
       maxNrOfDLTSLCRs,
       maxNrOfDPCHs,
       maxNrOfDSCHs,
       maxNrOfFACHs,
       maxNrOfRLs,
       maxNrOfRLs-1,
       maxNrOfRLs-2,
       maxNrOfRLSets,
       maxNrOfPCPCHs,
       maxNrOfPDSCHs,
       maxNrOfPUSCHs,
       maxNrOfPRACHLCRs,
       maxNrOfPDSCHSets,
       maxNrOfPUSCHSets,
       maxNrOfReceptsPerSyncFrame,
       maxNrOfSCCPCHs,
       maxNrOfSCCPCHLCRs,
       maxNrOfULTSs,
       maxNrOfULTSLCRs,
```

```
        maxNrOfUSCHs,
        maxAPSigNum,
        maxCPCHCell,
        maxFACHCell,
        maxFPACHCell,
        maxNoofLen,
        maxRACHCell,
        maxPCPCHCell,
        maxPRACHCell,
        maxSCCPCHCell,
        maxSCPICHCell,
        maxCellinNodeB,
        maxCCPinNodeB,
        maxCommunicationContext,
        maxLocalCellinNodeB,
        maxNrOfSlotFormatsPRACH,
        maxNrOfCellSyncBursts,
        maxNrOfReceptsPerSyncFrame,
        maxIB,
        maxIBSEG,
        maxNrOfHSSCCHs,
        maxNoOfSyncFramesLCR,
        maxNrofreceptionsperSyncFrameLCR,
        maxNrOfMACdFlows
FROM NBAP-Constants;

-- ***************************************************************
--
-- COMMON TRANSPORT CHANNEL SETUP REQUEST FDD
--
-- ***************************************************************

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

CommonTransportChannelSetupRequestFDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CommonTransportChannelSetupRequestFDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID   id-C-ID                                          CRITICALITY    reject    TYPE                      C-ID
        PRESENCE    mandatory   }|
    { ID    id-ConfigurationGenerationID                    CRITICALITY    reject    TYPE                      ConfigurationGenerationID
            PRESENCE    mandatory   }|
    { ID    id-CommonPhysicalChannelType-CTCH-SetupRqstFDD    CRITICALITY    ignore    TYPE                      CommonPhysicalChannelType-CTCH-
SetupRqstFDD          PRESENCE    mandatory   },
    ...
}

CommonPhysicalChannelType-CTCH-SetupRqstFDD ::= CHOICE {
    secondary-CCPCH-parameters       Secondary-CCPCH-CTCH-SetupRqstFDD,
```

```
    pRACH-parameters                    PRACH-CTCH-SetupRqstFDD,
    pCPCHes-parameters                  PCPCH-CTCH-SetupRqstFDD,
    ...
}

Secondary-CCPCH-CTCH-SetupRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID             CommonPhysicalChannelID,
    fdd-S-CCPCH-Offset                  FDD-S-CCPCH-Offset,
    dl-ScramblingCode                   DL-ScramblingCode   OPTIONAL,
    -- This IE shall be present if the PCH parameters IE is not present
    fdd-DL-ChannelisationCodeNumber     FDD-DL-ChannelisationCodeNumber,
    tFCS            TFCS,
    secondary-CCPCH-SlotFormat          SecondaryCCPCH-SlotFormat,
    tFCI-Presence                       TFCI-Presence   OPTIONAL,
    -- This IE shall be present if the Secondary CCPCH Slot Format is set to any of the values from 8 to 17
    multiplexingPosition                MultiplexingPosition,
    powerOffsetInformation              PowerOffsetInformation-CTCH-SetupRqstFDD,
    sTTD-Indicator                      STTD-Indicator,
    fACH-Parameters                     FACH-ParametersList-CTCH-SetupRqstFDD        OPTIONAL,
    pCH-Parameters                      PCH-Parameters-CTCH-SetupRqstFDD             OPTIONAL,
    iE-Extensions                       ProtocolExtensionContainer  { { Secondary-CCPCHItem-CTCH-SetupRqstFDD-ExtIEs} }    OPTIONAL,
    ...
}

Secondary-CCPCHItem-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PowerOffsetInformation-CTCH-SetupRqstFDD ::= SEQUENCE {
    pO1-ForTFCI-Bits                    PowerOffset,
    pO3-ForPilotBits                    PowerOffset,
    iE-Extensions                       ProtocolExtensionContainer { { PowerOffsetInformation-CTCH-SetupRqstFDD-ExtIEs} }   OPTIONAL,
    ...
}

PowerOffsetInformation-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

FACH-ParametersList-CTCH-SetupRqstFDD ::= ProtocolIE-Single-Container {{ FACH-ParametersListIEs-CTCH-SetupRqstFDD }}

FACH-ParametersListIEs-CTCH-SetupRqstFDD NBAP-PROTOCOL-IES ::= {
    { ID id-FACH-ParametersListIE-CTCH-SetupRqstFDD   CRITICALITY reject    TYPE FACH-ParametersListIE-CTCH-SetupRqstFDD PRESENCE mandatory }
}

FACH-ParametersListIE-CTCH-SetupRqstFDD ::= SEQUENCE (SIZE (1..maxNrOfFACHs)) OF FACH-ParametersItem-CTCH-SetupRqstFDD

FACH-ParametersItem-CTCH-SetupRqstFDD ::= SEQUENCE {
    commonTransportChannelID            CommonTransportChannelID,
    transportFormatSet                  TransportFormatSet,
    toAWS                               ToAWS,
    toAWE                               ToAWE,
    maxFACH-Power                       DL-Power,
    iE-Extensions                       ProtocolExtensionContainer { { FACH-ParametersItem-CTCH-SetupRqstFDD-ExtIEs} }      OPTIONAL,
```

```
    ...
}

FACH-ParametersItem-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
{ ID   id-bindingID                        CRITICALITY ignore     EXTENSION  BindingID           PRESENCE            optional }|
{ ID   id-transportlayeraddress            CRITICALITY ignore     EXTENSION  TransportLayerAddress             PRESENCE   optional },
    ...
}

PCH-Parameters-CTCH-SetupRqstFDD ::= ProtocolIE-Single-Container {{ PCH-ParametersIE-CTCH-SetupRqstFDD }}

PCH-ParametersIE-CTCH-SetupRqstFDD NBAP-PROTOCOL-IES ::= {
    { ID id-PCH-ParametersItem-CTCH-SetupRqstFDD   CRITICALITY reject   TYPE PCH-ParametersItem-CTCH-SetupRqstFDD   PRESENCE mandatory }
}

PCH-ParametersItem-CTCH-SetupRqstFDD ::= SEQUENCE {
    commonTransportChannelID           CommonTransportChannelID,
    transportFormatSet                 TransportFormatSet,
    toAWS                              ToAWS,
    toAWE                              ToAWE,
    pCH-Power                          DL-Power,
    pICH-Parameters                        PICH-Parameters-CTCH-SetupRqstFDD,
    iE-Extensions                      ProtocolExtensionContainer  { { PCH-ParametersItem-CTCH-SetupRqstFDD-ExtIEs} }   OPTIONAL,
    ...
}

PCH-ParametersItem-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    { ID    id-bindingID                       CRITICALITY ignore     EXTENSION   BindingID                PRESENCE   optional }|
    { ID    id-transportlayeraddress           CRITICALITY ignore     EXTENSION   TransportLayerAddress              PRESENCE   optional },
    ...
}

PICH-Parameters-CTCH-SetupRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID            CommonPhysicalChannelID,
    fdd-dl-ChannelisationCodeNumber    FDD-DL-ChannelisationCodeNumber,
    pICH-Power                         PICH-Power,
    pICH-Mode                          PICH-Mode,
    sTTD-Indicator                     STTD-Indicator,
    iE-Extensions                      ProtocolExtensionContainer { { PICH-Parameters-CTCH-SetupRqstFDD-ExtIEs} }     OPTIONAL,
    ...
}

PICH-Parameters-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PRACH-CTCH-SetupRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID            CommonPhysicalChannelID,
    scramblingCodeNumber               ScramblingCodeNumber,
    tFCS                               TFCS,
    preambleSignatures                 PreambleSignatures,
    allowedSlotFormatInformation       AllowedSlotFormatInformationList-CTCH-SetupRqstFDD,
    rACH-SubChannelNumbers             RACH-SubChannelNumbers,
    ul-punctureLimit                   PunctureLimit,
```

```
    preambleThreshold                           PreambleThreshold,
    rACH-Parameters                             RACH-Parameters-CTCH-SetupRqstFDD,
    aICH-Parameters                             AICH-Parameters-CTCH-SetupRqstFDD,
    iE-Extensions                               ProtocolExtensionContainer { { PRACHItem-CTCH-SetupRqstFDD-ExtIEs} }      OPTIONAL,
    ...
}

PRACHItem-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

AllowedSlotFormatInformationList-CTCH-SetupRqstFDD ::= SEQUENCE (SIZE (1.. maxNrOfSlotFormatsPRACH)) OF AllowedSlotFormatInformationItem-CTCH-
SetupRqstFDD

AllowedSlotFormatInformationItem-CTCH-SetupRqstFDD ::= SEQUENCE {
    rACHSlotFormat                              RACH-SlotFormat,
    iE-Extensions                               ProtocolExtensionContainer  { { AllowedSlotFormatInformationItem-CTCH-SetupRqstFDD-ExtIEs} }
    OPTIONAL,
    ...
}

AllowedSlotFormatInformationItem-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RACH-Parameters-CTCH-SetupRqstFDD ::= ProtocolIE-Single-Container {{ RACH-ParametersIE-CTCH-SetupRqstFDD }}

RACH-ParametersIE-CTCH-SetupRqstFDD NBAP-PROTOCOL-IES ::= {
    { ID id-RACH-ParametersItem-CTCH-SetupRqstFDD   CRITICALITY reject  TYPE RACH-ParametersItem-CTCH-SetupRqstFDD PRESENCE mandatory }
}

RACH-ParametersItem-CTCH-SetupRqstFDD ::= SEQUENCE {
    commonTransportChannelID                    CommonTransportChannelID,
    transportFormatSet                          TransportFormatSet,
    iE-Extensions                               ProtocolExtensionContainer  { { RACH-ParametersItem-CTCH-SetupRqstFDD-ExtIEs} }   OPTIONAL,
    ...
 }

RACH-ParametersItem-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    { ID    id-bindingID                        CRITICALITY ignore      EXTENSION  BindingID                       PRESENCE   optional }|
    { ID    id-transportlayeraddress            CRITICALITY ignore      EXTENSION  TransportLayerAddress           PRESENCE   optional },
    ...
}

AICH-Parameters-CTCH-SetupRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID                     CommonPhysicalChannelID,
    aICH-TransmissionTiming                     AICH-TransmissionTiming,
    fdd-dl-ChannelisationCodeNumber             FDD-DL-ChannelisationCodeNumber,
    aICH-Power                                  AICH-Power,
    sTTD-Indicator                              STTD-Indicator,
    iE-Extensions                               ProtocolExtensionContainer { { AICH-Parameters-CTCH-SetupRqstFDD-ExtIEs} }    OPTIONAL,
    ...
}
```

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```
AICH-Parameters-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PCPCH-CTCH-SetupRqstFDD ::= SEQUENCE {
    cPCH-Parameters              CPCH-Parameters-CTCH-SetupRqstFDD,
    iE-Extensions                ProtocolExtensionContainer { { PCPCHItem-CTCH-SetupRqstFDD-ExtIEs} }            OPTIONAL,
    ...
}

PCPCHItem-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CPCH-Parameters-CTCH-SetupRqstFDD ::= SEQUENCE {
    commonTransportChannelID     CommonTransportChannelID,
    transportFormatSet           TransportFormatSet,
    aPPreambleScramblingCode     CPCHScramblingCodeNumber,
    cDPreambleScramblingCode     CPCHScramblingCodeNumber,
    tFCS                         TFCS,
    cDSignatures                 PreambleSignatures         OPTIONAL,
    cDSubChannelNumbers          CDSubChannelNumbers        OPTIONAL,
    punctureLimit                PunctureLimit,
    cPCH-UL-DPCCH-SlotFormat      CPCH-UL-DPCCH-SlotFormat,
    uL-SIR                       UL-SIR,
    initialDL-transmissionPower  DL-Power,
    maximumDLPower               DL-Power,
    minimumDLPower               DL-Power,
    pO2-ForTPC-Bits              PowerOffset,
    fDD-TPC-DownlinkStepSize      FDD-TPC-DownlinkStepSize,
    nStartMessage                NStartMessage,
    nEOT                         NEOT,
    channel-Assignment-Indication  Channel-Assignment-Indication,
    cPCH-Allowed-Total-Rate       CPCH-Allowed-Total-Rate,
    pCPCHChannelInfomation       PCPCHChannelInformationList-CTCH-SetupRqstFDD,
    vCAMMapping-Information       VCAMMapping-InformationList-CTCH-SetupRqstFDD      OPTIONAL,
    -- this IE shall be present if the Channel Assignment Indication is set to "CA Active" --
    aP-AICH-Parameters           AP-AICH-Parameters-CTCH-SetupRqstFDD,
    cDCA-ICH-Parameters          CDCA-ICH-Parameters-CTCH-SetupRqstFDD,
    iE-Extensions                ProtocolExtensionContainer { { CPCH-Parameters-CTCH-SetupRqstFDD-ExtIEs} }       OPTIONAL,
    ...
}

CPCH-Parameters-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    { ID   id-bindingID                       CRITICALITY ignore    EXTENSION  BindingID                    PRESENCE   optional }|
    { ID   id-transportlayeraddress           CRITICALITY ignore    EXTENSION  TransportLayerAddress        PRESENCE   optional },
    ...
}

PCPCHChannelInformationList-CTCH-SetupRqstFDD ::= SEQUENCE (SIZE (1..maxNrOfPCPCHs)) OF PCPCHChannelInformationItem-CTCH-SetupRqstFDD

PCPCHChannelInformationItem-CTCH-SetupRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID       CommonPhysicalChannelID,
    cPCHScramblingCodeNumber       CPCHScramblingCodeNumber,
```

```
    dL-ScramblingCode                   DL-ScramblingCode,
    fdd-dl-ChannelisationCodeNumber     FDD-DL-ChannelisationCodeNumber,
    pCP-Length                          PCP-Length,
    uCSM-Information                    UCSM-Information-CTCH-SetupRqstFDD      OPTIONAL,
    -- this IE shall be present if the Channel Assignment Indication is equal to "CA Inactive" --
    iE-Extensions                       ProtocolExtensionContainer { { PCPCHChannelInformationItem-CTCH-SetupRqstFDD-ExtIEs} }   OPTIONAL,
    ...
}

PCPCHChannelInformationItem-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UCSM-Information-CTCH-SetupRqstFDD ::= SEQUENCE {
    minUL-ChannelisationCodeLength      MinUL-ChannelisationCodeLength,
    nFmax                               NFmax,
    channelRequestParameters            ChannelRequestParametersList-CTCH-SetupRqstFDD      OPTIONAL,
    iE-Extensions                       ProtocolExtensionContainer { { UCSM-InformationItem-CTCH-SetupRqstFDD-ExtIEs} }    OPTIONAL,
    ...
 }

UCSM-InformationItem-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

ChannelRequestParametersList-CTCH-SetupRqstFDD ::= SEQUENCE (SIZE (1..maxAPSigNum)) OF ChannelRequestParametersItem-CTCH-SetupRqstFDD

ChannelRequestParametersItem-CTCH-SetupRqstFDD ::= SEQUENCE {
    aPPreambleSignature          APPreambleSignature,
    aPSubChannelNumber           APSubChannelNumber      OPTIONAL,
    iE-Extensions                ProtocolExtensionContainer { { ChannelRequestParametersItem-CTCH-SetupRqstFDD-ExtIEs} }     OPTIONAL,
    ...
}

ChannelRequestParametersItem-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

VCAMMapping-InformationList-CTCH-SetupRqstFDD ::= SEQUENCE (SIZE (1..maxNoofLen)) OF VCAMMapping-InformationItem-CTCH-SetupRqstFDD

VCAMMapping-InformationItem-CTCH-SetupRqstFDD  ::= SEQUENCE {
    minUL-ChannelisationCodeLength      MinUL-ChannelisationCodeLength,
    nFmax                               NFmax,
    max-Number-of-PCPCHes               Max-Number-of-PCPCHes,
    sFRequestParameters                 SFRequestParametersList-CTCH-SetupRqstFDD,
    iE-Extensions                       ProtocolExtensionContainer { { VCAMMapping-InformationItem-CTCH-SetupRqstFDD-ExtIEs} }   OPTIONAL,
    ...
}

VCAMMapping-InformationItem-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

SFRequestParametersList-CTCH-SetupRqstFDD ::= SEQUENCE (SIZE (1..maxAPSigNum)) OF SFRequestParametersItem-CTCH-SetupRqstFDD
```

```
SFRequestParametersItem-CTCH-SetupRqstFDD ::= SEQUENCE {
    aPPreambleSignature        APPreambleSignature,
    aPSubChannelNumber         APSubChannelNumber     OPTIONAL,
    iE-Extensions              ProtocolExtensionContainer { { SFRequestParametersItem-CTCH-SetupRqstFDD-ExtIEs} }   OPTIONAL,
    ...
}

SFRequestParametersItem-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION::= {
    ...
}

AP-AICH-Parameters-CTCH-SetupRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID                  CommonPhysicalChannelID,
    fdd-dl-ChannelisationCodeNumber          FDD-DL-ChannelisationCodeNumber,
    aP-AICH-Power                            AICH-Power,
    cSICH-Power                              AICH-Power,
    sTTD-Indicator                           STTD-Indicator,
    iE-Extensions                            ProtocolExtensionContainer { { AP-AICH-Parameters-CTCH-SetupRqstFDD-ExtIEs} }   OPTIONAL,
    ...
}

AP-AICH-Parameters-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CDCA-ICH-Parameters-CTCH-SetupRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID                  CommonPhysicalChannelID,
    fdd-dl-ChannelisationCodeNumber          FDD-DL-ChannelisationCodeNumber,
    cDCA-ICH-Power                           AICH-Power,
    sTTD-Indicator                           STTD-Indicator,
    iE-Extensions                            ProtocolExtensionContainer { { CDCA-ICH-Parameters-CTCH-SetupRqstFDD-ExtIEs} }   OPTIONAL,
    ...
}

CDCA-ICH-Parameters-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *************************************************************
--
-- COMMON TRANSPORT CHANNEL SETUP REQUEST TDD
--
-- *************************************************************

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

CommonTransportChannelSetupRequestTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-C-ID                                          CRITICALITY reject    TYPE              C-ID
        PRESENCE    mandatory   }|
```

```
    { ID    id-ConfigurationGenerationID                          CRITICALITY reject     TYPE                      ConfigurationGenerationID
          PRESENCE    mandatory    }|
    { ID    id-CommonPhysicalChannelType-CTCH-SetupRqstTDD          CRITICALITY ignore     TYPE                      CommonPhysicalChannelType-CTCH-
SetupRqstTDD        PRESENCE    mandatory    },
    ...
}

CommonTransportChannelSetupRequestTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CommonPhysicalChannelType-CTCH-SetupRqstTDD ::= CHOICE {
    secondary-CCPCH-parameters                    Secondary-CCPCH-CTCH-SetupRqstTDD,
    pRACH-parameters                              PRACH-CTCH-SetupRqstTDD,
    ...
}

Secondary-CCPCH-CTCH-SetupRqstTDD ::= SEQUENCE {
    sCCPCH-CCTrCH-ID                              CCTrCH-ID,
    tFCS                                          TFCS,
    tFCI-Coding                                   TFCI-Coding,
    punctureLimit                                 PunctureLimit,
    secondaryCCPCH-parameterList                  Secondary-CCPCH-parameterList-CTCH-SetupRqstTDD,
    fACH-ParametersList                           FACH-ParametersList-CTCH-SetupRqstTDD        OPTIONAL,
    pCH-Parameters                                PCH-Parameters-CTCH-SetupRqstTDD             OPTIONAL,
    iE-Extensions                                 ProtocolExtensionContainer  {{Secondary-CCPCHItem-CTCH-SetupRqstTDD-ExtIEs}}   OPTIONAL,
    ...
}

Secondary-CCPCHItem-CTCH-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    { ID    id-Secondary-CCPCH-LCR-parameterList-CTCH-SetupRqstTDD          CRITICALITY reject                      EXTENSION  Secondary-CCPCH-LCR-
parameterList-CTCH-SetupRqstTDD    PRESENCE    optional    },
    ...
}

Secondary-CCPCH-parameterList-CTCH-SetupRqstTDD ::= ProtocolIE-Single-Container {{ Secondary-CCPCH-parameterListIEs-CTCH-SetupRqstTDD }}

Secondary-CCPCH-parameterListIEs-CTCH-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID id-Secondary-CCPCH-parameterListIE-CTCH-SetupRqstTDD   CRITICALITY reject  TYPE Secondary-CCPCH-parameterListIE-CTCH-SetupRqstTDD PRESENCE
mandatory } -- Mandatory for 3.84Mcps TDD only
}

Secondary-CCPCH-parameterListIE-CTCH-SetupRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfSCCPCHs)) OF Secondary-CCPCH-parameterItem-CTCH-SetupRqstTDD

Secondary-CCPCH-parameterItem-CTCH-SetupRqstTDD ::= SEQUENCE {
    commonPhysicalChannelID                       CommonPhysicalChannelID,
    tdd-ChannelisationCode                        TDD-ChannelisationCode,
    timeslot                                      TimeSlot,
    midambleShiftandBurstType                     MidambleShiftAndBurstType,
    tdd-PhysicalChannelOffset                     TDD-PhysicalChannelOffset,
    repetitionPeriod                              RepetitionPeriod,
    repetitionLength                              RepetitionLength,
    s-CCPCH-Power                                 DL-Power,
```

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```
    iE-Extensions                              ProtocolExtensionContainer { { Secondary-CCPCH-parameterItem-CTCH-SetupRqstTDD-ExtIEs} }
    OPTIONAL,
    ...
}

Secondary-CCPCH-parameterItem-CTCH-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

FACH-ParametersList-CTCH-SetupRqstTDD ::= ProtocolIE-Single-Container {{ FACH-ParametersListIEs-CTCH-SetupRqstTDD }}

FACH-ParametersListIEs-CTCH-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID id-FACH-ParametersListIE-CTCH-SetupRqstTDD   CRITICALITY reject    TYPE FACH-ParametersListIE-CTCH-SetupRqstTDD PRESENCE mandatory }
}

FACH-ParametersListIE-CTCH-SetupRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfFACHs)) OF FACH-ParametersItem-CTCH-SetupRqstTDD

FACH-ParametersItem-CTCH-SetupRqstTDD ::= SEQUENCE {
    commonTransportChannelID                   CommonTransportChannelID,
    fACH-CCTrCH-ID                             CCTrCH-ID,
    dl-TransportFormatSet                      TransportFormatSet,
    toAWS                                      ToAWS,
    toAWE                                      ToAWE,
    iE-Extensions                              ProtocolExtensionContainer  { { FACH-ParametersItem-CTCH-SetupRqstTDD-ExtIEs} }    OPTIONAL,
    ...
}

FACH-ParametersItem-CTCH-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    { ID    id-maxFACH-Power-LCR-CTCH-SetupRqstTDD          CRITICALITY reject      EXTENSION   DL-Power            PRESENCE   optional }|
    -- For 1.28Mcps TDD only
    { ID    id-bindingID                       CRITICALITY ignore    EXTENSION   BindingID                 PRESENCE   optional }|
    { ID    id-transportlayeraddress           CRITICALITY ignore    EXTENSION   TransportLayerAddress     PRESENCE   optional },
    ...
}

PCH-Parameters-CTCH-SetupRqstTDD ::= ProtocolIE-Single-Container {{ PCH-ParametersIE-CTCH-SetupRqstTDD }}

PCH-ParametersIE-CTCH-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID id-PCH-ParametersItem-CTCH-SetupRqstTDD   CRITICALITY reject   TYPE PCH-ParametersItem-CTCH-SetupRqstTDD   PRESENCE mandatory }
}

PCH-ParametersItem-CTCH-SetupRqstTDD ::= SEQUENCE {
    commonTransportChannelID                   CommonTransportChannelID,
    pCH-CCTrCH-ID                              CCTrCH-ID,
    dl-TransportFormatSet                      TransportFormatSet,
    toAWS                                      ToAWS,
    toAWE                                      ToAWE,
    pICH-Parameters                            PICH-Parameters-CTCH-SetupRqstTDD,
    iE-Extensions                              ProtocolExtensionContainer  { { PCH-ParametersItem-CTCH-SetupRqstTDD-ExtIEs} }    OPTIONAL,
    ...
}

PCH-ParametersItem-CTCH-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    { ID    id-PCH-Power-LCR-CTCH-SetupRqstTDD             CRITICALITY reject      EXTENSION   DL-Power            PRESENCE   optional }|
```

```
    -- For 1.28Mcps TDD only
    { ID   id-PICH-LCR-Parameters-CTCH-SetupRqstTDD        CRITICALITY reject     EXTENSION                  PICH-LCR-Parameters-CTCH-
SetupRqstTDD        PRESENCE    optional   }| -- Mandatory for 1.28Mcps TDD only
    { ID   id-bindingID                        CRITICALITY ignore    EXTENSION   BindingID                    PRESENCE    optional }|
    { ID   id-transportlayeraddress            CRITICALITY ignore    EXTENSION   TransportLayerAddress        PRESENCE    optional },
    ...
}

PICH-Parameters-CTCH-SetupRqstTDD ::= ProtocolIE-Single-Container {{ PICH-ParametersIE-CTCH-SetupRqstTDD }}

PICH-ParametersIE-CTCH-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID id-PICH-ParametersItem-CTCH-SetupRqstTDD   CRITICALITY reject  TYPE PICH-ParametersItem-CTCH-SetupRqstTDD PRESENCE optional }
}    -- Mandatory for 3.84Mcps TDD only

PICH-ParametersItem-CTCH-SetupRqstTDD ::= SEQUENCE {
    commonPhysicalChannelID              CommonPhysicalChannelID,
    tdd-ChannelisationCode               TDD-ChannelisationCode,
    timeSlot                             TimeSlot,
    midambleshiftAndBurstType            MidambleShiftAndBurstType,
    tdd-PhysicalChannelOffset            TDD-PhysicalChannelOffset,
    repetitionPeriod                     RepetitionPeriod,
    repetitionLength                     RepetitionLength,
    pagingIndicatorLength                PagingIndicatorLength,
    pICH-Power                           PICH-Power,
    iE-Extensions                        ProtocolExtensionContainer  { { PICH-ParametersItem-CTCH-SetupRqstTDD-ExtIEs} }   OPTIONAL,
    ...
}

PICH-ParametersItem-CTCH-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PICH-LCR-Parameters-CTCH-SetupRqstTDD ::= ProtocolIE-Single-Container {{ PICH-LCR-ParametersIE-CTCH-SetupRqstTDD }}

PICH-LCR-ParametersIE-CTCH-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID id-PICH-LCR-ParametersItem-CTCH-SetupRqstTDD   CRITICALITY reject  TYPE PICH-LCR-ParametersItem-CTCH-SetupRqstTDD   PRESENCE mandatory }
} -- Mandatory for 1.28Mcps TDD

PICH-LCR-ParametersItem-CTCH-SetupRqstTDD ::= SEQUENCE {
    commonPhysicalChannelID           CommonPhysicalChannelID,
    tdd-ChannelisationCodeLCR         TDD-ChannelisationCodeLCR,
    timeSlotLCR                       TimeSlotLCR,
    midambleShiftLCR                  MidambleShiftLCR,
    tdd-PhysicalChannelOffset         TDD-PhysicalChannelOffset,
    repetitionPeriod                  RepetitionPeriod,
    repetitionLength                  RepetitionLength,
    pagingIndicatorLength             PagingIndicatorLength,
    pICH-Power                        PICH-Power,
    iE-Extensions                     ProtocolExtensionContainer  { { PICH-LCR-ParametersItem-CTCH-SetupRqstTDD-ExtIEs} }   OPTIONAL,
    ...
}

PICH-LCR-ParametersItem-CTCH-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
```

```
}

Secondary-CCPCH-LCR-parameterList-CTCH-SetupRqstTDD ::= ProtocolIE-Single-Container {{ Secondary-CCPCH-LCR-parameterListIEs-CTCH-SetupRqstTDD }}

Secondary-CCPCH-LCR-parameterListIEs-CTCH-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID id-Secondary-CCPCH-LCR-parameterListIE-CTCH-SetupRqstTDD   CRITICALITY reject  TYPE Secondary-CCPCH-LCR-parameterListIE-CTCH-SetupRqstTDD
    PRESENCE optional } -- Mandatory for 1.28Mcps TDD only
}

Secondary-CCPCH-LCR-parameterListIE-CTCH-SetupRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfSCCPCHLCRs)) OF Secondary-CCPCH-LCR-parameterItem-CTCH-
SetupRqstTDD

Secondary-CCPCH-LCR-parameterItem-CTCH-SetupRqstTDD ::= SEQUENCE {
    commonPhysicalChannelID                     CommonPhysicalChannelID,
    tdd-ChannelisationCodeLCR                   TDD-ChannelisationCodeLCR,
    timeslotLCR                                 TimeSlotLCR,
    midambleShiftLCR                            MidambleShiftLCR,
    tdd-PhysicalChannelOffset                   TDD-PhysicalChannelOffset,
    repetitionPeriod                            RepetitionPeriod,
    repetitionLength                            RepetitionLength,
    s-CCPCH-Power                               DL-Power,
    iE-Extensions                               ProtocolExtensionContainer { { Secondary-CCPCH-LCR-parameterItem-CTCH-SetupRqstTDD-ExtIEs} }
    OPTIONAL,
    ...
}

Secondary-CCPCH-LCR-parameterItem-CTCH-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PRACH-CTCH-SetupRqstTDD ::= SEQUENCE {
    pRACH-Parameters-CTCH-SetupRqstTDD          PRACH-Parameters-CTCH-SetupRqstTDD,
    iE-Extensions                               ProtocolExtensionContainer { { PRACH-CTCH-SetupRqstTDD-ExtIEs } }   OPTIONAL,
    ...
}

PRACH-CTCH-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    { ID   id-PRACH-LCR-ParametersList-CTCH-SetupRqstTDD            CRITICALITY reject      EXTENSION                 PRACH-LCR-ParametersList-CTCH-
SetupRqstTDD        PRESENCE    optional   }| -- Mandatory for 1.28Mcps TDD only
    { ID   id-FPACH-LCR-Parameters-CTCH-SetupRqstTDD               CRITICALITY reject      EXTENSION                 FPACH-LCR-Parameters-CTCH-
SetupRqstTDD        PRESENCE    optional   }, -- Mandatory for 1.28Mcps TDD only
    ...
}

PRACH-Parameters-CTCH-SetupRqstTDD ::= ProtocolIE-Single-Container {{ PRACH-ParametersIE-CTCH-SetupRqstTDD }}

PRACH-ParametersIE-CTCH-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID id-PRACH-ParametersItem-CTCH-SetupRqstTDD   CRITICALITY reject TYPE PRACH-ParametersItem-CTCH-SetupRqstTDD PRESENCE optional }
}   -- Mandatory for 3.84Mcps TDD only


PRACH-ParametersItem-CTCH-SetupRqstTDD ::= SEQUENCE {
    commonPhysicalChannelID                     CommonPhysicalChannelID,
    tFCS                                        TFCS,
```

```
    timeslot                                   TimeSlot,
    tdd-ChannelisationCode                     TDD-ChannelisationCode,
    maxPRACH-MidambleShifts                    MaxPRACH-MidambleShifts,
    pRACH-Midamble                             PRACH-Midamble,
    rACH                                       RACH-Parameter-CTCH-SetupRqstTDD,
    iE-Extensions                              ProtocolExtensionContainer { { PRACH-ParametersItem-CTCH-SetupRqstTDD-ExtIEs} }     OPTIONAL,
    ...
}


PRACH-ParametersItem-CTCH-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}


RACH-Parameter-CTCH-SetupRqstTDD ::= ProtocolIE-Single-Container {{ RACH-ParameterIE-CTCH-SetupRqstTDD }}


RACH-ParameterIE-CTCH-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID id-RACH-ParameterItem-CTCH-SetupRqstTDD   CRITICALITY reject   TYPE RACH-ParameterItem-CTCH-SetupRqstTDD   PRESENCE mandatory }
}


RACH-ParameterItem-CTCH-SetupRqstTDD ::= SEQUENCE {
    commonTransportChannelID                   CommonTransportChannelID,
    uL-TransportFormatSet                      TransportFormatSet,
    iE-Extensions                              ProtocolExtensionContainer { { RACH-ParameterItem-CTCH-SetupRqstTDD-ExtIEs} }     OPTIONAL,
    ...
}


RACH-ParameterItem-CTCH-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    { ID    id-bindingID                       CRITICALITY ignore      EXTENSION   BindingID                     PRESENCE   optional }|
    { ID    id-transportlayeraddress           CRITICALITY ignore      EXTENSION   TransportLayerAddress         PRESENCE   optional },
    ...
}


PRACH-LCR-ParametersList-CTCH-SetupRqstTDD ::= ProtocolIE-Single-Container {{ PRACH-LCR-ParametersListIEs-CTCH-SetupRqstTDD }}


PRACH-LCR-ParametersListIEs-CTCH-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID id-PRACH-LCR-ParametersListIE-CTCH-SetupRqstTDD   CRITICALITY reject   TYPE PRACH-LCR-ParametersListIE-CTCH-SetupRqstTDD PRESENCE optional
}
}


PRACH-LCR-ParametersListIE-CTCH-SetupRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfPRACHLCRs)) OF PRACH-LCR-ParametersItem-CTCH-SetupRqstTDD


PRACH-LCR-ParametersItem-CTCH-SetupRqstTDD ::= SEQUENCE {
    commonPhysicalChannelID                    CommonPhysicalChannelID,
    tFCS                                       TFCS,
    timeslotLCR                                TimeSlotLCR,
    tdd-ChannelisationCodeLCR                  TDD-ChannelisationCodeLCR,
    maxPRACH-MidambleShifts                    MaxPRACH-MidambleShifts,
    pRACH-Midamble                             PRACH-Midamble,
    rACH                                       RACH-Parameter-CTCH-SetupRqstTDD,
    iE-Extensions                              ProtocolExtensionContainer { { PRACH-LCR-ParametersItem-CTCH-SetupRqstTDD-ExtIEs} }     OPTIONAL,
    ...
}


PRACH-LCR-ParametersItem-CTCH-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
```

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```
    ...
}

FPACH-LCR-Parameters-CTCH-SetupRqstTDD ::= ProtocolIE-Single-Container {{ FPACH-LCR-ParametersIE-CTCH-SetupRqstTDD }}

FPACH-LCR-ParametersIE-CTCH-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID id-FPACH-LCR-ParametersItem-CTCH-SetupRqstTDD   CRITICALITY reject TYPE FPACH-LCR-ParametersItem-CTCH-SetupRqstTDD PRESENCE optional }
}

FPACH-LCR-ParametersItem-CTCH-SetupRqstTDD ::= SEQUENCE {
    commonPhysicalChannelID                     CommonPhysicalChannelID,
    tdd-ChannelisationCodeLCR                   TDD-ChannelisationCodeLCR,
    timeslotLCR                                 TimeSlotLCR,
    midambleShiftLCR                            MidambleShiftLCR,
    fPACH-Power                             FPACH-Power,
    iE-Extensions                               ProtocolExtensionContainer  { { FPACH-LCR-ParametersItem-CTCH-SetupRqstTDD-ExtIEs} }    OPTIONAL,
    ...
}

FPACH-LCR-ParametersItem-CTCH-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ****************************************************************
--
-- COMMON TRANSPORT CHANNEL SETUP RESPONSE
--
-- ****************************************************************

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

CommonTransportChannelSetupResponse-IEs NBAP-PROTOCOL-IES ::= {
    { ID   id-FACH-ParametersList-CTCH-SetupRsp    CRITICALITY ignore     TYPE    FACH-CommonTransportChannel-InformationResponse     PRESENCE
    optional    }|
    { ID   id-PCH-Parameters-CTCH-SetupRsp         CRITICALITY ignore     TYPE    CommonTransportChannel-InformationResponse          PRESENCE
    optional    }|
    { ID   id-RACH-Parameters-CTCH-SetupRsp        CRITICALITY ignore     TYPE    CommonTransportChannel-InformationResponse       PRESENCE
    optional    }|
    { ID   id-CPCH-Parameters-CTCH-SetupRsp        CRITICALITY ignore           TYPE    CommonTransportChannel-InformationResponse
    PRESENCE    optional    }|
    { ID   id-CriticalityDiagnostics               CRITICALITY    ignore    TYPE    CriticalityDiagnostics               PRESENCE
    optional    },
    ...
}

CommonTransportChannelSetupResponse-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

FACH-CommonTransportChannel-InformationResponse ::= SEQUENCE (SIZE (1..maxNrOfFACHs)) OF CommonTransportChannel-InformationResponse
```

```
-- ****************************************************************
--
-- COMMON TRANSPORT CHANNEL SETUP FAILURE
--
-- ****************************************************************

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

CommonTransportChannelSetupFailure-IEs NBAP-PROTOCOL-IES ::= {
    { ID   id-Cause                     CRITICALITY ignore      TYPE    Cause                                   PRESENCE mandatory  }|
    { ID   id-CriticalityDiagnostics    CRITICALITY ignore      TYPE    CriticalityDiagnostics                  PRESENCE optional   },
    ...
}

CommonTransportChannelSetupFailure-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}


-- ****************************************************************
--
-- COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST FDD
--
-- ****************************************************************

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

CommonTransportChannelReconfigurationRequestFDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID   id-C-ID                                  CRITICALITY reject      TYPE    C-ID
    PRESENCE mandatory  }|
    { ID   id-ConfigurationGenerationID             CRITICALITY reject      TYPE    ConfigurationGenerationID           PRESENCE mandatory  }|
    { ID   id-CommonPhysicalChannelType-CTCH-ReconfRqstFDD CRITICALITY reject   TYPE    CommonPhysicalChannelType-CTCH-ReconfRqstFDD PRESENCE
    mandatory  },
    ...
}

CommonTransportChannelReconfigurationRequestFDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CommonPhysicalChannelType-CTCH-ReconfRqstFDD ::= CHOICE {
    secondary-CCPCH-parameters      Secondary-CCPCHList-CTCH-ReconfRqstFDD,
    pRACH-parameters                PRACHList-CTCH-ReconfRqstFDD,
    cPCH-parameters                 CPCHList-CTCH-ReconfRqstFDD,
    ...
}
```

```
Secondary-CCPCHList-CTCH-ReconfRqstFDD ::= SEQUENCE {
    fACH-ParametersList-CTCH-ReconfRqstFDD        FACH-ParametersList-CTCH-ReconfRqstFDD  OPTIONAL,
    pCH-Parameters-CTCH-ReconfRqstFDD             PCH-Parameters-CTCH-ReconfRqstFDD       OPTIONAL,
    pICH-Parameters-CTCH-ReconfRqstFDD            PICH-Parameters-CTCH-ReconfRqstFDD      OPTIONAL,
    iE-Extensions                                 ProtocolExtensionContainer { { Secondary-CCPCH-CTCH-ReconfRqstFDD-ExtIEs} } OPTIONAL,
    ...
}

Secondary-CCPCH-CTCH-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

FACH-ParametersList-CTCH-ReconfRqstFDD ::= ProtocolIE-Single-Container {{ FACH-ParametersListIEs-CTCH-ReconfRqstFDD }}

FACH-ParametersListIEs-CTCH-ReconfRqstFDD NBAP-PROTOCOL-IES ::= {
    { ID id-FACH-ParametersListIE-CTCH-ReconfRqstFDD   CRITICALITY reject  TYPE FACH-ParametersListIE-CTCH-ReconfRqstFDD   PRESENCE mandatory }
}

FACH-ParametersListIE-CTCH-ReconfRqstFDD ::= SEQUENCE (SIZE (1..maxFACHCell)) OF FACH-ParametersItem-CTCH-ReconfRqstFDD

FACH-ParametersItem-CTCH-ReconfRqstFDD ::= SEQUENCE {
    commonTransportChannelID              CommonTransportChannelID,
    maxFACH-Power                         DL-Power        OPTIONAL,
    toAWS                                 ToAWS           OPTIONAL,
    toAWE                                 ToAWE           OPTIONAL,
    iE-Extensions                         ProtocolExtensionContainer  { { FACH-ParametersItem-CTCH-ReconfRqstFDD-ExtIEs} }   OPTIONAL,
    ...
}

FACH-ParametersItem-CTCH-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PCH-Parameters-CTCH-ReconfRqstFDD ::= ProtocolIE-Single-Container {{ PCH-ParametersIE-CTCH-ReconfRqstFDD }}

PCH-ParametersIE-CTCH-ReconfRqstFDD NBAP-PROTOCOL-IES ::= {
    { ID id-PCH-ParametersItem-CTCH-ReconfRqstFDD   CRITICALITY reject  TYPE PCH-ParametersItem-CTCH-ReconfRqstFDD PRESENCE mandatory }
}

PCH-ParametersItem-CTCH-ReconfRqstFDD ::= SEQUENCE {
    commonTransportChannelID              CommonTransportChannelID,
    pCH-Power                             DL-Power        OPTIONAL,
    toAWS                                 ToAWS           OPTIONAL,
    toAWE                                 ToAWE           OPTIONAL,
    iE-Extensions                         ProtocolExtensionContainer  { { PCH-ParametersItem-CTCH-ReconfRqstFDD-ExtIEs} }       OPTIONAL,
    ...
}

PCH-ParametersItem-CTCH-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PICH-Parameters-CTCH-ReconfRqstFDD ::= ProtocolIE-Single-Container {{ PICH-ParametersIE-CTCH-ReconfRqstFDD }}
```

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```
PICH-ParametersIE-CTCH-ReconfRqstFDD NBAP-PROTOCOL-IES ::= {
    { ID id-PICH-ParametersItem-CTCH-ReconfRqstFDD  CRITICALITY reject  TYPE PICH-ParametersItem-CTCH-ReconfRqstFDD    PRESENCE mandatory }
}

PICH-ParametersItem-CTCH-ReconfRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID           CommonPhysicalChannelID,
    pICH-Power                        PICH-Power        OPTIONAL,
    iE-Extensions                     ProtocolExtensionContainer  { { PICH-ParametersItem-CTCH-ReconfRqstFDD-ExtIEs} }   OPTIONAL,
    ...
}

PICH-ParametersItem-CTCH-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PRACHList-CTCH-ReconfRqstFDD ::= SEQUENCE {
    pRACH-ParametersList-CTCH-ReconfRqstFDD     PRACH-ParametersList-CTCH-ReconfRqstFDD OPTIONAL,
    aICH-ParametersList-CTCH-ReconfRqstFDD      AICH-ParametersList-CTCH-ReconfRqstFDD  OPTIONAL,
    iE-Extensions                     ProtocolExtensionContainer { { PRACH-CTCH-ReconfRqstFDD-ExtIEs} } OPTIONAL,
    ...
}

PRACH-CTCH-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PRACH-ParametersList-CTCH-ReconfRqstFDD ::= ProtocolIE-Single-Container {{ PRACH-ParametersListIEs-CTCH-ReconfRqstFDD }}

PRACH-ParametersListIEs-CTCH-ReconfRqstFDD NBAP-PROTOCOL-IES ::= {
    { ID id-PRACH-ParametersListIE-CTCH-ReconfRqstFDD   CRITICALITY reject  TYPE PRACH-ParametersListIE-CTCH-ReconfRqstFDD   PRESENCE mandatory }
}

PRACH-ParametersListIE-CTCH-ReconfRqstFDD ::= SEQUENCE (SIZE (1..maxPRACHCell)) OF PRACH-ParametersItem-CTCH-ReconfRqstFDD

PRACH-ParametersItem-CTCH-ReconfRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID           CommonPhysicalChannelID,
    preambleSignatures                PreambleSignatures     OPTIONAL,
    allowedSlotFormatInformation      AllowedSlotFormatInformationList-CTCH-ReconfRqstFDD                 OPTIONAL,
    rACH-SubChannelNumbers            RACH-SubChannelNumbers     OPTIONAL,
    iE-Extensions                     ProtocolExtensionContainer  { { PRACH-ParametersItem-CTCH-ReconfRqstFDD-ExtIEs} }     OPTIONAL,
    ...
}

PRACH-ParametersItem-CTCH-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

AllowedSlotFormatInformationList-CTCH-ReconfRqstFDD ::= SEQUENCE (SIZE (1.. maxNrOfSlotFormatsPRACH)) OF AllowedSlotFormatInformationItem-CTCH-
ReconfRqstFDD

AllowedSlotFormatInformationItem-CTCH-ReconfRqstFDD ::= SEQUENCE {
    rACH-SlotFormat                   RACH-SlotFormat,
```

```
    iE-Extensions                               ProtocolExtensionContainer  { { AllowedSlotFormatInformationItem-CTCH-ReconfRqstFDD-ExtIEs} }
    OPTIONAL,
    ...
}

AllowedSlotFormatInformationItem-CTCH-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

AICH-ParametersList-CTCH-ReconfRqstFDD ::= ProtocolIE-Single-Container {{ AICH-ParametersListIEs-CTCH-ReconfRqstFDD }}

AICH-ParametersListIEs-CTCH-ReconfRqstFDD NBAP-PROTOCOL-IES ::= {
    { ID id-AICH-ParametersListIE-CTCH-ReconfRqstFDD    CRITICALITY reject  TYPE AICH-ParametersListIE-CTCH-ReconfRqstFDD    PRESENCE mandatory }
}

AICH-ParametersListIE-CTCH-ReconfRqstFDD ::= SEQUENCE (SIZE (1..maxPRACHCell)) OF AICH-ParametersItem-CTCH-ReconfRqstFDD

AICH-ParametersItem-CTCH-ReconfRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID         CommonPhysicalChannelID,
    aICH-Power                      AICH-Power      OPTIONAL,
    iE-Extensions                   ProtocolExtensionContainer  { { AICH-ParametersItemIE-CTCH-ReconfRqstFDD-ExtIEs} }    OPTIONAL,
    ...
}

AICH-ParametersItemIE-CTCH-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CPCHList-CTCH-ReconfRqstFDD ::= SEQUENCE {
    cPCH-ParametersList-CTCH-ReconfRqstFDD          CPCH-ParametersList-CTCH-ReconfRqstFDD                          OPTIONAL,
    aP-AICH-ParametersList-CTCH-ReconfRqstFDD       AP-AICH-ParametersList-CTCH-ReconfRqstFDD                       OPTIONAL,
    cDCA-ICH-ParametersList-CTCH-ReconfRqstFDD      CDCA-ICH-ParametersList-CTCH-ReconfRqstFDD                      OPTIONAL,
    iE-Extensions                                   ProtocolExtensionContainer  { { CPCHListItem-CTCH-ReconfRqstFDD-ExtIEs} }    OPTIONAL,
    ...
}

CPCHListItem-CTCH-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CPCH-ParametersList-CTCH-ReconfRqstFDD ::= ProtocolIE-Single-Container {{ CPCH-ParametersListIEs-CTCH-ReconfRqstFDD }}

CPCH-ParametersListIEs-CTCH-ReconfRqstFDD NBAP-PROTOCOL-IES ::= {
    { ID id-CPCH-ParametersListIE-CTCH-ReconfRqstFDD    CRITICALITY reject  TYPE CPCH-ParametersListIE-CTCH-ReconfRqstFDD    PRESENCE mandatory }
}

CPCH-ParametersListIE-CTCH-ReconfRqstFDD ::= SEQUENCE (SIZE (1..maxNrOfCPCHs)) OF CPCH-ParametersItem-CTCH-ReconfRqstFDD

CPCH-ParametersItem-CTCH-ReconfRqstFDD ::= SEQUENCE {
    commonTransportChannelID        CommonTransportChannelID,
    uL-SIR                          UL-SIR          OPTIONAL,
    initialDL-transmissionPower     DL-Power        OPTIONAL,
    maximumDLPower                  DL-Power        OPTIONAL,
    minimumDLPower                  DL-Power        OPTIONAL,
```

```
    iE-Extensions                    ProtocolExtensionContainer  { { CPCH-ParametersItem-CTCH-ReconfRqstFDD-ExtIEs} }     OPTIONAL,
    ...
}

CPCH-ParametersItem-CTCH-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

AP-AICH-ParametersList-CTCH-ReconfRqstFDD ::= ProtocolIE-Single-Container {{ AP-AICH-ParametersListIEs-CTCH-ReconfRqstFDD }}

AP-AICH-ParametersListIEs-CTCH-ReconfRqstFDD NBAP-PROTOCOL-IES ::= {
    { ID id-AP-AICH-ParametersListIE-CTCH-ReconfRqstFDD CRITICALITY reject  TYPE AP-AICH-ParametersListIE-CTCH-ReconfRqstFDD   PRESENCE mandatory }
}

AP-AICH-ParametersListIE-CTCH-ReconfRqstFDD ::= SEQUENCE (SIZE (1..maxNrOfCPCHs)) OF AP-AICH-ParametersItem-CTCH-ReconfRqstFDD

AP-AICH-ParametersItem-CTCH-ReconfRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID          CommonPhysicalChannelID,
    aP-AICH-Power                            AICH-Power     OPTIONAL,
    cSICH-Power                              AICH-Power     OPTIONAL,
    iE-Extensions                            ProtocolExtensionContainer  { { AP-AICH-ParametersItemIE-CTCH-ReconfRqstFDD-ExtIEs} }    OPTIONAL,
    ...
}

AP-AICH-ParametersItemIE-CTCH-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CDCA-ICH-ParametersList-CTCH-ReconfRqstFDD ::= ProtocolIE-Single-Container {{ CDCA-ICH-ParametersListIEs-CTCH-ReconfRqstFDD }}

CDCA-ICH-ParametersListIEs-CTCH-ReconfRqstFDD NBAP-PROTOCOL-IES ::= {
    { ID id-CDCA-ICH-ParametersListIE-CTCH-ReconfRqstFDD   CRITICALITY reject  TYPE CDCA-ICH-ParametersListIE-CTCH-ReconfRqstFDD PRESENCE
    mandatory }
}

CDCA-ICH-ParametersListIE-CTCH-ReconfRqstFDD ::= SEQUENCE (SIZE (1..maxNrOfCPCHs)) OF CDCA-ICH-ParametersItem-CTCH-ReconfRqstFDD

CDCA-ICH-ParametersItem-CTCH-ReconfRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID          CommonPhysicalChannelID,
    cDCA-ICH-Power                           AICH-Power     OPTIONAL,
    iE-Extensions                            ProtocolExtensionContainer  { { CDCA-ICH-ParametersItemIE-CTCH-ReconfRqstFDD-ExtIEs} }    OPTIONAL,
    ...
}

CDCA-ICH-ParametersItemIE-CTCH-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *************************************************************
--
-- COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST TDD
--
-- *************************************************************
```

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

CommonTransportChannelReconfigurationRequestTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID   id-C-ID                                        CRITICALITY reject     TYPE    C-ID
    PRESENCE    mandatory   }|
    { ID   id-ConfigurationGenerationID                   CRITICALITY reject     TYPE    ConfigurationGenerationID           PRESENCE
    mandatory   }|
    { ID id-Secondary-CCPCH-Parameters-CTCH-ReconfRqstTDD       CRITICALITY reject  TYPE    Secondary-CCPCH-Parameters-CTCH-ReconfRqstTDD
       PRESENCE optional   }|
    { ID id-PICH-Parameters-CTCH-ReconfRqstTDD    CRITICALITY reject  TYPE    PICH-Parameters-CTCH-ReconfRqstTDD       PRESENCE optional }|
    { ID id-FACH-ParametersList-CTCH-ReconfRqstTDD CRITICALITY reject  TYPE   FACH-ParametersList-CTCH-ReconfRqstTDD  PRESENCE optional }|
    { ID id-PCH-Parameters-CTCH-ReconfRqstTDD     CRITICALITY reject  TYPE    PCH-Parameters-CTCH-ReconfRqstTDD        PRESENCE optional },
    ...
}

CommonTransportChannelReconfigurationRequestTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-FPACH-LCR-Parameters-CTCH-ReconfRqstTDD    CRITICALITY reject  EXTENSION   FPACH-LCR-Parameters-CTCH-ReconfRqstTDD      PRESENCE
optional    },   -- Mandatory For 3.84Mcps TDD only
    ...
}

Secondary-CCPCH-Parameters-CTCH-ReconfRqstTDD::= SEQUENCE {
    cCTrCH-ID                  CCTrCH-ID,
    secondaryCCPCHList         Secondary-CCPCHList-CTCH-ReconfRqstTDD        OPTIONAL,
    iE-Extensions              ProtocolExtensionContainer { { Secondary-CCPCH-CTCH-ReconfRqstTDD-ExtIEs} }      OPTIONAL,
    ...
}

Secondary-CCPCH-CTCH-ReconfRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Secondary-CCPCHList-CTCH-ReconfRqstTDD ::= ProtocolIE-Single-Container {{ Secondary-CCPCHListIEs-CTCH-ReconfRqstTDD }}

Secondary-CCPCHListIEs-CTCH-ReconfRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID id-Secondary-CCPCHListIE-CTCH-ReconfRqstTDD    CRITICALITY reject  TYPE Secondary-CCPCHListIE-CTCH-ReconfRqstTDD    PRESENCE mandatory }
}

Secondary-CCPCHListIE-CTCH-ReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfSCCPCHs)) OF Secondary-CCPCHItem-CTCH-ReconfRqstTDD

Secondary-CCPCHItem-CTCH-ReconfRqstTDD ::= SEQUENCE {
    commonPhysicalChannelID          CommonPhysicalChannelID,
    sCCPCH-Power                     DL-Power        OPTIONAL,
    iE-Extensions                    ProtocolExtensionContainer { { Secondary-CCPCHItem-CTCH-ReconfRqstTDD-ExtIEs} }    OPTIONAL,
    ...
}

Secondary-CCPCHItem-CTCH-ReconfRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

```
PICH-Parameters-CTCH-ReconfRqstTDD   ::= SEQUENCE {
    commonPhysicalChannelID            CommonPhysicalChannelID,
    pICH-Power                         PICH-Power       OPTIONAL,
    iE-Extensions                      ProtocolExtensionContainer  { { PICH-Parameters-CTCH-ReconfRqstTDD-ExtIEs} }    OPTIONAL,
    ...
}

PICH-Parameters-CTCH-ReconfRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

FACH-ParametersList-CTCH-ReconfRqstTDD ::= SEQUENCE (SIZE (0..maxNrOfFACHs)) OF FACH-ParametersItem-CTCH-ReconfRqstTDD

FACH-ParametersItem-CTCH-ReconfRqstTDD ::= SEQUENCE {
    commonTransportChannelID           CommonTransportChannelID,
    toAWS                              ToAWS            OPTIONAL,
    toAWE                              ToAWE            OPTIONAL,
    iE-Extensions                      ProtocolExtensionContainer  { { FACH-ParametersItem-CTCH-ReconfRqstTDD-ExtIEs} }    OPTIONAL,
    ...
}

FACH-ParametersItem-CTCH-ReconfRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    { ID   id-maxFACH-Power-LCR-CTCH-ReconfRqstTDD          CRITICALITY reject     EXTENSION   DL-Power            PRESENCE   optional },
    -- For 3.84Mcps TDD only
    ...
}

PCH-Parameters-CTCH-ReconfRqstTDD ::= SEQUENCE {
    commonTransportChannelID           CommonTransportChannelID,
    toAWS                              ToAWS            OPTIONAL,
    toAWE                              ToAWE            OPTIONAL,
    iE-Extensions                      ProtocolExtensionContainer  { { PCH-Parameters-CTCH-ReconfRqstTDD-ExtIEs} }        OPTIONAL,
    ...
}

PCH-Parameters-CTCH-ReconfRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    { ID   id-PCH-Power-LCR-CTCH-ReconfRqstTDD          CRITICALITY reject     EXTENSION   DL-Power            PRESENCE   optional },
    ... -- For 3.84Mcps TDD only
}

FPACH-LCR-Parameters-CTCH-ReconfRqstTDD ::= SEQUENCE {
    commonPhysicalChannelId            CommonPhysicalChannelID,
    fPACHPower                         FPACH-Power      OPTIONAL,
    iE-Extensions                      ProtocolExtensionContainer  { { FPACH-LCR-Parameters-CTCH-ReconfRqstTDD-ExtIEs} }    OPTIONAL,
    ...
}

FPACH-LCR-Parameters-CTCH-ReconfRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- **************************************************************
--
```

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```
-- COMMON TRANSPORT CHANNEL RECONFIGURATION RESPONSE
--
-- *************************************************************

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

CommonTransportChannelReconfigurationResponse-IEs NBAP-PROTOCOL-IES ::= {
    { ID   id-CriticalityDiagnostics        CRITICALITY      ignore       TYPE   CriticalityDiagnostics            PRESENCE optional},
    ...
}

CommonTransportChannelReconfigurationResponse-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *************************************************************
--
-- COMMON TRANSPORT CHANNEL RECONFIGURATION FAILURE
--
-- *************************************************************

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

CommonTransportChannelReconfigurationFailure-IEs NBAP-PROTOCOL-IES ::= {
    { ID   id-Cause                         CRITICALITY ignore       TYPE   Cause                                 PRESENCE mandatory   }|
    { ID   id-CriticalityDiagnostics        CRITICALITY ignore       TYPE   CriticalityDiagnostics                PRESENCE optional },
    ...
}

CommonTransportChannelReconfigurationFailure-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *************************************************************
--
-- COMMON TRANSPORT CHANNEL DELETION REQUEST
--
-- *************************************************************

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

CommonTransportChannelDeletionRequest-IEs NBAP-PROTOCOL-IES ::= {
```

```
    { ID    id-C-ID                           CRITICALITY reject    TYPE    C-ID                            PRESENCE    mandatory}|
    { ID    id-CommonPhysicalChannelID        CRITICALITY reject    TYPE    CommonPhysicalChannelID         PRESENCE mandatory}|
    { ID    id-ConfigurationGenerationID      CRITICALITY reject    TYPE    ConfigurationGenerationID       PRESENCE mandatory},
    ...
}

CommonTransportChannelDeletionRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- **************************************************************
--
-- COMMON TRANSPORT CHANNEL DELETION RESPONSE
--
-- **************************************************************

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

CommonTransportChannelDeletionResponse-IEs NBAP-PROTOCOL-IES ::= {
    { ID   id-CriticalityDiagnostics      CRITICALITY    ignore    TYPE    CriticalityDiagnostics         PRESENCE optional},
    ...
}

CommonTransportChannelDeletionResponse-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- **************************************************************
--
-- BLOCK RESOURCE REQUEST
--
-- **************************************************************

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

BlockResourceRequest-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-C-ID                           CRITICALITY reject    TYPE    C-ID                              PRESENCE mandatory   }|
    { ID    id-BlockingPriorityIndicator      CRITICALITY reject    TYPE    BlockingPriorityIndicator         PRESENCE mandatory   }|
    { ID    id-ShutdownTimer                  CRITICALITY reject    TYPE    ShutdownTimer                     PRESENCE conditional },
    -- The IE shall be present if the Blocking Priority Indicator IE indicates 'Normal Priority'--
    ...
}

BlockResourceRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

```
-- **********************************************************
--
-- BLOCK RESOURCE RESPONSE
--
-- **********************************************************

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

BlockResourceResponse-IEs NBAP-PROTOCOL-IES ::= {
    { ID   id-CriticalityDiagnostics       CRITICALITY    ignore    TYPE   CriticalityDiagnostics            PRESENCE optional},
    ...
}

BlockResourceResponse-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- **********************************************************
--
-- BLOCK RESOURCE FAILURE
--
-- **********************************************************

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

BlockResourceFailure-IEs NBAP-PROTOCOL-IES ::= {
    { ID   id-Cause                          CRITICALITY    ignore    TYPE   Cause                          PRESENCE mandatory   }|
    { ID   id-CriticalityDiagnostics         CRITICALITY    ignore    TYPE   CriticalityDiagnostics         PRESENCE optional  },
    ...
}

BlockResourceFailure-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- **********************************************************
--
-- UNBLOCK RESOURCE INDICATION
--
-- **********************************************************

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

```
}

UnblockResourceIndication-IEs NBAP-PROTOCOL-IES ::= {
    { ID   id-C-ID          CRITICALITY    ignore    TYPE    C-ID        PRESENCE    mandatory},
    ...
}

UnblockResourceIndication-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *************************************************************
--
-- AUDIT REQUIRED INDICATION
--
-- *************************************************************

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

AuditRequiredIndication-IEs NBAP-PROTOCOL-IES ::= {
    ...
}

AuditRequiredIndication-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *************************************************************
--
-- AUDIT REQUEST
--
-- *************************************************************

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

AuditRequest-IEs NBAP-PROTOCOL-IES ::= {
    { ID   id-Start-Of-Audit-Sequence-Indicator      CRITICALITY    reject TYPE Start-Of-Audit-Sequence-Indicator   PRESENCE  mandatory },
    ...
}

AuditRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *************************************************************
--
```

```
-- AUDIT RESPONSE
--
-- *****************************************************************

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

AuditResponse-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-End-Of-Audit-Sequence-Indicator       CRITICALITY      ignore TYPE    End-Of-Audit-Sequence-Indicator    PRESENCE mandatory }|
    { ID    id-Cell-InformationList-AuditRsp          CRITICALITY      ignore          TYPE    Cell-InformationList-AuditRsp           PRESENCE
    optional    }|
    { ID    id-CCP-InformationList-AuditRsp           CRITICALITY      ignore          TYPE    CCP-InformationList-AuditRsp       PRESENCE optional
    }|
    -- CCP (Communication Control Port) --
    { ID    id-Local-Cell-InformationList-AuditRsp     CRITICALITY      ignore          TYPE    Local-Cell-InformationList-AuditRsp     PRESENCE
    optional    }|
    { ID    id-Local-Cell-Group-InformationList-AuditRsp   CRITICALITY      ignore      TYPE    Local-Cell-Group-InformationList-AuditRsp PRESENCE
    optional    }|
    { ID    id-CriticalityDiagnostics                 CRITICALITY      ignore          TYPE    CriticalityDiagnostics               PRESENCE optional
    },
    ...
}

AuditResponse-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    { ID    id-Power-Local-Cell-Group-InformationList-AuditRsp  CRITICALITY      ignore      EXTENSION               Power-Local-Cell-Group-
InformationList-AuditRsp        PRESENCE    optional    },
    ...
}

Cell-InformationList-AuditRsp ::= SEQUENCE (SIZE (1..maxCellinNodeB)) OF ProtocolIE-Single-Container {{ Cell-InformationItemIE-AuditRsp}}

Cell-InformationItemIE-AuditRsp NBAP-PROTOCOL-IES ::= {
    { ID    id-Cell-InformationItem-AuditRsp          CRITICALITY      ignore     TYPE    Cell-InformationItem-AuditRsp        PRESENCE    optional }
}

Cell-InformationItem-AuditRsp ::= SEQUENCE {
    c-ID                                C-ID,
    configurationGenerationID           ConfigurationGenerationID,
    resourceOperationalState            ResourceOperationalState,
    availabilityStatus                  AvailabilityStatus,
    local-Cell-ID                       Local-Cell-ID,
    primary-SCH-Information              P-SCH-Information-AuditRsp                 OPTIONAL,
    secondary-SCH-Information            S-SCH-Information-AuditRsp                 OPTIONAL,
    primary-CPICH-Information            P-CPICH-Information-AuditRsp               OPTIONAL,
    secondary-CPICH-InformationList     S-CPICH-InformationList-AuditRsp           OPTIONAL,
    primary-CCPCH-Information            P-CCPCH-Information-AuditRsp               OPTIONAL,
    bCH-Information                      BCH-Information-AuditRsp                   OPTIONAL,
    secondary-CCPCH-InformationList     S-CCPCH-InformationList-AuditRsp           OPTIONAL,
    pCH-Information                      PCH-Information-AuditRsp                   OPTIONAL,
    pICH-Information                     PICH-Information-AuditRsp                  OPTIONAL,
    fACH-InformationList                FACH-InformationList-AuditRsp              OPTIONAL,
```

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```
    pRACH-InformationList                     PRACH-InformationList-AuditRsp              OPTIONAL,
    rACH-InformationList                      RACH-InformationList-AuditRsp               OPTIONAL,
    aICH-InformationList                      AICH-InformationList-AuditRsp               OPTIONAL,
    pCPCH-InformationList                     PCPCH-InformationList-AuditRsp              OPTIONAL,
    cPCH-InformationList                      CPCH-InformationList-AuditRsp               OPTIONAL,
    aP-AICH-InformationList                   AP-AICH-InformationList-AuditRsp            OPTIONAL,
    cDCA-ICH-InformationList                  CDCA-ICH-InformationList-AuditRsp           OPTIONAL,
    sCH-Information                           SCH-Information-AuditRsp                    OPTIONAL,
    iE-Extensions                            ProtocolExtensionContainer  { { Cell-InformationItem-AuditRsp-ExtIEs} }   OPTIONAL,
    ...
}

Cell-InformationItem-AuditRsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-FPACH-LCR-InformationList-AuditRsp      CRITICALITY ignore  EXTENSION    FPACH-LCR-InformationList-AuditRsp      PRESENCE optional }|
    -- For 1.28Mcps TDD only
    { ID id-DwPCH-LCR-InformationList-AuditRsp      CRITICALITY ignore  EXTENSION    DwPCH-LCR-InformationList-AuditRsp      PRESENCE optional },
    -- For 1.28Mcps TDD only
    ...
}

P-SCH-Information-AuditRsp ::= ProtocolIE-Single-Container {{ P-SCH-InformationIE-AuditRsp }}

P-SCH-InformationIE-AuditRsp NBAP-PROTOCOL-IES ::= {
    { ID id-P-SCH-Information   CRITICALITY ignore  TYPE Common-PhysicalChannel-Status-Information              PRESENCE mandatory }
}

S-SCH-Information-AuditRsp ::= ProtocolIE-Single-Container {{ S-SCH-InformationIE-AuditRsp }}

S-SCH-InformationIE-AuditRsp NBAP-PROTOCOL-IES ::= {
    { ID id-S-SCH-Information   CRITICALITY ignore  TYPE Common-PhysicalChannel-Status-Information              PRESENCE mandatory }
}

P-CPICH-Information-AuditRsp ::= ProtocolIE-Single-Container {{ P-CPICH-InformationIE-AuditRsp }}

P-CPICH-InformationIE-AuditRsp NBAP-PROTOCOL-IES ::= {
    { ID id-P-CPICH-Information CRITICALITY ignore  TYPE Common-PhysicalChannel-Status-Information              PRESENCE mandatory }
}

S-CPICH-InformationList-AuditRsp ::= SEQUENCE (SIZE (1..maxSCPICHCell)) OF ProtocolIE-Single-Container {{ S-CPICH-InformationItemIE-AuditRsp }}

S-CPICH-InformationItemIE-AuditRsp NBAP-PROTOCOL-IES ::= {
    { ID id-S-CPICH-Information   CRITICALITY ignore   TYPE Common-PhysicalChannel-Status-Information             PRESENCE mandatory }
}

P-CCPCH-Information-AuditRsp ::= ProtocolIE-Single-Container {{ P-CCPCH-InformationIE-AuditRsp }}

P-CCPCH-InformationIE-AuditRsp NBAP-PROTOCOL-IES ::= {
    { ID id-P-CCPCH-Information   CRITICALITY ignore   TYPE Common-PhysicalChannel-Status-Information             PRESENCE mandatory }
}

BCH-Information-AuditRsp ::= ProtocolIE-Single-Container {{ BCH-InformationIE-AuditRsp }}

BCH-InformationIE-AuditRsp NBAP-PROTOCOL-IES ::= {
    { ID id-BCH-Information   CRITICALITY ignore   TYPE Common-TransportChannel-Status-Information                PRESENCE mandatory }
```

```
}

S-CCPCH-InformationList-AuditRsp ::= SEQUENCE (SIZE (1..maxSCCPCHCell)) OF ProtocolIE-Single-Container {{ S-CCPCH-InformationItemIE-AuditRsp }}

S-CCPCH-InformationItemIE-AuditRsp NBAP-PROTOCOL-IES ::= {
    { ID id-S-CCPCH-Information   CRITICALITY ignore   TYPE Common-PhysicalChannel-Status-Information                PRESENCE mandatory }
}
PCH-Information-AuditRsp ::= ProtocolIE-Single-Container {{ PCH-InformationIE-AuditRsp }}

PCH-InformationIE-AuditRsp NBAP-PROTOCOL-IES ::= {
    { ID id-PCH-Information   CRITICALITY ignore   TYPE Common-TransportChannel-Status-Information                PRESENCE mandatory }
}

PICH-Information-AuditRsp ::= ProtocolIE-Single-Container {{ PICH-InformationIE-AuditRsp }}

PICH-InformationIE-AuditRsp NBAP-PROTOCOL-IES ::= {
    { ID id-PICH-Information   CRITICALITY ignore   TYPE Common-PhysicalChannel-Status-Information                PRESENCE mandatory }
}

FACH-InformationList-AuditRsp ::= SEQUENCE (SIZE (1..maxFACHCell)) OF ProtocolIE-Single-Container {{ FACH-InformationItemIE-AuditRsp }}

FACH-InformationItemIE-AuditRsp NBAP-PROTOCOL-IES ::= {
    { ID id-FACH-Information   CRITICALITY ignore   TYPE Common-TransportChannel-Status-Information                PRESENCE mandatory }
}

PRACH-InformationList-AuditRsp ::= SEQUENCE (SIZE (1..maxPRACHCell)) OF ProtocolIE-Single-Container {{ PRACH-InformationItemIE-AuditRsp }}

PRACH-InformationItemIE-AuditRsp NBAP-PROTOCOL-IES ::= {
    { ID id-PRACH-Information   CRITICALITY ignore  TYPE Common-PhysicalChannel-Status-Information                PRESENCE mandatory }
}

RACH-InformationList-AuditRsp ::= SEQUENCE (SIZE (1..maxRACHCell)) OF ProtocolIE-Single-Container {{ RACH-InformationItemIE-AuditRsp }}

RACH-InformationItemIE-AuditRsp NBAP-PROTOCOL-IES ::= {
    { ID id-RACH-Information   CRITICALITY ignore   TYPE Common-TransportChannel-Status-Information                PRESENCE mandatory }
}

AICH-InformationList-AuditRsp ::= SEQUENCE (SIZE (1..maxPRACHCell)) OF ProtocolIE-Single-Container {{ AICH-InformationItemIE-AuditRsp }}

AICH-InformationItemIE-AuditRsp NBAP-PROTOCOL-IES ::= {
    { ID id-AICH-Information   CRITICALITY ignore   TYPE Common-PhysicalChannel-Status-Information                PRESENCE mandatory }
}

PCPCH-InformationList-AuditRsp ::= SEQUENCE (SIZE (1..maxPCPCHCell)) OF ProtocolIE-Single-Container {{ PCPCH-InformationItemIE-AuditRsp }}

PCPCH-InformationItemIE-AuditRsp NBAP-PROTOCOL-IES ::= {
    { ID id-PCPCH-Information   CRITICALITY ignore  TYPE Common-PhysicalChannel-Status-Information                PRESENCE optional }
}

CPCH-InformationList-AuditRsp ::= SEQUENCE (SIZE (1..maxCPCHCell)) OF ProtocolIE-Single-Container {{ CPCH-InformationItemIE-AuditRsp }}

CPCH-InformationItemIE-AuditRsp NBAP-PROTOCOL-IES ::= {
    { ID id-CPCH-Information   CRITICALITY ignore   TYPE Common-TransportChannel-Status-Information                PRESENCE optional }
}
```

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```
AP-AICH-InformationList-AuditRsp ::= SEQUENCE (SIZE (1..maxCPCHCell)) OF ProtocolIE-Single-Container {{ AP-AICH-InformationItemIE-AuditRsp }}

AP-AICH-InformationItemIE-AuditRsp NBAP-PROTOCOL-IES ::= {
    { ID id-AP-AICH-Information    CRITICALITY ignore    TYPE Common-PhysicalChannel-Status-Information                PRESENCE mandatory }
}

CDCA-ICH-InformationList-AuditRsp ::= SEQUENCE (SIZE (1..maxCPCHCell)) OF ProtocolIE-Single-Container {{ CDCA-ICH-InformationItemIE-AuditRsp }}

CDCA-ICH-InformationItemIE-AuditRsp NBAP-PROTOCOL-IES ::= {
    { ID id-CDCA-ICH-Information    CRITICALITY ignore    TYPE Common-PhysicalChannel-Status-Information                PRESENCE mandatory }
}

SCH-Information-AuditRsp ::= ProtocolIE-Single-Container {{ SCH-InformationIE-AuditRsp }}

SCH-InformationIE-AuditRsp NBAP-PROTOCOL-IES ::= {
    { ID id-SCH-Information    CRITICALITY ignore    TYPE Common-PhysicalChannel-Status-Information                PRESENCE mandatory }
}

CCP-InformationList-AuditRsp ::=SEQUENCE (SIZE (1..maxCCPinNodeB)) OF ProtocolIE-Single-Container {{ CCP-InformationItemIE-AuditRsp }}

CCP-InformationItemIE-AuditRsp NBAP-PROTOCOL-IES ::= {
    {ID id-CCP-InformationItem-AuditRsp          CRITICALITY      ignore        TYPE    CCP-InformationItem-AuditRsp        PRESENCE mandatory}
}

CCP-InformationItem-AuditRsp ::= SEQUENCE {
    communicationControlPortID          CommunicationControlPortID,
    resourceOperationalState            ResourceOperationalState,
    availabilityStatus                  AvailabilityStatus,
    iE-Extensions                       ProtocolExtensionContainer  {{ CCP-InformationItem-AuditRsp-ExtIEs }}          OPTIONAL,
    ...
}

CCP-InformationItem-AuditRsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

FPACH-LCR-InformationList-AuditRsp ::= SEQUENCE (SIZE (1..maxFPACHCell)) OF ProtocolIE-Single-Container {{ FPACH-LCR-InformationItemIE-AuditRsp }}

FPACH-LCR-InformationItemIE-AuditRsp NBAP-PROTOCOL-IES ::= {
    { ID id-FPACH-LCR-Information-AuditRsp    CRITICALITY ignore TYPE Common-PhysicalChannel-Status-Information        PRESENCE mandatory }
}


DwPCH-LCR-InformationList-AuditRsp ::= ProtocolIE-Single-Container {{ DwPCH-LCR-InformationIE-AuditRsp }}

DwPCH-LCR-InformationIE-AuditRsp NBAP-PROTOCOL-IES ::= {
    { ID id-DwPCH-LCR-Information-AuditRsp    CRITICALITY ignore    TYPE Common-PhysicalChannel-Status-Information        PRESENCE mandatory }
}

Local-Cell-InformationList-AuditRsp  ::=SEQUENCE (SIZE (1..maxLocalCellinNodeB)) OF ProtocolIE-Single-Container {{ Local-Cell-InformationItemIE-
AuditRsp }}

Local-Cell-InformationItemIE-AuditRsp NBAP-PROTOCOL-IES ::= {
```

*ETSI*

```
    { ID    id-Local-Cell-InformationItem-AuditRsp          CRITICALITY    ignore       TYPE                        Local-Cell-InformationItem-
AuditRsp         PRESENCE    mandatory}
}

Local-Cell-InformationItem-AuditRsp ::= SEQUENCE {
    local-Cell-ID                           Local-Cell-ID,
    dl-or-global-capacityCredit             DL-or-Global-CapacityCredit,
    ul-capacityCredit                       UL-CapacityCredit      OPTIONAL,
    commnonChannelsCapacityConsumptionLaw   CommonChannelsCapacityConsumptionLaw,
    dedicatedChannelsCapacityConsumptionLaw DedicatedChannelsCapacityConsumptionLaw,
    maximumDL-PowerCapability               MaximumDL-PowerCapability        OPTIONAL,
    minSpreadingFactor                      MinSpreadingFactor               OPTIONAL,
    minimumDL-PowerCapability               MinimumDL-PowerCapability        OPTIONAL,
    local-Cell-Group-ID                     Local-Cell-ID                    OPTIONAL,
    iE-Extensions                           ProtocolExtensionContainer  {{ Local-Cell-InformationItem-AuditRsp-ExtIEs}}    OPTIONAL,
    ...
}

Local-Cell-InformationItem-AuditRsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    { ID    id-ReferenceClockAvailability      CRITICALITY     ignore        EXTENSION ReferenceClockAvailability       PRESENCE optional }|
    { ID    id-Power-Local-Cell-Group-ID       CRITICALITY     ignore        EXTENSION   Local-Cell-ID                  PRESENCE optional },
    ...
}

Local-Cell-Group-InformationList-AuditRsp    ::= SEQUENCE (SIZE (1..maxLocalCellinNodeB)) OF ProtocolIE-Single-Container {{ Local-Cell-Group-
InformationItemIE-AuditRsp }}

Local-Cell-Group-InformationItemIE-AuditRsp NBAP-PROTOCOL-IES ::= {
    { ID    id-Local-Cell-Group-InformationItem-AuditRsp           CRITICALITY    ignore                      TYPE Local-Cell-Group-
InformationItem-AuditRsp       PRESENCE    mandatory}
}

Local-Cell-Group-InformationItem-AuditRsp ::= SEQUENCE {
    local-Cell-Group-ID                     Local-Cell-ID,
    dl-or-global-capacityCredit             DL-or-Global-CapacityCredit,
    ul-capacityCredit                       UL-CapacityCredit                    OPTIONAL,
    commnonChannelsCapacityConsumptionLaw   CommonChannelsCapacityConsumptionLaw,
    dedicatedChannelsCapacityConsumptionLaw DedicatedChannelsCapacityConsumptionLaw,
    iE-Extensions                           ProtocolExtensionContainer  {{ Local-Cell-Group-InformationItem-AuditRsp-ExtIEs}}    OPTIONAL,
    ...
}

Local-Cell-Group-InformationItem-AuditRsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Power-Local-Cell-Group-InformationList-AuditRsp  ::= SEQUENCE (SIZE (1..maxLocalCellinNodeB)) OF ProtocolIE-Single-Container {{ Power-Local-Cell-
Group-InformationItemIE-AuditRsp }}

Power-Local-Cell-Group-InformationItemIE-AuditRsp NBAP-PROTOCOL-IES ::= {
    { ID    id-Power-Local-Cell-Group-InformationItem-AuditRsp          CRITICALITY     ignore      TYPE  Power-Local-Cell-Group-InformationItem-
AuditRsp         PRESENCE    mandatory}
}
```

```
Power-Local-Cell-Group-InformationItem-AuditRsp ::= SEQUENCE {
    power-Local-Cell-Group-ID                       Local-Cell-ID,
    maximumDL-PowerCapability                       MaximumDL-PowerCapability,
    iE-Extensions                                   ProtocolExtensionContainer  {{ Power-Local-Cell-Group-InformationItem-AuditRsp-ExtIEs}}
    OPTIONAL,
    ...
}

Power-Local-Cell-Group-InformationItem-AuditRsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *************************************************************
--
-- AUDIT FAILURE
--
-- *************************************************************

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

AuditFailure-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-Cause                                CRITICALITY    ignore      TYPE    Cause                                   PRESENCE mandatory
    }|
    { ID    id-CriticalityDiagnostics               CRITICALITY    ignore      TYPE    CriticalityDiagnostics      PRESENCE optional },
    ...
}

AuditFailure-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *************************************************************
--
-- COMMON MEASUREMENT INITIATION REQUEST
--
-- *************************************************************

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

CommonMeasurementInitiationRequest-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-MeasurementID                                CRITICALITY reject          TYPE    MeasurementID                       PRESENCE
    mandatory   }|
    { ID    id-CommonMeasurementObjectType-CM-Rqst          CRITICALITY reject          TYPE    CommonMeasurementObjectType-CM-Rqst     PRESENCE
    mandatory   }|
    -- This IE represents both the Common Measurement Object Type IE and the choice based on the Common Measurement Object Type
    -- as described in the tabular message format in subclause 9.1.
```

```
    { ID    id-CommonMeasurementType                       CRITICALITY reject        TYPE    CommonMeasurementType             PRESENCE
    mandatory   }|
    { ID    id-MeasurementFilterCoefficient                CRITICALITY reject        TYPE    MeasurementFilterCoefficient      PRESENCE
    optional   }|
    { ID    id-ReportCharacteristics                       CRITICALITY reject        TYPE    ReportCharacteristics             PRESENCE
    mandatory   }|
    { ID    id-SFNReportingIndicator                       CRITICALITY reject        TYPE    FNReportingIndicator              PRESENCE
    mandatory
    } |
    { ID    id-SFN                                         CRITICALITY reject        TYPE    SFN                               PRESENCE optional
    },
    ...
}

CommonMeasurementInitiationRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...,
    {ID id-CommonMeasurementAccuracy                       CRITICALITY reject        EXTENSION CommonMeasurementAccuracy        PRESENCE
optional}
}

CommonMeasurementObjectType-CM-Rqst ::= CHOICE {
    cell                        Cell-CM-Rqst,
    rACH                        RACH-CM-Rqst,
    cPCH                        CPCH-CM-Rqst,
    ...
}

Cell-CM-Rqst ::= SEQUENCE {
    c-ID                        C-ID,
    timeSlot                    TimeSlot    OPTIONAL,    -- For 3.84Mcps TDD only
    iE-Extensions               ProtocolExtensionContainer { { CellItem-CM-Rqst-ExtIEs} }                    OPTIONAL,
    ...
}

CellItem-CM-Rqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-TimeSlotLCR-CM-Rqst    CRITICALITY reject     EXTENSION    TimeSlotLCR         PRESENCE optional      }| -- For 1.28Mcps TDD only
    {ID id-NeighbouringCellMeasurementInformation     CRITICALITY ignore         EXTENSION NeighbouringCellMeasurementInformation      PRESENCE
optional},
    ...
}

RACH-CM-Rqst ::= SEQUENCE {
    c-ID                        C-ID,
    commonTransportChannelID    CommonTransportChannelID,
    iE-Extensions               ProtocolExtensionContainer { { RACHItem-CM-Rqst-ExtIEs} }                    OPTIONAL,
    ...
}

RACHItem-CM-Rqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CPCH-CM-Rqst ::= SEQUENCE {
    c-ID                        C-ID,
```

```
    commonTransportChannelID          CommonTransportChannelID,
    spreadingfactor                   MinUL-ChannelisationCodeLength      OPTIONAL,
    iE-Extensions                     ProtocolExtensionContainer { { CPCHItem-CM-Rqst-ExtIEs} }                      OPTIONAL,
    ...
}

CPCHItem-CM-Rqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *************************************************************
--
-- COMMON MEASUREMENT INITIATION RESPONSE
--
-- *************************************************************

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

CommonMeasurementInitiationResponse-IEs NBAP-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   }|
    { ID   id-CriticalityDiagnostics                  CRITICALITY ignore     TYPE    CriticalityDiagnostics       PRESENCE optional },
    ...
}

CommonMeasurementInitiationResponse-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...,
    {ID id-CommonMeasurementAccuracy        CRITICALITY ignore     EXTENSION CommonMeasurementAccuracy          PRESENCE optional}
}

CommonMeasurementObjectType-CM-Rsp ::= CHOICE {
    cell                  Cell-CM-Rsp,
    rACH                  RACH-CM-Rsp,
    cPCH                  CPCH-CM-Rsp,
    ...
}

Cell-CM-Rsp ::= SEQUENCE {
    commonMeasurementValue        CommonMeasurementValue,
    iE-Extensions                 ProtocolExtensionContainer { { CellItem-CM-Rsp-ExtIEs} }                      OPTIONAL,
    ...
}

CellItem-CM-Rsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

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```
RACH-CM-Rsp ::= SEQUENCE {
    commonMeasurementValue          CommonMeasurementValue,
    iE-Extensions                   ProtocolExtensionContainer { { RACHItem-CM-Rsp-ExtIEs} }                OPTIONAL,
    ...
 }

RACHItem-CM-Rsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {

    ...
}

CPCH-CM-Rsp ::= SEQUENCE {
    commonMeasurementValue          CommonMeasurementValue,
    iE-Extensions                   ProtocolExtensionContainer { { CPCHItem-CM-Rsp-ExtIEs} }                OPTIONAL,
    ...
 }

CPCHItem-CM-Rsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {

    ...
}

-- **************************************************************
--
-- COMMON MEASUREMENT INITIATION FAILURE
--
-- **************************************************************

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

CommonMeasurementInitiationFailure-IEs NBAP-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 NBAP-PROTOCOL-EXTENSION ::= {

    ...
}

-- **************************************************************
--
-- COMMON MEASUREMENT REPORT
--
-- **************************************************************

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

```
}

CommonMeasurementReport-IEs NBAP-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    },
    ...
}

CommonMeasurementReport-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CommonMeasurementObjectType-CM-Rprt ::= CHOICE {
    cell                        Cell-CM-Rprt,
    rACH                        RACH-CM-Rprt,
    cPCH                        CPCH-CM-Rprt,
    ...
 }

Cell-CM-Rprt ::= SEQUENCE {
    commonMeasurementValueInformation   CommonMeasurementValueInformation,
    iE-Extensions                       ProtocolExtensionContainer {{ CellItem-CM-Rprt-ExtIEs }}                    OPTIONAL,
    ...

 }

CellItem-CM-Rprt-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}


RACH-CM-Rprt ::= SEQUENCE {
    commonMeasurementValueInformation   CommonMeasurementValueInformation,
    iE-Extensions                       ProtocolExtensionContainer {{ RACHItem-CM-Rprt-ExtIEs }}                    OPTIONAL,
    ...
 }

RACHItem-CM-Rprt-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CPCH-CM-Rprt ::= SEQUENCE {
    commonMeasurementValueInformation   CommonMeasurementValueInformation,
    iE-Extensions                       ProtocolExtensionContainer {{ CPCHItem-CM-Rprt-ExtIEs }}                    OPTIONAL,
    ...
 }

CPCHItem-CM-Rprt-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

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```
-- **************************************************************
--
-- COMMON MEASUREMENT TERMINATION REQUEST
--
-- **************************************************************

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

CommonMeasurementTerminationRequest-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-MeasurementID           CRITICALITY    ignore          TYPE    MeasurementID                       PRESENCE mandatory},
    ...
}

CommonMeasurementTerminationRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- **************************************************************
--
-- COMMON MEASUREMENT FAILURE INDICATION
--
-- **************************************************************

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

CommonMeasurementFailureIndication-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-MeasurementID            CRITICALITY ignore        TYPE    MeasurementID                       PRESENCE mandatory   }|
    { ID    id-Cause                    CRITICALITY ignore        TYPE    Cause                               PRESENCE mandatory   },
    ...
}

CommonMeasurementFailureIndication-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- **************************************************************
--
-- CELL SETUP REQUEST FDD
--
-- **************************************************************

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

```
}

CellSetupRequestFDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-Local-Cell-ID                                    CRITICALITY    reject                    TYPE Local-Cell-ID
            PRESENCE    mandatory    }|
    { ID    id-C-ID                                             CRITICALITY    reject                    TYPE C-ID
            PRESENCE    mandatory    }|
    { ID    id-ConfigurationGenerationID                        CRITICALITY    reject                    TYPE ConfigurationGenerationID
            PRESENCE    mandatory    }|
    { ID    id-T-Cell                                           CRITICALITY    reject                    TYPE T-Cell
            PRESENCE    mandatory    }|
    { ID    id-UARFCNforNu                                      CRITICALITY    reject                    TYPE UARFCN
            PRESENCE    mandatory    }|
    { ID    id-UARFCNforNd                                      CRITICALITY    reject                    TYPE UARFCN
            PRESENCE    mandatory    }|
    { ID    id-MaximumTransmissionPower                         CRITICALITY    reject                    TYPE MaximumTransmissionPower
            PRESENCE    mandatory    }|
    { ID    id-Closed-Loop-Timing-Adjustment-Mode              CRITICALITY    reject                    TYPE
    Closedlooptimingadjustmentmode              PRESENCE    optional    }|
    { ID    id-PrimaryScramblingCode                            CRITICALITY    reject                    TYPE PrimaryScramblingCode
            PRESENCE    mandatory    }|
    { ID    id-Synchronisation-Configuration-Cell-SetupRqst     CRITICALITY    reject                    TYPE Synchronisation-
Configuration-Cell-SetupRqst           PRESENCE    mandatory    }|
    { ID    id-DL-TPC-Pattern01Count                            CRITICALITY    reject                     TYPE DL-TPC-Pattern01Count
                    PRESENCE    mandatory    }|
    { ID    id-PrimarySCH-Information-Cell-SetupRqstFDD          CRITICALITY    reject                    TYPE PrimarySCH-Information-
Cell-SetupRqstFDD          PRESENCE    mandatory    }|
    { ID    id-SecondarySCH-Information-Cell-SetupRqstFDD        CRITICALITY    reject                    TYPE SecondarySCH-Information-
Cell-SetupRqstFDD          PRESENCE    mandatory    }|
    { ID    id-PrimaryCPICH-Information-Cell-SetupRqstFDD        CRITICALITY    reject                    TYPE PrimaryCPICH-Information-
Cell-SetupRqstFDD          PRESENCE    mandatory    }|
    { ID    id-SecondaryCPICH-InformationList-Cell-SetupRqstFDD  CRITICALITY    reject                    TYPE SecondaryCPICH-
InformationList-Cell-SetupRqstFDD          PRESENCE    optional    }|
    { ID    id-PrimaryCCPCH-Information-Cell-SetupRqstFDD        CRITICALITY    reject                    TYPE PrimaryCCPCH-Information-
Cell-SetupRqstFDD          PRESENCE    mandatory    }|
    { ID    id-Limited-power-increase-information-Cell-SetupRqstFDD CRITICALITY    reject                 TYPE Limited-power-increase-
information-Cell-SetupRqstFDD          PRESENCE    mandatory    },
    ...
}

CellSetupRequestFDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    {ID id-IPDLParameter-Information-Cell-SetupRqstFDD                CRITICALITY    reject    EXTENSION            IPDLParameter-Information-
Cell-SetupRqstFDD          PRESENCE    optional    }|
    {ID id-PDSCH-Information-Cell-SetupRqstFDD                    CRITICALITY    reject    EXTENSION                PDSCH-Information-Cell-
SetupRqstFDD          PRESENCE    optional    },
    ...
}

Synchronisation-Configuration-Cell-SetupRqst ::= SEQUENCE {
    n-INSYNC-IND            N-INSYNC-IND,
    n-OUTSYNC-IND           N-OUTSYNC-IND,
    t-RLFAILURE             T-RLFAILURE,
    iE-Extensions           ProtocolExtensionContainer { { Synchronisation-Configuration-Cell-SetupRqst-ExtIEs} }    OPTIONAL,
    ...
```

```
}

Synchronisation-Configuration-Cell-SetupRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PrimarySCH-Information-Cell-SetupRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID                CommonPhysicalChannelID,
    primarySCH-Power                       DL-Power,
    tSTD-Indicator                         TSTD-Indicator,
    iE-Extensions                          ProtocolExtensionContainer { { PrimarySCH-Information-Cell-SetupRqstFDD-ExtIEs} }    OPTIONAL,
    ...
}

PrimarySCH-Information-Cell-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

SecondarySCH-Information-Cell-SetupRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID                CommonPhysicalChannelID,
    secondarySCH-Power                     DL-Power,
    tSTD-Indicator                         TSTD-Indicator,
    iE-Extensions                          ProtocolExtensionContainer { { SecondarySCH-Information-Cell-SetupRqstFDD-ExtIEs} }   OPTIONAL,
    ...
}

SecondarySCH-Information-Cell-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PrimaryCPICH-Information-Cell-SetupRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID                CommonPhysicalChannelID,
    primaryCPICH-Power                     PrimaryCPICH-Power,
    transmitDiversityIndicator             TransmitDiversityIndicator,
    iE-Extensions                          ProtocolExtensionContainer { { PrimaryCPICH-Information-Cell-SetupRqstFDD-ExtIEs} }   OPTIONAL,
    ...
}

PrimaryCPICH-Information-Cell-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

SecondaryCPICH-InformationList-Cell-SetupRqstFDD ::= SEQUENCE (SIZE (1..maxSCPICHCell)) OF ProtocolIE-Single-Container{{ SecondaryCPICH-
InformationItemIE-Cell-SetupRqstFDD }}

SecondaryCPICH-InformationItemIE-Cell-SetupRqstFDD NBAP-PROTOCOL-IES ::= {
    { ID    id-SecondaryCPICH-InformationItem-Cell-SetupRqstFDD    CRITICALITY    reject                          TYPE SecondaryCPICH-
InformationItem-Cell-SetupRqstFDD      PRESENCE    mandatory}
}

SecondaryCPICH-InformationItem-Cell-SetupRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID                CommonPhysicalChannelID,
    dl-ScramblingCode                      DL-ScramblingCode,
    fDD-DL-ChannelisationCodeNumber        FDD-DL-ChannelisationCodeNumber,
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```
    secondaryCPICH-Power                        DL-Power,
    transmitDiversityIndicator                  TransmitDiversityIndicator,
    iE-Extensions                               ProtocolExtensionContainer { { SecondaryCPICH-InformationItem-Cell-SetupRqstFDD-ExtIEs} }   OPTIONAL,
    ...
}

SecondaryCPICH-InformationItem-Cell-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PrimaryCCPCH-Information-Cell-SetupRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID                     CommonPhysicalChannelID,
    bCH-information                             BCH-Information-Cell-SetupRqstFDD,
    sTTD-Indicator                              STTD-Indicator,
    iE-Extensions                               ProtocolExtensionContainer { { PrimaryCCPCH-Information-Cell-SetupRqstFDD-ExtIEs} }   OPTIONAL,
    ...
}

PrimaryCCPCH-Information-Cell-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

BCH-Information-Cell-SetupRqstFDD ::= SEQUENCE {
    commonTransportChannelID                    CommonTransportChannelID,
    bCH-Power                                   DL-Power,
    iE-Extensions                               ProtocolExtensionContainer { { BCH-Information-Cell-SetupRqstFDD-ExtIEs} }   OPTIONAL,
    ...
 }

BCH-Information-Cell-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Limited-power-increase-information-Cell-SetupRqstFDD ::= SEQUENCE {
    powerRaiseLimit                             PowerRaiseLimit,
    dLPowerAveragingWindowSize                  DLPowerAveragingWindowSize,
    iE-Extensions                               ProtocolExtensionContainer { { Limited-power-increase-information-Cell-SetupRqstFDD-ExtIEs} }
    OPTIONAL,
    ...
}

Limited-power-increase-information-Cell-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

IPDLParameter-Information-Cell-SetupRqstFDD::= SEQUENCE {
    iPDL-FDD-Parameters                         IPDL-FDD-Parameters,
    iPDL-Indicator                              IPDL-Indicator,
    iE-Extensions                               ProtocolExtensionContainer { { IPDLParameter-Information-Cell-SetupRqstFDD-ExtIEs} }     OPTIONAL,
    ...
}

IPDLParameter-Information-Cell-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
```

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```
}

PDSCH-Information-Cell-SetupRqstFDD ::= SEQUENCE {
    maximum-PDSCH-Power     Maximum-PDSCH-Power,
    iE-Extensions           ProtocolExtensionContainer { { PDSCH-Information-Cell-SetupRqstFDD-ExtIEs} }      OPTIONAL,
    ...
}

PDSCH-Information-Cell-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ****************************************************************
--
-- CELL SETUP REQUEST TDD
--
-- ****************************************************************

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

CellSetupRequestTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID   id-Local-Cell-ID                              CRITICALITY   reject   TYPE           Local-Cell-ID
          PRESENCE    mandatory   }|
      { ID    id-C-ID                                    CRITICALITY    reject    TYPE         C-ID
        PRESENCE     mandatory   }|
    { ID   id-ConfigurationGenerationID                  CRITICALITY   reject   TYPE           ConfigurationGenerationID
          PRESENCE    mandatory   }|
    { ID    id-UARFCNforNt                               CRITICALITY    reject    TYPE         UARFCN
          PRESENCE    mandatory   }|
    { ID    id-CellParameterID                           CRITICALITY   reject   TYPE           CellParameterID
          PRESENCE    mandatory   }|
    { ID    id-MaximumTransmissionPower                  CRITICALITY   reject   TYPE           MaximumTransmissionPower
          PRESENCE    mandatory   }|
    { ID    id-TransmissionDiversityApplied              CRITICALITY   reject   TYPE           TransmissionDiversityApplied
          PRESENCE    mandatory   }|
    { ID    id-SyncCase                                  CRITICALITY   reject   TYPE           SyncCase
        PRESENCE    mandatory   }|
    { ID    id-Synchronisation-Configuration-Cell-SetupRqst   CRITICALITY   reject   TYPE     Synchronisation-Configuration-
Cell-SetupRqst        PRESENCE    mandatory   }|
    { ID    id-DPCHConstant                              CRITICALITY   reject   TYPE           ConstantValue
          PRESENCE    mandatory   }|
    { ID    id-PUSCHConstant                             CRITICALITY   reject   TYPE           ConstantValue
          PRESENCE    mandatory   }|
    { ID    id-PRACHConstant                             CRITICALITY   reject   TYPE           ConstantValue
          PRESENCE    mandatory   }|
    { ID    id-TimingAdvanceApplied                      CRITICALITY   reject   TYPE           TimingAdvanceApplied
          PRESENCE    mandatory   }|
    { ID    id-SCH-Information-Cell-SetupRqstTDD         CRITICALITY   reject   TYPE           SCH-Information-Cell-
SetupRqstTDD              PRESENCE    optional   }|  -- Mandatory for 3.84Mcps TDD only
```

```
    { ID    id-PCCPCH-Information-Cell-SetupRqstTDD                  CRITICALITY    reject    TYPE                    PCCPCH-Information-Cell-
SetupRqstTDD               PRESENCE    optional    }| -- Mandatory for 3.84Mcps TDD only
    { ID    id-TimeSlotConfigurationList-Cell-SetupRqstTDD    CRITICALITY    reject    TYPE                    TimeSlotConfigurationList-Cell-
SetupRqstTDD         PRESENCE    optional    }, -- Mandatory for 3.84Mcps TDD only
    ...
}


CellSetupRequestTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    { ID    id-TimeSlotConfigurationList-LCR-Cell-SetupRqstTDD    CRITICALITY    reject    EXTENSION    TimeSlotConfigurationList-LCR-
Cell-SetupRqstTDD       PRESENCE    optional    }| -- Mandatory for 1.28Mcps TDD only
    { ID    id-PCCPCH-LCR-Information-Cell-SetupRqstTDD              CRITICALITY    reject    EXTENSION    PCCPCH-LCR-Information-Cell-
SetupRqstTDD               PRESENCE    optional    }| -- Mandatory for 1.28Mcps TDD only
    { ID    id-DwPCH-LCR-Information-Cell-SetupRqstTDD              CRITICALITY    reject    EXTENSION    DwPCH-LCR-Information-Cell-
SetupRqstTDD               PRESENCE    optional    }| -- Mandatory for 1.28Mcps TDD only
    { ID    id-ReferenceSFNoffset    CRITICALITY    ignore         EXTENSION ReferenceSFNoffset                    PRESENCE optional }|
    { ID    id-IPDLParameter-Information-Cell-SetupRqstTDD          CRITICALITY    reject    EXTENSION             IPDLParameter-Information-
Cell-SetupRqstTDD   PRESENCE    optional }| -- For 3.84Mcps TDD only
    { ID    id-IPDLParameter-Information-LCR-Cell-SetupRqstTDD          CRITICALITY    reject                     EXTENSION    IPDLParameter-
Information-LCR-Cell-SetupRqstTDD   PRESENCE    optional }, -- For 1.28Mcps TDD only
    ...
}



SCH-Information-Cell-SetupRqstTDD ::= SEQUENCE {
    commonPhysicalChannelID                CommonPhysicalChannelID,
    syncCaseIndicator                      SyncCaseIndicator-Cell-SetupRqstTDD-PSCH,
    sCH-Power                              DL-Power,
    tSTD-Indicator                         TSTD-Indicator,
    iE-Extensions                          ProtocolExtensionContainer { { SCH-Information-Cell-SetupRqstTDD-ExtIEs} }   OPTIONAL,
    ...
}


SCH-Information-Cell-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

SyncCaseIndicator-Cell-SetupRqstTDD-PSCH ::= ProtocolIE-Single-Container {{ SyncCaseIndicatorIE-Cell-SetupRqstTDD-PSCH }}

SyncCaseIndicatorIE-Cell-SetupRqstTDD-PSCH NBAP-PROTOCOL-IES ::= {
    { ID id-SyncCaseIndicatorItem-Cell-SetupRqstTDD-PSCH   CRITICALITY reject   TYPE SyncCaseIndicatorItem-Cell-SetupRqstTDD-PSCH     PRESENCE
mandatory }
}

SyncCaseIndicatorItem-Cell-SetupRqstTDD-PSCH ::= CHOICE {
    case1                              Case1-Cell-SetupRqstTDD,
    case2                              Case2-Cell-SetupRqstTDD,
    ...
}

Case1-Cell-SetupRqstTDD ::= SEQUENCE {
    timeSlot                           TimeSlot,
    iE-Extensions                      ProtocolExtensionContainer { { Case1Item-Cell-SetupRqstTDD-ExtIEs} }          OPTIONAL,
    ...
}
```

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```
Case1Item-Cell-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Case2-Cell-SetupRqstTDD ::= SEQUENCE {
    sCH-TimeSlot                        SCH-TimeSlot,
    iE-Extensions                       ProtocolExtensionContainer { { Case2Item-Cell-SetupRqstTDD-ExtIEs} }         OPTIONAL,
    ...
}

Case2Item-Cell-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}


PCCPCH-Information-Cell-SetupRqstTDD ::= SEQUENCE {
    commonPhysicalChannelID             CommonPhysicalChannelID,
    tdd-PhysicalChannelOffset           TDD-PhysicalChannelOffset,
    repetitionPeriod                    RepetitionPeriod,
    repetitionLength                    RepetitionLength,
    pCCPCH-Power                        PCCPCH-Power,
    sCTD-Indicator                      SCTD-Indicator,
    iE-Extensions                       ProtocolExtensionContainer { { PCCPCH-Information-Cell-SetupRqstTDD-ExtIEs} }   OPTIONAL,
    ...
}

PCCPCH-Information-Cell-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TimeSlotConfigurationList-Cell-SetupRqstTDD ::= SEQUENCE (SIZE (1..15)) OF TimeSlotConfigurationItem-Cell-SetupRqstTDD

TimeSlotConfigurationItem-Cell-SetupRqstTDD ::= SEQUENCE {
    timeSlot                            TimeSlot,
    timeSlotStatus                      TimeSlotStatus,
    timeSlotDirection                   TimeSlotDirection,
    iE-Extensions                       ProtocolExtensionContainer { { TimeSlotConfigurationItem-Cell-SetupRqstTDD-ExtIEs} }     OPTIONAL,
    ...
}

TimeSlotConfigurationItem-Cell-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TimeSlotConfigurationList-LCR-Cell-SetupRqstTDD ::= SEQUENCE (SIZE (1..7)) OF TimeSlotConfigurationItem-LCR-Cell-SetupRqstTDD

TimeSlotConfigurationItem-LCR-Cell-SetupRqstTDD ::= SEQUENCE {
    timeSlotLCR                         TimeSlotLCR,
    timeSlotStatus                      TimeSlotStatus,
    timeSlotDirection                   TimeSlotDirection,
    iE-Extensions                       ProtocolExtensionContainer { { TimeSlotConfigurationItem-LCR-Cell-SetupRqstTDD-ExtIEs} }    OPTIONAL,
    ...
}
```

```
TimeSlotConfigurationItem-LCR-Cell-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PCCPCH-LCR-Information-Cell-SetupRqstTDD ::= SEQUENCE {
    commonPhysicalChannelID                 CommonPhysicalChannelID,
    tdd-PhysicalChannelOffset               TDD-PhysicalChannelOffset,
    repetitionPeriod                        RepetitionPeriod,
    repetitionLength                        RepetitionLength,
    pCCPCH-Power                            PCCPCH-Power,
    sCTD-Indicator                         SCTD-Indicator,
    tSTD-Indicator                         TSTD-Indicator,
    iE-Extensions                           ProtocolExtensionContainer { { PCCPCH-LCR-Information-Cell-SetupRqstTDD-ExtIEs} }     OPTIONAL,
    ...
}

PCCPCH-LCR-Information-Cell-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DwPCH-LCR-Information-Cell-SetupRqstTDD ::= SEQUENCE {
    commonPhysicalChannelId        CommonPhysicalChannelID,
    tSTD-Indicator                 TSTD-Indicator,
    sYNCDlCodeId                   SYNCDlCodeId,
    dwPCH-Power                    DwPCH-Power,
    iE-Extensions                  ProtocolExtensionContainer { { DwPCH-LCR-Information-Cell-SetupRqstTDD-ExtIEs} }     OPTIONAL,
    ...
}

DwPCH-LCR-Information-Cell-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

IPDLParameter-Information-Cell-SetupRqstTDD ::= SEQUENCE {
    iPDL-TDD-Parameters                     IPDL-TDD-Parameters,
    iPDL-Indicator                          IPDL-Indicator,
    iE-Extensions                           ProtocolExtensionContainer { { IPDLParameter-Information-Cell-SetupRqstTDD-ExtIEs} }     OPTIONAL,
    ...
}

IPDLParameter-Information-Cell-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
IPDLParameter-Information-LCR-Cell-SetupRqstTDD ::= SEQUENCE {
    iPDL-TDD-Parameters-LCR                 IPDL-TDD-Parameters-LCR,
    iPDL-Indicator                          IPDL-Indicator,
    iE-Extensions                           ProtocolExtensionContainer { { IPDLParameter-Information-LCR-Cell-SetupRqstTDD-ExtIEs} }     OPTIONAL,
    ...
}

IPDLParameter-Information-LCR-Cell-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

```
-- **************************************************************
--
-- CELL SETUP RESPONSE
--
-- **************************************************************

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

CellSetupResponse-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-CriticalityDiagnostics      CRITICALITY    ignore      TYPE    CriticalityDiagnostics        PRESENCE optional},
    ...
}

CellSetupResponse-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- **************************************************************
--
-- CELL SETUP FAILURE
--
-- **************************************************************

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

CellSetupFailure-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-Cause                            CRITICALITY    ignore      TYPE    Cause                                PRESENCE mandatory
    }|
    { ID    id-CriticalityDiagnostics          CRITICALITY    ignore      TYPE    CriticalityDiagnostics    PRESENCE optional },
    ...
}

CellSetupFailure-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- **************************************************************
--
-- CELL RECONFIGURATION REQUEST FDD
--
-- **************************************************************

CellReconfigurationRequestFDD ::= SEQUENCE {
    protocolIEs              ProtocolIE-Container    {{CellReconfigurationRequestFDD-IEs}},
    protocolExtensions       ProtocolExtensionContainer {{CellReconfigurationRequestFDD-Extensions}}                          OPTIONAL,
```

```
    ...
}

CellReconfigurationRequestFDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-C-ID                                          CRITICALITY reject        TYPE              C-ID
        PRESENCE    mandatory   }|
    { ID    id-ConfigurationGenerationID                     CRITICALITY reject        TYPE              ConfigurationGenerationID
            PRESENCE    mandatory   }|
    { ID    id-MaximumTransmissionPower                      CRITICALITY reject        TYPE              MaximumTransmissionPower
            PRESENCE    optional    }|
    { ID    id-Synchronisation-Configuration-Cell-ReconfRqst    CRITICALITY    reject    TYPE           Synchronisation-Configuration-
Cell-ReconfRqst      PRESENCE    optional    }|
    { ID    id-PrimarySCH-Information-Cell-ReconfRqstFDD      CRITICALITY reject        TYPE              PrimarySCH-Information-Cell-
ReconfRqstFDD           PRESENCE    optional    }|
    { ID    id-SecondarySCH-Information-Cell-ReconfRqstFDD    CRITICALITY reject        TYPE              SecondarySCH-Information-Cell-
ReconfRqstFDD           PRESENCE    optional    }|
    { ID    id-PrimaryCPICH-Information-Cell-ReconfRqstFDD    CRITICALITY reject        TYPE              PrimaryCPICH-Information-Cell-
ReconfRqstFDD           PRESENCE    optional    }|
    { ID    id-SecondaryCPICH-InformationList-Cell-ReconfRqstFDD CRITICALITY reject     TYPE              SecondaryCPICH-InformationList-
Cell-ReconfRqstFDD      PRESENCE    optional    }|
    { ID    id-PrimaryCCPCH-Information-Cell-ReconfRqstFDD    CRITICALITY reject        TYPE              PrimaryCCPCH-Information-Cell-
ReconfRqstFDD           PRESENCE    optional    },
    ...
}

CellReconfigurationRequestFDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    {ID id-IPDLParameter-Information-Cell-ReconfRqstFDD              CRITICALITY    reject    EXTENSION           IPDLParameter-Information-
Cell-ReconfRqstFDD      PRESENCE    optional    }|
    {ID id-PDSCH-Information-Cell-ReconfRqstFDD               CRITICALITY    reject    EXTENSION                 PDSCH-Information-Cell-
ReconfRqstFDD       PRESENCE    optional    },
    ...
}

Synchronisation-Configuration-Cell-ReconfRqst ::= SEQUENCE {
    n-INSYNC-IND            N-INSYNC-IND,
    n-OUTSYNC-IND           N-OUTSYNC-IND,
    t-RLFAILURE             T-RLFAILURE,
    iE-Extensions           ProtocolExtensionContainer { { Synchronisation-Configuration-Cell-ReconfRqst-ExtIEs} }    OPTIONAL,
    ...
}

Synchronisation-Configuration-Cell-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PrimarySCH-Information-Cell-ReconfRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID                 CommonPhysicalChannelID,
    primarySCH-Power                        DL-Power,
    iE-Extensions                           ProtocolExtensionContainer { { PrimarySCH-Information-Cell-ReconfRqstFDD-ExtIEs} }    OPTIONAL,
    ...
}

PrimarySCH-Information-Cell-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
```

```
}

SecondarySCH-Information-Cell-ReconfRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID                 CommonPhysicalChannelID,
    secondarySCH-Power                      DL-Power,
    iE-Extensions                           ProtocolExtensionContainer { { SecondarySCH-Information-Cell-ReconfRqstFDD-ExtIEs} }      OPTIONAL,
    ...
 }

SecondarySCH-Information-Cell-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PrimaryCPICH-Information-Cell-ReconfRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID                 CommonPhysicalChannelID,
    primaryCPICH-Power                      PrimaryCPICH-Power,
    iE-Extensions                           ProtocolExtensionContainer { { PrimaryCPICH-Information-Cell-ReconfRqstFDD-ExtIEs} }      OPTIONAL,
    ...
 }

PrimaryCPICH-Information-Cell-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

SecondaryCPICH-InformationList-Cell-ReconfRqstFDD ::= SEQUENCE (SIZE (1..maxSCPICHCell)) OF ProtocolIE-Single-Container{{ SecondaryCPICH-
InformationItemIE-Cell-ReconfRqstFDD }}

SecondaryCPICH-InformationItemIE-Cell-ReconfRqstFDD NBAP-PROTOCOL-IES ::= {
    { ID    id-SecondaryCPICH-InformationItem-Cell-ReconfRqstFDD         CRITICALITY     reject                          TYPE SecondaryCPICH-
InformationItem-Cell-ReconfRqstFDD       PRESENCE    mandatory}
}

SecondaryCPICH-InformationItem-Cell-ReconfRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID                 CommonPhysicalChannelID,
    secondaryCPICH-Power                    DL-Power,
    iE-Extensions                           ProtocolExtensionContainer { { SecondaryCPICH-InformationItem-Cell-ReconfRqstFDD-ExtIEs} }
    OPTIONAL,
    ...
 }

SecondaryCPICH-InformationItem-Cell-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PrimaryCCPCH-Information-Cell-ReconfRqstFDD ::= SEQUENCE {
    bCH-information                         BCH-information-Cell-ReconfRqstFDD,
    iE-Extensions                           ProtocolExtensionContainer { { PrimaryCCPCH-Information-Cell-ReconfRqstFDD-ExtIEs} }      OPTIONAL,
    ...
 }

PrimaryCCPCH-Information-Cell-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

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```
BCH-information-Cell-ReconfRqstFDD ::= SEQUENCE {
    commonTransportChannelID                    CommonTransportChannelID,
    bCH-Power                                   DL-Power,
    iE-Extensions                               ProtocolExtensionContainer { { BCH-information-Cell-ReconfRqstFDD-ExtIEs} }    OPTIONAL,
    ...
 }

BCH-information-Cell-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

IPDLParameter-Information-Cell-ReconfRqstFDD::= SEQUENCE {
    iPDL-FDD-Parameters                         IPDL-FDD-Parameters    OPTIONAL,
    iPDL-Indicator                              IPDL-Indicator,
    iE-Extensions                               ProtocolExtensionContainer { { IPDLParameter-Information-Cell-ReconfRqstFDD-ExtIEs} }    OPTIONAL,
    ...
}

IPDLParameter-Information-Cell-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PDSCH-Information-Cell-ReconfRqstFDD    ::= SEQUENCE {
    maximumPDSCH-Power          Maximum-PDSCH-Power,
    iE-Extensions               ProtocolExtensionContainer { { PDSCH-Information-Cell-ReconfRqstFDD-ExtIEs} }    OPTIONAL,
    ...
}

PDSCH-Information-Cell-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *************************************************************
--
-- CELL RECONFIGURATION REQUEST TDD
--
-- *************************************************************

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

CellReconfigurationRequestTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-C-ID                                         CRITICALITY    reject    TYPE                  C-ID
        PRESENCE    mandatory    }|
    { ID    id-ConfigurationGenerationID                    CRITICALITY    reject    TYPE                  ConfigurationGenerationID
            PRESENCE    mandatory    }|
    { ID    id-Synchronisation-Configuration-Cell-ReconfRqst    CRITICALITY    reject    TYPE              Synchronisation-Configuration-
Cell-ReconfRqst PRESENCE    optional    }|
    { ID    id-TimingAdvanceApplied                         CRITICALITY    reject    TYPE                  TimingAdvanceApplied
            PRESENCE    optional    }| -- For 3.84Mcps TDD only
```

```
    { ID    id-SCH-Information-Cell-ReconfRqstTDD                  CRITICALITY    reject    TYPE                    SCH-Information-Cell-
ReconfRqstTDD                 PRESENCE    optional    }| -- For 3.84Mcps TDD only
    { ID    id-PCCPCH-Information-Cell-ReconfRqstTDD               CRITICALITY    reject    TYPE                    PCCPCH-Information-Cell-
ReconfRqstTDD            PRESENCE    optional     }|
    { ID    id-MaximumTransmissionPower                           CRITICALITY    reject    TYPE                    MaximumTransmissionPower
            PRESENCE    optional    }|
    { ID    id-DPCHConstant                                       CRITICALITY    reject    TYPE                    ConstantValue
            PRESENCE    optional    }|
    { ID    id-PUSCHConstant                                      CRITICALITY    reject    TYPE                    ConstantValue
            PRESENCE       optional     }|
    { ID    id-PRACHConstant                                      CRITICALITY    reject    TYPE                    ConstantValue
            PRESENCE    optional    }|
    { ID    id-TimeSlotConfigurationList-Cell-ReconfRqstTDD    CRITICALITY    reject    TYPE                    TimeSlotConfigurationList-Cell-
ReconfRqstTDD         PRESENCE    optional    }, -- For 3.84Mcps TDD only
    ...
}


CellReconfigurationRequestTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    { ID    id-TimeSlotConfigurationList-LCR-Cell-ReconfRqstTDD    CRITICALITY    reject    EXTENSION    TimeSlotConfigurationList-LCR-
Cell-ReconfRqstTDD PRESENCE optional}| -- Mandatory for 1.28Mcps TDD only
    { ID    id-DwPCH-LCR-Information-Cell-ReconfRqstTDD    CRITICALITY    reject    EXTENSION    DwPCH-LCR-Information-Cell-
ReconfRqstTDD      PRESENCE optional}| -- Mandatory for 1.28Mcps TDD only
    { ID    id-IPDLParameter-Information-Cell-ReconfRqstTDD         CRITICALITY    reject    EXTENSION    IPDLParameter-Information-
Cell-ReconfRqstTDD PRESENCE    optional }| -- For 3.84Mcps TDD only
    { ID    id-IPDLParameter-Information-LCR-Cell-ReconfRqstTDD    CRITICALITY    reject    EXTENSION    IPDLParameter-
Information-LCR-Cell-ReconfRqstTDD PRESENCE    optional },    -- For 1.28Mcps TDD only
    ...
}

SCH-Information-Cell-ReconfRqstTDD ::= SEQUENCE {
    commonPhysicalChannelID            CommonPhysicalChannelID,
    sCH-Power                          DL-Power,
    iE-Extensions                      ProtocolExtensionContainer { { PSCH-Information-Cell-ReconfRqstTDD-ExtIEs} }    OPTIONAL,
    ...
}

PSCH-Information-Cell-ReconfRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PCCPCH-Information-Cell-ReconfRqstTDD ::= SEQUENCE {
    commonPhysicalChannelID            CommonPhysicalChannelID,
    pCCPCH-Power                       DL-Power,
    iE-Extensions                      ProtocolExtensionContainer { { PCCPCH-Information-Cell-ReconfRqstTDD-ExtIEs} }    OPTIONAL,
    ...
}

PCCPCH-Information-Cell-ReconfRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TimeSlotConfigurationList-Cell-ReconfRqstTDD ::= SEQUENCE (SIZE (1..15)) OF TimeSlotConfigurationItem-Cell-ReconfRqstTDD

TimeSlotConfigurationItem-Cell-ReconfRqstTDD ::= SEQUENCE {
```

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```
    timeSlot                            TimeSlot,
    timeSlotStatus                      TimeSlotStatus,
    timeSlotDirection                   TimeSlotDirection,
    iE-Extensions                       ProtocolExtensionContainer { { TimeSlotConfigurationItem-Cell-ReconfRqstTDD-ExtIEs} }   OPTIONAL,
    ...
 }

TimeSlotConfigurationItem-Cell-ReconfRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TimeSlotConfigurationList-LCR-Cell-ReconfRqstTDD ::= SEQUENCE (SIZE (1..7)) OF TimeSlotConfigurationItem-LCR-Cell-ReconfRqstTDD

TimeSlotConfigurationItem-LCR-Cell-ReconfRqstTDD ::= SEQUENCE {
    timeSlotLCR                         TimeSlotLCR,
    timeSlotStatus                      TimeSlotStatus,
    timeSlotDirection                   TimeSlotDirection,
    iE-Extensions                       ProtocolExtensionContainer { { TimeSlotConfigurationItem-LCR-Cell-ReconfRqstTDD-ExtIEs} }  OPTIONAL,
    ...
 }

TimeSlotConfigurationItem-LCR-Cell-ReconfRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DwPCH-LCR-Information-Cell-ReconfRqstTDD ::= SEQUENCE {
    commonPhysicalChannelId             CommonPhysicalChannelID,
    dwPCH-Power                         DwPCH-Power,
    iE-Extensions                       ProtocolExtensionContainer { { DwPCH-LCR-Information-Cell-ReconfRqstTDD-ExtIEs} }    OPTIONAL,
    ...
 }

DwPCH-LCR-Information-Cell-ReconfRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

IPDLParameter-Information-Cell-ReconfRqstTDD ::= SEQUENCE {
    iPDL-TDD-Parameters                     IPDL-TDD-Parameters    OPTIONAL,
    iPDL-Indicator                          IPDL-Indicator,
    iE-Extensions                       ProtocolExtensionContainer { { IPDLParameter-Information-Cell-ReconfRqstTDD-ExtIEs} }   OPTIONAL,
    ...
}

IPDLParameter-Information-Cell-ReconfRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

IPDLParameter-Information-LCR-Cell-ReconfRqstTDD ::= SEQUENCE {
    iPDL-TDD-Parameters-LCR             IPDL-TDD-Parameters-LCR    OPTIONAL,
    iPDL-Indicator                      IPDL-Indicator,
    iE-Extensions                       ProtocolExtensionContainer { { IPDLParameter-Information-LCR-Cell-ReconfRqstTDD-ExtIEs} }  OPTIONAL,
    ...
}
```

```
IPDLParameter-Information-LCR-Cell-ReconfRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ***************************************************************
--
-- CELL RECONFIGURATION RESPONSE
--
-- ***************************************************************

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

CellReconfigurationResponse-IEs NBAP-PROTOCOL-IES ::= {
    { ID   id-CriticalityDiagnostics     CRITICALITY     ignore      TYPE    CriticalityDiagnostics        PRESENCE optional},
    ...
}

CellReconfigurationResponse-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ***************************************************************
--
-- CELL RECONFIGURATION FAILURE
--
-- ***************************************************************

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

CellReconfigurationFailure-IEs NBAP-PROTOCOL-IES ::= {
    { ID   id-Cause                    CRITICALITY    ignore     TYPE    Cause                          PRESENCE
    mandatory   }|
    { ID   id-CriticalityDiagnostics      CRITICALITY    ignore     TYPE    CriticalityDiagnostics       PRESENCE optional },
    ...
}

CellReconfigurationFailure-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ***************************************************************
--
-- CELL DELETION REQUEST
--
-- ***************************************************************
```

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

CellDeletionRequest-IEs NBAP-PROTOCOL-IES ::= {
    { ID   id-C-ID         CRITICALITY   reject      TYPE   C-ID      PRESENCE   mandatory},
    ...
}

CellDeletionRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *************************************************************
--
-- CELL DELETION RESPONSE
--
-- *************************************************************

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

CellDeletionResponse-IEs NBAP-PROTOCOL-IES ::= {
    { ID   id-CriticalityDiagnostics     CRITICALITY    ignore     TYPE   CriticalityDiagnostics        PRESENCE optional},
    ...
}

CellDeletionResponse-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *************************************************************
--
-- RESOURCE STATUS INDICATION
--
-- *************************************************************

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

ResourceStatusIndication-IEs NBAP-PROTOCOL-IES ::= {
    { ID   id-IndicationType-ResourceStatusInd          CRITICALITY    ignore      TYPE   IndicationType-ResourceStatusInd     PRESENCE
    mandatory   }|
    -- This IE represents both the Indication Type IE and the choice based on the indication type as described in the tabular message format in
subclause 9.1.
```

```
    { ID    id-Cause                                            CRITICALITY   ignore      TYPE   Cause                                    PRESENCE
    optional    },
    ...
}

ResourceStatusIndication-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

IndicationType-ResourceStatusInd ::= CHOICE {
    no-Failure                              No-Failure-ResourceStatusInd,
    serviceImpacting                        ServiceImpacting-ResourceStatusInd,
    ...
}

No-Failure-ResourceStatusInd ::= SEQUENCE {
    local-Cell-InformationList          Local-Cell-InformationList-ResourceStatusInd,
    local-Cell-Group-InformationList    Local-Cell-Group-InformationList-ResourceStatusInd  OPTIONAL,
    iE-Extensions                       ProtocolExtensionContainer { { No-FailureItem-ResourceStatusInd-ExtIEs} } OPTIONAL,
    ...
}

No-FailureItem-ResourceStatusInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    { ID    id-Power-Local-Cell-Group-InformationList-ResourceStatusInd    CRITICALITY    ignore                    EXTENSION  Power-Local-
Cell-Group-InformationList-ResourceStatusInd         PRESENCE    optional    },
    ...
}

Local-Cell-InformationList-ResourceStatusInd ::= SEQUENCE(SIZE (1..maxLocalCellinNodeB)) OF ProtocolIE-Single-Container {{ Local-Cell-
InformationItemIE-ResourceStatusInd }}

Local-Cell-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
    { ID id-Local-Cell-InformationItem-ResourceStatusInd   CRITICALITY ignore   TYPE Local-Cell-InformationItem-ResourceStatusInd     PRESENCE
mandatory }
}

Local-Cell-InformationItem-ResourceStatusInd ::= SEQUENCE {
    local-CellID                            Local-Cell-ID,
    addorDeleteIndicator                    AddorDeleteIndicator,
    dl-or-global-capacityCredit             DL-or-Global-CapacityCredit     OPTIONAL,
    -- This IE shall be present if AddorDeleteIndicator IE is set to "add"
    ul-capacityCredit                       UL-CapacityCredit       OPTIONAL,
    commnonChannelsCapacityConsumptionLaw   CommonChannelsCapacityConsumptionLaw    OPTIONAL,
    -- This IE shall be present if AddorDeleteIndicator IE is set to "add"
    dedicatedChannelsCapacityConsumptionLaw   DedicatedChannelsCapacityConsumptionLaw    OPTIONAL,
    -- This IE shall be present if AddorDeleteIndicator IE is set to "add"
    maximumDL-PowerCapability               MaximumDL-PowerCapability       OPTIONAL,
    -- This IE shall be present if AddorDeleteIndicator IE is set to "add"
    minSpreadingFactor                      MinSpreadingFactor              OPTIONAL,
    -- This IE shall be present if AddorDeleteIndicator IE is set to "add"
    minimumDL-PowerCapability               MinimumDL-PowerCapability       OPTIONAL,
    -- This IE shall be present if AddorDeleteIndicator IE is set to "add"
    local-Cell-Group-ID                     Local-Cell-ID           OPTIONAL,
    iE-Extensions                           ProtocolExtensionContainer { { Local-Cell-InformationItem-ResourceStatusInd-ExtIEs} }OPTIONAL,
```

```
    ...
}

Local-Cell-InformationItem-ResourceStatusInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-FPACH-LCR-InformationList-ResourceStatusInd      CRITICALITY ignore      EXTENSION    FPACH-LCR-InformationList-ResourceStatusInd
    PRESENCE optional   }|   -- for 1.28Mcps TDD only
    { ID id-DwPCH-LCR-Information-ResourceStatusInd CRITICALITY ignore      EXTENSION    DwPCH-LCR-Information-ResourceStatusInd    PRESENCE optional
    }|   -- for 1.28Mcps TDD only
    { ID    id-ReferenceClockAvailability       CRITICALITY     ignore            EXTENSION ReferenceClockAvailability        PRESENCE optional }|
    -- This IE shall be present if AddorDeleteIndicator IE is set to "add" and the Local Cell is related to a TDD cell
    { ID    id-Power-Local-Cell-Group-ID        CRITICALITY     ignore          EXTENSION   Local-Cell-ID                  PRESENCE optional },
    ...
}

Local-Cell-Group-InformationList-ResourceStatusInd ::= SEQUENCE(SIZE (1..maxLocalCellinNodeB)) OF ProtocolIE-Single-Container {{ Local-Cell-Group-
InformationItemIE-ResourceStatusInd }}

Local-Cell-Group-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
    { ID id-Local-Cell-Group-InformationItem-ResourceStatusInd   CRITICALITY ignore TYPE Local-Cell-Group-InformationItem-ResourceStatusInd
    PRESENCE mandatory }
}

Local-Cell-Group-InformationItem-ResourceStatusInd::= SEQUENCE {
    local-Cell-Group-ID                       Local-Cell-ID,
    dl-or-global-capacityCredit               DL-or-Global-CapacityCredit,
    ul-capacityCredit                         UL-CapacityCredit       OPTIONAL,
    commnonChannelsCapacityConsumptionLaw     CommonChannelsCapacityConsumptionLaw,
    dedicatedChannelsCapacityConsumptionLaw   DedicatedChannelsCapacityConsumptionLaw,
    iE-Extensions                             ProtocolExtensionContainer { { Local-Cell-Group-InformationItem-ResourceStatusInd-ExtIEs} }
    OPTIONAL,
    ...
}

Local-Cell-Group-InformationItem-ResourceStatusInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Power-Local-Cell-Group-InformationList-ResourceStatusInd ::= SEQUENCE(SIZE (1..maxLocalCellinNodeB)) OF ProtocolIE-Single-Container {{ Power-Local-
Cell-Group-InformationItemIE-ResourceStatusInd }}

Power-Local-Cell-Group-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
    { ID    id-Power-Local-Cell-Group-InformationItem-ResourceStatusInd CRITICALITY ignore  TYPE  Power-Local-Cell-Group-InformationItem-
ResourceStatusInd         PRESENCE    mandatory    }
}

Power-Local-Cell-Group-InformationItem-ResourceStatusInd::= SEQUENCE {
    power-Local-Cell-Group-ID                 Local-Cell-ID,
    maximumDL-PowerCapability                 MaximumDL-PowerCapability,
    iE-Extensions                             ProtocolExtensionContainer { { Power-Local-Cell-Group-InformationItem-ResourceStatusInd-ExtIEs} }
    OPTIONAL,
    ...
}

Power-Local-Cell-Group-InformationItem-ResourceStatusInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
```

```
    ...
}

ServiceImpacting-ResourceStatusInd ::= SEQUENCE {
    local-Cell-InformationList              Local-Cell-InformationList2-ResourceStatusInd   OPTIONAL,
    local-Cell-Group-InformationList        Local-Cell-Group-InformationList2-ResourceStatusInd OPTIONAL,
    cCP-InformationList                     CCP-InformationList-ResourceStatusInd           OPTIONAL,
    cell-InformationList                    Cell-InformationList-ResourceStatusInd          OPTIONAL,
    iE-Extensions                           ProtocolExtensionContainer { { ServiceImpactingItem-ResourceStatusInd-ExtIEs} }    OPTIONAL,
    ...
}

ServiceImpactingItem-ResourceStatusInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    { ID    id-Power-Local-Cell-Group-InformationList2-ResourceStatusInd        CRITICALITY     ignore                  EXTENSION  Power-Local-
Cell-Group-InformationList2-ResourceStatusInd        PRESENCE    optional    },
    ...
}

Local-Cell-InformationList2-ResourceStatusInd ::= SEQUENCE(SIZE (1..maxLocalCellinNodeB)) OF ProtocolIE-Single-Container {{ Local-Cell-
InformationItemIE2-ResourceStatusInd }}

Local-Cell-InformationItemIE2-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
    { ID id-Local-Cell-InformationItem2-ResourceStatusInd   CRITICALITY ignore  TYPE Local-Cell-InformationItem2-ResourceStatusInd    PRESENCE
mandatory }
}

Local-Cell-InformationItem2-ResourceStatusInd ::= SEQUENCE {
    local-Cell-ID                           Local-Cell-ID,
    dl-or-global-capacityCredit             DL-or-Global-CapacityCredit     OPTIONAL,
    ul-capacityCredit                       UL-CapacityCredit               OPTIONAL,
    commnonChannelsCapacityConsumptionLaw       CommonChannelsCapacityConsumptionLaw    OPTIONAL,
    dedicatedChannelsCapacityConsumptionLaw     DedicatedChannelsCapacityConsumptionLaw OPTIONAL,
    maximum-DL-PowerCapability              MaximumDL-PowerCapability       OPTIONAL,
    minSpreadingFactor                     MinSpreadingFactor              OPTIONAL,
    minimumDL-PowerCapability              MinimumDL-PowerCapability       OPTIONAL,
    iE-Extensions                           ProtocolExtensionContainer { { Local-Cell-InformationItem2-ResourceStatusInd-ExtIEs} }   OPTIONAL,
    ...
}

Local-Cell-InformationItem2-ResourceStatusInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    { ID    id-ReferenceClockAvailability          CRITICALITY     ignore          EXTENSION ReferenceClockAvailability       PRESENCE optional }|
    { ID    id-Power-Local-Cell-Group-ID           CRITICALITY     ignore          EXTENSION  Local-Cell-ID                   PRESENCE optional },
    ...
}

Local-Cell-Group-InformationList2-ResourceStatusInd ::= SEQUENCE(SIZE (1..maxLocalCellinNodeB)) OF ProtocolIE-Single-Container {{ Local-Cell-Group-
InformationItemIE2-ResourceStatusInd }}

Local-Cell-Group-InformationItemIE2-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
    { ID id-Local-Cell-Group-InformationItem2-ResourceStatusInd   CRITICALITY ignore    TYPE Local-Cell-Group-InformationItem2-ResourceStatusInd
    PRESENCE mandatory }
}

Local-Cell-Group-InformationItem2-ResourceStatusInd ::= SEQUENCE {
```

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```
    local-Cell-Group-ID                        Local-Cell-ID,
    dl-or-global-capacityCredit                DL-or-Global-CapacityCredit      OPTIONAL,
    ul-capacityCredit                          UL-CapacityCredit               OPTIONAL,
    commnonChannelsCapacityConsumptionLaw      CommonChannelsCapacityConsumptionLaw   OPTIONAL,
    dedicatedChannelsCapacityConsumptionLaw    DedicatedChannelsCapacityConsumptionLaw OPTIONAL,
    iE-Extensions                              ProtocolExtensionContainer { { Local-Cell-Group-InformationItem2-ResourceStatusInd-ExtIEs} }
    OPTIONAL,
    ...
}

Local-Cell-Group-InformationItem2-ResourceStatusInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Power-Local-Cell-Group-InformationList2-ResourceStatusInd ::= SEQUENCE(SIZE (1..maxLocalCellinNodeB)) OF ProtocolIE-Single-Container {{ Power-
Local-Cell-Group-InformationItemIE2-ResourceStatusInd }}

Power-Local-Cell-Group-InformationItemIE2-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
    { ID   id-Power-Local-Cell-Group-InformationItem2-ResourceStatusInd   CRITICALITY ignore  TYPE Power-Local-Cell-Group-InformationItem2-
ResourceStatusInd       PRESENCE    mandatory   }
}

Power-Local-Cell-Group-InformationItem2-ResourceStatusInd::= SEQUENCE {
    power-Local-Cell-Group-ID                  Local-Cell-ID,
    maximumDL-PowerCapability                  MaximumDL-PowerCapability,
    iE-Extensions                              ProtocolExtensionContainer { { Power-Local-Cell-Group-InformationItem2-ResourceStatusInd-ExtIEs} }
    OPTIONAL,
    ...
}

Power-Local-Cell-Group-InformationItem2-ResourceStatusInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CCP-InformationList-ResourceStatusInd ::= SEQUENCE (SIZE (1..maxCCPinNodeB)) OF ProtocolIE-Single-Container {{ CCP-InformationItemIE-
ResourceStatusInd }}

CCP-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
    { ID id-CCP-InformationItem-ResourceStatusInd   CRITICALITY ignore  TYPE CCP-InformationItem-ResourceStatusInd     PRESENCE mandatory }
}

CCP-InformationItem-ResourceStatusInd ::= SEQUENCE {
    communicationControlPortID                 CommunicationControlPortID,
    resourceOperationalState                   ResourceOperationalState,
    availabilityStatus                         AvailabilityStatus,
    iE-Extensions                              ProtocolExtensionContainer { { CCP-InformationItem-ResourceStatusInd-ExtIEs} }     OPTIONAL,
    ...
}

CCP-InformationItem-ResourceStatusInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

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```
Cell-InformationList-ResourceStatusInd ::= SEQUENCE (SIZE (1..maxCellinNodeB)) OF ProtocolIE-Single-Container {{ Cell-InformationItemIE-
ResourceStatusInd }}

Cell-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
    { ID id-Cell-InformationItem-ResourceStatusInd   CRITICALITY ignore TYPE Cell-InformationItem-ResourceStatusInd   PRESENCE mandatory }
}

Cell-InformationItem-ResourceStatusInd  ::= SEQUENCE {
    c-ID                                 C-ID,
    resourceOperationalState             ResourceOperationalState                OPTIONAL,
    availabilityStatus                   AvailabilityStatus                      OPTIONAL,
    primary-SCH-Information              P-SCH-Information-ResourceStatusInd     OPTIONAL, --FDD only
    secondary-SCH-Information            S-SCH-Information-ResourceStatusInd     OPTIONAL, --FDD only
    primary-CPICH-Information            P-CPICH-Information-ResourceStatusInd   OPTIONAL, --FDD only
    secondary-CPICH-Information          S-CPICH-InformationList-ResourceStatusInd   OPTIONAL, --FDD only
    primary-CCPCH-Information            P-CCPCH-Information-ResourceStatusInd   OPTIONAL,
    bCH-Information                      BCH-Information-ResourceStatusInd       OPTIONAL,
    secondary-CCPCH-InformationList      S-CCPCH-InformationList-ResourceStatusInd   OPTIONAL,
    pCH-Information                      PCH-Information-ResourceStatusInd       OPTIONAL,
    pICH-Information                     PICH-Information-ResourceStatusInd      OPTIONAL,
    fACH-InformationList                 FACH-InformationList-ResourceStatusInd  OPTIONAL,
    pRACH-InformationList                PRACH-InformationList-ResourceStatusInd OPTIONAL,
    rACH-InformationList                 RACH-InformationList-ResourceStatusInd  OPTIONAL,
    aICH-InformationList                 AICH-InformationList-ResourceStatusInd  OPTIONAL, --FDD only
    pCPCH-InformationList                PCPCH-InformationList-ResourceStatusInd OPTIONAL, --FDD only
    cPCH-InformationList                 CPCH-InformationList-ResourceStatusInd  OPTIONAL, --FDD only
    aP-AICH-InformationList              AP-AICH-InformationList-ResourceStatusInd   OPTIONAL, --FDD only
    cDCA-ICH-InformationList             CDCA-ICH-InformationList-ResourceStatusInd  OPTIONAL, --FDD only
    sCH-Information                      SCH-Information-ResourceStatusInd       OPTIONAL, --3.84Mcps TDD only
    iE-Extensions                        ProtocolExtensionContainer { { Cell-InformationItem-ResourceStatusInd-ExtIEs} } OPTIONAL,
    ...
}

Cell-InformationItem-ResourceStatusInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

P-SCH-Information-ResourceStatusInd ::= ProtocolIE-Single-Container {{ P-SCH-InformationIE-ResourceStatusInd }}

P-SCH-InformationIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
    { ID id-P-SCH-Information   CRITICALITY ignore  TYPE Common-PhysicalChannel-Status-Information                     PRESENCE mandatory }
}

S-SCH-Information-ResourceStatusInd ::= ProtocolIE-Single-Container {{ S-SCH-InformationIE-ResourceStatusInd }}

S-SCH-InformationIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
    { ID id-S-SCH-Information   CRITICALITY ignore  TYPE Common-PhysicalChannel-Status-Information                     PRESENCE mandatory }
}

P-CPICH-Information-ResourceStatusInd ::= ProtocolIE-Single-Container {{ P-CPICH-InformationIE-ResourceStatusInd }}

P-CPICH-InformationIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
    { ID id-P-CPICH-Information   CRITICALITY ignore    TYPE Common-PhysicalChannel-Status-Information                 PRESENCE mandatory }
}
```

```
S-CPICH-InformationList-ResourceStatusInd ::= SEQUENCE (SIZE (1..maxSCPICHCell)) OF ProtocolIE-Single-Container {{ S-CPICH-InformationItemIE-
ResourceStatusInd }}

S-CPICH-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
    { ID id-S-CPICH-Information    CRITICALITY ignore    TYPE Common-PhysicalChannel-Status-Information            PRESENCE mandatory }
}

P-CCPCH-Information-ResourceStatusInd ::= ProtocolIE-Single-Container {{ P-CCPCH-InformationIE-ResourceStatusInd }}

P-CCPCH-InformationIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
    { ID id-P-CCPCH-Information    CRITICALITY ignore    TYPE Common-PhysicalChannel-Status-Information            PRESENCE mandatory }
}

BCH-Information-ResourceStatusInd ::= ProtocolIE-Single-Container {{ BCH-InformationIE-ResourceStatusInd }}

BCH-InformationIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
    { ID id-BCH-Information    CRITICALITY ignore    TYPE Common-TransportChannel-Status-Information            PRESENCE mandatory }
}

S-CCPCH-InformationList-ResourceStatusInd ::= SEQUENCE (SIZE (1..maxSCCPCHCell)) OF ProtocolIE-Single-Container {{ S-CCPCH-InformationItemIE-
ResourceStatusInd }}

S-CCPCH-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
    { ID id-S-CCPCH-Information    CRITICALITY ignore    TYPE Common-PhysicalChannel-Status-Information            PRESENCE mandatory }
}

PCH-Information-ResourceStatusInd ::= ProtocolIE-Single-Container {{ PCH-InformationIE-ResourceStatusInd }}

PCH-InformationIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
    { ID id-PCH-Information    CRITICALITY ignore    TYPE Common-TransportChannel-Status-Information            PRESENCE mandatory }
}

PICH-Information-ResourceStatusInd ::= ProtocolIE-Single-Container {{ PICH-InformationIE-ResourceStatusInd }}

PICH-InformationIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
    { ID id-PICH-Information    CRITICALITY ignore    TYPE Common-PhysicalChannel-Status-Information            PRESENCE mandatory }
}

FACH-InformationList-ResourceStatusInd ::= SEQUENCE (SIZE (1..maxFACHCell)) OF ProtocolIE-Single-Container {{ FACH-InformationItemIE-
ResourceStatusInd }}

FACH-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
    { ID id-FACH-Information    CRITICALITY ignore    TYPE Common-TransportChannel-Status-Information            PRESENCE mandatory }
}

PRACH-InformationList-ResourceStatusInd ::= SEQUENCE (SIZE (1..maxPRACHCell)) OF ProtocolIE-Single-Container {{ PRACH-InformationItemIE-
ResourceStatusInd }}

PRACH-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
    { ID id-PRACH-Information    CRITICALITY ignore  TYPE Common-PhysicalChannel-Status-Information            PRESENCE mandatory }
}
```

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```
RACH-InformationList-ResourceStatusInd ::= SEQUENCE (SIZE (1..maxPRACHCell)) OF ProtocolIE-Single-Container {{ RACH-InformationItemIE-
ResourceStatusInd }}

RACH-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
    { ID id-RACH-Information    CRITICALITY ignore    TYPE Common-TransportChannel-Status-Information                PRESENCE mandatory }
}

AICH-InformationList-ResourceStatusInd ::= SEQUENCE (SIZE (1..maxPRACHCell)) OF ProtocolIE-Single-Container {{ AICH-InformationItemIE-
ResourceStatusInd }}

AICH-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
    { ID id-AICH-Information    CRITICALITY ignore    TYPE Common-PhysicalChannel-Status-Information                PRESENCE mandatory }
}

PCPCH-InformationList-ResourceStatusInd ::= SEQUENCE (SIZE (1..maxPCPCHCell)) OF ProtocolIE-Single-Container {{ PCPCH-InformationItemIE-
ResourceStatusInd }}

PCPCH-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
    { ID id-PCPCH-Information    CRITICALITY ignore   TYPE Common-PhysicalChannel-Status-Information                PRESENCE optional }
}

CPCH-InformationList-ResourceStatusInd ::= SEQUENCE (SIZE (1..maxCPCHCell)) OF ProtocolIE-Single-Container {{ CPCH-InformationItemIE-
ResourceStatusInd }}

CPCH-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
    { ID id-CPCH-Information    CRITICALITY ignore    TYPE Common-TransportChannel-Status-Information                PRESENCE optional }
}

AP-AICH-InformationList-ResourceStatusInd ::= SEQUENCE (SIZE (1..maxCPCHCell)) OF ProtocolIE-Single-Container {{ AP-AICH-InformationItemIE-
ResourceStatusInd }}

AP-AICH-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
    { ID id-AP-AICH-Information    CRITICALITY ignore    TYPE Common-PhysicalChannel-Status-Information                PRESENCE optional }
}

CDCA-ICH-InformationList-ResourceStatusInd ::= SEQUENCE (SIZE (1..maxCPCHCell)) OF ProtocolIE-Single-Container {{ CDCA-ICH-InformationItemIE-
ResourceStatusInd }}

CDCA-ICH-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
    { ID id-CDCA-ICH-Information    CRITICALITY ignore    TYPE Common-PhysicalChannel-Status-Information                PRESENCE optional }
}

SCH-Information-ResourceStatusInd ::= ProtocolIE-Single-Container {{ SCH-InformationIE-ResourceStatusInd }}

SCH-InformationIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
    { ID id-SCH-Information    CRITICALITY ignore    TYPE Common-PhysicalChannel-Status-Information                PRESENCE mandatory }
}

FPACH-LCR-InformationList-ResourceStatusInd ::= SEQUENCE (SIZE (0..maxFPACHCell)) OF ProtocolIE-Single-Container {{ FPACH-LCR-InformationItemIE-
ResourceStatusInd }}

FPACH-LCR-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
    { ID id-FPACH-LCR-Information  CRITICALITY ignore    TYPE Common-PhysicalChannel-Status-Information                PRESENCE mandatory }
}
```

```
DwPCH-LCR-Information-ResourceStatusInd ::= ProtocolIE-Single-Container {{ DwPCH-LCR-InformationIE-ResourceStatusInd }}

DwPCH-LCR-InformationIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
    { ID id-DwPCH-LCR-Information   CRITICALITY ignore  TYPE Common-PhysicalChannel-Status-Information           PRESENCE mandatory }
}

-- **************************************************************
--
-- SYSTEM INFORMATION UPDATE REQUEST
--
-- **************************************************************

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

SystemInformationUpdateRequest-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-C-ID                                           CRITICALITY reject      TYPE    C-ID
    PRESENCE mandatory  }|
    { ID    id-BCCH-ModificationTime                          CRITICALITY reject      TYPE    BCCH-ModificationTime          PRESENCE optional
    }|
    { ID    id-MIB-SB-SIB-InformationList-SystemInfoUpdateRqst    CRITICALITY reject      TYPE                      MIB-SB-SIB-InformationList-
SystemInfoUpdateRqst          PRESENCE    mandatory   },
    ...
}

SystemInformationUpdateRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

MIB-SB-SIB-InformationList-SystemInfoUpdateRqst ::= SEQUENCE (SIZE (1..maxIB)) OF MIB-SB-SIB-InformationItem-SystemInfoUpdateRqst

MIB-SB-SIB-InformationItem-SystemInfoUpdateRqst ::= SEQUENCE {
    iB-Type                          IB-Type,
    iB-OC-ID                         IB-OC-ID,
    deletionIndicator                DeletionIndicator-SystemInfoUpdate,
    iE-Extensions                    ProtocolExtensionContainer { { MIB-SB-SIB-InformationItem-SystemInfoUpdateRqst-ExtIEs} }    OPTIONAL,
    ...
}

MIB-SB-SIB-InformationItem-SystemInfoUpdateRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DeletionIndicator-SystemInfoUpdate ::= CHOICE {
    no-Deletion                      No-Deletion-SystemInfoUpdate,
    yes-Deletion                     NULL

}

No-Deletion-SystemInfoUpdate ::= SEQUENCE {
```

```
    sIB-Originator                           SIB-Originator            OPTIONAL,
    -- This IE shall be present if the IB-Type IE is set to "SIB"
    iB-SG-REP                                IB-SG-REP                 OPTIONAL,
    segmentInformationList                   SegmentInformationList-SystemInfoUpdate,
    iE-Extensions                            ProtocolExtensionContainer { { No-DeletionItem-SystemInfoUpdate-ExtIEs} }    OPTIONAL,
    ...
}

No-DeletionItem-SystemInfoUpdate-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

SegmentInformationList-SystemInfoUpdate ::= ProtocolIE-Single-Container {{ SegmentInformationListIEs-SystemInfoUpdate }}

SegmentInformationListIEs-SystemInfoUpdate NBAP-PROTOCOL-IES ::= {
    { ID id-SegmentInformationListIE-SystemInfoUpdate   CRITICALITY reject  TYPE SegmentInformationListIE-SystemInfoUpdate     PRESENCE mandatory }
}

SegmentInformationListIE-SystemInfoUpdate ::= SEQUENCE (SIZE (1..maxIBSEG)) OF SegmentInformationItem-SystemInfoUpdate

SegmentInformationItem-SystemInfoUpdate ::= SEQUENCE {
    iB-SG-POS                                IB-SG-POS           OPTIONAL,
    segment-Type                             Segment-Type        OPTIONAL,
    -- This IE shall be present if the SIB Originator IE is set to "CRNC" or the IB-Type IE is set to "MIB", "SB1" or "SB2"
    iB-SG-DATA                               IB-SG-DATA          OPTIONAL,
    -- This IE shall be present if the SIB Originator IE is set to "CRNC" or the IB-Type IE is set to "MIB", "SB1" or "SB2"
    iE-Extensions                            ProtocolExtensionContainer { { SegmentInformationItem-SystemInfoUpdate-ExtIEs} }OPTIONAL,
    ...
}

SegmentInformationItem-SystemInfoUpdate-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ***************************************************************
--
-- SYSTEM INFORMATION UPDATE RESPONSE
--
-- ***************************************************************

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

SystemInformationUpdateResponse-IEs NBAP-PROTOCOL-IES ::= {
    { ID   id-CriticalityDiagnostics      CRITICALITY    ignore        TYPE   CriticalityDiagnostics           PRESENCE optional},
    ...
}

SystemInformationUpdateResponse-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

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```
-- ************************************************************
--
-- SYSTEM INFORMATION UPDATE FAILURE
--
-- ************************************************************

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

SystemInformationUpdateFailure-IEs NBAP-PROTOCOL-IES ::= {
    { ID   id-Cause                            CRITICALITY    ignore       TYPE   Cause                                         PRESENCE mandatory
    }|
    { ID   id-CriticalityDiagnostics           CRITICALITY    ignore       TYPE   CriticalityDiagnostics    PRESENCE optional },
    ...
}

SystemInformationUpdateFailure-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

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

RadioLinkSetupRequestFDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID   id-CRNC-CommunicationContextID                CRITICALITY reject            TYPE                     CRNC-CommunicationContextID
            PRESENCE    mandatory   }|
    { 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    mandatory   }|
    { ID   id-DCH-FDD-Information        CRITICALITY reject             TYPE   DCH-FDD-Information                    PRESENCE mandatory   }|
    { ID   id-DSCH-FDD-Information       CRITICALITY reject             TYPE   DSCH-FDD-Information              PRESENCE optional }|
    { ID   id-TFCI2-Bearer-Information-RL-SetupRqstFDD   CRITICALITY ignore            TYPE                     TFCI2-Bearer-Information-RL-
SetupRqstFDD    PRESENCE    optional    }|
    { ID   id-RL-InformationList-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 },
    ...
```

```
}

RadioLinkSetupRequestFDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-DSCH-FDD-Common-Information                    CRITICALITY ignore  EXTENSION DSCH-FDD-Common-Information                    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-HSDSCH-RNTI                              CRITICALITY reject  EXTENSION HSDSCH-RNTI                              PRESENCE optional }|
    { ID id-HSPDSCH-RL-ID                            CRITICALITY reject  EXTENSION RL-ID                                    PRESENCE conditional },
    ...
}

UL-DPCH-Information-RL-SetupRqstFDD ::= SEQUENCE {
    ul-ScramblingCode                       UL-ScramblingCode,
    minUL-ChannelisationCodeLength          MinUL-ChannelisationCodeLength,
    maxNrOfUL-DPDCHs                        MaxNrOfUL-DPDCHs        OPTIONAL,
    -- This IE shall be present if Min UL Channelisation Code length IE is set to 4 --
    ul-PunctureLimit                        PunctureLimit,
    tFCS                                    TFCS,
    ul-DPCCH-SlotFormat                     UL-DPCCH-SlotFormat,
    ul-SIR-Target                           UL-SIR,
    diversityMode                           DiversityMode,
    sSDT-CellID-Length                      SSDT-CellID-Length     OPTIONAL,
    s-FieldLength                           S-FieldLength          OPTIONAL,
    iE-Extensions                           ProtocolExtensionContainer { { UL-DPCH-Information-RL-SetupRqstFDD-ExtIEs} } OPTIONAL,
    ...
}

UL-DPCH-Information-RL-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    {ID id-DPC-Mode        CRITICALITY reject  EXTENSION   DPC-Mode    PRESENCE optional   },
    ...
}

DL-DPCH-Information-RL-SetupRqstFDD ::= SEQUENCE {
    tFCS                                    TFCS,
    dl-DPCH-SlotFormat                      DL-DPCH-SlotFormat,
    tFCI-SignallingMode                     TFCI-SignallingMode,
    tFCI-Presence                           TFCI-Presence   OPTIONAL,
    -- this IE shall be present if the DL DPCH slot format IE is set to any of the values from 12 to 16 --
    multiplexingPosition                    MultiplexingPosition,
    pDSCH-RL-ID                             RL-ID           OPTIONAL,
    -- This IE shall be present if the DSCH Information IE is present --
    pDSCH-CodeMapping                       PDSCH-CodeMapping     OPTIONAL,
    -- This IE shall be present if the DSCH Information IE is present --
    powerOffsetInformation                  PowerOffsetInformation-RL-SetupRqstFDD,
    fdd-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 NBAP-PROTOCOL-EXTENSION ::= {
    ...
```

```
}

PowerOffsetInformation-RL-SetupRqstFDD ::= SEQUENCE {
    pO1-ForTFCI-Bits                      PowerOffset,
    pO2-ForTPC-Bits                       PowerOffset,
    pO3-ForPilotBits                      PowerOffset,
    iE-Extensions                         ProtocolExtensionContainer { { PowerOffsetInformation-RL-SetupRqstFDD-ExtIEs} } OPTIONAL,
    ...
}

PowerOffsetInformation-RL-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TFCI2-Bearer-Information-RL-SetupRqstFDD ::= SEQUENCE {
    toAWS                                 ToAWS,
    toAWE                                 ToAWE,
    iE-Extensions                         ProtocolExtensionContainer { { TFCI2-Bearer-Information-RL-SetupRqstFDD-ExtIEs} }   OPTIONAL,
    ...
}

TFCI2-Bearer-Information-RL-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-InformationList-RL-SetupRqstFDD ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF
    ProtocolIE-Single-Container{{ RL-InformationItemIE-RL-SetupRqstFDD }}

RL-InformationItemIE-RL-SetupRqstFDD NBAP-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 Information IE
    dl-CodeInformation              FDD-DL-CodeInformation,
    initialDL-transmissionPower     DL-Power,
    maximumDL-power                 DL-Power,
    minimumDL-power                 DL-Power,
    sSDT-Cell-Identity              SSDT-Cell-Identity      OPTIONAL,
    transmitDiversityIndicator      TransmitDiversityIndicator     OPTIONAL,
    -- This IE shall be present if Diversity Mode IE in UL DPCH Information group is not set to "none"
    iE-Extensions                   ProtocolExtensionContainer { { RL-InformationItem-RL-SetupRqstFDD-ExtIEs} }   OPTIONAL,
    ...
}

RL-InformationItem-RL-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
```

```
    { ID id-SSDT-CellIDforEDSCHPC CRITICALITY ignore EXTENSION SSDT-Cell-Identity        PRESENCE conditional }|
    -- This IE shall be present if Enhanced DSCH PC IE is present in the DSCH Common Information IE.
    { ID id-RL-Specific-DCH-Info    CRITICALITY ignore    EXTENSION  RL-Specific-DCH-Info    PRESENCE                optional }|
    { ID id-DelayedActivation CRITICALITY reject EXTENSION DelayedActivation PRESENCE optional },
    ...
}


-- ***************************************************************
--
-- RADIO LINK SETUP REQUEST TDD
--
-- ***************************************************************

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

RadioLinkSetupRequestTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-CRNC-CommunicationContextID                       CRITICALITY reject        TYPE                    CRNC-CommunicationContextID
                PRESENCE    mandatory    }|
    { 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    },
    ...
}

RadioLinkSetupRequestTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-HSDSCH-TDD-Information           CRITICALITY reject      EXTENSION HSDSCH-TDD-Information             PRESENCE optional }|
    { ID id-HSDSCH-RNTI                 CRITICALITY reject      EXTENSION HSDSCH-RNTI                PRESENCE optional }|
    { ID id-HSPDSCH-RL-ID               CRITICALITY reject      EXTENSION RL-ID                 PRESENCE conditional },
    ...
}

UL-CCTrCH-InformationList-RL-SetupRqstTDD ::= SEQUENCE (SIZE(1..maxNrOfCCTrCHs)) OF
    ProtocolIE-Single-Container{{ UL-CCTrCH-InformationItemIE-RL-SetupRqstTDD }}

UL-CCTrCH-InformationItemIE-RL-SetupRqstTDD NBAP-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,
    tFCS                      TFCS,
    tFCI-Coding                   TFCI-Coding,
    punctureLimit                 PunctureLimit,
```

```
    uL-DPCH-Information                      UL-DPCH-Information-RL-SetupRqstTDD    OPTIONAL,   -- For 3.84Mcps TDD only
    iE-Extensions                           ProtocolExtensionContainer { { UL-CCTrCH-InformationItem-RL-SetupRqstTDD-ExtIEs} }    OPTIONAL,
    ...
}

UL-CCTrCH-InformationItem-RL-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-UL-DPCH-LCR-Information-RL-SetupRqstTDD CRITICALITY notify    EXTENSION   UL-DPCH-LCR-Information-RL-SetupRqstTDD   PRESENCE optional
    }|  -- For 1.28Mcps TDD only
    { 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.
    ...
}

UL-DPCH-Information-RL-SetupRqstTDD ::= ProtocolIE-Single-Container{{ UL-DPCH-InformationIE-RL-SetupRqstTDD }}

UL-DPCH-InformationIE-RL-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID id-UL-DPCH-InformationList-RL-SetupRqstTDD    CRITICALITY notify  TYPE UL-DPCH-InformationItem-RL-SetupRqstTDD    PRESENCE mandatory   }
}

UL-DPCH-InformationItem-RL-SetupRqstTDD ::= SEQUENCE {
    repetitionPeriod                        RepetitionPeriod,
    repetitionLength                        RepetitionLength,
    tdd-DPCHOffset                          TDD-DPCHOffset,
    uL-Timeslot-Information                 UL-Timeslot-Information,
    iE-Extensions                           ProtocolExtensionContainer { { UL-DPCH-InformationItem-RL-SetupRqstTDD-ExtIEs} }   OPTIONAL,
    ...
}

UL-DPCH-InformationItem-RL-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-DPCH-LCR-Information-RL-SetupRqstTDD ::= ProtocolIE-Single-Container{{ UL-DPCH-LCR-InformationIE-RL-SetupRqstTDD }}

UL-DPCH-LCR-InformationIE-RL-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID id-UL-DPCH-LCR-InformationList-RL-SetupRqstTDD    CRITICALITY notify  TYPE UL-DPCH-LCR-InformationItem-RL-SetupRqstTDD     PRESENCE
optional    }
}

UL-DPCH-LCR-InformationItem-RL-SetupRqstTDD ::= SEQUENCE {
    repetitionPeriod                        RepetitionPeriod,
    repetitionLength                        RepetitionLength,
    tdd-DPCHOffset                          TDD-DPCHOffset,
    uL-TimeslotLCR-Information               UL-TimeslotLCR-Information,
    iE-Extensions                           ProtocolExtensionContainer { { UL-DPCH-LCR-InformationItem-RL-SetupRqstTDD-ExtIEs} }    OPTIONAL,
    ...
}

UL-DPCH-LCR-InformationItem-RL-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CCTrCH-InformationList-RL-SetupRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container{{ DL-CCTrCH-InformationItemIE-RL-
SetupRqstTDD }}
```

```
DL-CCTrCH-InformationItemIE-RL-SetupRqstTDD NBAP-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,
    tFCS                                    TFCS,
    tFCI-Coding                             TFCI-Coding,
    punctureLimit                           PunctureLimit,
    tdd-TPC-DownlinkStepSize                TDD-TPC-DownlinkStepSize,
    cCTrCH-TPCList                          CCTrCH-TPCList-RL-SetupRqstTDD        OPTIONAL,
    dL-DPCH-Information                     DL-DPCH-Information-RL-SetupRqstTDD    OPTIONAL,    -- For 3.84Mcps TDD only
    iE-Extensions                          ProtocolExtensionContainer { { DL-CCTrCH-InformationItem-RL-SetupRqstTDD-ExtIEs} }    OPTIONAL,
    ...
}

DL-CCTrCH-InformationItem-RL-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-DL-DPCH-LCR-Information-RL-SetupRqstTDD CRITICALITY notify      EXTENSION   DL-DPCH-LCR-Information-RL-SetupRqstTDD    PRESENCE optional
    }|  -- For 1.28Mcps TDD only
    { ID id-CCTrCH-Initial-DL-Power-RL-SetupRqstTDD    CRITICALITY ignore      EXTENSION DL-Power                        PRESENCE optional },
    ...
}

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 NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-Information-RL-SetupRqstTDD ::= ProtocolIE-Single-Container{{ DL-DPCH-InformationIE-RL-SetupRqstTDD }}

DL-DPCH-InformationIE-RL-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID id-DL-DPCH-InformationList-RL-SetupRqstTDD    CRITICALITY notify  TYPE DL-DPCH-InformationItem-RL-SetupRqstTDD    PRESENCE mandatory   }
}

DL-DPCH-InformationItem-RL-SetupRqstTDD   ::= SEQUENCE {
    repetitionPeriod                        RepetitionPeriod,
    repetitionLength                        RepetitionLength,
    tdd-DPCHOffset                          TDD-DPCHOffset,
    dL-Timeslot-Information            DL-Timeslot-Information,
    iE-Extensions                           ProtocolExtensionContainer { { DL-DPCH-InformationItem-RL-SetupRqstTDD-ExtIEs} }    OPTIONAL,
    ...
}

DL-DPCH-InformationItem-RL-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
```

```
}

DL-DPCH-LCR-Information-RL-SetupRqstTDD ::= ProtocolIE-Single-Container{{ DL-DPCH-LCR-InformationIE-RL-SetupRqstTDD }}

DL-DPCH-LCR-InformationIE-RL-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID id-DL-DPCH-LCR-InformationList-RL-SetupRqstTDD    CRITICALITY notify  TYPE DL-DPCH-LCR-InformationItem-RL-SetupRqstTDD      PRESENCE
mandatory    }
}

DL-DPCH-LCR-InformationItem-RL-SetupRqstTDD ::= SEQUENCE {
    repetitionPeriod                        RepetitionPeriod,
    repetitionLength                        RepetitionLength,
    tdd-DPCHOffset                          TDD-DPCHOffset,
    dL-TimeslotLCR-Information               DL-TimeslotLCR-Information,
    tstdIndicator                           TSTD-Indicator,
    iE-Extensions                           ProtocolExtensionContainer { { DL-DPCH-LCR-InformationItem-RL-SetupRqstTDD-ExtIEs} }    OPTIONAL,
    ...
}

DL-DPCH-LCR-InformationItem-RL-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-Information-RL-SetupRqstTDD ::= SEQUENCE {
    rL-ID                                   RL-ID,
    c-ID                                    C-ID,
    frameOffset                             FrameOffset,
    specialBurstScheduling                  SpecialBurstScheduling,
    initialDL-transmissionPower             DL-Power,
    maximumDL-power                         DL-Power,
    minimumDL-power                         DL-Power,
    dL-TimeSlotISCPInfo                     DL-TimeslotISCPInfo OPTIONAL,   -- For 3.84Mcps TDD only
    iE-Extensions                           ProtocolExtensionContainer { { RL-Information-RL-SetupRqstTDD-ExtIEs} }   OPTIONAL,
    ...
}

RL-Information-RL-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-TimeslotISCP-LCR-InfoList-RL-SetupRqstTDD    CRITICALITY reject      EXTENSION   TimeslotISCP-LCR-InfoList-RL-SetupRqstTDD    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 },
    ...
}

TimeslotISCP-LCR-InfoList-RL-SetupRqstTDD ::= SEQUENCE {
    dL-TimeslotISCP-LCR-Info    DL-TimeslotISCPInfoLCR,
    iE-Extensions               ProtocolExtensionContainer { {TimeslotISCP-LCR-InfoItem-RL-SetupRqstTDD-ExtIEs} }        OPTIONAL,
    ...
    }

TimeslotISCP-LCR-InfoItem-RL-SetupRqstTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

```
-- ************************************************************
--
-- RADIO LINK SETUP RESPONSE FDD
--
-- ************************************************************

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

RadioLinkSetupResponseFDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-CRNC-CommunicationContextID                          CRITICALITY ignore      TYPE                        CRNC-CommunicationContextID
                PRESENCE    mandatory   }|
    { ID    id-NodeB-CommunicationContextID                         CRITICALITY ignore      TYPE                        NodeB-CommunicationContextID
            PRESENCE    mandatory   }|
    { ID    id-CommunicationControlPortID                           CRITICALITY ignore      TYPE                        CommunicationControlPortID
            PRESENCE    mandatory   }|
    { ID    id-RL-InformationResponseList-RL-SetupRspFDD            CRITICALITY ignore      TYPE                        RL-InformationResponseList-RL-
SetupRspFDD     PRESENCE    mandatory   }|
    { ID    id-TFCI2-BearerInformationResponse  CRITICALITY ignore        TYPE    TFCI2-BearerInformationResponse PRESENCE optional }|
    { ID    id-CriticalityDiagnostics                               CRITICALITY ignore      TYPE                        CriticalityDiagnostics
                PRESENCE    optional    },
    ...
}

RadioLinkSetupResponseFDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-InformationResponseList-RL-SetupRspFDD ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container{{ RL-InformationResponseItemIE-RL-
SetupRspFDD }}

RL-InformationResponseItemIE-RL-SetupRspFDD NBAP-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,
    received-total-wide-band-power                          Received-total-wide-band-power-Value,
    diversityIndication         DiversityIndication-RL-SetupRspFDD,
    -- 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.
    dSCH-InformationResponseList                DSCH-InformationResponseList-RL-SetupRspFDD                          OPTIONAL,
    sSDT-SupportIndicator                       SSDT-SupportIndicator,
    iE-Extensions                               ProtocolExtensionContainer { { RL-InformationResponseItem-RL-SetupRspFDD-ExtIEs} }
    OPTIONAL,
    ...
}

RL-InformationResponseItem-RL-SetupRspFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
```

*ETSI*

```
    { ID id-DL-PowerBalancing-ActivationIndicator   CRITICALITY ignore     EXTENSION     DL-PowerBalancing-ActivationIndicator     PRESENCE
optional}|
    { ID id-HSDSCH-FDD-Information-Response     CRITICALITY ignore     EXTENSION HSDSCH-FDD-Information-Response     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 { { Combining-RL-SetupRspFDD-ExtIEs} }     OPTIONAL,
    ...
}

Combining-RL-SetupRspFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

NonCombiningOrFirstRL-RL-SetupRspFDD ::= SEQUENCE {
    dCH-InformationResponse               DCH-InformationResponse,
    iE-Extensions                         ProtocolExtensionContainer { { NonCombiningOrFirstRLItem-RL-SetupRspFDD-ExtIEs} }   OPTIONAL,
    ...
}

NonCombiningOrFirstRLItem-RL-SetupRspFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DSCH-InformationResponseList-RL-SetupRspFDD ::= ProtocolIE-Single-Container {{ DSCH-InformationResponseListIEs-RL-SetupRspFDD }}

DSCH-InformationResponseListIEs-RL-SetupRspFDD NBAP-PROTOCOL-IES ::= {
    { ID id-DSCH-InformationResponse   CRITICALITY ignore   TYPE DSCH-InformationResponse      PRESENCE mandatory }
}

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

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

RadioLinkSetupResponseTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-CRNC-CommunicationContextID                        CRITICALITY    ignore    TYPE               CRNC-CommunicationContextID
               PRESENCE    mandatory    }|
    { ID    id-NodeB-CommunicationContextID                       CRITICALITY    ignore    TYPE               NodeB-CommunicationContextID
             PRESENCE    mandatory    }|
```

```
    { ID    id-CommunicationControlPortID                        CRITICALITY     ignore      TYPE                CommunicationControlPortID
          PRESENCE     mandatory    }|
    { ID    id-RL-InformationResponse-RL-SetupRspTDD              CRITICALITY     ignore      TYPE                RL-InformationResponse-RL-
SetupRspTDD         PRESENCE     optional   }| -- Mandatory for 3.84Mcps TDD only
    { ID    id-CriticalityDiagnostics                            CRITICALITY     ignore      TYPE                CriticalityDiagnostics
          PRESENCE     optional    },
    ...
}


RadioLinkSetupResponseTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    { ID    id-RL-InformationResponse-LCR-RL-SetupRspTDD          CRITICALITY     ignore                  EXTENSION   RL-
InformationResponse-LCR-RL-SetupRspTDD           PRESENCE     optional    }, -- Mandatory for 1.28Mcps TDD only
    ...
}


RL-InformationResponse-RL-SetupRspTDD ::= SEQUENCE {
    rL-ID                                    RL-ID,
    uL-TimeSlot-ISCP-Info            UL-TimeSlot-ISCP-Info,
    ul-PhysCH-SF-Variation                   UL-PhysCH-SF-Variation,
    dCH-InformationResponseList              DCH-InformationResponseList-RL-SetupRspTDD                    OPTIONAL,
    dSCH-InformationResponseList             DSCH-InformationResponseList-RL-SetupRspTDD                   OPTIONAL,
    uSCH-InformationResponseList             USCH-InformationResponseList-RL-SetupRspTDD                   OPTIONAL,
    iE-Extensions                            ProtocolExtensionContainer { { RL-InformationResponseList-RL-SetupRspTDD-ExtIEs} }
    OPTIONAL,
    ...
}

RL-InformationResponseList-RL-SetupRspTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-HSDSCH-TDD-Information-Response       CRITICALITY ignore     EXTENSION HSDSCH-TDD-Information-Response    PRESENCE optional },
    ...
}


DCH-InformationResponseList-RL-SetupRspTDD ::= ProtocolIE-Single-Container{{ DCH-InformationResponseListIEs-RL-SetupRspTDD }}

DCH-InformationResponseListIEs-RL-SetupRspTDD NBAP-PROTOCOL-IES ::= {
    { ID id-DCH-InformationResponse CRITICALITY      ignore      TYPE    DCH-InformationResponse  PRESENCE         mandatory}
  }

DSCH-InformationResponseList-RL-SetupRspTDD ::= ProtocolIE-Single-Container {{ DSCH-InformationResponseListIEs-RL-SetupRspTDD }}

DSCH-InformationResponseListIEs-RL-SetupRspTDD NBAP-PROTOCOL-IES ::= {
    { ID id-DSCH-InformationResponse   CRITICALITY ignore   TYPE DSCH-InformationResponse       PRESENCE mandatory }
}

USCH-InformationResponseList-RL-SetupRspTDD ::= ProtocolIE-Single-Container {{ USCH-InformationResponseListIEs-RL-SetupRspTDD }}

USCH-InformationResponseListIEs-RL-SetupRspTDD NBAP-PROTOCOL-IES ::= {
    { ID id-USCH-InformationResponse   CRITICALITY ignore   TYPE USCH-InformationResponse       PRESENCE mandatory }
}

RL-InformationResponse-LCR-RL-SetupRspTDD ::= SEQUENCE {
    rL-ID                                    RL-ID,
    uL-TimeSlot-ISCP-LCR-Info                UL-TimeSlot-ISCP-LCR-Info,
    ul-PhysCH-SF-Variation                   UL-PhysCH-SF-Variation,
```

```
    dCH-InformationResponseList            DCH-InformationResponseList-RL-SetupRspTDD             OPTIONAL,
    dSCH-InformationResponseList           DSCH-InformationResponseList-RL-SetupRspTDD            OPTIONAL,
    uSCH-InformationResponseList           USCH-InformationResponseList-RL-SetupRspTDD            OPTIONAL,
    iE-Extensions                          ProtocolExtensionContainer { { RL-InformationResponseList-LCR-RL-SetupRspTDD-ExtIEs} }
    OPTIONAL,
    ...
}


RL-InformationResponseList-LCR-RL-SetupRspTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-HSDSCH-TDD-Information-Response-LCR      CRITICALITY ignore    EXTENSION HSDSCH-TDD-Information-Response   PRESENCE optional },
    ...
}


-- **************************************************************
--
-- RADIO LINK SETUP FAILURE FDD
--
-- **************************************************************

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


RadioLinkSetupFailureFDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-CRNC-CommunicationContextID                       CRITICALITY    ignore            TYPE CRNC-
CommunicationContextID                           PRESENCE    mandatory   }|
    { ID    id-NodeB-CommunicationContextID                      CRITICALITY    ignore            TYPE NodeB-
CommunicationContextID                           PRESENCE    conditional }|
    -- This IE shall be present if at least one of the radio links has been successfully set up
    { ID    id-CommunicationControlPortID                        CRITICALITY    ignore            TYPE
    CommunicationControlPortID                     PRESENCE    optional    }|
    { ID    id-CauseLevel-RL-SetupFailureFDD                     CRITICALITY    ignore            TYPE CauseLevel-RL-
SetupFailureFDD    PRESENCE    mandatory    }|
    { ID    id-CriticalityDiagnostics                            CRITICALITY    ignore            TYPE
    CriticalityDiagnostics                        PRESENCE    optional    },
    ...
}


RadioLinkSetupFailureFDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}


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 NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RLSpecificCauseList-RL-SetupFailureFDD ::= SEQUENCE {
    unsuccessful-RL-InformationRespList-RL-SetupFailureFDD     Unsuccessful-RL-InformationRespList-RL-SetupFailureFDD,
    successful-RL-InformationRespList-RL-SetupFailureFDD       Successful-RL-InformationRespList-RL-SetupFailureFDD  OPTIONAL,
    iE-Extensions                                ProtocolExtensionContainer { { RLSpecificCauseItem-RL-SetupFailureFDD-ExtIEs} }   OPTIONAL,
    ...
}

RLSpecificCauseItem-RL-SetupFailureFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Unsuccessful-RL-InformationRespList-RL-SetupFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfRLs))  OF ProtocolIE-Single-Container {{ Unsuccessful-RL-
InformationRespItemIE-RL-SetupFailureFDD }}

Unsuccessful-RL-InformationRespItemIE-RL-SetupFailureFDD NBAP-PROTOCOL-IES ::= {
    { ID   id-Unsuccessful-RL-InformationRespItem-RL-SetupFailureFDD       CRITICALITY      ignore                      TYPE Unsuccessful-RL-
InformationRespItem-RL-SetupFailureFDD      PRESENCE    mandatory}
}

Unsuccessful-RL-InformationRespItem-RL-SetupFailureFDD ::= SEQUENCE {
    rL-ID                                       RL-ID,
    cause                                       Cause,
    iE-Extensions                               ProtocolExtensionContainer { { Unsuccessful-RL-InformationRespItem-RL-SetupFailureFDD-ExtIEs} }
    OPTIONAL,
    ...
}

Unsuccessful-RL-InformationRespItem-RL-SetupFailureFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Successful-RL-InformationRespList-RL-SetupFailureFDD ::= SEQUENCE (SIZE (1.. maxNrOfRLs)) OF ProtocolIE-Single-Container {{ Successful-RL-
InformationRespItemIE-RL-SetupFailureFDD }}

Successful-RL-InformationRespItemIE-RL-SetupFailureFDD NBAP-PROTOCOL-IES ::= {
    { ID   id-Successful-RL-InformationRespItem-RL-SetupFailureFDD        CRITICALITY      ignore                      TYPE  Successful-RL-
InformationRespItem-RL-SetupFailureFDD      PRESENCE    mandatory}
}

Successful-RL-InformationRespItem-RL-SetupFailureFDD ::= SEQUENCE {
    rL-ID                                       RL-ID,
    rL-Set-ID                                   RL-Set-ID,
    received-total-wide-band-power                              Received-total-wide-band-power-Value,
    diversityIndication                         DiversityIndication-RL-SetupFailureFDD,
    -- 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.
    dSCH-InformationResponseList                DSCH-InformationRespList-RL-SetupFailureFDD     OPTIONAL,
    tFCI2-BearerInformationResponse             TFCI2-BearerInformationResponse     OPTIONAL,
```

```
    sSDT-SupportIndicator                       SSDT-SupportIndicator,
    iE-Extensions                               ProtocolExtensionContainer { { Successful-RL-InformationRespItem-RL-SetupFailureFDD-ExtIEs} }
    OPTIONAL,
    ...
}

Successful-RL-InformationRespItem-RL-SetupFailureFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-DL-PowerBalancing-ActivationIndicator   CRITICALITY ignore    EXTENSION    DL-PowerBalancing-ActivationIndicator   PRESENCE
optional}|
    { ID id-HSDSCH-FDD-Information-Response          CRITICALITY ignore    EXTENSION HSDSCH-FDD-Information-Response    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 NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

NonCombiningOrFirstRL-RL-SetupFailureFDD ::= SEQUENCE {
    dCH-InformationResponse                DCH-InformationResponse,
    iE-Extensions                          ProtocolExtensionContainer { { NonCombiningOrFirstRLItem-RL-SetupFailureFDD-ExtIEs} }
    OPTIONAL,
    ...
}

NonCombiningOrFirstRLItem-RL-SetupFailureFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DSCH-InformationRespList-RL-SetupFailureFDD ::= ProtocolIE-Single-Container {{ DSCH-InformationRespListIEs-RL-SetupFailureFDD }}

DSCH-InformationRespListIEs-RL-SetupFailureFDD NBAP-PROTOCOL-IES ::= {
    { ID id-DSCH-InformationResponse   CRITICALITY ignore   TYPE DSCH-InformationResponse      PRESENCE mandatory }
}

-- *************************************************************
--
-- RADIO LINK SETUP FAILURE TDD
--
-- *************************************************************

RadioLinkSetupFailureTDD ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container   {{RadioLinkSetupFailureTDD-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{RadioLinkSetupFailureTDD-Extensions}}                          OPTIONAL,
```

```
    ...
}

RadioLinkSetupFailureTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-CRNC-CommunicationContextID                      CRITICALITY ignore      TYPE                CRNC-CommunicationContextID
                          PRESENCE    mandatory    }|
    { ID    id-CauseLevel-RL-SetupFailureTDD                        CRITICALITY    ignore                    TYPE  CauseLevel-RL-
SetupFailureTDD    PRESENCE    mandatory    }|
    { ID    id-CriticalityDiagnostics                           CRITICALITY ignore      TYPE                CriticalityDiagnostics
                  PRESENCE    optional    },
    ...
}

RadioLinkSetupFailureTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

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 NBAP-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 NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Unsuccessful-RL-InformationRespItem-RL-SetupFailureTDD ::= ProtocolIE-Single-Container { {Unsuccessful-RL-InformationRespItemIE-RL-SetupFailureTDD}
}

Unsuccessful-RL-InformationRespItemIE-RL-SetupFailureTDD NBAP-PROTOCOL-IES ::= {
    { ID    id-Unsuccessful-RL-InformationResp-RL-SetupFailureTDD    CRITICALITY ignore      TYPE                Unsuccessful-RL-InformationResp-
RL-SetupFailureTDD    PRESENCE    mandatory    }
}

Unsuccessful-RL-InformationResp-RL-SetupFailureTDD ::= SEQUENCE {
    rL-ID                                        RL-ID,
```

```
    cause                                        Cause,
    iE-Extensions                                ProtocolExtensionContainer { { Unsuccessful-RL-InformationResp-RL-SetupFailureTDD-ExtIEs} }
    OPTIONAL,
    ...
}

Unsuccessful-RL-InformationResp-RL-SetupFailureTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}


-- **************************************************************
--
-- RADIO LINK ADDITION REQUEST FDD
--
-- **************************************************************

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

RadioLinkAdditionRequestFDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID   id-NodeB-CommunicationContextID                CRITICALITY reject        TYPE    NodeB-CommunicationContextID          PRESENCE
    mandatory   } |
    { ID id-Compressed-Mode-Deactivation-Flag       CRITICALITY reject            TYPE Compressed-Mode-Deactivation-Flag   PRESENCE optional }|
    { ID    id-RL-InformationList-RL-AdditionRqstFDD           CRITICALITY notify          TYPE                      RL-InformationList-RL-
AdditionRqstFDD        PRESENCE    mandatory   },
    ...
}

RadioLinkAdditionRequestFDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-InformationList-RL-AdditionRqstFDD   ::= SEQUENCE (SIZE (1..maxNrOfRLs-1)) OF ProtocolIE-Single-Container {{ RL-InformationItemIE-RL-
AdditionRqstFDD}}

RL-InformationItemIE-RL-AdditionRqstFDD NBAP-PROTOCOL-IES ::= {
    { ID   id-RL-InformationItem-RL-AdditionRqstFDD             CRITICALITY    notify      TYPE                RL-InformationItem-RL-
AdditionRqstFDD        PRESENCE    mandatory}
}

RL-InformationItem-RL-AdditionRqstFDD ::= SEQUENCE {
    rL-ID                            RL-ID,
    c-ID                             C-ID,
    frameOffset                      FrameOffset,
    chipOffset                       ChipOffset,
    diversityControlField            DiversityControlField,
    dl-CodeInformation               FDD-DL-CodeInformation,
    initialDL-TransmissionPower      DL-Power                OPTIONAL,
    maximumDL-Power                  DL-Power                OPTIONAL,
    minimumDL-Power                  DL-Power                OPTIONAL,
    sSDT-CellIdentity                SSDT-Cell-Identity      OPTIONAL,
```

```
    transmitDiversityIndicator                 TransmitDiversityIndicator     OPTIONAL,
    iE-Extensions                              ProtocolExtensionContainer { { RL-InformationItem-RL-AdditionRqstFDD-ExtIEs} }    OPTIONAL,
    ...
}

RL-InformationItem-RL-AdditionRqstFDD-ExtIEs NBAP-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-DelayedActivation CRITICALITY reject EXTENSION DelayedActivation PRESENCE optional },
    ...
}

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

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

RadioLinkAdditionRequestTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-NodeB-CommunicationContextID                    CRITICALITY    reject                      TYPE NodeB-
CommunicationContextID               PRESENCE    mandatory   }|
    { ID    id-UL-CCTrCH-InformationList-RL-AdditionRqstTDD         CRITICALITY    reject                 TYPE UL-CCTrCH-InformationList-
RL-AdditionRqstTDD         PRESENCE    optional    }|
    { ID    id-DL-CCTrCH-InformationList-RL-AdditionRqstTDD         CRITICALITY    reject                 TYPE DL-CCTrCH-InformationList-
RL-AdditionRqstTDD         PRESENCE    optional    }|
    { ID    id-RL-Information-RL-AdditionRqstTDD                    CRITICALITY    reject                 TYPE RL-Information-RL-
AdditionRqstTDD                 PRESENCE    mandatory   },
    ...
}

RadioLinkAdditionRequestTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-CCTrCH-InformationList-RL-AdditionRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF UL-CCTrCH-InformationItem-RL-AdditionRqstTDD

UL-CCTrCH-InformationItem-RL-AdditionRqstTDD ::= SEQUENCE {
    cCTrCH-ID                                  CCTrCH-ID,
    uL-DPCH-Information                        UL-DPCH-InformationList-RL-AdditionRqstTDD     OPTIONAL,
    iE-Extensions                              ProtocolExtensionContainer { { UL-CCTrCH-InformationItem-RL-AdditionRqstTDD-ExtIEs} }   OPTIONAL,
    ...
}

UL-CCTrCH-InformationItem-RL-AdditionRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...,
    { ID    id-UL-DPCH-InformationItem-LCR-RL-AdditionRqstTDD          CRITICALITY    notify                      EXTENSION   UL-DPCH-
InformationItem-LCR-RL-AdditionRqstTDD           PRESENCE    optional }, -- For 1.28cps TDD only
}
```

```
UL-DPCH-InformationList-RL-AdditionRqstTDD ::= ProtocolIE-Single-Container {{ UL-DPCH-InformationItemIE-RL-AdditionRqstTDD }}

UL-DPCH-InformationItemIE-RL-AdditionRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID   id-UL-DPCH-InformationItem-RL-AdditionRqstTDD           CRITICALITY   notify                        TYPE UL-DPCH-InformationItem-
RL-AdditionRqstTDD          PRESENCE   optional}  -- For 3.84Mcps TDD only
}

UL-DPCH-InformationItem-RL-AdditionRqstTDD ::= SEQUENCE {
    repetitionPeriod                          RepetitionPeriod,
    repetitionLength                          RepetitionLength,
    tdd-DPCHOffset                            TDD-DPCHOffset,
    uL-Timeslot-Information          UL-Timeslot-Information,
    iE-Extensions                             ProtocolExtensionContainer { { UL-DPCH-InformationItem-RL-AdditionRqstTDD-ExtIEs} }    OPTIONAL,
    ...
}

UL-DPCH-InformationItem-RL-AdditionRqstTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CCTrCH-InformationList-RL-AdditionRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF DL-CCTrCH-InformationItem-RL-AdditionRqstTDD

DL-CCTrCH-InformationItem-RL-AdditionRqstTDD ::= SEQUENCE {
    cCTrCH-ID                                 CCTrCH-ID,
    dL-DPCH-Information                        DL-DPCH-InformationList-RL-AdditionRqstTDD     OPTIONAL,
    iE-Extensions                             ProtocolExtensionContainer { { DL-CCTrCH-InformationItem-RL-AdditionRqstTDD-ExtIEs} }    OPTIONAL,
    ...
}

DL-CCTrCH-InformationItem-RL-AdditionRqstTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    { ID   id-DL-DPCH-InformationItem-LCR-RL-AdditionRqstTDD         CRITICALITY   notify                        EXTENSION   DL-DPCH-
InformationItem-LCR-RL-AdditionRqstTDD          PRESENCE   optional }| -- For 1.28Mcps TDD only
    { ID id-CCTrCH-Initial-DL-Power-RL-AdditionRqstTDD      CRITICALITY ignore    EXTENSION DL-Power              PRESENCE optional },
    ...
}

DL-DPCH-InformationList-RL-AdditionRqstTDD ::= ProtocolIE-Single-Container {{ DL-DPCH-InformationItemIE-RL-AdditionRqstTDD }}

DL-DPCH-InformationItemIE-RL-AdditionRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID   id-DL-DPCH-InformationItem-RL-AdditionRqstTDD           CRITICALITY   notify                        TYPE DL-DPCH-InformationItem-
RL-AdditionRqstTDD          PRESENCE   mandatory}  -- For 3.84Mcps TDD only
}

DL-DPCH-InformationItem-RL-AdditionRqstTDD ::= SEQUENCE {
    repetitionPeriod                          RepetitionPeriod,
    repetitionLength                          RepetitionLength,
    tdd-DPCHOffset                            TDD-DPCHOffset,
    dL-Timeslot-Information          DL-Timeslot-Information,
    iE-Extensions                             ProtocolExtensionContainer { { DL-DPCH-InformationItem-RL-AdditionRqstTDD-ExtIEs} }
    OPTIONAL,
    ...
}
```

```
DL-DPCH-InformationItem-RL-AdditionRqstTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-Information-RL-AdditionRqstTDD ::= SEQUENCE {
    rL-ID                                 RL-ID,
    c-ID                                  C-ID,
    frameOffset                           FrameOffset,
    diversityControlField                 DiversityControlField,
    initial-DL-Transmission-Power         DL-Power           OPTIONAL,
    maximumDL-Power                       DL-Power           OPTIONAL,
    minimumDL-Power                       DL-Power           OPTIONAL,
    dL-TimeSlotISCPInfo                   DL-TimeslotISCPInfo OPTIONAL,   -- For 3.84Mcps TDD only
    iE-Extensions                         ProtocolExtensionContainer { { RL-information-RL-AdditionRqstTDD-ExtIEs} }      OPTIONAL,
    ...
  }

RL-information-RL-AdditionRqstTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    { ID   id-TimeslotISCP-InformationList-LCR-RL-AdditionRqstTDD      CRITICALITY    notify                         EXTENSION   TIMESLOTISCP-
InformationList-LCR-RL-AdditionRqstTDD         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 },
    ...
}

UL-DPCH-InformationItem-LCR-RL-AdditionRqstTDD ::= SEQUENCE {
    repetitionPeriod                      RepetitionPeriod,
    repetitionLength                      RepetitionLength,
    tdd-DPCHOffset                        TDD-DPCHOffset,
    uL-TimeslotLCR-Information             UL-TimeslotLCR-Information,
    iE-Extensions                         ProtocolExtensionContainer { { UL-DPCH-InformationItem-LCR-RL-AdditionRqstTDD-ExtIEs} }     OPTIONAL,
    ...
}

UL-DPCH-InformationItem-LCR-RL-AdditionRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-InformationItem-LCR-RL-AdditionRqstTDD ::= SEQUENCE {
    repetitionPeriod                      RepetitionPeriod,
    repetitionLength                      RepetitionLength,
    tdd-DPCHOffset                        TDD-DPCHOffset,
    dL-TimeslotLCR-Information             DL-TimeslotLCR-Information,
    iE-Extensions                         ProtocolExtensionContainer { { DL-DPCH-InformationItem-LCR-RL-AdditionRqstTDD-ExtIEs} }     OPTIONAL,
    ...
}

DL-DPCH-InformationItem-LCR-RL-AdditionRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TIMESLOTISCP-InformationList-LCR-RL-AdditionRqstTDD ::= SEQUENCE {
    dL-TimeslotISCP-LCR-Info    DL-TimeslotISCPInfoLCR,
    iE-Extensions               ProtocolExtensionContainer { {TimeslotISCPInfoList-LCR-RL-AdditionRqstTDD-ExtIEs} }      OPTIONAL,
```

```
     ...
     }

TimeslotISCPInfoList-LCR-RL-AdditionRqstTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
     ...
}

-- *************************************************************
--
-- RADIO LINK ADDITION RESPONSE FDD
--
-- *************************************************************

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

RadioLinkAdditionResponseFDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-CRNC-CommunicationContextID                       CRITICALITY    ignore                     TYPE CRNC-
CommunicationContextID                     PRESENCE    mandatory    }|
    { ID    id-RL-InformationResponseList-RL-AdditionRspFDD      CRITICALITY    ignore                     TYPE RL-
InformationResponseList-RL-AdditionRspFDD   PRESENCE    mandatory    }|
    { ID    id-CriticalityDiagnostics                           CRITICALITY    ignore                     TYPE CriticalityDiagnostics
                    PRESENCE    optional    },
    ...
}

RadioLinkAdditionResponseFDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-InformationResponseList-RL-AdditionRspFDD ::= SEQUENCE (SIZE (1..maxNrOfRLs-1)) OF ProtocolIE-Single-Container {{ RL-InformationResponseItemIE-
RL-AdditionRspFDD }}

RL-InformationResponseItemIE-RL-AdditionRspFDD NBAP-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,
    received-total-wide-band-power                             Received-total-wide-band-power-Value,
    diversityIndication                    DiversityIndication-RL-AdditionRspFDD,
    -- 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,
    iE-Extensions                          ProtocolExtensionContainer { { RL-InformationResponseItem-RL-AdditionRspFDD-ExtIEs} }
    OPTIONAL,
    ...
}
```

*ETSI*

```
RL-InformationResponseItem-RL-AdditionRspFDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-DL-PowerBalancing-ActivationIndicator   CRITICALITY ignore     EXTENSION      DL-PowerBalancing-ActivationIndicator    PRESENCE
optional},
    ...
}

DiversityIndication-RL-AdditionRspFDD ::= CHOICE {
    combining                              Combining-RL-AdditionRspFDD,
    non-combining                          Non-Combining-RL-AdditionRspFDD
}

Combining-RL-AdditionRspFDD ::= SEQUENCE {
    rL-ID                                  RL-ID,
    iE-Extensions                          ProtocolExtensionContainer { { CombiningItem-RL-AdditionRspFDD-ExtIEs} }   OPTIONAL,
    ...
}

CombiningItem-RL-AdditionRspFDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Non-Combining-RL-AdditionRspFDD ::= SEQUENCE {
    dCH-InformationResponse                DCH-InformationResponse,
    iE-Extensions                          ProtocolExtensionContainer { { Non-CombiningItem-RL-AdditionRspFDD-ExtIEs} }    OPTIONAL,
    ...
}

Non-CombiningItem-RL-AdditionRspFDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *************************************************************
--
-- RADIO LINK ADDITION RESPONSE TDD
--
-- *************************************************************

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

RadioLinkAdditionResponseTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-CRNC-CommunicationContextID              CRITICALITY ignore     TYPE              CRNC-CommunicationContextID
              PRESENCE    mandatory  }|
    { 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   },
    ...
}

RadioLinkAdditionResponseTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
```

```
    { ID id-RL-InformationResponse-LCR-RL-AdditionRspTDD         CRITICALITY ignore         EXTENSION                RL-InformationResponse-LCR-RL-
AdditionRspTDD  PRESENCE optional },     --Mandatory for 1.28Mcps TDD only
    ...
}

RL-InformationResponse-RL-AdditionRspTDD ::= SEQUENCE {
    rL-ID                                   RL-ID,
    uL-TimeSlot-ISCP-Info                   UL-TimeSlot-ISCP-Info,
    ul-PhysCH-SF-Variation                  UL-PhysCH-SF-Variation,
    dCH-Information                         DCH-Information-RL-AdditionRspTDD           OPTIONAL,
    dSCH-InformationResponseList            DSCH-InformationResponseList-RL-AdditionRspTDD                      OPTIONAL,
    uSCH-InformationResponseList            USCH-InformationResponseList-RL-AdditionRspTDD                      OPTIONAL,
    iE-Extensions                           ProtocolExtensionContainer { { RL-InformationResponse-RL-AdditionRspTDD-ExtIEs} }    OPTIONAL,
    ...
}

RL-InformationResponse-RL-AdditionRspTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-Information-RL-AdditionRspTDD ::= SEQUENCE {
    diversityIndication             DiversityIndication-RL-AdditionRspTDD,
    -- 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.
    iE-Extensions                   ProtocolExtensionContainer { { DCH-Information-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
    ...
}

DCH-Information-RL-AdditionRspTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DiversityIndication-RL-AdditionRspTDD ::= CHOICE {
    combining                               Combining-RL-AdditionRspTDD,
    non-Combining                           Non-Combining-RL-AdditionRspTDD
}

Combining-RL-AdditionRspTDD ::= SEQUENCE {
    rL-ID                                   RL-ID,
    iE-Extensions                           ProtocolExtensionContainer { { CombiningItem-RL-AdditionRspTDD-ExtIEs} }    OPTIONAL,
    ...
}

CombiningItem-RL-AdditionRspTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Non-Combining-RL-AdditionRspTDD ::= SEQUENCE {
    dCH-InformationResponse         DCH-InformationResponse,
    iE-Extensions                           ProtocolExtensionContainer { { Non-CombiningItem-RL-AdditionRspTDD-ExtIEs} }     OPTIONAL,
    ...
}

Non-CombiningItem-RL-AdditionRspTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
```

```
    ...
}

DSCH-InformationResponseList-RL-AdditionRspTDD ::= ProtocolIE-Single-Container {{ DSCH-InformationResponseListIEs-RL-AdditionRspTDD }}

DSCH-InformationResponseListIEs-RL-AdditionRspTDD NBAP-PROTOCOL-IES ::= {
    { ID id-DSCH-InformationResponse   CRITICALITY ignore   TYPE DSCH-InformationResponse      PRESENCE mandatory }
}

USCH-InformationResponseList-RL-AdditionRspTDD ::= ProtocolIE-Single-Container {{ USCH-InformationResponseListIEs-RL-AdditionRspTDD }}

USCH-InformationResponseListIEs-RL-AdditionRspTDD NBAP-PROTOCOL-IES ::= {
    { ID id-USCH-InformationResponse   CRITICALITY ignore   TYPE USCH-InformationResponse      PRESENCE mandatory }
}

RL-InformationResponse-LCR-RL-AdditionRspTDD ::= SEQUENCE {
    rL-ID                              RL-ID,
    uL-TimeSlot-ISCP-InfoLCR           UL-TimeSlot-ISCP-LCR-Info,
    ul-PhysCH-SF-Variation             UL-PhysCH-SF-Variation,
    dCH-Information                    DCH-Information-RL-AdditionRspTDD           OPTIONAL,
    dSCH-InformationResponseList       DSCH-InformationResponseList-RL-AdditionRspTDD                 OPTIONAL,
    uSCH-InformationResponseList       USCH-InformationResponseList-RL-AdditionRspTDD                 OPTIONAL,
    iE-Extensions                      ProtocolExtensionContainer { { RL-InformationResponse-LCR-RL-AdditionRspTDD-ExtIEs} }   OPTIONAL,
    ...
}

RL-InformationResponse-LCR-RL-AdditionRspTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *************************************************************
--
-- RADIO LINK ADDITION FAILURE FDD
--
-- *************************************************************

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

RadioLinkAdditionFailureFDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-CRNC-CommunicationContextID        CRITICALITY    ignore    TYPE    CRNC-CommunicationContextID        PRESENCE mandatory   }|
    { ID    id-CauseLevel-RL-AdditionFailureFDD   CRITICALITY    ignore    TYPE    CauseLevel-RL-AdditionFailureFDD   PRESENCE mandatory   }|
    { ID    id-CriticalityDiagnostics             CRITICALITY    ignore    TYPE    CriticalityDiagnostics             PRESENCE optional
    },
    ...
}

RadioLinkAdditionFailureFDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

```
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  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RLSpecificCauseList-RL-AdditionFailureFDD ::= SEQUENCE {
    unsuccessful-RL-InformationRespList-RL-AdditionFailureFDD     Unsuccessful-RL-InformationRespList-RL-AdditionFailureFDD,
    successful-RL-InformationRespList-RL-AdditionFailureFDD       Successful-RL-InformationRespList-RL-AdditionFailureFDD  OPTIONAL,
    iE-Extensions                       ProtocolExtensionContainer { { RLSpecificCauseItem-RL-AdditionFailureFDD-ExtIEs} }      OPTIONAL,
    ...
}

RLSpecificCauseItem-RL-AdditionFailureFDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Unsuccessful-RL-InformationRespList-RL-AdditionFailureFDD ::= SEQUENCE  (SIZE (1..maxNrOfRLs-1)) OF ProtocolIE-Single-Container {{ Unsuccessful-RL-
InformationRespItemIE-RL-AdditionFailureFDD }}

Unsuccessful-RL-InformationRespItemIE-RL-AdditionFailureFDD NBAP-PROTOCOL-IES ::= {
    { ID   id-Unsuccessful-RL-InformationRespItem-RL-AdditionFailureFDD      CRITICALITY    ignore           TYPE Unsuccessful-RL-
InformationRespItem-RL-AdditionFailureFDD   PRESENCE    mandatory}
}

Unsuccessful-RL-InformationRespItem-RL-AdditionFailureFDD ::= SEQUENCE {
    rL-ID                               RL-ID,
    cause                               Cause,
    iE-Extensions                       ProtocolExtensionContainer { { Unsuccessful-RL-InformationRespItem-RL-AdditionFailureFDD-ExtIEs} }
        OPTIONAL,
    ...
}

Unsuccessful-RL-InformationRespItem-RL-AdditionFailureFDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Successful-RL-InformationRespList-RL-AdditionFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfRLs-2)) OF ProtocolIE-Single-Container {{ Successful-RL-
InformationRespItemIE-RL-AdditionFailureFDD }}

Successful-RL-InformationRespItemIE-RL-AdditionFailureFDD NBAP-PROTOCOL-IES ::= {
    { ID   id-Successful-RL-InformationRespItem-RL-AdditionFailureFDD      CRITICALITY    ignore           TYPE Successful-RL-
InformationRespItem-RL-AdditionFailureFDD      PRESENCE    mandatory}
}
```

```
Successful-RL-InformationRespItem-RL-AdditionFailureFDD ::= SEQUENCE {
    rL-ID                                       RL-ID,
    rL-Set-ID                                   RL-Set-ID,
    received-total-wide-band-power              Received-total-wide-band-power-Value,
    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,
    iE-Extensions                               ProtocolExtensionContainer { { Successful-RL-InformationRespItem-RL-AdditionFailureFDD-ExtIEs} }
    OPTIONAL,
    ...
}

Successful-RL-InformationRespItem-RL-AdditionFailureFDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-DL-PowerBalancing-ActivationIndicator  CRITICALITY ignore     EXTENSION     DL-PowerBalancing-ActivationIndicator    PRESENCE
optional},
    ...
}

DiversityIndication-RL-AdditionFailureFDD ::= CHOICE {
    combining                       Combining-RL-AdditionFailureFDD,
    non-Combining                   Non-Combining-RL-AdditionFailureFDD
}

Combining-RL-AdditionFailureFDD ::= SEQUENCE {
    rL-ID                           RL-ID,
    iE-Extensions                   ProtocolExtensionContainer { { CombiningItem-RL-AdditionFailureFDD-ExtIEs} }     OPTIONAL,
    ...
}

CombiningItem-RL-AdditionFailureFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Non-Combining-RL-AdditionFailureFDD ::= SEQUENCE {
    dCH-InformationResponse                 DCH-InformationResponse,
    iE-Extensions                           ProtocolExtensionContainer { { Non-CombiningItem-RL-AdditionFailureFDD-ExtIEs} }
    OPTIONAL,
    ...
}

Non-CombiningItem-RL-AdditionFailureFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *************************************************************
--
-- RADIO LINK ADDITION FAILURE TDD
--
-- *************************************************************

RadioLinkAdditionFailureTDD ::= SEQUENCE {
    protocolIEs         ProtocolIE-Container    {{RadioLinkAdditionFailureTDD-IEs}},
```

```
    protocolExtensions     ProtocolExtensionContainer  {{RadioLinkAdditionFailureTDD-Extensions}}               OPTIONAL,
    ...
}

RadioLinkAdditionFailureTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-CRNC-CommunicationContextID              CRITICALITY    ignore    TYPE    CRNC-CommunicationContextID
    PRESENCE    mandatory    }|
    { ID    id-CauseLevel-RL-AdditionFailureTDD         CRITICALITY    ignore    TYPE    CauseLevel-RL-AdditionFailureTDD
    PRESENCE    mandatory }|
    { ID    id-CriticalityDiagnostics                   CRITICALITY    ignore    TYPE    CriticalityDiagnostics
    PRESENCE    optional    },
    ...
}

RadioLinkAdditionFailureTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

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 NBAP-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 NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Unsuccessful-RL-InformationRespItem-RL-AdditionFailureTDD ::= ProtocolIE-Single-Container { {Unsuccessful-RL-InformationRespItemIE-RL-
AdditionFailureTDD} }

Unsuccessful-RL-InformationRespItemIE-RL-AdditionFailureTDD NBAP-PROTOCOL-IES ::= {
    { ID id-Unsuccessful-RL-InformationResp-RL-AdditionFailureTDD   CRITICALITY ignore  TYPE Unsuccessful-RL-InformationResp-RL-AdditionFailureTDD
    PRESENCE mandatory }
}

Unsuccessful-RL-InformationResp-RL-AdditionFailureTDD ::= SEQUENCE {
```

*ETSI*

```
    rL-ID                                     RL-ID,
    cause                                     Cause,
    iE-Extensions                             ProtocolExtensionContainer { { Unsuccessful-RL-InformationResp-RL-AdditionFailureTDD-ExtIEs} }
    OPTIONAL,
    ...
}


Unsuccessful-RL-InformationResp-RL-AdditionFailureTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}


-- ***************************************************************
--
-- RADIO LINK RECONFIGURATION PREPARE FDD
--
-- ***************************************************************

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

RadioLinkReconfigurationPrepareFDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID   id-NodeB-CommunicationContextID                    CRITICALITY    reject     TYPE                 NodeB-CommunicationContextID
          PRESENCE    mandatory   } |
    { 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-DSCH-ModifyList-RL-ReconfPrepFDD           CRITICALITY    reject     TYPE                 DSCH-ModifyList-RL-ReconfPrepFDD
          PRESENCE    optional    } |
    { ID   id-DSCHs-to-Add-FDD             CRITICALITY    reject     TYPE    DSCH-FDD-Information                  PRESENCE optional }
|
    { ID   id-DSCH-DeleteList-RL-ReconfPrepFDD           CRITICALITY    reject     TYPE                 DSCH-DeleteList-RL-ReconfPrepFDD
          PRESENCE    optional    } |
    { ID   id-TFCI2-BearerSpecificInformation-RL-ReconfPrepFDD    CRITICALITY    reject     TYPE          TFCI2-BearerSpecificInformation-
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 },
    ...
}

RadioLinkReconfigurationPrepareFDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-DSCH-FDD-Common-Information                 CRITICALITY ignore  EXTENSION DSCH-FDD-Common-Information              PRESENCE optional
    }|
    { ID id-SignallingBearerRequestIndicator    CRITICALITY reject  EXTENSION   SignallingBearerRequestIndicator             PRESENCE optional }|
```

```
    { ID    id-HSDSCH-Information-to-Modify         CRITICALITY reject      EXTENSION HSDSCH-Information-to-Modify         PRESENCE optional }|
    { ID    id-HSDSCH-FDD-Information-to-Add        CRITICALITY reject      EXTENSION HSDSCH-FDD-Information               PRESENCE optional }|
    { ID    id-HSDSCH-FDD-Information-to-Delete     CRITICALITY reject      EXTENSION HSDSCH-DeleteList-RL-ReconfPrepFDD   PRESENCE optional }|
    { ID    id-HSDSCH-RNTI                          CRITICALITY reject      EXTENSION HSDSCH-RNTI                          PRESENCE optional }|
    { ID    id-HSPDSCH-RL-ID                        CRITICALITY reject      EXTENSION RL-ID                                PRESENCE optional },
    ...
}

UL-DPCH-Information-RL-ReconfPrepFDD ::= SEQUENCE {
    ul-ScramblingCode                               UL-ScramblingCode                   OPTIONAL,
    ul-SIR-Target                                   UL-SIR                              OPTIONAL,
    minUL-ChannelisationCodeLength                  MinUL-ChannelisationCodeLength      OPTIONAL,
    maxNrOfUL-DPDCHs                                MaxNrOfUL-DPDCHs                    OPTIONAL,
    -- This IE shall be present if minUL-ChannelisationCodeLength Ie is set to 4
    ul-PunctureLimit                                PunctureLimit                      OPTIONAL,
    tFCS                                            TFCS        OPTIONAL,
    ul-DPCCH-SlotFormat                             UL-DPCCH-SlotFormat                OPTIONAL,
    diversityMode                                   DiversityMode                      OPTIONAL,
    sSDT-CellIDLength                               SSDT-CellID-Length                 OPTIONAL,
    s-FieldLength                                   S-FieldLength                      OPTIONAL,
    iE-Extensions                                   ProtocolExtensionContainer { { UL-DPCH-Information-RL-ReconfPrepFDD-ExtIEs} }   OPTIONAL,
    ...
}

UL-DPCH-Information-RL-ReconfPrepFDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-Information-RL-ReconfPrepFDD ::= SEQUENCE {
    tFCS                                            TFCS                               OPTIONAL,
    dl-DPCH-SlotFormat                              DL-DPCH-SlotFormat                 OPTIONAL,
    tFCI-SignallingMode                             TFCI-SignallingMode                OPTIONAL,
    tFCI-Presence                                   TFCI-Presence                      OPTIONAL,
    -- This IE shall be present if the DL DPCH Slot Format IE is set to any of the values from 12 to 16
    multiplexingPosition                            MultiplexingPosition               OPTIONAL,
    pDSCH-CodeMapping                               PDSCH-CodeMapping                  OPTIONAL,
    pDSCH-RL-ID                                     RL-ID                              OPTIONAL,
    limitedPowerIncrease                            LimitedPowerIncrease               OPTIONAL,
    iE-Extensions                                   ProtocolExtensionContainer { { DL-DPCH-Information-RL-ReconfPrepFDD-ExtIEs} }   OPTIONAL,
    ...
}

DL-DPCH-Information-RL-ReconfPrepFDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-DeleteList-RL-ReconfPrepFDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-DeleteItem-RL-ReconfPrepFDD

DCH-DeleteItem-RL-ReconfPrepFDD ::= SEQUENCE {
    dCH-ID                                          DCH-ID,
    iE-Extensions                                   ProtocolExtensionContainer { { DCH-DeleteItem-RL-ReconfPrepFDD-ExtIEs} }   OPTIONAL,
    ...
}
```

*ETSI*

```
DCH-DeleteItem-RL-ReconfPrepFDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DSCH-ModifyList-RL-ReconfPrepFDD ::= SEQUENCE (SIZE (1..maxNrOfDSCHs)) OF ProtocolIE-Single-Container {{DSCH-ModifyItemIE-RL-ReconfPrepFDD }}

DSCH-ModifyItemIE-RL-ReconfPrepFDD NBAP-PROTOCOL-IES ::= {
    { ID    id-DSCH-ModifyItem-RL-ReconfPrepFDD    CRITICALITY reject    TYPE    DSCH-ModifyItem-RL-ReconfPrepFDD  PRESENCE mandatory}
}

DSCH-ModifyItem-RL-ReconfPrepFDD ::= SEQUENCE {
    dSCH-ID                                 DSCH-ID,
    dl-TransportFormatSet                   TransportFormatSet        OPTIONAL,
    allocationRetentionPriority             AllocationRetentionPriority OPTIONAL,
    frameHandlingPriority                   FrameHandlingPriority     OPTIONAL,
    toAWS                                   ToAWS                     OPTIONAL,
    toAWE                                   ToAWE                     OPTIONAL,
    transportBearerRequestIndicator         TransportBearerRequestIndicator,
    iE-Extensions                           ProtocolExtensionContainer { { DSCH-ModifyItem-RL-ReconfPrepFDD-ExtIEs} }    OPTIONAL,
    ...
}

DSCH-ModifyItem-RL-ReconfPrepFDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    { ID    id-bindingID                    CRITICALITY ignore    EXTENSION   BindingID                    PRESENCE   optional }|
    { ID    id-transportlayeraddress        CRITICALITY ignore    EXTENSION   TransportLayerAddress        PRESENCE   optional },
    ...
}

DSCH-DeleteList-RL-ReconfPrepFDD ::= SEQUENCE (SIZE (1..maxNrOfDSCHs)) OF ProtocolIE-Single-Container {{DSCH-DeleteItemIE-RL-ReconfPrepFDD }}

DSCH-DeleteItemIE-RL-ReconfPrepFDD NBAP-PROTOCOL-IES ::= {
    { ID    id-DSCH-DeleteItem-RL-ReconfPrepFDD    CRITICALITY reject    TYPE    DSCH-DeleteItem-RL-ReconfPrepFDD  PRESENCE mandatory}
}

DSCH-DeleteItem-RL-ReconfPrepFDD ::= SEQUENCE {
    dSCH-ID                                 DSCH-ID,
    iE-Extensions                           ProtocolExtensionContainer { { DSCH-DeleteItem-RL-ReconfPrepFDD-ExtIEs} }    OPTIONAL,
    ...
}

DSCH-DeleteItem-RL-ReconfPrepFDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TFCI2-BearerSpecificInformation-RL-ReconfPrepFDD ::= CHOICE {
    addOrModify             AddOrModify-TFCI2-RL-ReconfPrepFDD,
    delete                  NULL
}

AddOrModify-TFCI2-RL-ReconfPrepFDD ::= SEQUENCE {
    toAWS                           ToAWS,
    toAWE                           ToAWE,
    iE-Extensions                   ProtocolExtensionContainer { { AddOrModify-TFCI2-RL-ReconfPrepFDD-ExtIEs} }   OPTIONAL,
    ...
```

```
}

AddOrModify-TFCI2-RL-ReconfPrepFDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    { ID   id-TFCI2BearerRequestIndicator      CRITICALITY     reject          EXTENSION   TFCI2BearerRequestIndicator      PRESENCE optional },
    ...
}

RL-InformationList-RL-ReconfPrepFDD ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container {{ RL-InformationItemIE-RL-ReconfPrepFDD }}

RL-InformationItemIE-RL-ReconfPrepFDD NBAP-PROTOCOL-IES ::= {
    { ID   id-RL-InformationItem-RL-ReconfPrepFDD      CRITICALITY     reject          TYPE                     RL-InformationItem-RL-
ReconfPrepFDD      PRESENCE    mandatory}
}

RL-InformationItem-RL-ReconfPrepFDD ::= SEQUENCE {
    rL-ID                                      RL-ID,
    dl-CodeInformation                         FDD-DL-CodeInformation      OPTIONAL,
    maxDL-Power                                DL-Power                                OPTIONAL,
    minDL-Power                                DL-Power                                OPTIONAL,
    sSDT-Indication                            SSDT-Indication                         OPTIONAL,
    sSDT-Cell-Identity                         SSDT-Cell-Identity                      OPTIONAL,
    -- The IE shall be present if the SSDT Indication IE is set to "SSDT Active in the UE"
    transmitDiversityIndicator                 TransmitDiversityIndicator              OPTIONAL,
    -- This IE shall be present if Diversity Mode IE is present in UL DPCH Information IE and it is not set to "none"
    iE-Extensions                              ProtocolExtensionContainer { { RL-InformationItem-RL-ReconfPrepFDD-ExtIEs} }     OPTIONAL,
    ...
}

RL-InformationItem-RL-ReconfPrepFDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-SSDT-CellIDforEDSCHPC CRITICALITY ignore EXTENSION SSDT-Cell-Identity      PRESENCE conditional }|
    -- This IE shall be present if Enhanced DSCH PC IE is present in the DSCH Common Information IE.
    { 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 },
    ...
}

HSDSCH-DeleteList-RL-ReconfPrepFDD ::= SEQUENCE (SIZE (1..maxNrOfMACdFlows)) OF HSDSCH-DeleteItem-RL-ReconfPrepFDD

HSDSCH-DeleteItem-RL-ReconfPrepFDD ::= SEQUENCE {
    hsDSCH-MACdFlow-ID                         HSDSCH-MACdFlow-ID,
    iE-Extensions                              ProtocolExtensionContainer { { HSDSCH-DeleteItem-RL-ReconfPrepFDD-ExtIEs} }     OPTIONAL,
    ...
}

HSDSCH-DeleteItem-RL-ReconfPrepFDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *************************************************************
--
-- RADIO LINK RECONFIGURATION PREPARE TDD
--
-- *************************************************************
```

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

RadioLinkReconfigurationPrepareTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-NodeB-CommunicationContextID                          CRITICALITY    reject    TYPE                NodeB-CommunicationContextID
                PRESENCE    mandatory    }|
    { ID    id-UL-CCTrCH-InformationAddList-RL-ReconfPrepTDD          CRITICALITY    reject              TYPE UL-CCTrCH-
InformationAddList-RL-ReconfPrepTDD           PRESENCE    optional    } |
    { ID    id-UL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD       CRITICALITY    reject              TYPE UL-CCTrCH-
InformationModifyList-RL-ReconfPrepTDD        PRESENCE    optional        } |
    { ID    id-UL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD       CRITICALITY    reject              TYPE UL-CCTrCH-
InformationDeleteList-RL-ReconfPrepTDD        PRESENCE    optional        } |
    { ID    id-DL-CCTrCH-InformationAddList-RL-ReconfPrepTDD          CRITICALITY    reject              TYPE DL-CCTrCH-
InformationAddList-RL-ReconfPrepTDD           PRESENCE    optional    } |
    { ID    id-DL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD       CRITICALITY    reject              TYPE DL-CCTrCH-
InformationModifyList-RL-ReconfPrepTDD        PRESENCE    optional    } |
    { ID    id-DL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD       CRITICALITY    reject              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-Information-ModifyList-RL-ReconfPrepTDD           CRITICALITY    reject    TYPE           DSCH-Information-ModifyList-RL-
ReconfPrepTDD        PRESENCE    optional        } |
    { ID    id-DSCHs-to-Add-TDD          CRITICALITY     reject     TYPE    DSCH-TDD-Information                         PRESENCE    optional    }
|
    { ID    id-DSCH-Information-DeleteList-RL-ReconfPrepTDD           CRITICALITY    reject    TYPE           DSCH-Information-DeleteList-RL-
ReconfPrepTDD        PRESENCE    optional        } |
    { ID    id-USCH-Information-ModifyList-RL-ReconfPrepTDD           CRITICALITY    reject    TYPE           USCH-Information-ModifyList-RL-
ReconfPrepTDD        PRESENCE    optional        } |
    { ID    id-USCH-Information-Add          CRITICALITY     reject     TYPE    USCH-Information                         PRESENCE    optional    }
|
    { ID    id-USCH-Information-DeleteList-RL-ReconfPrepTDD           CRITICALITY    reject    TYPE           USCH-Information-DeleteList-RL-
ReconfPrepTDD        PRESENCE    optional        } |
    { ID    id-RL-Information-RL-ReconfPrepTDD                        CRITICALITY    reject    TYPE           RL-Information-RL-ReconfPrepTDD
                PRESENCE    optional        },
    ...
}

RadioLinkReconfigurationPrepareTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-SignallingBearerRequestIndicator    CRITICALITY reject EXTENSION    SignallingBearerRequestIndicator                PRESENCE optional }|
    { ID    id-HSDSCH-Information-to-Modify          CRITICALITY reject      EXTENSION HSDSCH-Information-to-Modify          PRESENCE optional }|
    { ID    id-HSDSCH-TDD-Information-to-Add         CRITICALITY reject      EXTENSION HSDSCH-TDD-Information               PRESENCE optional }|
    { ID    id-HSDSCH-TDD-Information-to-Delete      CRITICALITY reject      EXTENSION HSDSCH-DeleteList-RL-ReconfPrepTDD    PRESENCE optional }|
    { ID    id-HSDSCH-RNTI                          CRITICALITY reject      EXTENSION HSDSCH-RNTI                         PRESENCE optional }|
    { ID    id-HSPDSCH-RL-ID                        CRITICALITY reject      EXTENSION RL-ID                               PRESENCE optional },
    ...
}
```

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```
UL-CCTrCH-InformationAddList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF UL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD

UL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD ::= SEQUENCE {
    cCTrCH-ID                               CCTrCH-ID,
    tFCS                                    TFCS,
    tFCI-Coding                             TFCI-Coding,
    punctureLimit                           PunctureLimit,
    ul-DPCH-InformationList                 UL-DPCH-InformationAddList-RL-ReconfPrepTDD OPTIONAL,
    iE-Extensions                           ProtocolExtensionContainer { { UL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}

UL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-UL-DPCH-InformationAddListIE-RL-ReconfPrepTDD   CRITICALITY reject      EXTENSION UL-DPCH-InformationAddList-RL-ReconfPrepTDD
    PRESENCE optional }|    -- For 3.84Mcps TDD only
    { 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.
    ...
}

UL-DPCH-InformationAddList-RL-ReconfPrepTDD ::= ProtocolIE-Single-Container {{ UL-DPCH-InformationAddListIEs-RL-ReconfPrepTDD }}

UL-DPCH-InformationAddListIEs-RL-ReconfPrepTDD NBAP-PROTOCOL-IES ::= {
    { ID id-UL-DPCH-InformationAddListIE-RL-ReconfPrepTDD   CRITICALITY reject      TYPE UL-DPCH-InformationAddItem-RL-ReconfPrepTDD    PRESENCE
mandatory }
}

UL-DPCH-InformationAddItem-RL-ReconfPrepTDD ::= SEQUENCE {
    repetitionPeriod                        RepetitionPeriod,
    repetitionLength                        RepetitionLength,
    tdd-DPCHOffset                          TDD-DPCHOffset,
    uL-Timeslot-Information                 UL-Timeslot-Information,
    iE-Extensions                           ProtocolExtensionContainer { { UL-DPCH-InformationAddItem-RL-ReconfPrepTDD-ExtIEs} }     OPTIONAL,
    ...
}

UL-DPCH-InformationAddItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-DPCH-LCR-InformationAddList-RL-ReconfPrepTDD ::= ProtocolIE-Single-Container {{ UL-DPCH-LCR-InformationAddListIEs-RL-ReconfPrepTDD }}

UL-DPCH-LCR-InformationAddListIEs-RL-ReconfPrepTDD NBAP-PROTOCOL-IES ::= {
    { ID id-UL-DPCH-LCR-InformationAddListIE-RL-ReconfPrepTDD   CRITICALITY reject      TYPE UL-DPCH-LCR-InformationAddItem-RL-ReconfPrepTDD
    PRESENCE mandatory }    -- For 1.28Mcps TDD only
}

UL-DPCH-LCR-InformationAddItem-RL-ReconfPrepTDD ::= SEQUENCE {
    repetitionPeriod                        RepetitionPeriod,
    repetitionLength                        RepetitionLength,
    tdd-DPCHOffset                          TDD-DPCHOffset,
    uL-Timeslot-InformationLCR              UL-TimeslotLCR-Information,
```

```
    iE-Extensions                               ProtocolExtensionContainer { { UL-DPCH-LCR-InformationAddItem-RL-ReconfPrepTDD-ExtIEs} }    OPTIONAL,
    ...
}

UL-DPCH-LCR-InformationAddItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF UL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD

UL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    cCTrCH-ID                               CCTrCH-ID,
    tFCS                                    TFCS                                                            OPTIONAL,
    tFCI-Coding                             TFCI-Coding                                                     OPTIONAL,
    punctureLimit                           PunctureLimit                                                   OPTIONAL,
    ul-DPCH-InformationAddList              UL-DPCH-InformationModify-AddList-RL-ReconfPrepTDD              OPTIONAL,
    ul-DPCH-InformationModifyList           UL-DPCH-InformationModify-ModifyList-RL-ReconfPrepTDD           OPTIONAL,
    ul-DPCH-InformationDeleteList           UL-DPCH-InformationModify-DeleteList-RL-ReconfPrepTDD           OPTIONAL,
    iE-Extensions                           ProtocolExtensionContainer { { UL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}

UL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-UL-DPCH-LCR-InformationModify-AddList    CRITICALITY reject      EXTENSION    UL-DPCH-LCR-InformationModify-AddList-RL-ReconfPrepTDD
    PRESENCE optional }|    -- For 1.28Mcps TDD only
    { ID id-UL-SIRTarget        CRITICALITY reject      EXTENSION      UL-SIR      PRESENCE optional                  },
    -- This IE shall be applicable for 1.28Mcps TDD only.
    ...
}

UL-DPCH-InformationModify-AddList-RL-ReconfPrepTDD ::= ProtocolIE-Single-Container {{ UL-DPCH-InformationModify-AddListIEs-RL-ReconfPrepTDD }}

UL-DPCH-InformationModify-AddListIEs-RL-ReconfPrepTDD NBAP-PROTOCOL-IES ::= {
    { ID id-UL-DPCH-InformationModify-AddListIE-RL-ReconfPrepTDD   CRITICALITY reject      TYPE UL-DPCH-InformationModify-AddItem-RL-ReconfPrepTDD
      PRESENCE mandatory }
}

UL-DPCH-InformationModify-AddItem-RL-ReconfPrepTDD ::= SEQUENCE {
    repetitionPeriod                   RepetitionPeriod,
    repetitionLength                   RepetitionLength,
    tdd-DPCHOffset                     TDD-DPCHOffset,
    uL-Timeslot-Information      UL-Timeslot-Information,
    iE-Extensions                          ProtocolExtensionContainer { { UL-DPCH-InformationModify-AddItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}

UL-DPCH-InformationModify-AddItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-DPCH-LCR-InformationModify-AddList-RL-ReconfPrepTDD ::= ProtocolIE-Single-Container {{ UL-DPCH-LCR-InformationModify-AddListIEs-RL-ReconfPrepTDD
}}
```

```
UL-DPCH-LCR-InformationModify-AddListIEs-RL-ReconfPrepTDD NBAP-PROTOCOL-IES ::= {
    { ID id-UL-DPCH-LCR-InformationModify-AddListIE-RL-ReconfPrepTDD   CRITICALITY reject      TYPE UL-DPCH-LCR-InformationModify-AddItem-RL-
ReconfPrepTDD      PRESENCE mandatory }
}

UL-DPCH-LCR-InformationModify-AddItem-RL-ReconfPrepTDD ::= SEQUENCE {
    repetitionPeriod                       RepetitionPeriod,
    repetitionLength                       RepetitionLength,
    tdd-DPCHOffset                         TDD-DPCHOffset,
    uL-Timeslot-InformationLCR             UL-TimeslotLCR-Information,
    iE-Extensions                          ProtocolExtensionContainer { { UL-DPCH-LCR-InformationModify-AddItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}

UL-DPCH-LCR-InformationModify-AddItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-DPCH-InformationModify-ModifyList-RL-ReconfPrepTDD ::= ProtocolIE-Single-Container {{ UL-DPCH-InformationModify-ModifyListIEs-RL-ReconfPrepTDD
}}

UL-DPCH-InformationModify-ModifyListIEs-RL-ReconfPrepTDD NBAP-PROTOCOL-IES ::= {
    { ID id-UL-DPCH-InformationModify-ModifyListIE-RL-ReconfPrepTDD   CRITICALITY reject      TYPE UL-DPCH-InformationModify-ModifyItem-RL-
ReconfPrepTDD      PRESENCE mandatory }
}

UL-DPCH-InformationModify-ModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    repetitionPeriod                       RepetitionPeriod   OPTIONAL,
    repetitionLength                       RepetitionLength   OPTIONAL,
    tdd-DPCHOffset                         TDD-DPCHOffset     OPTIONAL,
    uL-Timeslot-InformationModify-ModifyList-RL-ReconfPrepTDD       UL-Timeslot-InformationModify-ModifyList-RL-ReconfPrepTDD
    OPTIONAL,
    iE-Extensions                          ProtocolExtensionContainer { { UL-DPCH-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}

UL-DPCH-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-UL-TimeslotLCR-Information-RL-ReconfPrepTDD   CRITICALITY reject      EXTENSION   UL-TimeslotLCR-InformationModify-ModifyList-RL-
ReconfPrepTDD      PRESENCE optional },   -- For 1.28Mcps TDD only
    ...
}

UL-Timeslot-InformationModify-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfULTSs)) OF UL-Timeslot-InformationModify-ModifyItem-RL-
ReconfPrepTDD   -- For 3.84Mcps TDD only

UL-Timeslot-InformationModify-ModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    timeSlot                               TimeSlot,
    midambleShiftAndBurstType              MidambleShiftAndBurstType      OPTIONAL,
    tFCI-Presence                          TFCI-Presence      OPTIONAL,
    uL-Code-InformationModify-ModifyList-RL-ReconfPrepTDD            UL-Code-InformationModify-ModifyList-RL-ReconfPrepTDD      OPTIONAL,
```

```
    iE-Extensions                           ProtocolExtensionContainer { { UL-Timeslot-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}

UL-Timeslot-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-Code-InformationModify-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF UL-Code-InformationModify-ModifyItem-RL-
ReconfPrepTDD

UL-Code-InformationModify-ModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    dPCH-ID                                 DPCH-ID,
    tdd-ChannelisationCode                  TDD-ChannelisationCode      OPTIONAL,
    iE-Extensions                           ProtocolExtensionContainer { { UL-Code-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}

UL-Code-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-TimeslotLCR-InformationModify-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfULTSLCRs)) OF UL-Timeslot-LCR-InformationModify-
ModifyItem-RL-ReconfPrepTDD -- For 1.28Mcps TDD only
UL-Timeslot-LCR-InformationModify-ModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    timeSlotLCR                             TimeSlotLCR,
    midambleShiftLCR            MidambleShiftLCR        OPTIONAL,
    tFCI-Presence                           TFCI-Presence       OPTIONAL,
    uL-Code-InformationModify-ModifyList-RL-ReconfPrepTDDLCR             UL-Code-InformationModify-ModifyList-RL-ReconfPrepTDDLCR     OPTIONAL,
    iE-Extensions                           ProtocolExtensionContainer { { UL-Timeslot-LCR-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs} }
        OPTIONAL,
    ...
}

UL-Timeslot-LCR-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-Code-InformationModify-ModifyList-RL-ReconfPrepTDDLCR ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF UL-Code-InformationModify-ModifyItem-RL-
ReconfPrepTDD

UL-Code-InformationModify-ModifyItem-RL-ReconfPrepTDDLCR ::= SEQUENCE {
    dPCH-ID                                 DPCH-ID,
    tdd-ChannelisationCodeLCR               TDD-ChannelisationCodeLCR       OPTIONAL,
    iE-Extensions                           ProtocolExtensionContainer { { UL-Code-InformationModify-ModifyItem-RL-ReconfPrepTDDLCR-ExtIEs} }
    OPTIONAL,
    ...
}

UL-Code-InformationModify-ModifyItem-RL-ReconfPrepTDDLCR-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

*ETSI*

```
UL-DPCH-InformationModify-DeleteList-RL-ReconfPrepTDD ::= ProtocolIE-Single-Container {{ UL-DPCH-InformationModify-DeleteListIEs-RL-ReconfPrepTDD
}}

UL-DPCH-InformationModify-DeleteListIEs-RL-ReconfPrepTDD NBAP-PROTOCOL-IES ::= {
    { ID id-UL-DPCH-InformationModify-DeleteListIE-RL-ReconfPrepTDD   CRITICALITY reject       TYPE UL-DPCH-InformationModify-DeleteListIE-RL-
ReconfPrepTDD       PRESENCE mandatory }
}

UL-DPCH-InformationModify-DeleteListIE-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF UL-DPCH-InformationModify-DeleteItem-RL-
ReconfPrepTDD

UL-DPCH-InformationModify-DeleteItem-RL-ReconfPrepTDD ::= SEQUENCE {
    dPCH-ID                                    DPCH-ID,
    iE-Extensions                              ProtocolExtensionContainer { { UL-DPCH-InformationModify-DeleteItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}

UL-DPCH-InformationModify-DeleteItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF UL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD

UL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD ::= SEQUENCE {
    cCTrCH-ID                                  CCTrCH-ID,
    iE-Extensions                              ProtocolExtensionContainer { { UL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}

UL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CCTrCH-InformationAddList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF DL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD

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,
    dl-DPCH-InformationList                    DL-DPCH-InformationAddList-RL-ReconfPrepTDD                    OPTIONAL,
    iE-Extensions                             ProtocolExtensionContainer { { DL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}

DL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-DL-DPCH-LCR-InformationAddList-RL-ReconfPrepTDD   CRITICALITY reject       EXTENSION                         DL-DPCH-LCR-
InformationAddList-RL-ReconfPrepTDD     PRESENCE optional }|    -- For 1.28Mcps TDD only
    { ID id-CCTrCH-Initial-DL-Power-RL-ReconfPrepTDD       CRITICALITY ignore    EXTENSION DL-Power              PRESENCE optional },
```

*ETSI*

```
    ...
}

CCTrCH-TPCAddList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF CCTrCH-TPCAddItem-RL-ReconfPrepTDD        -- For 3.84Mcps TDD only

CCTrCH-TPCAddItem-RL-ReconfPrepTDD   ::= SEQUENCE {
    cCTrCH-ID                             CCTrCH-ID,
    iE-Extensions                         ProtocolExtensionContainer { { CCTrCH-TPCAddItem-RL-ReconfPrepTDD-ExtIEs} }     OPTIONAL,
    ...
}

CCTrCH-TPCAddItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-InformationAddList-RL-ReconfPrepTDD ::= ProtocolIE-Single-Container {{ DL-DPCH-InformationAddListIEs-RL-ReconfPrepTDD }}

DL-DPCH-InformationAddListIEs-RL-ReconfPrepTDD NBAP-PROTOCOL-IES ::= {
    { ID id-DL-DPCH-InformationAddListIE-RL-ReconfPrepTDD   CRITICALITY reject      TYPE DL-DPCH-InformationAddItem-RL-ReconfPrepTDD    PRESENCE
mandatory }
}

DL-DPCH-InformationAddItem-RL-ReconfPrepTDD ::= SEQUENCE {
    repetitionPeriod                      RepetitionPeriod,
    repetitionLength                      RepetitionLength,
    tdd-DPCHOffset                        TDD-DPCHOffset,
    dL-Timeslot-Information               DL-Timeslot-Information,
    iE-Extensions                         ProtocolExtensionContainer { { DL-DPCH-InformationAddItem-RL-ReconfPrepTDD-ExtIEs} }     OPTIONAL,
    ...
}

DL-DPCH-InformationAddItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-LCR-InformationAddList-RL-ReconfPrepTDD ::= ProtocolIE-Single-Container {{ DL-DPCH-LCR-InformationAddListIEs-RL-ReconfPrepTDD }}

DL-DPCH-LCR-InformationAddListIEs-RL-ReconfPrepTDD NBAP-PROTOCOL-IES ::= {
    { ID id-DL-DPCH-LCR-InformationAddListIE-RL-ReconfPrepTDD   CRITICALITY reject      TYPE DL-DPCH-LCR-InformationAddItem-RL-ReconfPrepTDD
    PRESENCE mandatory }    -- For 1.28Mcps TDD only
}

DL-DPCH-LCR-InformationAddItem-RL-ReconfPrepTDD ::= SEQUENCE {
    repetitionPeriod                      RepetitionPeriod,
    repetitionLength                      RepetitionLength,
    tdd-DPCHOffset                        TDD-DPCHOffset,
    dL-Timeslot-InformationLCR            DL-TimeslotLCR-Information,
    iE-Extensions                         ProtocolExtensionContainer { { DL-DPCH-LCR-InformationAddItem-RL-ReconfPrepTDD-ExtIEs} }     OPTIONAL,
    ...
}

DL-DPCH-LCR-InformationAddItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

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```
DL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF DL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD

DL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    cCTrCH-ID                                   CCTrCH-ID,
    tFCS                                        TFCS                                                    OPTIONAL,
    tFCI-Coding                                 TFCI-Coding                                             OPTIONAL,
    punctureLimit                               PunctureLimit                                           OPTIONAL,
    cCTrCH-TPCList                              CCTrCH-TPCModifyList-RL-ReconfPrepTDD                    OPTIONAL,
    dl-DPCH-InformationAddList                   DL-DPCH-InformationModify-AddList-RL-ReconfPrepTDD          OPTIONAL,
    dl-DPCH-InformationModifyList                DL-DPCH-InformationModify-ModifyList-RL-ReconfPrepTDD       OPTIONAL,
    dl-DPCH-InformationDeleteList                DL-DPCH-InformationModify-DeleteList-RL-ReconfPrepTDD       OPTIONAL,
    iE-Extensions                               ProtocolExtensionContainer { { DL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}

DL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...,
    { ID id-DL-DPCH-LCR-InformationModify-AddList-RL-ReconfPrepTDD CRITICALITY reject        EXTENSION                DL-DPCH-LCR-InformationModify-
AddList-RL-ReconfPrepTDD        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  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-InformationModify-AddList-RL-ReconfPrepTDD ::= ProtocolIE-Single-Container {{ DL-DPCH-InformationModify-AddListIEs-RL-ReconfPrepTDD }}  --
For 3.84Mcps TDD only

DL-DPCH-InformationModify-AddListIEs-RL-ReconfPrepTDD NBAP-PROTOCOL-IES ::= {
    { ID id-DL-DPCH-InformationModify-AddListIE-RL-ReconfPrepTDD   CRITICALITY reject      TYPE DL-DPCH-InformationModify-AddItem-RL-ReconfPrepTDD
      PRESENCE mandatory }    -- For 1.28Mcps TDD only
}

DL-DPCH-InformationModify-AddItem-RL-ReconfPrepTDD ::= SEQUENCE {
    repetitionPeriod                  RepetitionPeriod,
    repetitionLength                  RepetitionLength,
    tdd-DPCHOffset                    TDD-DPCHOffset,
    dL-Timeslot-Information           DL-Timeslot-Information,
    iE-Extensions                     ProtocolExtensionContainer { { DL-DPCH-InformationModify-AddItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}

DL-DPCH-InformationModify-AddItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
```

```
    ...
}

DL-DPCH-LCR-InformationModify-AddList-RL-ReconfPrepTDD ::= ProtocolIE-Single-Container {{ DL-DPCH-LCR-InformationModify-AddListIEs-RL-ReconfPrepTDD
}}

DL-DPCH-LCR-InformationModify-AddListIEs-RL-ReconfPrepTDD NBAP-PROTOCOL-IES ::= {
    { ID id-DL-DPCH-LCR-InformationModify-AddListIE-RL-ReconfPrepTDD   CRITICALITY reject      TYPE DL-DPCH-LCR-InformationModify-AddItem-RL-
ReconfPrepTDD       PRESENCE mandatory }
}

DL-DPCH-LCR-InformationModify-AddItem-RL-ReconfPrepTDD ::= SEQUENCE {
    repetitionPeriod                       RepetitionPeriod,
    repetitionLength                       RepetitionLength,
    tdd-DPCHOffset                         TDD-DPCHOffset,
    dL-Timeslot-InformationLCR             DL-TimeslotLCR-Information,
    iE-Extensions                          ProtocolExtensionContainer { { DL-DPCH-LCR-InformationModify-AddItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}

DL-DPCH-LCR-InformationModify-AddItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-InformationModify-ModifyList-RL-ReconfPrepTDD ::= ProtocolIE-Single-Container {{ DL-DPCH-InformationModify-ModifyListIEs-RL-ReconfPrepTDD
}}

DL-DPCH-InformationModify-ModifyListIEs-RL-ReconfPrepTDD NBAP-PROTOCOL-IES ::= {
    { ID id-DL-DPCH-InformationModify-ModifyListIE-RL-ReconfPrepTDD   CRITICALITY reject      TYPE DL-DPCH-InformationModify-ModifyItem-RL-
ReconfPrepTDD       PRESENCE mandatory }
}

DL-DPCH-InformationModify-ModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    repetitionPeriod                       RepetitionPeriod        OPTIONAL,
    repetitionLength                       RepetitionLength        OPTIONAL,
    tdd-DPCHOffset                         TDD-DPCHOffset          OPTIONAL,
    dL-Timeslot-InformationAddModify-ModifyList-RL-ReconfPrepTDD       DL-Timeslot-InformationModify-ModifyList-RL-ReconfPrepTDD      OPTIONAL,
    iE-Extensions                          ProtocolExtensionContainer { { DL-DPCH-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}

DL-DPCH-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-DL-Timeslot-LCR-InformationModify-ModifyList-RL-ReconfPrepTDD   CRITICALITY reject                           EXTENSION       DL-Timeslot-
LCR-InformationModify-ModifyList-RL-ReconfPrepTDD       PRESENCE optional },
    ...
}

DL-Timeslot-InformationModify-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfDLTSs)) OF DL-Timeslot-InformationModify-ModifyItem-RL-
ReconfPrepTDD

DL-Timeslot-InformationModify-ModifyItem-RL-ReconfPrepTDD    ::= SEQUENCE {
    timeSlot                               TimeSlot,
```

```
    midambleShiftAndBurstType                    MidambleShiftAndBurstType           OPTIONAL,
    tFCI-Presence                                TFCI-Presence               OPTIONAL,
    dL-Code-InformationModify-ModifyList-RL-ReconfPrepTDD             DL-Code-InformationModify-ModifyList-RL-ReconfPrepTDD        OPTIONAL,
    iE-Extensions                                ProtocolExtensionContainer { { DL-Timeslot-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}

DL-Timeslot-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
DL-Code-InformationModify-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (0..maxNrOfDPCHs)) OF DL-Code-InformationModify-ModifyItem-RL-
ReconfPrepTDD

DL-Code-InformationModify-ModifyItem-RL-ReconfPrepTDD    ::= SEQUENCE {
    dPCH-ID                                      DPCH-ID,
    tdd-ChannelisationCode                       TDD-ChannelisationCode      OPTIONAL,
    iE-Extensions                                ProtocolExtensionContainer { { DL-Code-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}

DL-Code-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-Timeslot-LCR-InformationModify-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfDLTSLCRs)) OF DL-Timeslot-InformationModify-ModifyItem-
RL-ReconfPrepTDD

DL-Timeslot-LCR-InformationModify-ModifyItem-RL-ReconfPrepTDD    ::= SEQUENCE {
    timeSlotLCR                                  TimeSlotLCR,
    midambleShiftLCR            MidambleShiftLCR            OPTIONAL,
    tFCI-Presence                                TFCI-Presence           OPTIONAL,
    dL-Code-LCR-InformationModify-ModifyList-RL-ReconfPrepTDD             DL-Code-LCR-InformationModify-ModifyList-RL-ReconfPrepTDD
    OPTIONAL,
    iE-Extensions                                ProtocolExtensionContainer { { DL-Timeslot-LCR-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs} }
        OPTIONAL,
    ...
}

DL-Timeslot-LCR-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
DL-Code-LCR-InformationModify-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (0..maxNrOfDPCHs)) OF DL-Code-InformationModify-ModifyItem-RL-
ReconfPrepTDD

DL-Code-LCR-InformationModify-ModifyItem-RL-ReconfPrepTDD    ::= SEQUENCE {
    dPCH-ID                                      DPCH-ID,
    tdd-ChannelisationCodeLCR                    TDD-ChannelisationCodeLCR       OPTIONAL,
    iE-Extensions                                ProtocolExtensionContainer { { DL-Code-LCR-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}
```

```
DL-Code-LCR-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-InformationModify-DeleteList-RL-ReconfPrepTDD ::= ProtocolIE-Single-Container {{ DL-DPCH-InformationModify-DeleteListIEs-RL-ReconfPrepTDD
}}

DL-DPCH-InformationModify-DeleteListIEs-RL-ReconfPrepTDD NBAP-PROTOCOL-IES ::= {
    { ID id-DL-DPCH-InformationModify-DeleteListIE-RL-ReconfPrepTDD   CRITICALITY reject       TYPE DL-DPCH-InformationModify-DeleteListIE-RL-
ReconfPrepTDD       PRESENCE mandatory }
}

DL-DPCH-InformationModify-DeleteListIE-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF DL-DPCH-InformationModify-DeleteItem-RL-
ReconfPrepTDD

DL-DPCH-InformationModify-DeleteItem-RL-ReconfPrepTDD ::= SEQUENCE {
    dPCH-ID                                  DPCH-ID,
    iE-Extensions                            ProtocolExtensionContainer { { DL-DPCH-InformationModify-DeleteItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}

DL-DPCH-InformationModify-DeleteItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF DL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD

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  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-DeleteList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..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  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DSCH-Information-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfDSCHs)) OF DSCH-Information-ModifyItem-RL-ReconfPrepTDD

DSCH-Information-ModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
```

```
    dSCH-ID                                     DSCH-ID,
    cCTrCH-ID                                   CCTrCH-ID               OPTIONAL,
    transportFormatSet                          TransportFormatSet      OPTIONAL,
    allocationRetentionPriority                 AllocationRetentionPriority OPTIONAL,
    frameHandlingPriority                       FrameHandlingPriority   OPTIONAL,
    toAWS                                       ToAWS                   OPTIONAL,
    toAWE                                       ToAWE                   OPTIONAL,
    transportBearerRequestIndicator             TransportBearerRequestIndicator,
    iE-Extensions                               ProtocolExtensionContainer { { DSCH-Information-ModifyItem-RL-ReconfPrepTDD-ExtIEs} }   OPTIONAL,
    ...
 }

DSCH-Information-ModifyItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-bindingID                      CRITICALITY ignore     EXTENSION   BindingID         PRESENCE            optional }|
    { ID id-transportlayeraddress          CRITICALITY ignore     EXTENSION   TransportLayerAddress             PRESENCE    optional },
    ...
}

DSCH-Information-DeleteList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfDSCHs)) OF DSCH-Information-DeleteItem-RL-ReconfPrepTDD

DSCH-Information-DeleteItem-RL-ReconfPrepTDD ::= SEQUENCE {
    dSCH-ID                                     DSCH-ID,
    iE-Extensions                               ProtocolExtensionContainer { { DSCH-Information-DeleteItem-RL-ReconfPrepTDD-ExtIEs} }   OPTIONAL,
    ...
}

DSCH-Information-DeleteItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

USCH-Information-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfUSCHs)) OF USCH-Information-ModifyItem-RL-ReconfPrepTDD

USCH-Information-ModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    uSCH-ID                                     USCH-ID,
    transportFormatSet                          TransportFormatSet      OPTIONAL,
    allocationRetentionPriority                 AllocationRetentionPriority OPTIONAL,
    cCTrCH-ID                                   CCTrCH-ID               OPTIONAL,
    transportBearerRequestIndicator             TransportBearerRequestIndicator,
    iE-Extensions                               ProtocolExtensionContainer { { USCH-Information-ModifyItem-RL-ReconfPrepTDD-ExtIEs} }   OPTIONAL,
    ...
}

USCH-Information-ModifyItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-bindingID                      CRITICALITY ignore     EXTENSION   BindingID         PRESENCE            optional }|
    { ID id-transportlayeraddress          CRITICALITY ignore     EXTENSION   TransportLayerAddress             PRESENCE    optional },
    ...
}

USCH-Information-DeleteList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfUSCHs)) OF USCH-Information-DeleteItem-RL-ReconfPrepTDD

USCH-Information-DeleteItem-RL-ReconfPrepTDD ::= SEQUENCE {
    uSCH-ID                                     USCH-ID,
    iE-Extensions                               ProtocolExtensionContainer { { USCH-Information-DeleteItem-RL-ReconfPrepTDD-ExtIEs} }   OPTIONAL,
    ...
```

```
}

USCH-Information-DeleteItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-Information-RL-ReconfPrepTDD ::= SEQUENCE {
    rL-ID                                       RL-ID,
    maxDL-Power                                 DL-Power        OPTIONAL,
    minDL-Power                                 DL-Power        OPTIONAL,
    iE-Extensions                               ProtocolExtensionContainer { { RL-Information-RL-ReconfPrepTDD-ExtIEs} }    OPTIONAL,
    ...
}

RL-Information-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-InitDL-Power        CRITICALITY ignore      EXTENSION DL-Power      PRESENCE optional                   }|
    { ID id-RL-Specific-DCH-Info        CRITICALITY ignore      EXTENSION   RL-Specific-DCH-Info               PRESENCE    optional },
    ...
}

HSDSCH-DeleteList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfMACdFlows)) OF HSDSCH-DeleteItem-RL-ReconfPrepTDD

HSDSCH-DeleteItem-RL-ReconfPrepTDD ::= SEQUENCE {
    hsDSCH-MACdFlow-ID                          HSDSCH-MACdFlow-ID,
    iE-Extensions                               ProtocolExtensionContainer { { HSDSCH-DeleteItem-RL-ReconfPrepTDD-ExtIEs} }    OPTIONAL,
    ...
}

HSDSCH-DeleteItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

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

RadioLinkReconfigurationReady-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-CRNC-CommunicationContextID                  CRITICALITY    ignore   TYPE            CRNC-CommunicationContextID
                PRESENCE    mandatory   } |
    { ID    id-RL-InformationResponseList-RL-ReconfReady    CRITICALITY    ignore   TYPE            RL-InformationResponseList-RL-
ReconfReady    PRESENCE    optional    } |
    { ID    id-CriticalityDiagnostics                       CRITICALITY    ignore   TYPE            CriticalityDiagnostics
                PRESENCE    optional    },
    ...
}
```

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```
RadioLinkReconfigurationReady-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-TargetCommunicationControlPortID   CRITICALITY ignore  EXTENSION   CommunicationControlPortID                PRESENCE optional },
    ...
}

RL-InformationResponseList-RL-ReconfReady    ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container {{ RL-InformationResponseItemIE-RL-
ReconfReady}}

RL-InformationResponseItemIE-RL-ReconfReady NBAP-PROTOCOL-IES ::= {
    { ID   id-RL-InformationResponseItem-RL-ReconfReady             CRITICALITY   ignore                         TYPE RL-
InformationResponseItem-RL-ReconfReady     PRESENCE   mandatory}
}

RL-InformationResponseItem-RL-ReconfReady ::= SEQUENCE {
    rL-ID                                       RL-ID,
    dCH-InformationResponseList-RL-ReconfReady        DCH-InformationResponseList-RL-ReconfReady  OPTIONAL,
    dSCH-InformationResponseList-RL-ReconfReady        DSCH-InformationResponseList-RL-ReconfReady OPTIONAL,
    uSCH-InformationResponseList-RL-ReconfReady        USCH-InformationResponseList-RL-ReconfReady OPTIONAL,
    tFCI2-BearerInformationResponse                   TFCI2-BearerInformationResponse     OPTIONAL, --FDD only
    iE-Extensions                               ProtocolExtensionContainer { { RL-InformationResponseItem-RL-ReconfReady-ExtIEs} }
    OPTIONAL,
    ...
}

RL-InformationResponseItem-RL-ReconfReady-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-DL-PowerBalancing-UpdatedIndicator  CRITICALITY ignore        EXTENSION      DL-PowerBalancing-UpdatedIndicator     PRESENCE optional}|
    { ID id-HSDSCH-FDD-Information-Response            CRITICALITY ignore      EXTENSION HSDSCH-FDD-Information-Response     PRESENCE optional }|
    { ID id-HSDSCH-TDD-Information-Response            CRITICALITY ignore      EXTENSION HSDSCH-TDD-Information-Response     PRESENCE optional },
    ...
}

DCH-InformationResponseList-RL-ReconfReady::= ProtocolIE-Single-Container {{ DCH-InformationResponseListIEs-RL-ReconfReady }}

DCH-InformationResponseListIEs-RL-ReconfReady NBAP-PROTOCOL-IES ::= {
    { ID id-DCH-InformationResponse   CRITICALITY ignore   TYPE DCH-InformationResponse    PRESENCE mandatory }
}

DSCH-InformationResponseList-RL-ReconfReady::= ProtocolIE-Single-Container {{ DSCH-InformationResponseListIEs-RL-ReconfReady }}

DSCH-InformationResponseListIEs-RL-ReconfReady NBAP-PROTOCOL-IES ::= {
    { ID id-DSCH-InformationResponse   CRITICALITY ignore   TYPE DSCH-InformationResponse   PRESENCE mandatory }
}

USCH-InformationResponseList-RL-ReconfReady::= ProtocolIE-Single-Container {{ USCH-InformationResponseListIEs-RL-ReconfReady }}

USCH-InformationResponseListIEs-RL-ReconfReady NBAP-PROTOCOL-IES ::= {
    { ID id-USCH-InformationResponse   CRITICALITY ignore   TYPE USCH-InformationResponse       PRESENCE mandatory }
}

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

```
-- ****************************************************************

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

RadioLinkReconfigurationFailure-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-CRNC-CommunicationContextID                         CRITICALITY    ignore    TYPE                        CRNC-CommunicationContextID
                  PRESENCE     mandatory    } |
    { ID    id-CauseLevel-RL-ReconfFailure CRITICALITY    ignore    TYPE    CauseLevel-RL-ReconfFailure            PRESENCE mandatory    } |
    { ID    id-CriticalityDiagnostics                              CRITICALITY    ignore    TYPE                        CriticalityDiagnostics
                  PRESENCE     optional    },
    ...
}

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

CauseLevel-RL-ReconfFailure ::= CHOICE {
    generalCause       GeneralCauseList-RL-ReconfFailure,
    rLSpecificCause    RLSpecificCauseList-RL-ReconfFailure,
    ...
}

GeneralCauseList-RL-ReconfFailure ::= SEQUENCE {
    cause                               Cause,
    iE-Extensions                       ProtocolExtensionContainer { { GeneralCauseItem-RL-ReconfFailure-ExtIEs} }        OPTIONAL,
    ...
 }

GeneralCauseItem-RL-ReconfFailure-ExtIEs  NBAP-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  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-ReconfigurationFailureList-RL-ReconfFailure ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container {{ RL-
ReconfigurationFailureItemIE-RL-ReconfFailure}}

RL-ReconfigurationFailureItemIE-RL-ReconfFailure NBAP-PROTOCOL-IES ::= {
    { ID    id-RL-ReconfigurationFailureItem-RL-ReconfFailure                CRITICALITY    ignore                    TYPE RL-
ReconfigurationFailureItem-RL-ReconfFailure         PRESENCE    mandatory}
```

```
}

RL-ReconfigurationFailureItem-RL-ReconfFailure ::= SEQUENCE {
    rL-ID                                       RL-ID,
    cause                                       Cause,
    iE-Extensions                               ProtocolExtensionContainer { { RL-ReconfigurationFailureItem-RL-ReconfFailure-ExtIEs} }
    OPTIONAL,
    ...
 }

RL-ReconfigurationFailureItem-RL-ReconfFailure-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}


-- *************************************************************
--
-- RADIO LINK RECONFIGURATION COMMIT
--
-- *************************************************************

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

RadioLinkReconfigurationCommit-IEs NBAP-PROTOCOL-IES ::= {
    { ID   id-NodeB-CommunicationContextID          CRITICALITY     ignore     TYPE    NodeB-CommunicationContextID       PRESENCE mandatory   } |
    { ID   id-CFN                                   CRITICALITY     ignore     TYPE    CFN                                                     PRESENCE
    mandatory   }|
    { ID   id-Active-Pattern-Sequence-Information   CRITICALITY     ignore     TYPE    Active-Pattern-Sequence-Information  PRESENCE optional },
    ...
}

RadioLinkReconfigurationCommit-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}


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

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

RadioLinkReconfigurationCancel-IEs NBAP-PROTOCOL-IES ::= {
    { ID   id-NodeB-CommunicationContextID          CRITICALITY     ignore     TYPE    NodeB-CommunicationContextID       PRESENCE mandatory   },
    ...
}
```

```
RadioLinkReconfigurationCancel-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- **************************************************************
--
-- RADIO LINK RECONFIGURATION REQUEST FDD
--
-- **************************************************************

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

RadioLinkReconfigurationRequestFDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-NodeB-CommunicationContextID                CRITICALITY    reject    TYPE    NodeB-CommunicationContextID            PRESENCE
    mandatory    } |
    { 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-RL-InformationList-RL-ReconfRqstFDD         CRITICALITY    reject    TYPE    RL-InformationList-RL-ReconfRqstFDD     PRESENCE
    optional    }|
    { ID id-Transmission-Gap-Pattern-Sequence-Information  CRITICALITY    reject    TYPE    Transmission-Gap-Pattern-Sequence-Information
PRESENCE optional },
    ...
}

RadioLinkReconfigurationRequestFDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-SignallingBearerRequestIndicator   CRITICALITY reject  EXTENSION   SignallingBearerRequestIndicator          PRESENCE optional },
    ...
}


UL-DPCH-Information-RL-ReconfRqstFDD ::= SEQUENCE {
    ul-TFCS                                       TFCS          OPTIONAL,
    iE-Extensions                                 ProtocolExtensionContainer { { UL-DPCH-Information-RL-ReconfRqstFDD-ExtIEs} }    OPTIONAL,
    ...
}

UL-DPCH-Information-RL-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-Information-RL-ReconfRqstFDD ::= SEQUENCE {
    dl-TFCS                                       TFCS          OPTIONAL,
```

```
    tFCI-SignallingMode                             TFCI-SignallingMode                      OPTIONAL,
    limitedPowerIncrease                            LimitedPowerIncrease                     OPTIONAL,
    iE-Extensions                                   ProtocolExtensionContainer { { DL-DPCH-Information-RL-ReconfRqstFDD-ExtIEs} }    OPTIONAL,
    ...
 }

DL-DPCH-Information-RL-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-DeleteList-RL-ReconfRqstFDD ::= SEQUENCE (SIZE (1..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  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-InformationList-RL-ReconfRqstFDD ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container {{ RL-InformationItemIE-RL-ReconfRqstFDD}}

RL-InformationItemIE-RL-ReconfRqstFDD NBAP-PROTOCOL-IES ::= {
    { ID    id-RL-InformationItem-RL-ReconfRqstFDD           CRITICALITY    reject        TYPE             RL-InformationItem-RL-
ReconfRqstFDD            PRESENCE   mandatory}
}

RL-InformationItem-RL-ReconfRqstFDD ::= SEQUENCE {
    rL-ID                                           RL-ID,
    maxDL-Power                                     DL-Power      OPTIONAL,
    minDL-Power                                     DL-Power      OPTIONAL,
    dl-CodeInformation                  FDD-DL-CodeInformation      OPTIONAL,
-- The IE shall be present if the Transmission Gap Pattern Sequence Information IE is included and the indicated Downlink Compressed Mode method
for at least one of the included Transmission Gap Pattern Sequence is set to "SF/2".
    iE-Extensions                                   ProtocolExtensionContainer { { RL-InformationItem-RL-ReconfRqstFDD-ExtIEs} }     OPTIONAL,
    ...
}

RL-InformationItem-RL-ReconfRqstFDD-ExtIEs  NBAP-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 },
    ...
}

-- ****************************************************************
--
-- RADIO LINK RECONFIGURATION REQUEST TDD
--
-- ****************************************************************

RadioLinkReconfigurationRequestTDD ::= SEQUENCE {
```

```
    protocolIEs            ProtocolIE-Container    {{RadioLinkReconfigurationRequestTDD-IEs}},
    protocolExtensions     ProtocolExtensionContainer  {{RadioLinkReconfigurationRequestTDD-Extensions}}          OPTIONAL,
    ...
}

RadioLinkReconfigurationRequestTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-NodeB-CommunicationContextID                        CRITICALITY    reject                         TYPE NodeB-
CommunicationContextID                 PRESENCE    mandatory    } |
    { 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    } |
    { ID    id-RL-Information-RL-ReconfRqstTDD                 CRITICALITY    ignore        TYPE                   RL-Information-RL-ReconfRqstTDD
            PRESENCE    optional    },
    ...
}

RadioLinkReconfigurationRequestTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-SignallingBearerRequestIndicator    CRITICALITY reject    EXTENSION    SignallingBearerRequestIndicator         PRESENCE optional },
    ...
}

UL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container {{ UL-CCTrCH-
InformationModifyItemIE-RL-ReconfRqstTDD}}

UL-CCTrCH-InformationModifyItemIE-RL-ReconfRqstTDD NBAP-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                                   TFCS          OPTIONAL,
    punctureLimit                          PunctureLimit   OPTIONAL,
    iE-Extensions                          ProtocolExtensionContainer { { UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD-ExtIEs} }
    OPTIONAL,
    ...
}

UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

```
UL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container {{ UL-CCTrCH-
InformationDeleteItemIE-RL-ReconfRqstTDD}}

UL-CCTrCH-InformationDeleteItemIE-RL-ReconfRqstTDD NBAP-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  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container {{ DL-CCTrCH-
InformationModifyItemIE-RL-ReconfRqstTDD}}

DL-CCTrCH-InformationModifyItemIE-RL-ReconfRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID   id-DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD        CRITICALITY    notify                        TYPE  DL-CCTrCH-
InformationModifyItem-RL-ReconfRqstTDD      PRESENCE    mandatory}
}

DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD ::= SEQUENCE {
    cCTrCH-ID                                    CCTrCH-ID,
    tFCS                                         TFCS            OPTIONAL,
    punctureLimit                                PunctureLimit   OPTIONAL,
    iE-Extensions                                ProtocolExtensionContainer { { DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD-ExtIEs} }
    OPTIONAL,
    ...
}

DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container {{ DL-CCTrCH-
InformationDeleteItemIE-RL-ReconfRqstTDD}}

DL-CCTrCH-InformationDeleteItemIE-RL-ReconfRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID   id-DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD        CRITICALITY    notify                        TYPE  DL-CCTrCH-
InformationDeleteItem-RL-ReconfRqstTDD      PRESENCE    mandatory}
}

DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD ::= SEQUENCE {
    cCTrCH-ID                                    CCTrCH-ID,
    iE-Extensions                                ProtocolExtensionContainer { { DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD-ExtIEs} }
    OPTIONAL,
    ...
}
```

```
DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-DeleteList-RL-ReconfRqstTDD ::= SEQUENCE (SIZE (1..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  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-Information-RL-ReconfRqstTDD ::= SEQUENCE {
    rL-ID                                   RL-ID,
    maxDL-Power                             DL-Power      OPTIONAL,
    minDL-Power                             DL-Power      OPTIONAL,
    iE-Extensions                           ProtocolExtensionContainer { { RL-InformationItem-RL-ReconfRqstTDD-ExtIEs} }     OPTIONAL,
    ...
}

RL-InformationItem-RL-ReconfRqstTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-RL-Specific-DCH-Info     CRITICALITY ignore    EXTENSION   RL-Specific-DCH-Info                     PRESENCE   optional },
    ...
}

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

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

RadioLinkReconfigurationResponse-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-CRNC-CommunicationContextID                 CRITICALITY ignore    TYPE    CRNC-CommunicationContextID                  PRESENCE
    mandatory   } |
    { ID    id-RL-InformationResponseList-RL-ReconfRsp     CRITICALITY ignore    TYPE    RL-InformationResponseList-RL-ReconfRsp      PRESENCE
    optional    } |
    { ID    id-CriticalityDiagnostics                      CRITICALITY ignore    TYPE    CriticalityDiagnostics                       PRESENCE
    optional    },
    ...
}

RadioLinkReconfigurationResponse-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-TargetCommunicationControlPortID    CRITICALITY ignore EXTENSION   CommunicationControlPortID                     PRESENCE optional },
```

```
    ...
}

RL-InformationResponseList-RL-ReconfRsp ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container {{RL-InformationResponseItemIE-RL-
ReconfRsp}}

RL-InformationResponseItemIE-RL-ReconfRsp NBAP-PROTOCOL-IES ::= {
    { ID    id-RL-InformationResponseItem-RL-ReconfRsp           CRITICALITY    ignore      TYPE              RL-InformationResponseItem-RL-
ReconfRsp        PRESENCE    mandatory}
}

RL-InformationResponseItem-RL-ReconfRsp ::= SEQUENCE {
    rL-ID                            RL-ID,
    dCH-InformationResponseList-RL-ReconfRsp        DCH-InformationResponseList-RL-ReconfRsp                        OPTIONAL,
    iE-Extensions                        ProtocolExtensionContainer { { RL-InformationResponseItem-RL-ReconfRsp-ExtIEs} }    OPTIONAL,
    ...
}

RL-InformationResponseItem-RL-ReconfRsp-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-DL-PowerBalancing-UpdatedIndicator CRITICALITY ignore     EXTENSION        DL-PowerBalancing-UpdatedIndicator     PRESENCE optional},
    ...
}

DCH-InformationResponseList-RL-ReconfRsp::= ProtocolIE-Single-Container {{ DCH-InformationResponseListIEs-RL-ReconfRsp }}

DCH-InformationResponseListIEs-RL-ReconfRsp NBAP-PROTOCOL-IES ::= {
    { ID id-DCH-InformationResponse   CRITICALITY ignore   TYPE DCH-InformationResponse    PRESENCE mandatory }
}

-- *************************************************************
--
-- RADIO LINK DELETION REQUEST
--
-- *************************************************************

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

RadioLinkDeletionRequest-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-NodeB-CommunicationContextID                CRITICALITY    reject      TYPE              NodeB-CommunicationContextID
          PRESENCE    mandatory       } |
    { ID    id-CRNC-CommunicationContextID                CRITICALITY    reject       TYPE           CRNC-CommunicationContextID
          PRESENCE    mandatory    }|
    { ID    id-RL-informationList-RL-DeletionRqst          CRITICALITY    notify      TYPE              RL-informationList-RL-
DeletionRqst           PRESENCE    mandatory       } ,
    ...
}

RadioLinkDeletionRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {
```

```
    ...
}

RL-informationList-RL-DeletionRqst ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container {{RL-informationItemIE-RL-DeletionRqst}}

RL-informationItemIE-RL-DeletionRqst NBAP-PROTOCOL-IES ::= {
    { ID    id-RL-informationItem-RL-DeletionRqst              CRITICALITY    notify         TYPE                       RL-informationItem-RL-
DeletionRqst                 PRESENCE    mandatory}
}

RL-informationItem-RL-DeletionRqst ::= SEQUENCE {
    rL-ID                                   RL-ID,
    iE-Extensions                           ProtocolExtensionContainer { { RL-informationItem-RL-DeletionRqst-ExtIEs} }    OPTIONAL,
    ...
 }

RL-informationItem-RL-DeletionRqst-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *************************************************************
--
-- RADIO LINK DELETION RESPONSE
--
-- *************************************************************

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

RadioLinkDeletionResponse-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-CRNC-CommunicationContextID          CRITICALITY     ignore        TYPE    CRNC-CommunicationContextID             PRESENCE
    mandatory   }|
    { ID    id-CriticalityDiagnostics               CRITICALITY     ignore        TYPE    CriticalityDiagnostics            PRESENCE optional },
    ...
}

RadioLinkDeletionResponse-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}


-- *************************************************************
--
-- DL POWER CONTROL REQUEST FDD
--
-- *************************************************************

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

```
}

DL-PowerControlRequest-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-NodeB-CommunicationContextID          CRITICALITY ignore      TYPE    NodeB-CommunicationContextID          PRESENCE mandatory  }
|
    { 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 the Adjustment Type IE is set 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 the Adjustment Type IE is set to 'Individual'
    { ID id-MaxAdjustmentStep                     CRITICALITY ignore  TYPE MaxAdjustmentStep                            PRESENCE conditional} |
    -- This IE shall be present if the Adjustment Type IE is set to 'Common' or 'Individual'
    { ID id-AdjustmentPeriod                      CRITICALITY ignore  TYPE AdjustmentPeriod                             PRESENCE conditional }|
    -- This IE shall be present if the Adjustment Type IE is set to 'Common' or 'Individual'
    { ID id-AdjustmentRatio        CRITICALITY ignore  TYPE ScaledAdjustmentRatio        PRESENCE conditional   },
    -- This IE shall be present if the Adjustment Type IE is set to 'Common' or 'Individual'
    ...
}

DL-PowerControlRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-ReferencePowerInformationList-DL-PC-Rqst ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container {{DL-
ReferencePowerInformationItemIE-DL-PC-Rqst }}

DL-ReferencePowerInformationItemIE-DL-PC-Rqst NBAP-PROTOCOL-IES ::= {
    { ID id-DL-ReferencePowerInformationItem-DL-PC-Rqst     CRITICALITY     ignore     TYPE    DL-ReferencePowerInformationItem-DL-PC-Rqst
    PRESENCE    mandatory
}
}

DL-ReferencePowerInformationItem-DL-PC-Rqst ::= SEQUENCE {
    rL-ID                              RL-ID,
    dl-ReferencePower                  DL-Power,
    iE-Extensions                      ProtocolExtensionContainer { { DL-ReferencePowerInformationItem-DL-PC-Rqst-ExtIEs } }    OPTIONAL,
    ...
}

DL-ReferencePowerInformationItem-DL-PC-Rqst-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ************************************************************
--
-- DL POWER TIMESLOT CONTROL REQUEST TDD
--
-- ************************************************************

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

```
}

DL-PowerTimeslotControlRequest-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-NodeB-CommunicationContextID              CRITICALITY ignore        TYPE    NodeB-CommunicationContextID           PRESENCE mandatory
    } |
    { ID id-TimeslotISCPInfo          CRITICALITY ignore        TYPE    DL-TimeslotISCPInfo      PRESENCE optional },   -- Mandatory for 3.84Mcps TDD
only

    ...
}

DL-PowerTimeslotControlRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-TimeslotISCPInfoList-LCR-DL-PC-RqstTDD       CRITICALITY ignore        EXTENSION   TimeslotISCPInfoList-LCR-DL-PC-RqstTDD      PRESENCE
optional }|
    { ID id-PrimCCPCH-RSCP-DL-PC-RqstTDD                 CRITICALITY ignore        EXTENSION PrimaryCCPCH-RSCP        PRESENCE optional },
    ...
}

TimeslotISCPInfoList-LCR-DL-PC-RqstTDD ::= SEQUENCE {
    dL-TimeslotISCP-LCR-Info    DL-TimeslotISCPInfoLCR,     -- Mandatory for 1.28Mcps TDD only
    iE-Extensions                ProtocolExtensionContainer { {TimeslotISCPInfoItem-LCR-DL-PC-RqstTDD-ExtIEs} }          OPTIONAL,
    ...
    }

TimeslotISCPInfoItem-LCR-DL-PC-RqstTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {

    ...
}

-- *************************************************************
--
-- DEDICATED MEASUREMENT INITIATION REQUEST
--
-- *************************************************************

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

DedicatedMeasurementInitiationRequest-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-NodeB-CommunicationContextID                  CRITICALITY    reject    TYPE    NodeB-CommunicationContextID          PRESENCE
    mandatory    } |
    { ID    id-MeasurementID                                 CRITICALITY    reject    TYPE    MeasurementID                         PRESENCE
    mandatory    } |
    { ID    id-DedicatedMeasurementObjectType-DM-Rqst    CRITICALITY    reject    TYPE    DedicatedMeasurementObjectType-DM-Rqst    PRESENCE
    mandatory    } |
    -- This IE represents both the Dedicated Measurement Object Type IE and the choice based on the Dedicated Measurement Object Type
    -- as described in the tabular message format in subclause 9.1.
    { 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    } ,
    ...
}

DedicatedMeasurementInitiationRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DedicatedMeasurementObjectType-DM-Rqst ::= CHOICE {
    rL                        RL-DM-Rqst,
    rLS                       RL-Set-DM-Rqst,
    all-RL                    AllRL-DM-Rqst,
    all-RLS                   AllRL-Set-DM-Rqst,
    ...
}

RL-DM-Rqst ::= SEQUENCE {
    rL-InformationList                RL-InformationList-DM-Rqst,
    iE-Extensions                     ProtocolExtensionContainer { { RLItem-DM-Rqst-ExtIEs } }                 OPTIONAL,
    ...
}

RLItem-DM-Rqst-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-InformationList-DM-Rqst ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container {{ RL-InformationItemIE-DM-Rqst }}

RL-InformationItemIE-DM-Rqst NBAP-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  NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-PUSCH-Info-DM-Rqst      CRITICALITY reject               EXTENSION   PUSCH-Info-DM-Rqst                 PRESENCE optional},
    -- TDD only
    ...
}

PUSCH-Info-DM-Rqst ::= SEQUENCE (SIZE (1..maxNrOfPUSCHs)) OF PUSCH-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  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-Set-InformationList-DM-Rqst                     ::= SEQUENCE (SIZE(1..maxNrOfRLSets)) OF RL-Set-InformationItem-DM-Rqst

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 NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

AllRL-DM-Rqst ::= NULL


AllRL-Set-DM-Rqst ::= NULL

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

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

DedicatedMeasurementInitiationResponse-IEs NBAP-PROTOCOL-IES ::= {
    { ID   id-CRNC-CommunicationContextID                CRITICALITY    ignore    TYPE    CRNC-CommunicationContextID            PRESENCE
    mandatory   } |
    { 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    },
    ...
}

DedicatedMeasurementInitiationResponse-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DedicatedMeasurementObjectType-DM-Rsp ::= CHOICE {
```

```
    rL                          RL-DM-Rsp,
    rLS                         RL-Set-DM-Rsp,
    all-RL                      RL-DM-Rsp,
    all-RLS                     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  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-InformationList-DM-Rsp ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container {{ RL-InformationItemIE-DM-Rsp }}

RL-InformationItemIE-DM-Rsp NBAP-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  NBAP-PROTOCOL-EXTENSION ::= {
    {ID id-PUSCH-Info-DM-Rsp        CRITICALITY reject            EXTENSION   PUSCH-Info-DM-Rsp                 PRESENCE optional},
    -- TDD only
    ...
}

PUSCH-Info-DM-Rsp ::= SEQUENCE (SIZE (0..maxNrOfPUSCHs)) OF PUSCH-ID

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  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-Set-InformationList-DM-Rsp ::= SEQUENCE (SIZE (1..maxNrOfRLSets)) OF ProtocolIE-Single-Container {{ RL-Set-InformationItemIE-DM-Rsp }}

RL-Set-InformationItemIE-DM-Rsp NBAP-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-Rsp-ExtIEs} } OPTIONAL,
    ...
}

RL-Set-InformationItem-DM-Rsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

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

DedicatedMeasurementInitiationFailure-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-CRNC-CommunicationContextID        CRITICALITY    ignore       TYPE    CRNC-CommunicationContextID    PRESENCE mandatory   }
|
    { 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 NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *************************************************************
--
-- DEDICATED MEASUREMENT REPORT
--
-- *************************************************************

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

DedicatedMeasurementReport-IEs NBAP-PROTOCOL-IES ::= {
```

```
    { ID    id-CRNC-CommunicationContextID                      CRITICALITY    ignore    TYPE                    CRNC-CommunicationContextID
            PRESENCE    mandatory    } |
    { ID    id-MeasurementID                                    CRITICALITY    ignore    TYPE                    MeasurementID
      PRESENCE    mandatory    } |
    { ID    id-DedicatedMeasurementObjectType-DM-Rprt           CRITICALITY    ignore    TYPE                    DedicatedMeasurementObjectType-
DM-Rprt    PRESENCE    mandatory    } ,
    ...
}

DedicatedMeasurementReport-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DedicatedMeasurementObjectType-DM-Rprt ::= CHOICE {
    rL                          RL-DM-Rprt,
    rLS                         RL-Set-DM-Rprt,
    all-RL                      RL-DM-Rprt,
    all-RLS                     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  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-InformationList-DM-Rprt ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container {{ RL-InformationItemIE-DM-Rprt }}

RL-InformationItemIE-DM-Rprt NBAP-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  NBAP-PROTOCOL-EXTENSION ::= {
    {ID id-PUSCH-Info-DM-Rprt        CRITICALITY reject                 EXTENSION   PUSCH-Info-DM-Rprt              PRESENCE optional},
    -- TDD only
    ...
}

PUSCH-Info-DM-Rprt ::= SEQUENCE (SIZE (0..maxNrOfPUSCHs)) OF PUSCH-ID

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  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-Set-InformationList-DM-Rprt ::= SEQUENCE (SIZE (1..maxNrOfRLSets)) OF ProtocolIE-Single-Container {{ RL-Set-InformationItemIE-DM-Rprt }}

RL-Set-InformationItemIE-DM-Rprt NBAP-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 NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- **************************************************************
--
-- DEDICATED MEASUREMENT TERMINATION REQUEST
--
-- **************************************************************

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

DedicatedMeasurementTerminationRequest-IEs NBAP-PROTOCOL-IES ::= {
    { ID   id-NodeB-CommunicationContextID        CRITICALITY   ignore      TYPE   NodeB-CommunicationContextID    PRESENCE mandatory   }
|
    { ID   id-MeasurementID                       CRITICALITY   ignore      TYPE   MeasurementID                   PRESENCE
    mandatory   },
    ...
}

DedicatedMeasurementTerminationRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- **************************************************************
--
-- DEDICATED MEASUREMENT FAILURE INDICATION
--
```

```
-- ************************************************************

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

DedicatedMeasurementFailureIndication-IEs NBAP-PROTOCOL-IES ::= {
    { ID   id-CRNC-CommunicationContextID       CRITICALITY   ignore   TYPE   CRNC-CommunicationContextID      PRESENCE mandatory   } |
    { ID   id-MeasurementID                     CRITICALITY   ignore   TYPE   MeasurementID                    PRESENCE mandatory
    } |
    { ID   id-Cause                             CRITICALITY   ignore   TYPE   Cause                            PRESENCE mandatory
    },
    ...
}

DedicatedMeasurementFailureIndication-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ************************************************************
--
-- RADIO LINK FAILURE INDICATION
--
-- ************************************************************

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

RadioLinkFailureIndication-IEs NBAP-PROTOCOL-IES ::= {
    { ID   id-CRNC-CommunicationContextID              CRITICALITY   ignore      TYPE   CRNC-CommunicationContextID      PRESENCE
    mandatory   } |
    { ID   id-Reporting-Object-RL-FailureInd           CRITICALITY   ignore      TYPE   Reporting-Object-RL-FailureInd   PRESENCE
    mandatory   } ,
    ...
}

RadioLinkFailureIndication-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

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 NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-InformationList-RL-FailureInd ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container {{ RL-InformationItemIE-RL-FailureInd}}

RL-InformationItemIE-RL-FailureInd NBAP-PROTOCOL-IES ::= {
    { ID   id-RL-InformationItem-RL-FailureInd        CRITICALITY    ignore      TYPE   RL-InformationItem-RL-FailureInd      PRESENCE
    mandatory}
 }

RL-InformationItem-RL-FailureInd ::= SEQUENCE {
    rL-ID                                 RL-ID,
    cause                                 Cause,
    iE-Extensions                         ProtocolExtensionContainer { { RL-InformationItem-RL-FailureInd-ExtIEs } }    OPTIONAL,
    ...
 }

RL-InformationItem-RL-FailureInd-ExtIEs NBAP-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 NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-Set-InformationList-RL-FailureInd ::= SEQUENCE (SIZE (1..maxNrOfRLSets)) OF ProtocolIE-Single-Container {{ RL-Set-InformationItemIE-RL-
FailureInd }}

RL-Set-InformationItemIE-RL-FailureInd NBAP-PROTOCOL-IES ::= {
    { ID id-RL-Set-InformationItem-RL-FailureInd    CRITICALITY ignore     TYPE RL-Set-InformationItem-RL-FailureInd    PRESENCE mandatory   }
}

RL-Set-InformationItem-RL-FailureInd ::= SEQUENCE {
    rL-Set-ID              RL-Set-ID,
    cause                  Cause,
    iE-Extensions          ProtocolExtensionContainer { { RL-Set-InformationItem-RL-FailureInd-ExtIEs} } OPTIONAL,
    ...
 }

RL-Set-InformationItem-RL-FailureInd-ExtIEs NBAP-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 NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CCTrCH-InformationList-RL-FailureInd ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container {{ CCTrCH-InformationItemIE-RL-
FailureInd}}

CCTrCH-InformationItemIE-RL-FailureInd NBAP-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 NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ************************************************************
--
-- RADIO LINK PREEMPTION REQUIRED INDICATION
--
-- ************************************************************

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

RadioLinkPreemptionRequiredIndication-IEs NBAP-PROTOCOL-IES ::= {
    { ID   id-CRNC-CommunicationContextID              CRITICALITY    ignore      TYPE                    CRNC-CommunicationContextID
          PRESENCE    mandatory      } |
    { ID id-RL-InformationList-RL-PreemptRequiredInd    CRITICALITY ignore  TYPE RL-InformationList-RL-PreemptRequiredInd    PRESENCE optional },
    ...
}

RadioLinkPreemptionRequiredIndication-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

```
RL-InformationList-RL-PreemptRequiredInd                        ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container { {RL-InformationItemIE-RL-
PreemptRequiredInd}}

RL-InformationItemIE-RL-PreemptRequiredInd NBAP-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-InformationItem-RL-PreemptRequiredInd-ExtIEs} } OPTIONAL,
    ...
}

RL-InformationItem-RL-PreemptRequiredInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *************************************************************
--
-- RADIO LINK RESTORE INDICATION
--
-- *************************************************************

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

RadioLinkRestoreIndication-IEs NBAP-PROTOCOL-IES ::= {
    { ID   id-CRNC-CommunicationContextID              CRITICALITY     ignore       TYPE   CRNC-CommunicationContextID          PRESENCE
    mandatory   } |
    { ID   id-Reporting-Object-RL-RestoreInd           CRITICALITY     ignore       TYPE   Reporting-Object-RL-RestoreInd    PRESENCE
    mandatory   },
    ...
}

RadioLinkRestoreIndication-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Reporting-Object-RL-RestoreInd ::= CHOICE {
    rL                   RL-RL-RestoreInd,
    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 NBAP-PROTOCOL-EXTENSION ::= {
    ...
 }

RL-InformationList-RL-RestoreInd ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container {{RL-InformationItemIE-RL-RestoreInd}}

RL-InformationItemIE-RL-RestoreInd NBAP-PROTOCOL-IES ::= {
    { ID   id-RL-InformationItem-RL-RestoreInd        CRITICALITY    ignore       TYPE   RL-InformationItem-RL-RestoreInd       PRESENCE
    mandatory}
 }

RL-InformationItem-RL-RestoreInd ::= SEQUENCE {
    rL-ID                              RL-ID,
    iE-Extensions                      ProtocolExtensionContainer { { RL-InformationItem-RL-RestoreInd-ExtIEs } }   OPTIONAL,
    ...
 }

RL-InformationItem-RL-RestoreInd-ExtIEs NBAP-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 NBAP-PROTOCOL-EXTENSION ::= {
    ...
 }

RL-Set-InformationList-RL-RestoreInd ::= SEQUENCE (SIZE (1..maxNrOfRLSets)) OF ProtocolIE-Single-Container {{ RL-Set-InformationItemIE-RL-
RestoreInd }}

RL-Set-InformationItemIE-RL-RestoreInd NBAP-PROTOCOL-IES ::= {
    { ID id-RL-Set-InformationItem-RL-RestoreInd   CRITICALITY ignore     TYPE RL-Set-InformationItem-RL-RestoreInd PRESENCE mandatory   }
 }

RL-Set-InformationItem-RL-RestoreInd ::= SEQUENCE {
    rL-Set-ID              RL-Set-ID,
    iE-Extensions          ProtocolExtensionContainer { { RL-Set-InformationItem-RL-RestoreInd-ExtIEs} } OPTIONAL,
    ...
}

RL-Set-InformationItem-RL-RestoreInd-ExtIEs NBAP-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 NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CCTrCH-InformationList-RL-RestoreInd ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container {{ CCTrCH-InformationItemIE-RL-
RestoreInd}}

CCTrCH-InformationItemIE-RL-RestoreInd NBAP-PROTOCOL-IES ::= {
    { ID   id-CCTrCH-InformationItem-RL-RestoreInd          CRITICALITY     ignore        TYPE                    CCTrCH-InformationItem-RL-
RestoreInd          PRESENCE   mandatory}
 }

CCTrCH-InformationItem-RL-RestoreInd ::= SEQUENCE {
    cCTrCH-ID                                  CCTrCH-ID,
    iE-Extensions                              ProtocolExtensionContainer { { CCTrCH-InformationItem-RL-RestoreInd-ExtIEs } }     OPTIONAL,
    ...
 }

CCTrCH-InformationItem-RL-RestoreInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}


-- *************************************************************
--
-- COMPRESSED MODE COMMAND FDD
--
-- *************************************************************

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

CompressedModeCommand-IEs NBAP-PROTOCOL-IES ::= {
    { ID   id-NodeB-CommunicationContextID        CRITICALITY       ignore    TYPE    NodeB-CommunicationContextID        PRESENCE
    mandatory  } |
    { ID   id-Active-Pattern-Sequence-Information CRITICALITY       ignore    TYPE    Active-Pattern-Sequence-Information  PRESENCE
    mandatory },
    ...
}

CompressedModeCommand-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
```

```
}


-- *************************************************************
--
-- ERROR INDICATION
--
-- *************************************************************

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

ErrorIndication-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-CRNC-CommunicationContextID        CRITICALITY    ignore    TYPE    CRNC-CommunicationContextID        PRESENCE optional } |
    { ID    id-NodeB-CommunicationContextID       CRITICALITY    ignore    TYPE    NodeB-CommunicationContextID       PRESENCE optional } |
    { ID    id-Cause                              CRITICALITY    ignore    TYPE    Cause                                          PRESENCE
    optional    } |
    { ID    id-CriticalityDiagnostics             CRITICALITY    ignore    TYPE    CriticalityDiagnostics             PRESENCE optional },
    ...
}

ErrorIndication-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *************************************************************
--
-- PRIVATE MESSAGE
--
-- *************************************************************

PrivateMessage ::= SEQUENCE {
    privateIEs      PrivateIE-Container {{PrivateMessage-IEs}},
    ...
}

PrivateMessage-IEs NBAP-PRIVATE-IES ::= {
    ...
}

-- *************************************************************
--
-- PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST FDD
--
-- *************************************************************

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

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```
PhysicalSharedChannelReconfigurationRequestFDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID   id-C-ID                                    CRITICALITY    reject      TYPE   C-ID                              PRESENCE
    mandatory   } |
    { ID   id-SFN                                     CRITICALITY    reject      TYPE   SFN                               PRESENCE
    optional} |
    { ID   id-HS-PDSCH-HS-SCCH-MaxPower-PSCH-ReconfRqst   CRITICALITY    reject   TYPE   MaximumTransmissionPower          PRESENCE
    optional    } |
    { ID   id-HS-PDSCH-HS-SCCH-ScramblingCode-PSCH-ReconfRqst   CRITICALITY    reject TYPE   DL-ScramblingCode             PRESENCE
    optional    } |
    { ID   id-HS-PDSCH-FDD-Code-Information-PSCH-ReconfRqst    CRITICALITY    reject TYPE   HS-PDSCH-FDD-Code-Information   PRESENCE
    optional    } |
    { ID   id-HS-SCCH-FDD-Code-Information-PSCH-ReconfRqst    CRITICALITY    reject TYPE   HS-SCCH-FDD-Code-Information    PRESENCE
    optional    },
    ...
}

PhysicalSharedChannelReconfigurationRequestFDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}


-- ****************************************************************
--
-- PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST TDD
--
-- ****************************************************************

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

PhysicalSharedChannelReconfigurationRequestTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID   id-C-ID                                    CRITICALITY    reject      TYPE   C-ID
    PRESENCE    mandatory   } |
    { ID   id-SFN                                     CRITICALITY    reject      TYPE   SFN
       PRESENCE     optional} |
    { ID   id-PDSCHSets-AddList-PSCH-ReconfRqst       CRITICALITY    reject      TYPE   PDSCHSets-AddList-PSCH-ReconfRqst       PRESENCE
    optional    } |
    { ID   id-PDSCHSets-ModifyList-PSCH-ReconfRqst    CRITICALITY    reject      TYPE   PDSCHSets-ModifyList-PSCH-ReconfRqst    PRESENCE
    optional    } |
    { ID   id-PDSCHSets-DeleteList-PSCH-ReconfRqst    CRITICALITY    reject      TYPE   PDSCHSets-DeleteList-PSCH-ReconfRqst    PRESENCE
    optional    } |
    { ID   id-PUSCHSets-AddList-PSCH-ReconfRqst       CRITICALITY    reject      TYPE   PUSCHSets-AddList-PSCH-ReconfRqst       PRESENCE
    optional    } |
    { ID   id-PUSCHSets-ModifyList-PSCH-ReconfRqst    CRITICALITY    reject      TYPE   PUSCHSets-ModifyList-PSCH-ReconfRqst    PRESENCE
    optional    } |
    { ID   id-PUSCHSets-DeleteList-PSCH-ReconfRqst    CRITICALITY    reject      TYPE   PUSCHSets-DeleteList-PSCH-ReconfRqst    PRESENCE
    optional    },
    ...
}

PhysicalSharedChannelReconfigurationRequestTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
```

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```
    { ID    id-HS-PDSCH-TDD-Information-PSCH-ReconfRqst         CRITICALITY    reject      EXTENSION HS-PDSCH-TDD-Information-PSCH-ReconfRqst
    PRESENCE    optional    } |
    { ID    id-Add-To-HS-SCCH-Resource-Pool-PSCH-ReconfRqst     CRITICALITY    reject      EXTENSION Add-To-HS-SCCH-Resource-Pool-PSCH-ReconfRqst
        PRESENCE    optional    } |
    { ID    id-Modify-HS-SCCH-Resource-Pool-PSCH-ReconfRqst     CRITICALITY    reject      EXTENSION Modify-HS-SCCH-Resource-Pool-PSCH-ReconfRqst
        PRESENCE    optional    } |
    { ID    id-Delete-From-HS-SCCH-Resource-Pool-PSCH-ReconfRqst    CRITICALITY    reject      EXTENSION Delete-From-HS-SCCH-Resource-Pool-PSCH-
ReconfRqst        PRESENCE    optional    },
    ...
}


PDSCHSets-AddList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfPDSCHSets)) OF PDSCHSets-AddItem-PSCH-ReconfRqst


PDSCHSets-AddItem-PSCH-ReconfRqst    ::= SEQUENCE {
    pDSCHSet-ID                             PDSCHSet-ID,
    pDSCH-InformationList                   PDSCH-Information-AddList-PSCH-ReconfRqst   OPTIONAL,
    iE-Extensions                           ProtocolExtensionContainer { {PDSCHSets-AddItem-PSCH-ReconfRqst-ExtIEs} }   OPTIONAL,
    ...
}


PDSCHSets-AddItem-PSCH-ReconfRqst-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    {ID id-PDSCH-AddInformation-LCR-PSCH-ReconfRqst    CRITICALITY reject      EXTENSION  PDSCH-AddInformation-LCR-PSCH-ReconfRqst        PRESENCE
    optional},
    ...
}


PDSCH-Information-AddList-PSCH-ReconfRqst ::= ProtocolIE-Single-Container {{ PDSCH-Information-AddListIEs-PSCH-ReconfRqst }}   -- Mandatory for
3.84Mcps TDD only


PDSCH-Information-AddListIEs-PSCH-ReconfRqst    NBAP-PROTOCOL-IES ::= {
    {ID id-PDSCH-Information-AddListIE-PSCH-ReconfRqst  CRITICALITY reject    TYPE    PDSCH-Information-AddItem-PSCH-ReconfRqst       PRESENCE
    mandatory}
}


PDSCH-Information-AddItem-PSCH-ReconfRqst ::= SEQUENCE {
    repetitionPeriod                        RepetitionPeriod,
    repetitionLength                        RepetitionLength,
    tdd-PhysicalChannelOffset               TDD-PhysicalChannelOffset,
    dL-Timeslot-InformationAddList-PSCH-ReconfRqst          DL-Timeslot-InformationAddList-PSCH-ReconfRqst,
    iE-Extensions                           ProtocolExtensionContainer { {PDSCH-Information-AddItem-PSCH-ReconfRqst-ExtIEs} }   OPTIONAL,
    ...
    }


PDSCH-Information-AddItem-PSCH-ReconfRqst-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}


DL-Timeslot-InformationAddList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1.. maxNrOfDLTSs)) OF DL-Timeslot-InformationAddItem-PSCH-ReconfRqst


DL-Timeslot-InformationAddItem-PSCH-ReconfRqst ::= SEQUENCE {
    timeSlot                                TimeSlot,
    midambleShiftAndBurstType               MidambleShiftAndBurstType,
    tFCI-Presence                           TFCI-Presence,
    dL-Code-InformationAddList-PSCH-ReconfRqst              DL-Code-InformationAddList-PSCH-ReconfRqst,
```

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```
    iE-Extensions                         ProtocolExtensionContainer { { DL-Timeslot-InformationAddItem-PSCH-ReconfRqst-ExtIEs} }    OPTIONAL,
    ...
}

DL-Timeslot-InformationAddItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-Code-InformationAddList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfULTSs)) OF DL-Code-InformationAddItem-PSCH-ReconfRqst

DL-Code-InformationAddItem-PSCH-ReconfRqst ::= SEQUENCE {
    pDSCH-ID                          PDSCH-ID,
    tdd-ChannelisationCode            TDD-ChannelisationCode,
    iE-Extensions                     ProtocolExtensionContainer { { DL-Code-InformationAddItem-PSCH-ReconfRqst-ExtIEs} }   OPTIONAL,
    ...
}

DL-Code-InformationAddItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PDSCH-AddInformation-LCR-PSCH-ReconfRqst ::= ProtocolIE-Single-Container {{ PDSCH-AddInformation-LCR-AddListIEs-PSCH-ReconfRqst }}   -- Mandatory
for 1.28Mcps TDD only

PDSCH-AddInformation-LCR-AddListIEs-PSCH-ReconfRqst NBAP-PROTOCOL-IES ::= {
    {ID id-PDSCH-AddInformation-LCR-AddListIE-PSCH-ReconfRqst  CRITICALITY reject     TYPE    PDSCH-AddInformation-LCR-AddItem-PSCH-ReconfRqst
        PRESENCE    optional}
}

PDSCH-AddInformation-LCR-AddItem-PSCH-ReconfRqst ::= SEQUENCE {
    repetitionPeriod                          RepetitionPeriod,
    repetitionLength                          RepetitionLength,
    tdd-PhysicalChannelOffset                 TDD-PhysicalChannelOffset,
    dL-Timeslot-InformationAddList-LCR-PSCH-ReconfRqst           DL-Timeslot-InformationAddList-LCR-PSCH-ReconfRqst,
    iE-Extensions                             ProtocolExtensionContainer { {PDSCH-AddInformation-LCR-AddItem-PSCH-ReconfRqst-ExtIEs} }
    OPTIONAL,
    ...
    }

PDSCH-AddInformation-LCR-AddItem-PSCH-ReconfRqst-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-Timeslot-InformationAddList-LCR-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1.. maxNrOfDLTSLCRs)) OF DL-Timeslot-InformationAddItem-LCR-PSCH-ReconfRqst

DL-Timeslot-InformationAddItem-LCR-PSCH-ReconfRqst ::= SEQUENCE {
    timeSlotLCR                               TimeSlotLCR,
    midambleShiftLCR                          MidambleShiftLCR,
    tFCI-Presence                             TFCI-Presence,
    dL-Code-InformationAddList-LCR-PSCH-ReconfRqst           DL-Code-InformationAddList-LCR-PSCH-ReconfRqst,
    iE-Extensions                             ProtocolExtensionContainer { { DL-Timeslot-InformationAddItem-LCR-PSCH-ReconfRqst-ExtIEs} }
    OPTIONAL,
    ...
}
```

```
DL-Timeslot-InformationAddItem-LCR-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-Code-InformationAddList-LCR-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfULTSs)) OF DL-Code-InformationAddItem-LCR-PSCH-ReconfRqst

DL-Code-InformationAddItem-LCR-PSCH-ReconfRqst ::= SEQUENCE {
    pDSCH-ID                            PDSCH-ID,
    tdd-ChannelisationCodeLCR           TDD-ChannelisationCodeLCR,
    iE-Extensions                       ProtocolExtensionContainer { { DL-Code-InformationAddItem-LCR-PSCH-ReconfRqst-ExtIEs} }    OPTIONAL,
    ...
}

DL-Code-InformationAddItem-LCR-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PDSCHSets-ModifyList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfPDSCHSets)) OF PDSCHSets-ModifyItem-PSCH-ReconfRqst

PDSCHSets-ModifyItem-PSCH-ReconfRqst     ::= SEQUENCE {
    pDSCHSet-ID                         PDSCHSet-ID,
    pDSCH-InformationList               PDSCH-Information-ModifyList-PSCH-ReconfRqst,
    iE-Extensions                       ProtocolExtensionContainer { {PDSCHSets-ModifyItem-PSCH-ReconfRqst-ExtIEs} }   OPTIONAL,
    ...
}

PDSCHSets-ModifyItem-PSCH-ReconfRqst-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    {ID id-PDSCH-ModifyInformation-LCR-PSCH-ReconfRqst  CRITICALITY reject     EXTENSION   PDSCH-ModifyInformation-LCR-PSCH-ReconfRqst
    PRESENCE    optional},  -- Mandatory for 1.28Mcps TDD only
    ...
}

PDSCH-Information-ModifyList-PSCH-ReconfRqst ::= ProtocolIE-Single-Container {{ PDSCH-Information-ModifyListIEs-PSCH-ReconfRqst }}

PDSCH-Information-ModifyListIEs-PSCH-ReconfRqst NBAP-PROTOCOL-IES ::= {
    {ID id-PDSCH-Information-ModifyListIE-PSCH-ReconfRqst   CRITICALITY reject     TYPE    PDSCH-Information-ModifyItem-PSCH-ReconfRqst
    PRESENCE    optional}   -- Mandatory for 3.84Mcps TDD only
}

PDSCH-Information-ModifyItem-PSCH-ReconfRqst ::= SEQUENCE {
    repetitionPeriod                    RepetitionPeriod                OPTIONAL,
    repetitionLength                    RepetitionLength                OPTIONAL,
    tdd-PhysicalChannelOffset           TDD-PhysicalChannelOffset       OPTIONAL,
    dL-Timeslot-InformationModifyList-PSCH-ReconfRqst        DL-Timeslot-InformationModifyList-PSCH-ReconfRqst    OPTIONAL,
    iE-Extensions                       ProtocolExtensionContainer { {PDSCH-Information-ModifyItem-PSCH-ReconfRqst-ExtIEs} }    OPTIONAL,
    ...
    }

PDSCH-Information-ModifyItem-PSCH-ReconfRqst-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-Timeslot-InformationModifyList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1.. maxNrOfDLTSs)) OF DL-Timeslot-InformationModifyItem-PSCH-ReconfRqst
```

```
DL-Timeslot-InformationModifyItem-PSCH-ReconfRqst ::= SEQUENCE {
    timeSlot                                TimeSlot,
    midambleShiftAndBurstType               MidambleShiftAndBurstType   OPTIONAL,
    tFCI-Presence                           TFCI-Presence   OPTIONAL,
    dL-Code-InformationModifyList-PSCH-ReconfRqst               DL-Code-InformationModifyList-PSCH-ReconfRqst        OPTIONAL,
    iE-Extensions                           ProtocolExtensionContainer { { DL-Timeslot-InformationModifyItem-PSCH-ReconfRqst-ExtIEs} }
    OPTIONAL,
    ...
}

DL-Timeslot-InformationModifyItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-Code-InformationModifyList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfPDSCHs)) OF DL-Code-InformationModifyItem-PSCH-ReconfRqst

DL-Code-InformationModifyItem-PSCH-ReconfRqst ::= SEQUENCE {
    pDSCH-ID                                PDSCH-ID,
    tdd-ChannelisationCode                  TDD-ChannelisationCode,
    iE-Extensions                           ProtocolExtensionContainer { { DL-Code-InformationModifyItem-PSCH-ReconfRqst-ExtIEs} }   OPTIONAL,
    ...
}

DL-Code-InformationModifyItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PDSCH-ModifyInformation-LCR-PSCH-ReconfRqst NBAP-PROTOCOL-IES ::= {
    {ID id-PDSCH-ModifyInformation-LCR-ModifyListIE-PSCH-ReconfRqst     CRITICALITY reject     TYPE                 PDSCH-ModifyInformation-LCR-
ModifyItem-PSCH-ReconfRqst          PRESENCE    mandatory}
}

PDSCH-ModifyInformation-LCR-ModifyItem-PSCH-ReconfRqst ::= SEQUENCE {
    repetitionPeriod                        RepetitionPeriod                    OPTIONAL,
    repetitionLength                        RepetitionLength                    OPTIONAL,
    tdd-PhysicalChannelOffset               TDD-PhysicalChannelOffset       OPTIONAL,
    dL-Timeslot-LCR-InformationModifyList-PSCH-ReconfRqst               DL-Timeslot-LCR-InformationModifyList-PSCH-ReconfRqst     OPTIONAL,
    iE-Extensions                           ProtocolExtensionContainer { {PDSCH-ModifyInformation-LCR-ModifyListIE-PSCH-ReconfRqst-ExtIEs} }
    OPTIONAL,
    ...
    }

PDSCH-ModifyInformation-LCR-ModifyListIE-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-Timeslot-LCR-InformationModifyList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1.. maxNrOfDLTSLCRs)) OF DL-Timeslot-InformationModifyItem-PSCH-
ReconfRqst

DL-Timeslot-LCR-InformationModifyItem-PSCH-ReconfRqst ::= SEQUENCE {
    timeSlotLCR                             TimeSlotLCR,
    midambleShiftLCR                        MidambleShiftLCR   OPTIONAL,
    tFCI-Presence                           TFCI-Presence   OPTIONAL,
```

```
    dL-Code-LCR-InformationModifyList-PSCH-ReconfRqst              DL-Code-LCR-InformationModifyList-PSCH-ReconfRqst    OPTIONAL,
    iE-Extensions                          ProtocolExtensionContainer { { DL-Timeslot-LCR-InformationModifyItem-PSCH-ReconfRqst-ExtIEs} }
    OPTIONAL,
    ...
}

DL-Timeslot-LCR-InformationModifyItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-Code-LCR-InformationModifyList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfPDSCHs)) OF DL-Code-InformationModifyItem-PSCH-ReconfRqst

DL-Code-LCR-InformationModifyItem-PSCH-ReconfRqst ::= SEQUENCE {
    pDSCH-ID                          PDSCH-ID,
    tdd-ChannelisationCodeLCR              TDD-ChannelisationCodeLCR,
    iE-Extensions                     ProtocolExtensionContainer { { DL-Code-LCR-InformationModifyItem-PSCH-ReconfRqst-ExtIEs} }
    OPTIONAL,
    ...
}

DL-Code-LCR-InformationModifyItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PDSCHSets-DeleteList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfPDSCHSets)) OF PDSCHSets-DeleteItem-PSCH-ReconfRqst

PDSCHSets-DeleteItem-PSCH-ReconfRqst     ::= SEQUENCE {
    pDSCHSet-ID                       PDSCHSet-ID,
    iE-Extensions                     ProtocolExtensionContainer { {PDSCHSets-DeleteItem-PSCH-ReconfRqst-ExtIEs} }   OPTIONAL,
    ...
}

PDSCHSets-DeleteItem-PSCH-ReconfRqst-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PUSCHSets-AddList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfPUSCHSets)) OF PUSCHSets-AddItem-PSCH-ReconfRqst

PUSCHSets-AddItem-PSCH-ReconfRqst    ::= SEQUENCE {
    pUSCHSet-ID                       PUSCHSet-ID,
    pUSCH-InformationList             PUSCH-Information-AddList-PSCH-ReconfRqst   OPTIONAL,
    iE-Extensions                     ProtocolExtensionContainer { {PUSCHSets-AddItem-PSCH-ReconfRqst-ExtIEs} }   OPTIONAL,
    ...
}

PUSCHSets-AddItem-PSCH-ReconfRqst-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    {ID id-PUSCH-AddInformation-LCR-PSCH-ReconfRqst    CRITICALITY reject    EXTENSION  PUSCH-AddInformation-LCR-PSCH-ReconfRqst     PRESENCE
    optional},  -- Mandatory for 1.28Mcps TDD only
    ...
}

PUSCH-Information-AddList-PSCH-ReconfRqst ::=  ProtocolIE-Single-Container {{ PUSCH-Information-AddListIEs-PSCH-ReconfRqst }}  -- Mandatory for
3.84Mcps TDD only
```

```
PUSCH-Information-AddListIEs-PSCH-ReconfRqst NBAP-PROTOCOL-IES ::= {
    {ID id-PUSCH-Information-AddListIE-PSCH-ReconfRqst  CRITICALITY reject     TYPE    PUSCH-Information-AddItem-PSCH-ReconfRqst        PRESENCE
    mandatory}
}

PUSCH-Information-AddItem-PSCH-ReconfRqst ::= SEQUENCE {
    repetitionPeriod                          RepetitionPeriod,
    repetitionLength                          RepetitionLength,
    tdd-PhysicalChannelOffset                 TDD-PhysicalChannelOffset,
    uL-Timeslot-InformationAddList-PSCH-ReconfRqst            UL-Timeslot-InformationAddList-PSCH-ReconfRqst,
    iE-Extensions                             ProtocolExtensionContainer { {PUSCH-Information-AddItem-PSCH-ReconfRqst-ExtIEs} }    OPTIONAL,
    ...
    }

PUSCH-Information-AddItem-PSCH-ReconfRqst-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-Timeslot-InformationAddList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfULTSs)) OF UL-Timeslot-InformationAddItem-PSCH-ReconfRqst

UL-Timeslot-InformationAddItem-PSCH-ReconfRqst ::= SEQUENCE {
    timeSlot                          TimeSlot,
    midambleShiftAndBurstType         MidambleShiftAndBurstType,
    tFCI-Presence                     TFCI-Presence,
    uL-Code-InformationAddList-PSCH-ReconfRqst            UL-Code-InformationAddList-PSCH-ReconfRqst,
    iE-Extensions                     ProtocolExtensionContainer { { UL-Timeslot-InformationAddItem-PSCH-ReconfRqst-ExtIEs} }    OPTIONAL,
    ...
}

UL-Timeslot-InformationAddItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-Code-InformationAddList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfPDSCHs)) OF UL-Code-InformationAddItem-PSCH-ReconfRqst

UL-Code-InformationAddItem-PSCH-ReconfRqst ::= SEQUENCE {
    pUSCH-ID                          PUSCH-ID,
    tdd-ChannelisationCode            TDD-ChannelisationCode,
    iE-Extensions                     ProtocolExtensionContainer { { UL-Code-InformationAddItem-PSCH-ReconfRqst-ExtIEs} }   OPTIONAL,
    ...
}

UL-Code-InformationAddItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PUSCH-AddInformation-LCR-PSCH-ReconfRqst ::= ProtocolIE-Single-Container {{ PUSCH-AddInformation-LCR-AddListIEs-PSCH-ReconfRqst }}

PUSCH-AddInformation-LCR-AddListIEs-PSCH-ReconfRqst NBAP-PROTOCOL-IES ::= {
    {ID id-PUSCH-AddInformation-LCR-AddListIE-PSCH-ReconfRqst  CRITICALITY reject      TYPE     PUSCH-AddInformation-LCR-AddItem-PSCH-ReconfRqst
       PRESENCE    optional}
}

PUSCH-AddInformation-LCR-AddItem-PSCH-ReconfRqst ::= SEQUENCE {
```

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```
    repetitionPeriod                         RepetitionPeriod,
    repetitionLength                         RepetitionLength,
    tdd-PhysicalChannelOffset                TDD-PhysicalChannelOffset,
    uL-Timeslot-InformationAddList-LCR-PSCH-ReconfRqst       UL-Timeslot-InformationAddList-LCR-PSCH-ReconfRqst,
    iE-Extensions                            ProtocolExtensionContainer { {PUSCH-AddInformation-LCR-AddItem-PSCH-ReconfRqst-ExtIEs} }
    OPTIONAL,
    ...
    }

PUSCH-AddInformation-LCR-AddItem-PSCH-ReconfRqst-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-Timeslot-InformationAddList-LCR-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1.. maxNrOfDLTSLCRs)) OF UL-Timeslot-InformationAddItem-LCR-PSCH-ReconfRqst

UL-Timeslot-InformationAddItem-LCR-PSCH-ReconfRqst ::= SEQUENCE {
    timeSlotLCR                              TimeSlotLCR,
    midambleShiftLCR                         MidambleShiftLCR,
    tFCI-Presence                            TFCI-Presence,
    uL-Code-InformationAddList-LCR-PSCH-ReconfRqst         UL-Code-InformationAddList-LCR-PSCH-ReconfRqst,
    iE-Extensions                            ProtocolExtensionContainer { { UL-Timeslot-InformationAddItem-LCR-PSCH-ReconfRqst-ExtIEs} }
    OPTIONAL,
    ...
}

UL-Timeslot-InformationAddItem-LCR-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-Code-InformationAddList-LCR-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfULTSs)) OF UL-Code-InformationAddItem-LCR-PSCH-ReconfRqst

UL-Code-InformationAddItem-LCR-PSCH-ReconfRqst ::= SEQUENCE {
    pUSCH-ID                                 PUSCH-ID,
    tdd-ChannelisationCodeLCR                TDD-ChannelisationCodeLCR,
    iE-Extensions                            ProtocolExtensionContainer { { UL-Code-InformationAddItem-LCR-PSCH-ReconfRqst-ExtIEs} }     OPTIONAL,
    ...
}

UL-Code-InformationAddItem-LCR-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PUSCHSets-ModifyList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfPUSCHSets)) OF PUSCHSets-ModifyItem-PSCH-ReconfRqst

PUSCHSets-ModifyItem-PSCH-ReconfRqst     ::= SEQUENCE {
    pUSCHSet-ID                              PUSCHSet-ID,
    pUSCH-InformationList                    PUSCH-Information-ModifyList-PSCH-ReconfRqst    OPTIONAL,
    iE-Extensions                            ProtocolExtensionContainer { {PUSCHSets-ModifyItem-PSCH-ReconfRqst-ExtIEs} }   OPTIONAL,
    ...
}

PUSCHSets-ModifyItem-PSCH-ReconfRqst-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    {ID id-PUSCH-ModifyInformation-LCR-PSCH-ReconfRqst  CRITICALITY reject     EXTENSION   PUSCH-ModifyInformation-LCR-PSCH-ReconfRqst
    PRESENCE    optional}, -- For 1.28Mcps TDD only
```

*ETSI*

```
    ...
}

PUSCH-Information-ModifyList-PSCH-ReconfRqst ::= ProtocolIE-Single-Container {{ PUSCH-Information-ModifyListIEs-PSCH-ReconfRqst }}   -- For
3.84Mcps TDD only

PUSCH-Information-ModifyListIEs-PSCH-ReconfRqst NBAP-PROTOCOL-IES ::= {
    {ID id-PUSCH-Information-ModifyListIE-PSCH-ReconfRqst   CRITICALITY reject     TYPE    PUSCH-Information-ModifyItem-PSCH-ReconfRqst
    PRESENCE    mandatory}
}

PUSCH-Information-ModifyItem-PSCH-ReconfRqst ::= SEQUENCE {
    repetitionPeriod                        RepetitionPeriod                    OPTIONAL,
    repetitionLength                        RepetitionLength                    OPTIONAL,
    tdd-PhysicalChannelOffset               TDD-PhysicalChannelOffset           OPTIONAL,
    uL-Timeslot-InformationModifyList-PSCH-ReconfRqst        UL-Timeslot-InformationModifyList-PSCH-ReconfRqst    OPTIONAL,
    iE-Extensions                           ProtocolExtensionContainer { {PUSCH-Information-ModifyItem-PSCH-ReconfRqst-ExtIEs} }    OPTIONAL,
    ...
    }

PUSCH-Information-ModifyItem-PSCH-ReconfRqst-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-Timeslot-InformationModifyList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfULTSs)) OF UL-Timeslot-InformationModifyItem-PSCH-ReconfRqst

UL-Timeslot-InformationModifyItem-PSCH-ReconfRqst ::= SEQUENCE {
    timeSlot                            TimeSlot,
    midambleShiftAndBurstType           MidambleShiftAndBurstType   OPTIONAL,
    tFCI-Presence                       TFCI-Presence   OPTIONAL,
    uL-Code-InformationModifyList-PSCH-ReconfRqst           UL-Code-InformationModifyList-PSCH-ReconfRqst        OPTIONAL,
    iE-Extensions                       ProtocolExtensionContainer { { UL-Timeslot-InformationModifyItem-PSCH-ReconfRqst-ExtIEs} }
    OPTIONAL,
    ...
}

UL-Timeslot-InformationModifyItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-Code-InformationModifyList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfPUSCHs)) OF UL-Code-InformationModifyItem-PSCH-ReconfRqst

UL-Code-InformationModifyItem-PSCH-ReconfRqst ::= SEQUENCE {
    pUSCH-ID                            PUSCH-ID,
    tdd-ChannelisationCode              TDD-ChannelisationCode,
    iE-Extensions                       ProtocolExtensionContainer { { UL-Code-InformationModifyItem-PSCH-ReconfRqst-ExtIEs} }   OPTIONAL,
    ...
}

UL-Code-InformationModifyItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PUSCH-ModifyInformation-LCR-PSCH-ReconfRqst ::= ProtocolIE-Single-Container {{ PUSCH-ModifyInformation-LCR-ModifyListIEs-PSCH-ReconfRqst }}
```

```
PUSCH-ModifyInformation-LCR-ModifyListIEs-PSCH-ReconfRqst   NBAP-PROTOCOL-IES ::= {
    {ID id-PUSCH-ModifyInformation-LCR-ModifyListIE-PSCH-ReconfRqst    CRITICALITY reject     TYPE                PUSCH-ModifyInformation-LCR-
ModifyItem-PSCH-ReconfRqst         PRESENCE   optional}
}

PUSCH-ModifyInformation-LCR-ModifyItem-PSCH-ReconfRqst ::= SEQUENCE {
    repetitionPeriod                         RepetitionPeriod        OPTIONAL,
    repetitionLength                         RepetitionLength        OPTIONAL,
    tdd-PhysicalChannelOffset                TDD-PhysicalChannelOffset  OPTIONAL,
    uL-Timeslot-InformationModifyList-LCR-PSCH-ReconfRqst          UL-Timeslot-LCR-InformationModifyList-PSCH-ReconfRqst     OPTIONAL,
    iE-Extensions                            ProtocolExtensionContainer { {PUSCH-ModifyInformation-LCR-ModifyItem-PSCH-ReconfRqst-ExtIEs} }
    OPTIONAL,
        ...
    }

PUSCH-ModifyInformation-LCR-ModifyItem-PSCH-ReconfRqst-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-Timeslot-LCR-InformationModifyList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfULTSLCRs)) OF UL-Timeslot-InformationModifyItem-PSCH-ReconfRqst

UL-Timeslot-LCR-InformationModifyItem-PSCH-ReconfRqst ::= SEQUENCE {
    timeSlotLCR                              TimeSlotLCR,
    midambleShiftLCR                         MidambleShiftLCR    OPTIONAL,
    tFCI-Presence                            TFCI-Presence       OPTIONAL,
    uL-Code-InformationModifyList-PSCH-ReconfRqst          UL-Code-InformationModifyList-PSCH-ReconfRqst      OPTIONAL,
    iE-Extensions                            ProtocolExtensionContainer { { UL-Timeslot-LCR-InformationModifyItem-PSCH-ReconfRqst-ExtIEs} }
    OPTIONAL,
    ...
}

UL-Timeslot-LCR-InformationModifyItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-Code-LCR-InformationModifyList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfPDSCHs)) OF UL-Code-InformationModifyItem-PSCH-ReconfRqst

UL-Code-LCR-InformationModifyItem-PSCH-ReconfRqst ::= SEQUENCE {
    pUSCH-ID                                 PUSCH-ID,
    tdd-ChannelisationCodeLCR                TDD-ChannelisationCodeLCR,
    iE-Extensions                            ProtocolExtensionContainer { { UL-Code-LCR-InformationModifyItem-PSCH-ReconfRqst-ExtIEs} }
    OPTIONAL,
    ...
}

UL-Code-LCR-InformationModifyItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PUSCHSets-DeleteList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfPUSCHSets)) OF PUSCHSets-DeleteItem-PSCH-ReconfRqst

PUSCHSets-DeleteItem-PSCH-ReconfRqst     ::= SEQUENCE {
    pUSCHSet-ID                              PUSCHSet-ID,
```

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```
    iE-Extensions                                     ProtocolExtensionContainer { {PUSCHSets-DeleteItem-PSCH-ReconfRqst-ExtIEs} }    OPTIONAL,
    ...
}

PUSCHSets-DeleteItem-PSCH-ReconfRqst-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

HS-PDSCH-TDD-Information-PSCH-ReconfRqst ::= SEQUENCE {
    dL-HS-PDSCH-Timeslot-Information-PSCH-ReconfRqst                  DL-HS-PDSCH-Timeslot-Information-PSCH-ReconfRqst    OPTIONAL,
    dL-HS-PDSCH-Timeslot-Information-LCR-PSCH-ReconfRqst              DL-HS-PDSCH-Timeslot-Information-LCR-PSCH-ReconfRqst   OPTIONAL,
    iE-Extensions                               ProtocolExtensionContainer { { HS-PDSCH-TDD-Information-PSCH-ReconfRqst-ExtIEs} }    OPTIONAL,
      ...
    }

HS-PDSCH-TDD-Information-PSCH-ReconfRqst-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-HS-PDSCH-Timeslot-Information-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfDLTSs)) OF DL-HS-PDSCH-Timeslot-InformationItem-PSCH-ReconfRqst

DL-HS-PDSCH-Timeslot-InformationItem-PSCH-ReconfRqst::= SEQUENCE {
    timeSlot                          TimeSlot,
    midambleShiftAndBurstType         MidambleShiftAndBurstType,
    iE-Extensions                     ProtocolExtensionContainer { { DL-HS-PDSCH-Timeslot-InformationItem-PSCH-ReconfRqst-ExtIEs} }
    OPTIONAL,
    ...
}

DL-HS-PDSCH-Timeslot-InformationItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-HS-PDSCH-Timeslot-Information-LCR-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfDLTSLCRs)) OF DL-HS-PDSCH-Timeslot-InformationItem-LCR-PSCH-
ReconfRqst

DL-HS-PDSCH-Timeslot-InformationItem-LCR-PSCH-ReconfRqst::= SEQUENCE {
    timeSlot                          TimeSlotLCR,
    midambleShiftAndBurstType         MidambleShiftLCR,
    iE-Extensions                     ProtocolExtensionContainer { { DL-HS-PDSCH-Timeslot-InformationItem-LCR-PSCH-ReconfRqst-ExtIEs} }
    OPTIONAL,
    ...
}

DL-HS-PDSCH-Timeslot-InformationItem-LCR-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Add-To-HS-SCCH-Resource-Pool-PSCH-ReconfRqst::= SEQUENCE {
    hS-SCCH-Information-PSCH-ReconfRqst     HS-SCCH-Information-PSCH-ReconfRqst     OPTIONAL,
    hS-SCCH-Information-LCR-PSCH-ReconfRqst HS-SCCH-Information-PSCH-ReconfRqst     OPTIONAL,
    iE-Extensions                          ProtocolExtensionContainer { { Add-To-HS-SCCH-Resource-Pool-PSCH-ReconfRqst-ExtIEs} }    OPTIONAL,
    ...
}
```

```
Add-To-HS-SCCH-Resource-Pool-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

HS-SCCH-Information-PSCH-ReconfRqst::= SEQUENCE (SIZE (1..maxNrOfHSSCCHs)) OF HS-SCCH-InformationItem-PSCH-ReconfRqst

HS-SCCH-InformationItem-PSCH-ReconfRqst  ::= SEQUENCE {
    hS-SCCH-ID                            HS-SCCH-ID,
    timeSlot                              TimeSlot,
    midambleShiftAndBurstType             MidambleShiftAndBurstType,
    tdd-ChannelisationCode                TDD-ChannelisationCode,
    hS-SCCH-MaxPower                       DL-Power,
    hS-SICH-Information                   HS-SICH-Information-PSCH-ReconfRqst,
    iE-Extensions                         ProtocolExtensionContainer { { HS-SCCH-InformationItem-PSCH-ReconfRqst-ExtIEs} }   OPTIONAL,
    ...
}

HS-SCCH-InformationItem-PSCH-ReconfRqst-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

HS-SICH-Information-PSCH-ReconfRqst  ::= SEQUENCE {
    timeSlot                              TimeSlot,
    midambleShiftAndBurstType             MidambleShiftAndBurstType,
    tdd-ChannelisationCode                TDD-ChannelisationCode,
    iE-Extensions                         ProtocolExtensionContainer { { HS-SICH-Information-PSCH-ReconfRqst-ExtIEs} }    OPTIONAL,
    ...
}

HS-SICH-Information-PSCH-ReconfRqst-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

HS-SCCH-Information-LCR-PSCH-ReconfRqst::= SEQUENCE (SIZE (1..maxNrOfHSSCCHs)) OF HS-SCCH-InformationItem-LCR-PSCH-ReconfRqst

HS-SCCH-InformationItem-LCR-PSCH-ReconfRqst  ::= SEQUENCE {
    hS-SCCH-ID                            HS-SCCH-ID,
    timeSlotLCR                           TimeSlotLCR,
    midambleShiftLCR                      MidambleShiftLCR,
    tdd-ChannelisationCode                TDD-ChannelisationCodeLCR,
    hS-SCCH-MaxPower                       DL-Power,
    hS-SICH-Information-LCR                HS-SICH-Information-LCR-PSCH-ReconfRqst,
    iE-Extensions                         ProtocolExtensionContainer { { HS-SCCH-InformationItem-LCR-PSCH-ReconfRqst-ExtIEs} }    OPTIONAL,
    ...
}

HS-SCCH-InformationItem-LCR-PSCH-ReconfRqst-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

HS-SICH-Information-LCR-PSCH-ReconfRqst  ::= SEQUENCE {
    timeSlotLCR                           TimeSlotLCR,
    midambleShiftLCR                      MidambleShiftLCR,
```

```
    tdd-ChannelisationCodeLCR              TDD-ChannelisationCodeLCR,
    iE-Extensions                          ProtocolExtensionContainer { { HS-SICH-Information-LCR-PSCH-ReconfRqst-ExtIEs} }   OPTIONAL,
    ...
}

HS-SICH-Information-LCR-PSCH-ReconfRqst-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Modify-HS-SCCH-Resource-Pool-PSCH-ReconfRqst::= SEQUENCE {
    hS-SCCH-InformationModify-PSCH-ReconfRqst       HS-SCCH-InformationModify-PSCH-ReconfRqst   OPTIONAL,
    hS-SCCH-InformationModify-LCR-PSCH-ReconfRqst   HS-SCCH-InformationModify-PSCH-ReconfRqst   OPTIONAL,
    iE-Extensions                                   ProtocolExtensionContainer { { Modify-HS-SCCH-Resource-Pool-PSCH-ReconfRqst-ExtIEs} }
    OPTIONAL,
    ...
}

Modify-HS-SCCH-Resource-Pool-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

HS-SCCH-InformationModify-PSCH-ReconfRqst::= SEQUENCE (SIZE (1..maxNrOfHSSCCHs)) OF HS-SCCH-InformationModifyItem-PSCH-ReconfRqst

HS-SCCH-InformationModifyItem-PSCH-ReconfRqst    ::= SEQUENCE {
    hS-SCCH-ID                            HS-SCCH-ID,
    timeSlot                              TimeSlot    OPTIONAL,
    midambleShiftAndBurstType             MidambleShiftAndBurstType   OPTIONAL,
    tdd-ChannelisationCode                TDD-ChannelisationCode  OPTIONAL,
    hS-SCCH-MaxPower                       DL-Power    OPTIONAL,
    hS-SICH-Information                    HS-SICH-Information-PSCH-ReconfRqst    OPTIONAL,
    iE-Extensions                         ProtocolExtensionContainer { { HS-SCCH-InformationModifyItem-PSCH-ReconfRqst-ExtIEs} }   OPTIONAL,
    ...
}

HS-SCCH-InformationModifyItem-PSCH-ReconfRqst-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

HS-SICH-InformationModify-PSCH-ReconfRqst    ::= SEQUENCE {
    timeSlot                              TimeSlot    OPTIONAL,
    midambleShiftAndBurstType             MidambleShiftAndBurstType   OPTIONAL,
    tdd-ChannelisationCode                TDD-ChannelisationCode  OPTIONAL,
    iE-Extensions                         ProtocolExtensionContainer { { HS-SICH-InformationModify-PSCH-ReconfRqst-ExtIEs} }   OPTIONAL,
    ...
}

HS-SICH-InformationModify-PSCH-ReconfRqst-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

HS-SCCH-InformationModify-LCR-PSCH-ReconfRqst::= SEQUENCE (SIZE (1..maxNrOfHSSCCHs)) OF HS-SCCH-InformationModifyItem-LCR-PSCH-ReconfRqst

HS-SCCH-InformationModifyItem-LCR-PSCH-ReconfRqst    ::= SEQUENCE {
    hS-SCCH-ID                            HS-SCCH-ID,
```

```
    timeSlotLCR                           TimeSlotLCR    OPTIONAL,
    midambleShiftLCR                      MidambleShiftLCR    OPTIONAL,
    tdd-ChannelisationCode                TDD-ChannelisationCodeLCR    OPTIONAL,
    hS-SCCH-MaxPower                      DL-Power    OPTIONAL,
    hS-SICH-Information-LCR               HS-SICH-Information-LCR-PSCH-ReconfRqst     OPTIONAL,
    iE-Extensions                         ProtocolExtensionContainer { { HS-SCCH-InformationModifyItem-LCR-PSCH-ReconfRqst-ExtIEs} }
    OPTIONAL,
    ...
}

HS-SCCH-InformationModifyItem-LCR-PSCH-ReconfRqst-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

HS-SICH-InformationModify-LCR-PSCH-ReconfRqst    ::= SEQUENCE {
    timeSlotLCR                           TimeSlotLCR    OPTIONAL,
    midambleShiftLCR                      MidambleShiftLCR    OPTIONAL,
    tdd-ChannelisationCodeLCR             TDD-ChannelisationCodeLCR    OPTIONAL,
    iE-Extensions                         ProtocolExtensionContainer { { HS-SICH-InformationModify-LCR-PSCH-ReconfRqst-ExtIEs} }    OPTIONAL,
    ...
}

HS-SICH-InformationModify-LCR-PSCH-ReconfRqst-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Delete-From-HS-SCCH-Resource-Pool-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfHSSCCHs)) OF Delete-From-HS-SCCH-Resource-PoolItem-PSCH-ReconfRqst

Delete-From-HS-SCCH-Resource-PoolItem-PSCH-ReconfRqst    ::= SEQUENCE {
    hS-SCCH-ID                            HS-SCCH-ID,
    iE-Extensions                         ProtocolExtensionContainer { { Delete-From-HS-SCCH-Resource-PoolItem-PSCH-ReconfRqst-ExtIEs} }
    OPTIONAL,
    ...
}

Delete-From-HS-SCCH-Resource-PoolItem-PSCH-ReconfRqst-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- **************************************************************
--
-- PHYSICAL SHARED CHANNEL RECONFIGURATION RESPONSE TDD
--
-- **************************************************************

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

PhysicalSharedChannelReconfigurationResponseTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID   id-CriticalityDiagnostics    CRITICALITY    ignore    TYPE    CriticalityDiagnostics         PRESENCE optional },
    ...
```

```
}

PhysicalSharedChannelReconfigurationResponseTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}


-- *************************************************************
--
-- PHYSICAL SHARED CHANNEL RECONFIGURATION FAILURE TDD
--
-- *************************************************************

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

PhysicalSharedChannelReconfigurationFailureTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-CauseLevel-PSCH-ReconfFailureTDD     CRITICALITY ignore  TYPE CauseLevel-PSCH-ReconfFailureTDD        PRESENCE mandatory }|
    { ID    id-CriticalityDiagnostics         CRITICALITY ignore    TYPE   CriticalityDiagnostics                PRESENCE optional },
    ...
}

PhysicalSharedChannelReconfigurationFailureTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CauseLevel-PSCH-ReconfFailureTDD ::= CHOICE {
    generalCause          GeneralCauseList-PSCH-ReconfFailureTDD,
    setSpecificCause      SetSpecificCauseList-PSCH-ReconfFailureTDD,
    ...
}

GeneralCauseList-PSCH-ReconfFailureTDD ::= SEQUENCE {
    cause                     Cause,
    iE-Extensions             ProtocolExtensionContainer { { GeneralCauseItem-PSCH-ReconfFailureTDD-ExtIEs} }      OPTIONAL,
    ...
}

GeneralCauseItem-PSCH-ReconfFailureTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

SetSpecificCauseList-PSCH-ReconfFailureTDD ::= SEQUENCE {
    unsuccessful-PDSCHSetList-PSCH-ReconfFailureTDD Unsuccessful-PDSCHSetList-PSCH-ReconfFailureTDD                 OPTIONAL,
    unsuccessful-PUSCHSetList-PSCH-ReconfFailureTDD Unsuccessful-PUSCHSetList-PSCH-ReconfFailureTDD                 OPTIONAL,
    iE-Extensions                                   ProtocolExtensionContainer { { SetSpecificCauseItem-PSCH-ReconfFailureTDD-ExtIEs} }
    OPTIONAL,
    ...
}

SetSpecificCauseItem-PSCH-ReconfFailureTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
```

```
    ...
}

Unsuccessful-PDSCHSetList-PSCH-ReconfFailureTDD ::= SEQUENCE (SIZE (0.. maxNrOfPDSCHSets)) OF ProtocolIE-Single-Container {{ Unsuccessful-
PDSCHSetItemIE-PSCH-ReconfFailureTDD }}

Unsuccessful-PDSCHSetItemIE-PSCH-ReconfFailureTDD NBAP-PROTOCOL-IES ::= {
    { ID    id-Unsuccessful-PDSCHSetItem-PSCH-ReconfFailureTDD  CRITICALITY ignore  TYPE Unsuccessful-PDSCHSetItem-PSCH-ReconfFailureTDDPRESENCE
mandatory}
}

Unsuccessful-PDSCHSetItem-PSCH-ReconfFailureTDD ::= SEQUENCE {
    pDSCHSet-ID            PDSCHSet-ID,
    cause                  Cause,
    iE-Extensions          ProtocolExtensionContainer { {Unsuccessful-PDSCHSetItem-PSCH-ReconfFailureTDD-ExtIEs} }   OPTIONAL,
    ...
}

Unsuccessful-PDSCHSetItem-PSCH-ReconfFailureTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Unsuccessful-PUSCHSetList-PSCH-ReconfFailureTDD ::= SEQUENCE (SIZE (0.. maxNrOfPUSCHSets)) OF ProtocolIE-Single-Container {{ Unsuccessful-
PUSCHSetItemIE-PSCH-ReconfFailureTDD }}

Unsuccessful-PUSCHSetItemIE-PSCH-ReconfFailureTDD NBAP-PROTOCOL-IES ::= {
    { ID    id-Unsuccessful-PUSCHSetItem-PSCH-ReconfFailureTDD  CRITICALITY ignore  TYPE Unsuccessful-PUSCHSetItem-PSCH-ReconfFailureTDDPRESENCE
mandatory}
}

Unsuccessful-PUSCHSetItem-PSCH-ReconfFailureTDD ::= SEQUENCE {
    pUSCHSet-ID            PUSCHSet-ID,
    cause                  Cause,
    iE-Extensions          ProtocolExtensionContainer { {Unsuccessful-PUSCHSetItem-PSCH-ReconfFailureTDD-ExtIEs} }   OPTIONAL,
    ...
}

Unsuccessful-PUSCHSetItem-PSCH-ReconfFailureTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ************************************************************
--
-- RESET REQUEST
--
-- ************************************************************

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

```
}

ResetRequest-IEs NBAP-PROTOCOL-IES ::= {
    {ID id-ResetIndicator        CRITICALITY ignore      TYPE    ResetIndicator      PRESENCE    mandatory},
    ...
}

ResetRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

ResetIndicator ::= CHOICE {
    communicationContext          CommunicationContextList-Reset,
    communicationControlPort      CommunicationControlPortList-Reset,
    nodeB                         NULL,
    ...
}

CommunicationContextList-Reset ::= SEQUENCE {
    communicationContextInfoList-Reset     CommunicationContextInfoList-Reset,
    iE-Extensions                          ProtocolExtensionContainer { {CommunicationContextItem-Reset-ExtIEs} }   OPTIONAL,
    ...
}

CommunicationContextItem-Reset-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CommunicationContextInfoList-Reset ::= SEQUENCE (SIZE (1.. maxCommunicationContext))   OF ProtocolIE-Single-Container {{
CommunicationContextInfoItemIE-Reset }}

CommunicationContextInfoItemIE-Reset NBAP-PROTOCOL-IES ::= {
    {ID id-CommunicationContextInfoItem-Reset       CRITICALITY reject      TYPE CommunicationContextInfoItem-Reset    PRESENCE mandatory}
}

CommunicationContextInfoItem-Reset ::= SEQUENCE {
    communicationContextType-Reset        CommunicationContextType-Reset,
    iE-Extensions                         ProtocolExtensionContainer { { CommunicationContextInfoItem-Reset-ExtIEs} }    OPTIONAL,
    ...
}
```

```
CommunicationContextInfoItem-Reset-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}


CommunicationContextType-Reset ::= CHOICE {
    cRNC-CommunicationContextID              CRNC-CommunicationContextID,
    nodeB-CommunicationContextID             NodeB-CommunicationContextID,
    ...
}


CommunicationControlPortList-Reset ::= SEQUENCE {
    communicationControlPortInfoList-Reset      CommunicationControlPortInfoList-Reset,
    iE-Extensions                               ProtocolExtensionContainer  { {CommunicationControlPortItem-Reset-ExtIEs} }    OPTIONAL,
    ...
}


CommunicationControlPortItem-Reset-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}


CommunicationControlPortInfoList-Reset ::= SEQUENCE (SIZE (1.. maxCCPinNodeB))  OF ProtocolIE-Single-Container
{{CommunicationControlPortInfoItemIE-Reset }}

CommunicationControlPortInfoItemIE-Reset NBAP-PROTOCOL-IES ::= {
    {ID id-CommunicationControlPortInfoItem-Reset       CRITICALITY reject      TYPE CommunicationControlPortInfoItem-Reset     PRESENCE mandatory}
}


CommunicationControlPortInfoItem-Reset ::= SEQUENCE {
    communicationControlPortID          CommunicationControlPortID,
    iE-Extensions                       ProtocolExtensionContainer { {CommunicationControlPortInfoItem-Reset-ExtIEs} }OPTIONAL,
    ...
}


CommunicationControlPortInfoItem-Reset-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ************************************************************
--
-- RESET RESPONSE
--
```

```
-- ***************************************************************

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

ResetResponse-IEs NBAP-PROTOCOL-IES ::= {
    {ID id-CriticalityDiagnostics       CRITICALITY     ignore      TYPE    CriticalityDiagnostics                  PRESENCE optional},
    ...
}

ResetResponse-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ***************************************************************
--
-- INFORMATION EXCHANGE INITIATION REQUEST
--
-- ***************************************************************

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

InformationExchangeInitiationRequest-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-InformationExchangeID                          CRITICALITY reject          TYPE                        InformationExchangeID
            PRESENCE    mandatory   }|
    { ID    id-InformationExchangeObjectType-InfEx-Rqst       CRITICALITY reject          TYPE                        InformationExchangeObjectType-
InfEx-Rqst      PRESENCE    mandatory   }|
    -- This IE represents both the Information Exchange Object Type IE and the choice based on the Information Exchange Object Type
    -- as described in the tabular message format in subclause 9.1.
    { ID    id-InformationType                          CRITICALITY reject                  TYPE    InformationType               PRESENCE mandatory
    }|
    { ID    id-InformationReportCharacteristics                       CRITICALITY reject          TYPE    InformationReportCharacteristics
            PRESENCE    mandatory},
    ...
}

InformationExchangeInitiationRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

InformationExchangeObjectType-InfEx-Rqst ::= CHOICE {
    cell                        Cell-InfEx-Rqst,
    ...
}

Cell-InfEx-Rqst ::= SEQUENCE {
    c-ID                    C-ID,
```

*ETSI*

```
    iE-Extensions                     ProtocolExtensionContainer { { CellItem-InfEx-Rqst-ExtIEs} }                     OPTIONAL,
    ...
}

CellItem-InfEx-Rqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *************************************************************
--
-- INFORMATION EXCHANGE INITIATION RESPONSE
--
-- *************************************************************

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

InformationExchangeInitiationResponse-IEs NBAP-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 NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

InformationExchangeObjectType-InfEx-Rsp ::= CHOICE {
    cell                    Cell-InfEx-Rsp,
    ...
 }

Cell-InfEx-Rsp ::= SEQUENCE {
    requestedDataValue           RequestedDataValue,
    iE-Extensions                ProtocolExtensionContainer { { CellItem-InfEx-Rsp-ExtIEs} }                     OPTIONAL,
    ...
 }

CellItem-InfEx-Rsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *************************************************************
--
-- INFORMATION EXCHANGE INITIATION FAILURE
--
-- *************************************************************
```

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

InformationExchangeInitiationFailure-IEs NBAP-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 NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *************************************************************
--
-- INFORMATION REPORT
--
-- *************************************************************

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

InformationReport-IEs NBAP-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 NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

InformationExchangeObjectType-InfEx-Rprt ::= CHOICE {
    cell                    Cell-Inf-Rprt,
    ...
 }

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

 }

CellItem-Inf-Rprt-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
```

```
    ...
}

-- **************************************************************
--
-- INFORMATION EXCHANGE TERMINATION REQUEST
--
-- **************************************************************

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

InformationExchangeTerminationRequest-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-InformationExchangeID             CRITICALITY    ignore              TYPE    InformationExchangeID      PRESENCE mandatory},
    ...
}

InformationExchangeTerminationRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- **************************************************************
--
-- INFORMATION EXCHANGE FAILURE INDICATION
--
-- **************************************************************

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

InformationExchangeFailureIndication-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-InformationExchangeID             CRITICALITY ignore          TYPE    InformationExchangeID              PRESENCE mandatory   }|
    { ID    id-Cause                             CRITICALITY ignore          TYPE    Cause                             PRESENCE mandatory   },
    ...
}

InformationExchangeFailureIndication-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- **************************************************************
--
-- CELL SYNCHRONISATION INITIATION REQUEST TDD
--
-- **************************************************************

CellSynchronisationInitiationRequestTDD ::= SEQUENCE {
    protocolIEs           ProtocolIE-Container    {{CellSynchronisationInitiationRequestTDD-IEs}},
```

```
    protocolExtensions      ProtocolExtensionContainer {{CellSynchronisationInitiationRequestTDD-Extensions}}    OPTIONAL,
    ...
}

CellSynchronisationInitiationRequestTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    { ID    id-SYNCDlCodeId-TransInitLCR-CellSyncInitiationRqstTDD        CRITICALITY    reject                    EXTENSION    SYNCDlCodeId-
TransInitLCR-CellSyncInitiationRqstTDD      PRESENCE    optional    }| -- 1.28Mcps TDD only
    { ID    id-SYNCDlCodeId-MeasureInitLCR-CellSyncInitiationRqstTDD      CRITICALITY    reject                    EXTENSION    SYNCDlCodeId-
MeasureInitLCR-CellSyncInitiationRqstTDD        PRESENCE    optional    }, -- 1.28Mcps TDD only
    ...
}

CellSynchronisationInitiationRequestTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-C-ID                              CRITICALITY    reject    TYPE    C-ID                                        PRESENCE mandatory    }|
    { ID    id-cellSyncBurstRepetitionPeriod        CRITICALITY    reject    TYPE    CellSyncBurstRepetitionPeriod    PRESENCE mandatory    }|
    { ID    id-timeslotInfo-CellSyncInitiationRqstTDD    CRITICALITY    reject    TYPE    TimeslotInfo-CellSyncInitiationRqstTDD    PRESENCE
    optional    }| -- Mandatory for 3.84Mcps TDD only
    { ID    id-CellSyncBurstTransInit-CellSyncInitiationRqstTDD    CRITICALITY    reject    TYPE                CellSyncBurstTransInit-
CellSyncInitiationRqstTDD        PRESENCE    optional    }| -- 3.84Mcps TDD only
    { ID    id-CellSyncBurstMeasureInit-CellSyncInitiationRqstTDD    CRITICALITY    reject                    TYPE  CellSyncBurstMeasureInit-
CellSyncInitiationRqstTDD        PRESENCE    optional    }, -- 3.84Mcps TDD only
    ...
}

CellSyncBurstTransInit-CellSyncInitiationRqstTDD::= SEQUENCE {
    cSBTransmissionID                        CSBTransmissionID,
    sfn                                      SFN,
    cellSyncBurstCode                        CellSyncBurstCode,
    cellSyncBurstCodeShift                   CellSyncBurstCodeShift,
    initialDLTransPower                      DL-Power,
    iE-Extensions                            ProtocolExtensionContainer { { CellSyncBurstTransInit-CellSyncInitiationRqstTDD-ExtIEs} }    OPTIONAL,
    ...
}

CellSyncBurstTransInit-CellSyncInitiationRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TimeslotInfo-CellSyncInitiationRqstTDD::= SEQUENCE (SIZE (1..15)) OF TimeSlot

CellSyncBurstMeasureInit-CellSyncInitiationRqstTDD::= SEQUENCE {
    cSBMeasurementID                         CSBMeasurementID,
    cellSyncBurstCode                        CellSyncBurstCode,
    cellSyncBurstCodeShift                   CellSyncBurstCodeShift,
    synchronisationReportType                SynchronisationReportType,
    sfn                                      SFN                                OPTIONAL,
    synchronisationReportCharacteristics     SynchronisationReportCharacteristics,
    iE-Extensions                            ProtocolExtensionContainer { { CellSyncBurstMeasureInit-CellSyncInitiationRqstTDD-ExtIEs} }
    OPTIONAL,
    ...
}

CellSyncBurstMeasureInit-CellSyncInitiationRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
```

```
}

SYNCDlCodeId-TransInitLCR-CellSyncInitiationRqstTDD::= SEQUENCE {
    cSBTransmissionID                       CSBTransmissionID,
    sfn                                     SFN,
    uARFCN                                  UARFCN,
    sYNCDlCodeId                            SYNCDlCodeId,
    DwPCH-Power                             DwPCH-Power,
    iE-Extensions                           ProtocolExtensionContainer { { SYNCDlCodeId-TransInitLCR-CellSyncInitiationRqstTDD-ExtIEs } }
    OPTIONAL,
    ...
}

SYNCDlCodeId-TransInitLCR-CellSyncInitiationRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

SYNCDlCodeId-MeasureInitLCR-CellSyncInitiationRqstTDD::= SEQUENCE {
    cSBMeasurementID                        CSBMeasurementID,
    sfn                                     SFN             OPTIONAL,
    uARFCN                                  UARFCN,
    sYNCDlCodeId                            SYNCDlCodeId,
    synchronisationReportType               SynchronisationReportType,
    synchronisationReportCharacteristics    SynchronisationReportCharacteristics,
    iE-Extensions                           ProtocolExtensionContainer { { SYNCDlCodeId-MeasureInitLCR-CellSyncInitiationRqstTDD-ExtIEs } }
    OPTIONAL,
    ...
}

SYNCDlCodeId-MeasureInitLCR-CellSyncInitiationRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *************************************************************
--
-- CELL SYNCHRONISATION INITIATION RESPONSE TDD
--
-- *************************************************************

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

CellSynchronisationInitiationResponseTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CellSynchronisationInitiationResponseTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID   id-CriticalityDiagnostics               CRITICALITY    ignore   TYPE   CriticalityDiagnostics                   PRESENCE
    optional    },
    ...
}
```

```
-- *************************************************************
--
-- CELL SYNCHRONISATION INITIATION FAILURE TDD
--
-- *************************************************************

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

CellSynchronisationInitiationFailureTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CellSynchronisationInitiationFailureTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID   id-Cause                            CRITICALITY     ignore    TYPE    Cause                                    PRESENCE mandatory
    }|
    { ID   id-CriticalityDiagnostics           CRITICALITY     ignore    TYPE    CriticalityDiagnostics      PRESENCE optional },
    ...
}

-- *************************************************************
--
-- CELL SYNCHRONISATION RECONFIGURATION REQUEST TDD
--
-- *************************************************************

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

CellSynchronisationReconfigurationRequestTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    { ID   id-NSubCyclesPerCyclePeriod-CellSyncReconfRqstTDD      CRITICALITY     reject     EXTENSION          NSubCyclesPerCyclePeriod
    PRESENCE    optional     }| -- 1.28Mcps TDD only
    { ID   id-SYNCDlCodeIdTransReconfInfoLCR-CellSyncReconfRqstTDD     CRITICALITY     reject                          EXTENSION
    SYNCDlCodeIdTransReconfInfoLCR-CellSyncReconfRqstTDD         PRESENCE    optional     }| -- 1.28Mcps TDD only
    { ID   id-SYNCDlCodeIdMeasReconfigurationLCR-CellSyncReconfRqstTDD     CRITICALITY     reject                          EXTENSION
    SYNCDlCodeIdMeasReconfigurationLCR-CellSyncReconfRqstTDD         PRESENCE    optional     }, -- 1.28Mcps TDD only
    ...
}

CellSynchronisationReconfigurationRequestTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID   id-C-ID                            CRITICALITY     reject    TYPE    C-ID                                    PRESENCE    mandatory
    }|
    { ID   id-TimeSlot                        CRITICALITY     reject    TYPE    TimeSlot                                PRESENCE    mandatory  }|
    -- 1.28Mcps TDD - There is no Time Slot indication needed, the CRNC should indicate Time Slot 0 and the Node B shall ignore it
    { ID   id-NCyclesPerSFNperiod             CRITICALITY     reject    TYPE    NCyclesPerSFNperiod                     PRESENCE    mandatory  }|
    { ID   id-NRepetitionsPerCyclePeriod      CRITICALITY     reject    TYPE    NRepetitionsPerCyclePeriod PRESENCE    mandatory  }|
```

```
    { ID    id-CellSyncBurstTransReconfInfo-CellSyncReconfRqstTDD         CRITICALITY     reject                         TYPE
    CellSyncBurstTransReconfInfo-CellSyncReconfRqstTDD     PRESENCE     optional    }|  -- 3.84Mcps TDD only
    { ID    id-CellSyncBurstMeasReconfiguration-CellSyncReconfRqstTDD      CRITICALITY     reject                         TYPE
    CellSyncBurstMeasReconfiguration-CellSyncReconfRqstTDD      PRESENCE     optional    }, -- 3.84Mcps TDD only
    ...
}

CellSyncBurstTransReconfInfo-CellSyncReconfRqstTDD ::= SEQUENCE (SIZE (1.. maxNrOfCellSyncBursts)) OF CellSyncBurstTransInfoItem-
CellSyncReconfRqstTDD

CellSyncBurstTransInfoItem-CellSyncReconfRqstTDD ::= SEQUENCE {
    cSBTransmissionID                          CSBTransmissionID,
    syncFrameNumberToTransmit                  SyncFrameNumber,
    cellSyncBurstCode                          CellSyncBurstCode         OPTIONAL,
    cellSyncBurstCodeShift                     CellSyncBurstCodeShift    OPTIONAL,
    dlTransPower                               DL-Power                  OPTIONAL,
    iE-Extensions                              ProtocolExtensionContainer { { CellSyncBurstTransInfoItem-CellSyncReconfRqstTDD-ExtIEs} }
    OPTIONAL,
    ...
}

CellSyncBurstTransInfoItem-CellSyncReconfRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CellSyncBurstMeasReconfiguration-CellSyncReconfRqstTDD ::= ProtocolIE-Single-Container {{ CellSyncBurstMeasInfo-CellSyncReconfRqstTDD }}

CellSyncBurstMeasInfo-CellSyncReconfRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID id-CellSyncBurstMeasInfoList-CellSyncReconfRqstTDD CRITICALITY reject  TYPE CellSyncBurstMeasInfoList-CellSyncReconfRqstTDD PRESENCE
    mandatory }|
    { ID id-SynchronisationReportType                      CRITICALITY reject  TYPE SynchronisationReportType                        PRESENCE
    optional }|
    { ID id-SynchronisationReportCharacteristics           CRITICALITY reject  TYPE SynchronisationReportCharacteristics        PRESENCE optional },
    ...
}

CellSyncBurstMeasInfoList-CellSyncReconfRqstTDD ::= SEQUENCE (SIZE (1.. maxNrOfCellSyncBursts)) OF CellSyncBurstMeasInfoItem-CellSyncReconfRqstTDD

CellSyncBurstMeasInfoItem-CellSyncReconfRqstTDD ::= SEQUENCE {
    syncFrameNrToReceive                       SyncFrameNumber,
    syncBurstInfo                              CellSyncBurstInfoList-CellSyncReconfRqstTDD,
    ...
}

CellSyncBurstInfoList-CellSyncReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfReceptsPerSyncFrame)) OF CellSyncBurstInfoItem-CellSyncReconfRqstTDD

CellSyncBurstInfoItem-CellSyncReconfRqstTDD ::= SEQUENCE {
    cSBMeasurementID                           CSBMeasurementID,
    cellSyncBurstCode                          CellSyncBurstCode,
    cellSyncBurstCodeShift                     CellSyncBurstCodeShift,
    iE-Extensions                              ProtocolExtensionContainer { { CellSyncBurstMeasInfo-CellSyncReconfRqstTDD-ExtIEs} }    OPTIONAL,
    ...
}
```

```
CellSyncBurstMeasInfo-CellSyncReconfRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

SYNCDlCodeIdTransReconfInfoLCR-CellSyncReconfRqstTDD ::= SEQUENCE {SIZE {1..maxNrofSyncFramesLCR} OF SYNCDlCodeIdTransReconfItemLCR-
CellSyncReconfRqstTDD

SYNCDlCodeIdTransReconfItemLCR-CellSyncReconfRqstTDD ::= SEQUENCE {
    cSBTransmissionID                         CSBTransmissionID,
    syncFrameNumberforTransmit                SyncFrameNumber,
    uARFCN                                    UARFCN,
    sYNCDlCodeId                              SYNCDlCodeId    OPTIONAL,
    DwPCH-Power                               DwPCH-Power     OPTIONAL,
    iE-Extensions                             ProtocolExtensionContainer { { SYNCDlCodeIdTransReconfInfoLCR-CellSyncReconfRqstTDD-ExtIEs} }
    OPTIONAL,
    ...
}

SYNCDlCodeIdTransReconfInfoLCR-CellSyncReconfRqstTDD-ExtIEs : := {
    ...
}

SYNCDlCodeIdMeasReconfigurationLCR-CellSyncReconfRqstTDD ::= ProtocolIE-Single-Container {{ SYNCDlCodeIdMeasInfoLCR-CellSyncReconfRqstTDD }}

SYNCDlCodeIdMeasInfoLCR-CellSyncReconfRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID id-SYNCDlCodeIdMeasInfoList-CellSyncReconfRqstTDD  CRITICALITY reject  EXTENSION SYNCDlCodeIdMeasInfoList-CellSyncReconfRqstTDDPRESENCE
    mandatory }|
    { ID id-SynchronisationReportType              CRITICALITY reject  EXTENSION SynchronisationReportType              PRESENCE
    optional }|
    { ID id-SynchronisationReportCharacteristics        CRITICALITY reject  EXTENSION SynchronisationReportCharacteristics        PRESENCE optional
},
    ...
}

SYNCDlCodeIdMeasInfoList-CellSyncReconfRqstTDD::= SEQUENCE (SIZE (1.. maxNrofSyncDLCodesLCR)) OF SYNCDlCodeIdMeasInfoItem-CellSyncReconfRqstTDD

SYNCDlCodeIdMeasInfoItem-CellSyncReconfRqstTDD ::= SEQUENCE {
    syncFrameNrToReceive                  SyncFrameNumber,
    sYNCDlCodeIdInfoLCR                   SYNCDlCodeIdInfoListLCR-CellSyncReconfRqstTDD,
    iE-Extensions                        ProtocolExtensionContainer { { SYNCDlCodeIdMeasInfoItem-CellSyncReconfRqstTDD-ExtIEs} }    OPTIONAL,
    ...
}

SYNCDlCodeIdMeasInfoItem-CellSyncReconfRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

SYNCDlCodeIdInfoListLCR-CellSyncReconfRqstTDD ::= SEQUENCE (SIZE (1.. maxNrofreceptionsperSyncFrameLCR)) SYNCDlCodeIdInfoItemLCR-
CellSyncReconfRqstTDD ))

SYNCDlCodeIdInfoItemLCR-CellSyncReconfRqstTDD ::= SEQUENCE {
    cSBMeasurementID                      CSBMeasurementID,
    sYNCDlCodeId                          SYNCDlCodeId,
    uARFCN                                UARFCN,
```

```
    propagationDelayCompensation              TimingAdjustmentValue    OPTIONAL,
    iE-Extensions                             ProtocolExtensionContainer { { SYNCDlCodeIdInfoLCR-CellSyncReconfRqstTDD-ExtIEs} }   OPTIONAL,
    ...
}

SYNCDlCodeIdInfoLCR-CellSyncReconfRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *************************************************************
--
-- CELL SYNCHRONISATION RECONFIGURATION RESPONSE TDD
--
-- *************************************************************

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

CellSynchronisationReconfigurationResponseTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CellSynchronisationReconfigurationResponseTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID   id-CriticalityDiagnostics                CRITICALITY   ignore    TYPE   CriticalityDiagnostics       PRESENCE optional },
    ...
}

-- *************************************************************
--
-- CELL SYNCHRONISATION RECONFIGURATION FAILURE TDD
--
-- *************************************************************

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

CellSynchronisationReconfigurationFailureTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CellSynchronisationReconfigurationFailureTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID   id-Cause                           CRITICALITY   ignore    TYPE   Cause                            PRESENCE mandatory
    }|
    { ID   id-CriticalityDiagnostics          CRITICALITY   ignore    TYPE   CriticalityDiagnostics       PRESENCE optional },
    ...
}

-- *************************************************************
```

```
--
-- CELL SYNCHRONISATION ADJUSTMENT REQUEST TDD
--
-- *************************************************************

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

CellSynchronisationAdjustmentRequestTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {

    ...
}

CellSynchronisationAdjustmentRequestTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-CellAdjustmentInfo-SyncAdjustmntRqstTDD  CRITICALITY ignore  TYPE CellAdjustmentInfo-SyncAdjustmntRqstTDD PRESENCE mandatory   },
    ...
}

CellAdjustmentInfo-SyncAdjustmentRqstTDD::= SEQUENCE (SIZE (1..maxCellinNodeB)) OF ProtocolIE-Single-Container {{ CellAdjustmentInfoItemIE-
SyncAdjustmntRqstTDD }}

CellAdjustmentInfoItemIE-SyncAdjustmntRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID id-CellAdjustmentInfoItem-SyncAdjustmntRqstTDD        CRITICALITY     ignore        TYPE                      CellAdjustmentInfoItem-
SyncAdjustmentRqstTDD       PRESENCE    mandatory }
}

CellAdjustmentInfoItem-SyncAdjustmentRqstTDD ::= SEQUENCE {
    c-ID                                 C-ID,
    frameAdjustmentValue                 FrameAdjustmentValue      OPTIONAL,
    timingAdjustmentValue                TimingAdjustmentValue     OPTIONAL,
    dLTransPower                         DL-Power                  OPTIONAL, -- 3.84Mcps TDD only
    sfn                                  SFN                       OPTIONAL,
    iE-Extensions                        ProtocolExtensionContainer { { CellAdjustmentInfoItem-SyncAdjustmntRqstTDD-ExtIEs} }     OPTIONAL,
    ...
 }

CellAdjustmentInfoItem-SyncAdjustmntRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-DwPCH-Power     CRITICALITY ignore EXTENSION   DwPCH-Power    PRESENCE optional }, -- 1.28Mcps TDD only
    ...
}

-- *************************************************************
--
-- CELL SYNCHRONISATION ADJUSTMENT RESPONSE TDD
--
-- *************************************************************

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

```
CellSynchronisationAdjustmentResponseTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CellSynchronisationAdjustmentResponseTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-CriticalityDiagnostics          CRITICALITY    ignore    TYPE    CriticalityDiagnostics                    PRESENCE optional },
    ...
}

-- *************************************************************
--
-- CELL SYNCHRONISATION ADJUSTMENT FAILURE TDD
--
-- *************************************************************

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

CellSynchronisationAdjustmentFailureTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CellSynchronisationAdjustmentFailureTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-CauseLevel-SyncAdjustmntFailureTDD   CRITICALITY ignore    TYPE    CauseLevel-SyncAdjustmntFailureTDD    PRESENCE mandatory    }|
    { ID    id-CriticalityDiagnostics               CRITICALITY ignore    TYPE    CriticalityDiagnostics                        PRESENCE optional
    },
    ...
}

CauseLevel-SyncAdjustmntFailureTDD ::= CHOICE {
    generalCause          GeneralCauseList-SyncAdjustmntFailureTDD,
    cellSpecificCause     CellSpecificCauseList-SyncAdjustmntFailureTDD,
    ...
}

GeneralCauseList-SyncAdjustmntFailureTDD::= SEQUENCE {
    cause                                    Cause,
    iE-Extensions                            ProtocolExtensionContainer { { GeneralCauseList-SyncAdjustmntFailureTDD-ExtIEs} }    OPTIONAL,
    ...
}

GeneralCauseList-SyncAdjustmntFailureTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CellSpecificCauseList-SyncAdjustmntFailureTDD ::= SEQUENCE {
    unsuccessful-cell-InformationRespList-SyncAdjustmntFailureTDD     Unsuccessful-cell-InformationRespList-SyncAdjustmntFailureTDD,
    iE-Extensions                            ProtocolExtensionContainer { { CellSpecificCauseList-SyncAdjustmntFailureTDD-ExtIEs} }
    OPTIONAL,
    ...
```

```
}

CellSpecificCauseList-SyncAdjustmntFailureTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Unsuccessful-cell-InformationRespList-SyncAdjustmntFailureTDD ::= SEQUENCE (SIZE (1..maxNrOfRLs))                    OF ProtocolIE-Single-Container
{{ Unsuccessful-cell-InformationRespItemIE-SyncAdjustmntFailureTDD }}

Unsuccessful-cell-InformationRespItemIE-SyncAdjustmntFailureTDD NBAP-PROTOCOL-IES ::= {
    { ID   id-Unsuccessful-cell-InformationRespItem-SyncAdjustmntFailureTDD        CRITICALITY                         ignore    TYPE Unsuccessful-
cell-InformationRespItem-SyncAdjustmntFailureTDD         PRESENCE   mandatory},
    ...
}

Unsuccessful-cell-InformationRespItem-SyncAdjustmntFailureTDD::= SEQUENCE {
    c-ID                                        C-ID,
    cause                                       Cause,
    iE-Extensions                               ProtocolExtensionContainer { { Unsuccessful-cell-InformationRespItem-SyncAdjustmntFailureTDD-
ExtIEs} }        OPTIONAL,
    ...
}

Unsuccessful-cell-InformationRespItem-SyncAdjustmntFailureTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ***************************************************************
--
-- CELL SYNCHRONISATION TERMINATION REQUEST TDD
--
-- ***************************************************************

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

CellSynchronisationTerminationRequestTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CellSynchronisationTerminationRequestTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID   id-C-ID                          CRITICALITY   ignore    TYPE   C-ID                                 PRESENCE mandatory  }|
    { ID   id-CSBTransmissionID             CRITICALITY   ignore    TYPE   CSBTransmissionID                    PRESENCE optional   }|
    { ID   id-CSBMeasurementID              CRITICALITY   ignore    TYPE   CSBMeasurementID                     PRESENCE optional   },
    ...
}

-- ***************************************************************
--
-- CELL SYNCHRONISATION FAILURE INDICATION TDD
--
```

```
-- ***************************************************************

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

CellSynchronisationFailureIndicationTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CellSynchronisationFailureIndicationTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-C-ID                          CRITICALITY     ignore    TYPE    C-ID                                  PRESENCE mandatory   }|
    { ID    id-CSBTransmissionID             CRITICALITY     ignore    TYPE    CSBTransmissionID                     PRESENCE optional    }|
    { ID    id-CSBMeasurementID              CRITICALITY     ignore    TYPE    CSBMeasurementID                      PRESENCE optional    }|
    { ID    id-Cause                         CRITICALITY     ignore    TYPE    Cause                                 PRESENCE mandatory   },
    ...
}

-- ***************************************************************
--
-- CELL SYNCHRONISATION REPORT TDD
--
-- ***************************************************************

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

CellSynchronisationReportTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CellSynchronisationReportTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-CellSyncInfo-CellSyncReprtTDD         CRITICALITY ignore     TYPE    CellSyncInfo-CellSyncReprtTDD         PRESENCE mandatory  },
    ...
}


CellSyncInfo-CellSyncReprtTDD ::= SEQUENCE (SIZE (1..maxCellinNodeB))   OF ProtocolIE-Single-Container {{ CellSyncInfoItemIE-CellSyncReprtTDD }}

CellSyncInfoItemIE-CellSyncReprtTDD NBAP-PROTOCOL-IES ::= {
    { ID    id-C-ID                                  CRITICALITY ignore  TYPE C-ID
    PRESENCE    mandatory}|
    { ID    id-SyncReportType-CellSyncReprtTDD       CRITICALITY ignore     TYPE SyncReportType-CellSyncReprtTDD       PRESENCE optional},
    ...
}

SyncReportType-CellSyncReprtTDD ::= CHOICE {
    intStdPhSyncInfo-CellSyncReprtTDD       IntStdPhCellSyncInfo-CellSyncReprtTDD,
    lateEntrantCell             NULL,
```

```
    frequencyAcquisition          NULL,
    ...
}

IntStdPhCellSyncInfo-CellSyncReprtTDD ::= SEQUENCE {
    cellSyncBurstMeasuredInfo                CellSyncBurstMeasInfoList-CellSyncReprtTDD,
    iE-Extensions                            ProtocolExtensionContainer { { IntStdPhCellSyncInfoList-CellSyncReprtTDD-ExtIEs} }   OPTIONAL,
    ...
}

IntStdPhCellSyncInfoList-CellSyncReprtTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-AccumulatedClockupdate-CellSyncReprtTDD    CRITICALITY ignore EXTENSION   TimingAdjustmentValue     PRESENCE optional }|
    { ID id-SyncDLCodeIdsMeasInfoList-CellSyncReprtTDD CRITICALITY  ignore EXTENSION    SyncDLCodeIdsMeasInfoList-CellSyncReprtTDD    PRESENCE
optional }, -- Mandatory for 1.28Mcps TDD only
    ...
}

CellSyncBurstMeasInfoList-CellSyncReprtTDD ::= SEQUENCE (SIZE (0.. maxNrOfCellSyncBursts)) OF CellSyncBurstMeasInfoItem-CellSyncReprtTDD --
Mandatory for 3.84Mcps TDD only

CellSyncBurstMeasInfoItem-CellSyncReprtTDD ::= SEQUENCE {
    sFN                                 SFN,
    cellSyncBurstInfo-CellSyncReprtTDD        SEQUENCE (SIZE (1..maxNrOfReceptsPerSyncFrame)) OF CellSyncBurstInfo-CellSyncReprtTDD,
    ...
}

CellSyncBurstInfo-CellSyncReprtTDD ::= CHOICE {
    cellSyncBurstAvailable       CellSyncBurstAvailable-CellSyncReprtTDD,
    cellSyncBurstNotAvailable    NULL,
    ...
}

CellSyncBurstAvailable-CellSyncReprtTDD ::= SEQUENCE {
    cellSyncBurstTiming         CellSyncBurstTiming,
    cellSyncBurstSIR            CellSyncBurstSIR,
    ...
}

SyncDLCodeIdsMeasInfoList-CellSyncReprtTDD ::= SEQUENCE (SIZE (0..maxNoOfSyncFramesLCR)) OF SyncDLCodeIdsMeasInfoItem-CellSyncReprtTDD
-- Mandatory for 1.28Mcps TDD only

SyncDLCodeIdsMeasInfoItem-CellSyncReprtTDD ::= SEQUENCE {
    sFN                                 SFN,
    syncDLCodeIdInfo-CellSyncReprtTDD         SEQUENCE (SIZE (1..maxNrOfReceptsPerSyncFrameLCR)) OF syncDLCodeIdInfo-CellSyncReprtTDD,
    iE-Extensions                             ProtocolExtensionContainer { { SyncDLCodeIdsMeasInfoItem-CellSyncReprtTDD-ExtIEs } }    OPTIONAL,
    ...
}

SyncDLCodeIdsMeasInfoItem-CellSyncReprtTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

syncDLCodeIdInfo-CellSyncReprtTDD ::= CHOICE {
    syncDLCodeIdAvailable              SyncDLCodeIdAvailable-CellSyncReprtTDD,
```

```
    syncDLCodeIDNotAvailable          NULL,
    ...
}

SynCodeIdAvailable-CellSyncReprtTDD ::= SEQUENCE {
    syncDLCodeIdTiming        CellSyncBurstTiming,
    syncDLCodeIdSIR           CellSyncBurstSIR,
    iE-Extensions             ProtocolExtensionContainer { { SynCodeIdAvailable-CellSyncReprtTDD-ExtIEs } }        OPTIONAL,
    ...
}

SynCodeIdAvailable-CellSyncReprtTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ***************************************************************
--
-- BEARER REARRANGEMENT INDICATION
--
-- ***************************************************************

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

BearerRearrangementIndication-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-CRNC-CommunicationContextID                    CRITICALITY    ignore      TYPE                    CRNC-CommunicationContextID
            PRESENCE    mandatory      } |
    { ID    id-SignallingBearerRequestIndicator               CRITICALITY    ignore      TYPE                    SignallingBearerRequestIndicator
      PRESENCE    optional      } |
    { ID    id-DCH-RearrangeList-Bearer-RearrangeInd          CRITICALITY    ignore      TYPE                    DCH-RearrangeList-Bearer-
    RearrangeInd              PRESENCE    optional      } |
    { ID    id-DSCH-RearrangeList-Bearer-RearrangeInd         CRITICALITY    ignore      TYPE                    DSCH-RearrangeList-Bearer-
    RearrangeInd              PRESENCE    optional      } |
    { ID    id-USCH-RearrangeList-Bearer-RearrangeInd         CRITICALITY    ignore      TYPE                    USCH-RearrangeList-Bearer-
    RearrangeInd              PRESENCE    optional      } |
    { ID    id-TFCI2BearerRequestIndicator                    CRITICALITY    ignore      TYPE                    TFCI2BearerRequestIndicator
    PRESENCE    optional      },
    ...

BearerRearrangementIndication-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-RearrangeList-Bearer-RearrangeInd ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-RearrangeItem-Bearer-RearrangeInd

DCH-RearrangeItem-Bearer-RearrangeInd ::= SEQUENCE {
    dCH-ID                                DCH-ID,
    iE-Extensions                         ProtocolExtensionContainer { { DCH-RearrangeItem-Bearer-RearrangeInd-ExtIEs} }   OPTIONAL,
    ...
}
```

```
DCH-RearrangeItem-Bearer-RearrangeInd-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DSCH-RearrangeList-Bearer-RearrangeInd ::= SEQUENCE (SIZE (1..maxNrOfDSCHs)) OF DSCH-RearrangeItem-Bearer-RearrangeInd

DSCH-RearrangeItem-Bearer-RearrangeInd ::= SEQUENCE {
    dSCH-ID                                     DSCH-ID,
    iE-Extensions                               ProtocolExtensionContainer { { DSCH-RearrangeItem-Bearer-RearrangeInd-ExtIEs} }     OPTIONAL,
    ...
}

DSCH-RearrangeItem-Bearer-RearrangeInd-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

USCH-RearrangeList-Bearer-RearrangeInd ::= SEQUENCE (SIZE (1..maxNrOfUSCHs)) OF USCH-RearrangeItem-Bearer-RearrangeInd

USCH-RearrangeItem-Bearer-RearrangeInd ::= SEQUENCE {
    uSCH-ID                                     USCH-ID,
    iE-Extensions                               ProtocolExtensionContainer { { USCH-RearrangeItem-Bearer-RearrangeInd-ExtIEs} }     OPTIONAL,
    ...
}

USCH-RearrangeItem-Bearer-RearrangeInd-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- **************************************************************
--
-- RADIO LINK ACTIVATION COMMAND FDD
--
-- **************************************************************

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

RadioLinkActivationCommandFDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-NodeB-CommunicationContextID              CRITICALITY reject  TYPE    NodeB-CommunicationContextID
    PRESENCE    mandatory    }|
    { ID    id-DelayedActivationList-RL-ActivationCmdFDD     CRITICALITY reject  TYPE    DelayedActivationInformationList-RL-ActivationCmdFDD
       PRESENCE    mandatory    },
    ...
}

RadioLinkActivationCommandFDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}


DelayedActivationInformationList-RL-ActivationCmdFDD ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container {
```

```
    { DelayedActivationInformation-RL-ActivationCmdFDD-IEs} }

DelayedActivationInformation-RL-ActivationCmdFDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-DelayedActivationInformation-RL-ActivationCmdFDD   CRITICALITY reject  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 NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *************************************************************
--
-- RADIO LINK ACTIVATION COMMAND TDD
--
-- *************************************************************

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

RadioLinkActivationCommandTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID   id-NodeB-CommunicationContextID                      CRITICALITY reject  TYPE    NodeB-CommunicationContextID
    PRESENCE    mandatory   }|
    { ID   id-DelayedActivationList-RL-ActivationCmdTDD         CRITICALITY reject  TYPE    DelayedActivationInformationList-RL-ActivationCmdTDD
      PRESENCE    mandatory   },
    ...
}

RadioLinkActivationCommandTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}


DelayedActivationInformationList-RL-ActivationCmdTDD ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container {
    { DelayedActivationInformation-RL-ActivationCmdTDD-IEs} }

DelayedActivationInformation-RL-ActivationCmdTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-DelayedActivationInformation-RL-ActivationCmdTDD   CRITICALITY reject  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 NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

END
```

# 9.3.4    Information Elements Definitions

```
--*******************************************************************************
--
-- Information Element Definitions
--
--*******************************************************************************

NBAP-IEs {
itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
umts-Access (20) modules (3) nbap (2) version1 (1) nbap-IEs (2) }

DEFINITIONS AUTOMATIC TAGS ::=
BEGIN

IMPORTS
    maxNrOfRLs,
    maxNrOfTFCs,
    maxNrOfErrors,
    maxCTFC,
    maxNrOfTFs,
    maxTTI-count,
    maxRateMatching,
    maxCodeNrComp-1,
    maxNrOfCellSyncBursts,
    maxNrOfCodeGroups,
    maxNrOfMeasNCell,
    maxNrOfMeasNCell-1,
    maxNrOfReceptsPerSyncFrame,
    maxNrOfTFCIGroups,
    maxNrOfTFCI1Combs,
    maxNrOfTFCI2Combs,
    maxNrOfTFCI2Combs-1,
    maxNrOfSF,
    maxTGPS,
    maxNrOfUSCHs,
    maxNrOfULTSs,
    maxNrOfULTSLCRs,
    maxNrOfDPCHs,
    maxNrOfDPCHLCRs,
    maxNrOfCodes,
    maxNrOfDSCHs,
    maxNrOfDLTSs,
```

```
    maxNrOfDLTSLCRs,
    maxNrOfDCHs,
    maxNrOfLevels,
    maxNoGPSItems,
    maxNoSat,
    maxNrOfHSSCCHs,
    maxNrOfHSSCCHCodes,
    maxNrOfMACdFlows,
    maxNrOfMACdFlows-1,
    maxNrOfMACdPDUIndexes,
    maxNrOfMACdPDUIndexes-1,
    maxNrOfPriorityQueues,
    maxNrOfPriorityQueues-1,
    maxNrOfHARQProcesses,

    id-MessageStructure,
    id-ReportCharacteristicsType-OnModification,
    id-Rx-Timing-Deviation-Value-LCR,
    id-SFNSFNMeasurementValueInformation,
    id-SFNSFNMeasurementThresholdInformation,
    id-TUTRANGPSMeasurementValueInformation,
    id-TUTRANGPSMeasurementThresholdInformation,
    id-TypeOfError,
    id-transportlayeraddress,
    id-bindingID
FROM NBAP-Constants

    Criticality,
    ProcedureID,
    ProtocolIE-ID,
    TransactionID,
    TriggeringMessage
FROM NBAP-CommonDataTypes

    NBAP-PROTOCOL-IES,
    ProtocolExtensionContainer{},
    ProtocolIE-Single-Container{},
    NBAP-PROTOCOL-EXTENSION
FROM NBAP-Containers;


-- ==========================================
--   A
-- ==========================================

Acknowledged-PCPCH-access-preambles ::= INTEGER (0..15,...)

Acknowledged-PRACH-preambles-Value ::= INTEGER(0..240,...)
-- The number of L1 acknowledged random access tries per every 20 ms period.

AddorDeleteIndicator ::= ENUMERATED {
    add,
    delete
}
```

```
Active-Pattern-Sequence-Information ::= SEQUENCE {
    cMConfigurationChangeCFN                            CFN,
    transmission-Gap-Pattern-Sequence-Status    Transmission-Gap-Pattern-Sequence-Status-List    OPTIONAL,
    iE-Extensions                               ProtocolExtensionContainer { {Active-Pattern-Sequence-Information-ExtIEs} } OPTIONAL,
    ...
}


Active-Pattern-Sequence-Information-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}


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 NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

AICH-Power ::= INTEGER (-22..5)
-- Offset in dB.

AICH-TransmissionTiming ::= ENUMERATED {
    v0,
    v1
}

AllocationRetentionPriority ::= SEQUENCE {
    priorityLevel           PriorityLevel,
    pre-emptionCapability       Pre-emptionCapability,
    pre-emptionVulnerability    Pre-emptionVulnerability,
    iE-Extensions               ProtocolExtensionContainer { {AllocationRetentionPriority-ExtIEs} } OPTIONAL,
    ...
}

AllocationRetentionPriority-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Angle-Of-Arrival-Value-LCR ::= SEQUENCE OF {
    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 NBAP-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,...}

APPreambleSignature ::= INTEGER (0..15)

APSubChannelNumber ::= INTEGER (0..11)

AvailabilityStatus ::= ENUMERATED {
    empty,
    in-test,
    failed,
    power-off,
    off-line,
    off-duty,
    dependency,
    degraded,
    not-installed,
    log-full,
    ...
}

-- =========================================
--  B
-- =========================================

BCCH-ModificationTime ::= INTEGER  (0..511)
-- Time = BCCH-ModificationTime * 8
-- Range 0 to 4088, step 8
-- All SFN values in which MIB may be mapped are allowed

BindingID ::= OCTET STRING (SIZE (1..4, ...))
--If the Binding ID includes a UDP port, the UDP port is included in octet 1 and 2.The first octet of
the UDP port field is included in the first octet of the the Binding ID.

BetaCD ::= INTEGER (0..15)

BLER                    ::= INTEGER (-63..0)
-- Step 0.1 (Range -6.3..0). It is the Log10 of the BLER

BlockingPriorityIndicator ::= ENUMERATED {
    high,
    normal,
    low,
    ...
}
```

```
-- High priority: Block resource immediately.
-- Normal priority: Block resource when idle or upon timer expiry.
-- Low priority: Block resource when idle.

SCTD-Indicator ::= ENUMERATED {
    active,
    inactive
}


-- ==========================================
--  C
-- ==========================================

Cause ::= CHOICE {
    radioNetwork            CauseRadioNetwork,
    transport            CauseTransport,
    protocol                CauseProtocol,
    misc                    CauseMisc,
    ...
}

CauseMisc ::= ENUMERATED {
    control-processing-overload,
    hardware-failure,
    oam-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,
    dl-radio-resources-not-available,
    ul-radio-resources-not-available,
    rl-already-ActivatedOrAlocated,
    nodeB-Resources-unavailable,
    measurement-not-supported-for-the-object,
    combining-resources-not-available,
    requested-configuration-not-supported,
    synchronisation-failure,
    priority-transport-channel-established,
```

```
        sIB-Origination-in-Node-B-not-Supported,
        requested-tx-diversity-mode-not-supported,
        unspecified,
        bCCH-scheduling-error,
        measurement-temporarily-not-available,
        invalid-CM-settings,
        reconfiguration-CFN-not-elapsed,
        number-of-DL-codes-not-supported,
        s-cipch-not-supported,
        combining-not-supported,
        ul-sf—not-supported,
        dl-SF-not-supported,
        common-transport-channel-type-not-supported,
        dedicated-transport-channel-type-not-supported,
        downlink-shared-channel-type-not-supported,
        uplink-shared-channel-type-not-supported,
        cm-not-supported,
        tx-diversity-no-longer-supported,
        unknown-Local-Cell-ID,
        ...,
        number-of-UL-codes-not-supported,
        information-temporarily-not-available,
        information-provision-not-supported-for-the-object,
        cell-synchronisation-not-supported,
        synchronisation-adjustment-not-supported,
        dpc-mode-change-not-supported,
        iPDL-already-activated,
        iPDL-not-supported,
        iPDL-parameters-not-available,
        frequency-acquisition-not-supported,
        power-balancing-status-not-compatible,
        requested-typeofbearer-re-arrangement-not-supported,
        signalling-Bearer-Re-arrangement-not-supported,
        bearer-Re-arrangement-needed,
        delayed-activation-not-supported,
        rl-timing-adjustment-not-supported
}

CauseTransport ::= ENUMERATED {
        transport-resource-unavailable,
        unspecified,
        ...
}

CCTrCH-ID ::= INTEGER (0..15)

CDSubChannelNumbers ::= BIT STRING {
                                        subCh11(0),
                                        subCh10(1),
                                        subCh9(2),
                                        subCh8(3),
                                        subCh7(4),
                                        subCh6(5),
                                        subCh5(6),
```

```
                                subCh4(7),
                                subCh3(8),
                                subCh2(9),
                                subCh1(10),
                                subCh0(11)
                                } (SIZE (12))

CellParameterID ::= INTEGER (0..127,...)

CellSyncBurstAvailabilityIndicator ::= ENUMERATED {
    cellSyncBurstAvailable,
    cellSyncBurstNotAvailable
}

CellSyncBurstCode ::= INTEGER(0..7, ...)

CellSyncBurstCodeShift ::= INTEGER(0..7)

CellSyncBurstRepetitionPeriod ::= INTEGER (0..4095)

CellSyncBurstSIR ::= INTEGER (0..31)

CellSyncBurstTiming ::= CHOICE {
    initialPhase        INTEGER (0..1048575),
    steadyStatePhase        INTEGER (0..255)
}

CellSyncBurstTimingThreshold ::= INTEGER(0..254)

CFN ::= INTEGER (0..255)

Channel-Assignment-Indication ::= ENUMERATED {
    cA-Active,
    cA-Inactive
}

ChipOffset ::= INTEGER (0..38399)
-- Unit Chip

C-ID ::= INTEGER (0..65535)

Closedlooptimingadjustmentmode  ::= ENUMERATED {
    adj-1-slot,
    adj-2-slot,
    ...
}

CommonChannelsCapacityConsumptionLaw ::= SEQUENCE (SIZE(1..maxNrOfSF)) OF
    SEQUENCE {
        dl-Cost     INTEGER (0..65535),
        ul-Cost     INTEGER (0..65535),
        iE-Extensions       ProtocolExtensionContainer { { CommonChannelsCapacityConsumptionLaw-ExtIEs } }            OPTIONAL,
        ...
}
```

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```
CommonChannelsCapacityConsumptionLaw-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CommonMeasurementAccuracy ::= CHOICE {
    tUTRANGPSMeasurementAccuracyClass       TUTRANGPSAccuracyClass,
    ...
}

CommonMeasurementType ::= ENUMERATED  {
    received-total-wide-band-power,
    transmitted-carrier-power,
    acknowledged-prach-preambles,
    ul-timeslot-iscp,
    acknowledged-PCPCH-access-preambles,
    detected-PCPCH-access-preambles,
    ...,
    uTRAN-GPS-Timing-of-Cell-Frames-for-LCS,
    sFN-SFN-Observed-Time-Difference
}

CommonMeasurementValue ::= CHOICE {
    transmitted-carrier-power               Transmitted-Carrier-Power-Value,
    received-total-wide-band-power          Received-total-wide-band-power-Value,
    acknowledged-prach-preambles            Acknowledged-PRACH-preambles-Value,
    uL-TimeslotISCP                         UL-TimeslotISCP-Value,
    acknowledged-PCPCH-access-preambles     Acknowledged-PCPCH-access-preambles,
    detected-PCPCH-access-preambles         Detected-PCPCH-access-preambles,
    ...,
    extension-CommonMeasurementValue        Extension-CommonMeasurementValue
}

Extension-CommonMeasurementValue    ::= ProtocolIE-Single-Container {{ Extension-CommonMeasurementValueIE }}

Extension-CommonMeasurementValueIE NBAP-PROTOCOL-IES ::= {
    { ID id-TUTRANGPSMeasurementValueInformation   CRITICALITY ignore  TYPE TUTRANGPSMeasurementValueInformation   PRESENCE mandatory }|
    { ID id-SFNSFNMeasurementValueInformation   CRITICALITY ignore  TYPE SFNSFNMeasurementValueInformation    PRESENCE mandatory }
}

CommonMeasurementValueInformation ::= CHOICE {

    measurementAvailable        CommonMeasurementAvailable,

    measurementnotAvailable     CommonMeasurementnotAvailable

}


CommonMeasurementAvailable::= SEQUENCE {

    commonmeasurementValue      CommonMeasurementValue,

    ie-Extensions               ProtocolExtensionContainer { { CommonMeasurementAvailableItem-ExtIEs} }          OPTIONAL,

    ...

}
```

```
CommonMeasurementAvailableItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
CommonMeasurementnotAvailable ::= NULL

CommonPhysicalChannelID ::= INTEGER (0..255)

Common-PhysicalChannel-Status-Information ::= SEQUENCE {
    commonPhysicalChannelID         CommonPhysicalChannelID,
    resourceOperationalState        ResourceOperationalState,
    availabilityStatus              AvailabilityStatus,
    iE-Extensions                   ProtocolExtensionContainer { { Common-PhysicalChannel-Status-Information-ExtIEs} }   OPTIONAL,
    ...
}

Common-PhysicalChannel-Status-Information-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CommonTransportChannelID ::= INTEGER (0..255)

Common-TransportChannel-Status-Information ::= SEQUENCE {
    commonTransportChannelID        CommonTransportChannelID,
    resourceOperationalState        ResourceOperationalState,
    availabilityStatus              AvailabilityStatus,
    iE-Extensions                   ProtocolExtensionContainer { { Common-TransportChannel-Status-Information-ExtIEs} }   OPTIONAL,
    ...
}

Common-TransportChannel-Status-Information-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CommunicationControlPortID ::= INTEGER (0..65535)

Compressed-Mode-Deactivation-Flag::= ENUMERATED {
    deactivate,
    maintain-Active
}
-- on=deactivate

ConfigurationGenerationID ::= INTEGER (0..255)
-- Value '0' means "No configuration"

ConstantValue ::= INTEGER (-10..10,...)
-- -10 dB - +10 dB
-- unit dB
-- step 1 dB

CPCH-Allowed-Total-Rate ::= ENUMERATED {
    v15,
    v30,
```

```
    v60,
    v120,
    v240,
    v480,
    v960,
    v1920,
    v2880,
    v3840,
    v4800,
    v5760,
    ...
}

CPCHScramblingCodeNumber ::= INTEGER (0..79)


CPCH-UL-DPCCH-SlotFormat ::= INTEGER (0..2,...)


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 NBAP-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 NBAP-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 NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CRNC-CommunicationContextID ::= INTEGER (0..1048575)

CSBMeasurementID ::= INTEGER (0..65535)

CSBTransmissionID ::= INTEGER (0..65535)

-- =========================================
-- D
-- =========================================

DATA-ID ::= INTEGER (0..3)

DCH-ID ::= INTEGER (0..255)

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 NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-Specific-FDD-InformationList ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-Specific-FDD-Item

DCH-Specific-FDD-Item ::=   SEQUENCE {
    dCH-ID                            DCH-ID,
    ul-TransportFormatSet             TransportFormatSet,
    dl-TransportFormatSet             TransportFormatSet,
    allocationRetentionPriority       AllocationRetentionPriority,
    frameHandlingPriority             FrameHandlingPriority,
    qE-Selector                       QE-Selector,
    iE-Extensions                     ProtocolExtensionContainer { { DCH-Specific-FDD-Item-ExtIEs} }        OPTIONAL,
    ...
}

DCH-Specific-FDD-Item-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-InformationResponse ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-InformationResponseItem
```

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```
DCH-InformationResponseItem ::= SEQUENCE {
    dCH-ID                                          DCH-ID,
    bindingID                                       BindingID            OPTIONAL,
    transportLayerAddress                           TransportLayerAddress   OPTIONAL,
    iE-Extensions                                   ProtocolExtensionContainer { { DCH-InformationResponseItem-ExtIEs} }    OPTIONAL,
    ...
}

DCH-InformationResponseItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

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 NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

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,
    dl-CCTrCH-ID                        CCTrCH-ID,
    ul-TransportFormatSet               TransportFormatSet,
    dl-TransportFormatSet               TransportFormatSet,
    allocationRetentionPriority         AllocationRetentionPriority,
    frameHandlingPriority               FrameHandlingPriority,
    qE-Selector                         QE-Selector                      OPTIONAL,
    -- This IE shall be present if DCH is part of set of Coordinated DCHs
    iE-Extensions                       ProtocolExtensionContainer { { DCH-Specific-TDD-Item-ExtIEs} }         OPTIONAL,
    ...
}

DCH-Specific-TDD-Item-ExtIEs NBAP-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          DCH-ModifySpecificInformation-FDD,
    iE-Extensions                        ProtocolExtensionContainer { { FDD-DCHs-to-ModifyItem-ExtIEs} }              OPTIONAL,
    ...
}

FDD-DCHs-to-ModifyItem-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-ModifySpecificInformation-FDD::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-ModifySpecificItem-FDD

DCH-ModifySpecificItem-FDD::=   SEQUENCE {
    dCH-ID                               DCH-ID,
    ul-TransportFormatSet                TransportFormatSet        OPTIONAL,
    dl-TransportFormatSet                TransportFormatSet        OPTIONAL,
    allocationRetentionPriority          AllocationRetentionPriority OPTIONAL,
    frameHandlingPriority                FrameHandlingPriority     OPTIONAL,
    iE-Extensions                        ProtocolExtensionContainer { { DCH-ModifySpecificItem-FDD-ExtIEs} }     OPTIONAL,
    ...
}

DCH-ModifySpecificItem-FDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}


TDD-DCHs-to-Modify ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-ModifyItem-TDD

DCH-ModifyItem-TDD ::= SEQUENCE {
    ul-FP-Mode                       UL-FP-Mode      OPTIONAL,
    toAWS                            ToAWS           OPTIONAL,
    toAWE                            ToAWE           OPTIONAL,
    transportBearerRequestIndicator  TransportBearerRequestIndicator,
    dCH-SpecificInformationList      DCH-ModifySpecificInformation-TDD,
    iE-Extensions                    ProtocolExtensionContainer { { TDD-DCHs-to-ModifyItem-ExtIEs} }              OPTIONAL,
    ...
}

TDD-DCHs-to-ModifyItem-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-ModifySpecificInformation-TDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-ModifySpecificItem-TDD

DCH-ModifySpecificItem-TDD ::=  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 { { DCH-ModifySpecificItem-TDD-ExtIEs} }        OPTIONAL,
```

```
    ...
}

DCH-ModifySpecificItem-TDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DedicatedChannelsCapacityConsumptionLaw ::= SEQUENCE ( SIZE(1..maxNrOfSF) ) OF
    SEQUENCE {
        dl-Cost-1       INTEGER (0..65535),
        dl-Cost-2       INTEGER (0..65535),
        ul-Cost-1       INTEGER (0..65535),
        ul-Cost-2       INTEGER (0..65535),
        iE-Extensions       ProtocolExtensionContainer { { DedicatedChannelsCapacityConsumptionLaw-ExtIEs } }        OPTIONAL,
    ...
}

DedicatedChannelsCapacityConsumptionLaw-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DedicatedMeasurementType ::= ENUMERATED {
    sir,
    sir-error,
    transmitted-code-power,
    rscp,
    rx-timing-deviation,
    round-trip-time,
    ...,
    rx-timing-deviation-LCR,
    angle-Of-Arrival-LCR,
}

DedicatedMeasurementValue ::= CHOICE {
    sIR-Value                   SIR-Value,
    sIR-ErrorValue              SIR-Error-Value,
    transmittedCodePowerValue       Transmitted-Code-Power-Value,
    rSCP                            RSCP-Value,
    rxTimingDeviationValue          Rx-Timing-Deviation-Value,
    roundTripTime                   Round-Trip-Time-Value,
    ...,
    extension-DedicatedMeasurementValue     Extension-DedicatedMeasurementValue
}

Extension-DedicatedMeasurementValue ::= ProtocolIE-Single-Container {{ Extension-DedicatedMeasurementValueIE }}

Extension-DedicatedMeasurementValueIE NBAP-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  EXTENSION Angle-Of-Arrival-Value-LCR  PRESENCE mandatory },
    ...
}


DedicatedMeasurementValueInformation ::= CHOICE {
```

```
    measurementAvailable        DedicatedMeasurementAvailable,
    measurementnotAvailable     DedicatedMeasurementnotAvailable
}


DedicatedMeasurementAvailable::= SEQUENCE {
    dedicatedmeasurementValue       DedicatedMeasurementValue,
    cFN                             CFN                                OPTIONAL,
    ie-Extensions                   ProtocolExtensionContainer { { DedicatedMeasurementAvailableItem-ExtIEs} }      OPTIONAL,
    ...
}


DedicatedMeasurementAvailableItem-ExtIEs NBAP-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 NBAP-PROTOCOL-EXTENSION ::= {
    ...
}


Deactivate-Info ::= SEQUENCE {
    deactivation-type   Execution-Type,
    iE-Extensions       ProtocolExtensionContainer { { Deactivate-Info-ExtIEs} }      OPTIONAL,
    ...
}

Deactivate-Info-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
```

```
    ...
}

Execution-Type ::= CHOICE {
    synchronised    CFN,
    unsynchronised  NULL
}

Detected-PCPCH-access-preambles ::= INTEGER (0..240,...)


DeltaSIR                ::= INTEGER (0..30)
-- Unit dB, Step 0.1 dB, Range 0..3 dB.

DGPSCorrections ::= SEQUENCE {
    gpstow              GPSTOW,
    status-health       GPS-Status-Health,
    satelliteinfo       SAT-Info-DGPSCorrections,

    ie-Extensions       ProtocolExtensionContainer { { DGPSCorrections-ExtIEs} }      OPTIONAL,

    ...
}


DGPSCorrections-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {

    ...
}

DGPSThresholds ::= SEQUENCE {
    prcdeviation        PRCDeviation,
    ie-Extensions       ProtocolExtensionContainer { { DGPSThresholds-ExtIEs} }    OPTIONAL,
    ...
}


DGPSThresholds-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {

    ...
}

DiversityControlField ::= ENUMERATED {
    may,
    must,
    must-not,
    ...
}

DiversityMode ::= ENUMERATED {
    none,
    sTTD,
    closed-loop-mode1,
    closed-loop-mode2,
    ...
}

DL-DPCH-SlotFormat ::= INTEGER (0..16,...)
```

```
DL-DPCH-TimingAdjustment ::= ENUMERATED {
    timing-advance,
    timing-delay
}

DL-Timeslot-Information ::= SEQUENCE (SIZE (1.. maxNrOfDLTSs)) 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 NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-TimeslotLCR-Information ::= SEQUENCE (SIZE (1.. maxNrOfDLTSLCRs)) 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 NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-FrameType ::= ENUMERATED {
    typeA,
    typeB,
    ...
}

DL-or-Global-CapacityCredit ::= INTEGER (0..65535)

DL-Power ::= INTEGER (-350..150)
-- DL-Power = power * 10
-- If Power <=-35 DL-Power shall be set to -350
-- if Power >=15 DL-Power shall be set to 150
-- Unit dB, Range -35dB .. +15dB, Step +0.1dB

DLPowerAveragingWindowSize ::= INTEGER (1..60)

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-PC-Rqst    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 NBAP-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 NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-PowerBalancing-ActivationIndicator   ::= ENUMERATED {
    dL-PowerBalancing-Activated
}

DL-PowerBalancing-UpdatedIndicator  ::= ENUMERATED {
    dL-PowerBalancing-Updated
}

DL-ScramblingCode ::= INTEGER (0..15)
-- 0= Primary scrambling code of the cell, 1..15= Secondary scrambling code --

DL-TimeslotISCP ::= INTEGER (0..91)

DL-TimeslotISCPInfo ::= SEQUENCE (SIZE (1..maxNrOfDLTSs)) OF DL-TimeslotISCPInfoItem

DL-TimeslotISCPInfoItem ::= SEQUENCE {
    timeSlot                TimeSlot,
    dL-TimeslotISCP         DL-TimeslotISCP,
    iE-Extensions           ProtocolExtensionContainer { {DL-TimeslotISCPInfoItem-ExtIEs} }                      OPTIONAL,
    ...
    }

DL-TimeslotISCPInfoItem-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
```

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```
    ...
    }

DL-TimeslotISCPInfoLCR ::= SEQUENCE (SIZE (1..maxNrOfDLTSLCRs)) OF DL-TimeslotISCPInfoItemLCR

DL-TimeslotISCPInfoItemLCR ::= SEQUENCE {
    timeSlotLCR                 TimeSlotLCR,
    dL-TimeslotISCP             DL-TimeslotISCP,
    iE-Extensions               ProtocolExtensionContainer { {DL-TimeslotISCPInfoItemLCR-ExtIEs} }                OPTIONAL,
    ...
    }

DL-TimeslotISCPInfoItemLCR-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-TPC-Pattern01Count ::= INTEGER (0..30,...)

Downlink-Compressed-Mode-Method    ::= ENUMERATED {

    puncturing,

    sFdiv2,

    higher-layer-scheduling,

    ...
}

DPC-Mode ::= ENUMERATED {
    mode0,
    mode1,
    ...
}

DPCH-ID ::= INTEGER (0..239)

DSCH-ID ::= INTEGER (0..255)

DSCH-InformationResponse ::= SEQUENCE (SIZE (1..maxNrOfDSCHs)) OF DSCH-InformationResponseItem

DSCH-InformationResponseItem ::= SEQUENCE {
    dSCH-ID                                     DSCH-ID,
    bindingID                                   BindingID               OPTIONAL,
    transportLayerAddress                       TransportLayerAddress       OPTIONAL,
    iE-Extensions                               ProtocolExtensionContainer { { DSCH-InformationResponseItem-ExtIEs } }     OPTIONAL,
    ...
}

DSCH-InformationResponseItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DSCH-FDD-Common-Information ::= SEQUENCE {
    enhancedDSCHPCIndicator         EnhancedDSCHPCIndicator     OPTIONAL,
    enhancedDSCHPC                  EnhancedDSCHPC              OPTIONAL,
    -- The IE shall be present if the Enhanced DSCH PC Indicator IE is set to "Enhanced DSCH PC Active in the UE".
```

```
    iE-Extensions                       ProtocolExtensionContainer { { DSCH-FDD-Common-Information-ExtIEs} }           OPTIONAL,
    ...
}

DSCH-FDD-Common-Information-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DSCH-FDD-Information ::= SEQUENCE (SIZE (1..maxNrOfDSCHs)) OF DSCH-FDD-InformationItem

DSCH-FDD-InformationItem ::= SEQUENCE {
    dSCH-ID                             DSCH-ID,
    transportFormatSet                  TransportFormatSet,
    allocationRetentionPriority         AllocationRetentionPriority,
    frameHandlingPriority               FrameHandlingPriority,
    toAWS                               ToAWS,
    toAWE                               ToAWE,
    iE-Extensions                       ProtocolExtensionContainer { { DSCH-FDD-InformationItem-ExtIEs} }           OPTIONAL,
    ...
}

DSCH-FDD-InformationItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-bindingID                   CRITICALITY ignore      EXTENSION   BindingID          PRESENCE           optional }|
    { ID id-transportlayeraddress       CRITICALITY ignore      EXTENSION   TransportLayerAddress               PRESENCE    optional },
    ...
}

DSCH-TDD-Information ::= SEQUENCE (SIZE (1..maxNrOfDSCHs)) OF DSCH-TDD-InformationItem

DSCH-TDD-InformationItem ::= SEQUENCE {
    dSCH-ID                             DSCH-ID,
    cCTrCH-ID                           CCTrCH-ID,
    transportFormatSet                  TransportFormatSet,
    allocationRetentionPriority         AllocationRetentionPriority,
    frameHandlingPriority               FrameHandlingPriority,
    toAWS                               ToAWS,
    toAWE                               ToAWE,
    iE-Extensions                       ProtocolExtensionContainer { { DSCH-TDD-InformationItem-ExtIEs} }           OPTIONAL,
    ...
}

DSCH-TDD-InformationItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-bindingID                   CRITICALITY ignore      EXTENSION   BindingID          PRESENCE           optional }|
    { ID id-transportlayeraddress       CRITICALITY ignore      EXTENSION   TransportLayerAddress               PRESENCE    optional },
    ...
}

DwPCH-Power ::= ENUMERATED {minus10, minus9, minus8, minus7, minus6, minus5, minus4, minus3, minus2, minus1, zero, plus1, plus2, plus3, plus4,
plus5, ...}

-- =========================================
-- E
-- =========================================
```

*ETSI*

```
End-Of-Audit-Sequence-Indicator ::= INTEGER (-150..400,...)
-- DwPCH-power = power * 10
-- If power <= -15 DwPCH shall be set to -150
-- If power >= 40 DwPCH shall be set to 400
-- Unit dBm, Range -15dBm .. +40 dBm, Step +0.1dB

EnhancedDSCHPC ::= SEQUENCE {
    enhancedDSCHPCWnd    EnhancedDSCHPCWnd,
    enhancedDSCHPCCounter    EnhancedDSCHPCCounter,
    enhancedDSCHPowerOffset EnhancedDSCHPowerOffset,
    ...
}

EnhancedDSCHPCCounter ::= INTEGER (1..50)

EnhancedDSCHPCIndicator ::= ENUMERATED {
    enhancedDSCHPCActiveInTheUE,
    enhancedDSCHPCNotActiveInTheUE
}

EnhancedDSCHPCWnd ::= INTEGER (1..10)

EnhancedDSCHPowerOffset ::= INTEGER (-15..0)

-- =======================================
--  F
-- =======================================

FDD-DL-ChannelisationCodeNumber ::= INTEGER(0.. 511)
-- According to the mapping in [9]. The maximum value is equal to the DL spreading factor -1--

FDD-DL-CodeInformation ::= SEQUENCE (SIZE (1..maxNrOfCodes)) OF FDD-DL-CodeInformationItem

FDD-DL-CodeInformationItem ::= SEQUENCE {
    dl-ScramblingCode                          DL-ScramblingCode,
    fdd-DL-ChannelisationCodeNumber            FDD-DL-ChannelisationCodeNumber,

    transmissionGapPatternSequenceCodeInformation        TransmissionGapPatternSequenceCodeInformation        OPTIONAL,
    iE-Extensions                              ProtocolExtensionContainer { { FDD-DL-CodeInformationItem-ExtIEs} }     OPTIONAL,
    ...
}

FDD-DL-CodeInformationItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

FDD-S-CCPCH-Offset ::= INTEGER (0..149)
-- 0: 0 chip, 1: 256 chip, 2: 512 chip, .. ,149: 38144 chip [7] --

FDD-TPC-DownlinkStepSize ::= ENUMERATED {
    step-size0-5,
    step-size1,
    step-size1-5,
    step-size2,
    ...
```

```
}

FirstRLS-Indicator ::= ENUMERATED {
    first-RLS,
    not-first-RLS,
    ...
}

FNReportingIndicator ::= ENUMERATED {
 fN-reporting-required,
 fN-reporting-not-required
}

FrameHandlingPriority ::= INTEGER (0..15)
-- 0=lower priority, 15=higher priority --

FrameAdjustmentValue ::= INTEGER(0..4095)

FrameOffset ::= INTEGER (0..255)

FPACH-Power ::= INTEGER (-150..400,...) -- FPACH-power = power * 10
-- If power <= -15 FPACH shall be set to -150
-- If power >= 40 FPACH shall be set to 400
-- Unit dBm, Range -15dBm .. +40 dBm, Step +0.1dB

-- =========================================
--  G
-- =========================================

GapLength                ::= INTEGER (1..14)
-- Unit slot

GapDuration              ::= INTEGER (1..144,...)
-- Unit frame

GPS-Almanac ::= SEQUENCE {
    wnₐ-alm              BIT STRING (SIZE (8)),
    sat-info-almanac     SAT-Info-Almanac,
    sVGlobalHealth-alm   BIT STRING (SIZE (364)) OPTIONAL,
    ie-Extensions        ProtocolExtensionContainer { { GPS-Almanac-ExtIEs} }    OPTIONAL,
    ...
}

GPS-Almanac-ExtIEs NBAP-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 NBAP-PROTOCOL-EXTENSION ::= {
   ...
}


GPS-Information ::= SEQUENCE (SIZE (0..maxNoGPSItems)) OF GPS-Information-Item
-- This IE shall be present if the Information Type Item IE indicates 'GPS Information'

GPS-Information-Item ::= ENUMERATED {
   gps-navigation-model-and-time-recovery,
   gps-ionospheric-model,
   gps-utc-model,
   gps-almanac,
   gps-rt-integrity,
   ...
}

GPS-RealTime-Integrity ::= CHOICE {
   bad-satellites            GPSBadSat-Info-RealTime-Integrity,
   no-bad-satellites         NULL
}


GPSBadSat-Info-RealTime-Integrity ::= SEQUENCE {
   sat-info                      SATInfo-RealTime-Integrity,
   ie-Extensions                 ProtocolExtensionContainer { { GPSBadSat-Info-RealTime-Integrity-ExtIEs} }        OPTIONAL,
   ...
}


GPSBadSat-Info-RealTime-Integrity-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
   ...
}

GPS-NavigationModel-and-TimeRecovery ::= SEQUENCE (SIZE (1..maxNoSat)) OF GPS-NavandRecovery-Item

GPS-NavandRecovery-Item ::= SEQUENCE {
  tx-tow-nav                    INTEGER (0..1048575),
  sat-id-nav                    SAT-ID,
  tlm-message-nav               BIT STRING (SIZE (14)),
  tlm-revd-c-nav                BIT STRING (SIZE (2)),
```

```
    ho-word-nav                       BIT STRING (SIZE (22)),
    w-n-nav                           BIT STRING (SIZE (10)),
    ca-or-p-on-l2-nav                 BIT STRING (SIZE (2)),
    user-range-accuracy-index-nav     BIT STRING (SIZE (4)),
    sv-health-nav                     BIT STRING (SIZE (6)),
    iodc-nav                          BIT STRING (SIZE (10)),
    l2-p-dataflag-nav                 BIT STRING (SIZE (1)),
    sf1-reserved-nav                  BIT STRING (SIZE (87)),
    t-gd-nav                          BIT STRING (SIZE (8)),
    t-oc-nav                          BIT STRING (SIZE (16)),
    a-f-2-nav                         BIT STRING (SIZE (8)),
    a-f-1-nav                         BIT STRING (SIZE (16)),
    a-f-zero-nav                      BIT STRING (SIZE (22)),
    c-rs-nav                          BIT STRING (SIZE (16)),
    delta-n-nav                       BIT STRING (SIZE (16)),
    m-zero-nav                        BIT STRING (SIZE (32)),
    c-uc-nav                          BIT STRING (SIZE (16)),
    gps-e-nav                         BIT STRING (SIZE (32)),
    c-us-nav                          BIT STRING (SIZE (16)),
    a-sqrt-nav                        BIT STRING (SIZE (32)),
    t-oe-nav                          BIT STRING (SIZE (16)),
    fit-interval-flag-nav             BIT STRING (SIZE (1)),
    aodo-nav                          BIT STRING (SIZE (5)),
    c-ic-nav                          BIT STRING (SIZE (16)),
    omega-zero-nav                    BIT STRING (SIZE (32)),
    c-is-nav                          BIT STRING (SIZE (16)),
    i-zero-nav                        BIT STRING (SIZE (32)),
    c-rc-nav                          BIT STRING (SIZE (16)),
    gps-omega-nav                     BIT STRING (SIZE (32)),
    omegadot-nav                      BIT STRING (SIZE (24)),
    idot-nav                          BIT STRING (SIZE (14)),
    spare-zero-fill                   BIT STRING (SIZE (20)),
    ie-Extensions                     ProtocolExtensionContainer { { GPS-NavandRecovery-Item-ExtIEs} }                    OPTIONAL,
     ...
}


GPS-NavandRecovery-Item-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
     ...
}


GPS-RX-POS ::= SEQUENCE {
    latitudeSign          ENUMERATED {north, south},
    latitude              INTEGER (0..8388607),
    longitude             INTEGER (-8388608..8388607),
    directionOfAltitude   ENUMERATED {height, depth},
    altitude              INTEGER (0..32767),
    iE-Extensions         ProtocolExtensionContainer { { GPS-RX-POS-ExtIEs} } OPTIONAL,
     ...
}

GPS-RX-POS-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
```

```
    ...
}

GPS-Status-Health ::= ENUMERATED {
   udre-scale-1dot0,
   udre-scale-0dot75,
   udre-scale-0dot5,
   udre-scale-0dot3,
   udre-scale-0dot1,
   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 NBAP-PROTOCOL-EXTENSION ::= {
   ...
}


-- =========================================
-- H
-- =========================================

HARQMemoryPartitioningFDD ::= SEQUENCE (SIZE (1..maxNrOfHARQProcesses)) OF HARQMemoryPartitioning-ItemFDD

HARQMemoryPartitioning-ItemFDD ::= SEQUENCE {
   process-Memory-Size              INTEGER (0..172800,...),
   iE-Extensions                    ProtocolExtensionContainer { { HARQMemoryPartitioning-ItemFDD-ExtIEs} }     OPTIONAL,
   ...
}

HARQMemoryPartitioning-ItemFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
   ...
}

HARQMemoryPartitioningTDD ::= SEQUENCE (SIZE (1..maxNrOfHARQProcesses)) OF HARQMemoryPartitioning-ItemTDD

HARQMemoryPartitioning-ItemTDD ::= SEQUENCE {
   process-Memory-Size              INTEGER (0..168960,...),
```

```
    iE-Extensions                        ProtocolExtensionContainer { { HARQMemoryPartitioning-ItemTDD-ExtIEs} }        OPTIONAL,
    ...
}

HARQMemoryPartitioning-ItemTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

HSDSCH-FDD-Information ::= SEQUENCE {
    hsDSCH-MACdFlow-Specific-Info        HSDSCH-MACdFlow-Specific-InfoList,
    ueCapability-Info                    UE-Capability-InformationFDD,
    harqMemoryPartitioningFDD            HARQMemoryPartitioningFDD,
    measFeedbackOffset                   INTEGER (0..79,...),
    iE-Extensions                        ProtocolExtensionContainer { { HSDSCH-FDD-Information-ExtIEs} }        OPTIONAL,
    ...
}

HSDSCH-FDD-Information-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

HSDSCH-TDD-Information ::= SEQUENCE {
    hsDSCH-MACdFlow-Specific-Info        HSDSCH-MACdFlow-Specific-InfoList,
    ueCapability-Info                    UE-Capability-InformationTDD,
    harqMemoryPartitioningTDD            HARQMemoryPartitioningTDD,
    iE-Extensions                        ProtocolExtensionContainer { { HSDSCH-TDD-Information-ExtIEs} }        OPTIONAL,
    ...
}

HSDSCH-TDD-Information-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

HSDSCH-MACdFlow-Specific-InfoItem ::= SEQUENCE {
    hsDSCH-MACdFlow-ID                   HSDSCH-MACdFlow-ID,
    bler                                 BLER,
    allocationRetentionPriority          AllocationRetentionPriority,
    priorityQueueInfo                    PriorityQueue-InfoList,
    iE-Extensions                        ProtocolExtensionContainer { { HSDSCH-MACdFlow-Specific-InfoItem-ExtIEs} }   OPTIONAL,
    ...
}

HSDSCH-MACdFlow-Specific-InfoItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

HSDSCH-Information-to-Modify ::= SEQUENCE {
    hsDSCH-MACdFlow-Specific-Info-to-Modify        HSDSCH-MACdFlow-Specific-InfoList-to-Modify                    OPTIONAL,
    measFeedbackRepCycleK                          ENUMERATED { measurement-Feedback-Reporting-Cycle-K1, measurement-Feedback-Reporting-Cycle-K2 }
            OPTIONAL,
    -- only for FDD
    iE-Extensions                        ProtocolExtensionContainer { { HSDSCH-FDD-Information-to-Modify-ExtIEs} }    OPTIONAL,
```

```
    ...
}

HSDSCH-FDD-Information-to-Modify-ExtIEs NBAP-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,
    bler                                BLER                                    OPTIONAL,
    allocationRetentionPriority         AllocationRetentionPriority             OPTIONAL,
    priorityQueueInfotoModify           PriorityQueue-InfoList-to-Modify        OPTIONAL,
    iE-Extensions                       ProtocolExtensionContainer { { HSDSCH-MACdFlow-Specific-InfoItem-to-Modify-ExtIEs} }   OPTIONAL,
    ...
}

HSDSCH-MACdFlow-Specific-InfoItem-to-Modify-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

HSDSCH-FDD-Information-Response ::= SEQUENCE {
    hsDSCH-MACdFlow-Specific-InformationResp        HSDSCH-MACdFlow-Specific-InformationResp,
    hsSCCH-Specific-Information-ResponseFDD          HSSCCH-Specific-InformationRespListFDD,
    measFeedback-CycleK1                             Measurement-Feedback-Reporting-Cycle,
    measFeedback-CycleK2                             Measurement-Feedback-Reporting-Cycle,

    iE-Extensions                                   ProtocolExtensionContainer { { HSDSCH-FDD-Information-Response-ExtIEs } }     OPTIONAL,
    ...
}

HSDSCH-FDD-Information-Response-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

HSDSCH-TDD-Information-Response ::= SEQUENCE {
    hsDSCH-MACdFlow-Specific-InformationResp        HSDSCH-MACdFlow-Specific-InformationResp,
    hsSCCH-Specific-Information-ResponseTDD          HSSCCH-Specific-InformationRespListTDD                               OPTIONAL,
    hsSCCH-Specific-Information-ResponseTDDLCR       HSSCCH-Specific-InformationRespListTDDLCR                            OPTIONAL,
    iE-Extensions                                   ProtocolExtensionContainer { { HSDSCH-TDD-Information-Response-ExtIEs } }     OPTIONAL,
    ...
}

HSDSCH-TDD-Information-Response-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

HSDSCH-MACdFlow-Specific-InformationResp ::= SEQUENCE (SIZE (1..maxNrOfMACdFlows)) OF HSDSCH-MACdFlow-Specific-InformationResp-Item

HSDSCH-MACdFlow-Specific-InformationResp-Item ::= SEQUENCE {
    hsDSCHMacdFlow-Id                               HSDSCH-MACdFlow-ID,
    bindingID                                       BindingID               OPTIONAL,
    transportLayerAddress                           TransportLayerAddress   OPTIONAL,
```

*ETSI*

```
    iE-Extensions                                  ProtocolExtensionContainer { { HSDSCH-MACdFlow-Specific-InformationRespItem-ExtIEs } }
    OPTIONAL,
    ...
}

HSDSCH-MACdFlow-Specific-InformationRespItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

HSSCCH-Specific-InformationRespListFDD ::= SEQUENCE (SIZE (1..maxNrOfHSSCCHCodes)) OF HSSCCH-Codes

HSSCCH-Codes ::= SEQUENCE {
    codeNumber                                     INTEGER (1..127),
    iE-Extensions                                  ProtocolExtensionContainer { { HSSCCH-Specific-InformationRespItemFDD-ExtIEs } }    OPTIONAL,
    ...
}

HSSCCH-Specific-InformationRespItemFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

HSSCCH-Specific-InformationRespListTDD ::= SEQUENCE (SIZE (1..maxNrOfHSSCCHCodes)) OF HSSCCH-Specific-InformationRespItemTDD

HSSCCH-Specific-InformationRespItemTDD ::= SEQUENCE {
    timeslot                                       TimeSlot,
    midambleShiftAndBurstType                      MidambleShiftAndBurstType,
    tDD-ChannelisationCode                         TDD-ChannelisationCode,
    hSSICH-Info                                    HSSICH-Info,
    iE-Extensions                                  ProtocolExtensionContainer { { HSSCCH-Specific-InformationRespItemTDD-ExtIEs } }
    OPTIONAL,
    ...
}

HSSCCH-Specific-InformationRespItemTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

HSSCCH-Specific-InformationRespListTDDLCR ::= SEQUENCE (SIZE (1..maxNrOfHSSCCHCodes)) OF HSSCCH-Specific-InformationRespItemTDDLCR

HSSCCH-Specific-InformationRespItemTDDLCR ::= SEQUENCE {
    timeslotLCR                                    TimeSlotLCR,
    midambleShiftLCR                               MidambleShiftLCR,
    tDD-ChannelisationCodeLCR                      TDD-ChannelisationCodeLCR,
    hSSICH-InfoLCR                                 HSSICH-InfoLCR,
    iE-Extensions                                  ProtocolExtensionContainer { { HSSCCH-Specific-InformationRespItemTDDLCR-ExtIEs } }
    OPTIONAL,
    ...
}

HSSCCH-Specific-InformationRespItemTDDLCR-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

HSSICH-Info ::= SEQUENCE {
```

```
    timeslot                                    TimeSlot,
    midambleShiftAndBurstType                   MidambleShiftAndBurstType,
    tDD-ChannelisationCode                      TDD-ChannelisationCode,
    iE-Extensions                               ProtocolExtensionContainer { { HSSICH-Info-ExtIEs } }      OPTIONAL,
    ...
}

HSSICH-Info-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

HSSICH-InfoLCR ::= SEQUENCE {
    timeslotLCR                                 TimeSlotLCR,
    midambleShiftLCR                            MidambleShiftLCR,
    tDD-ChannelisationCodeLCR                   TDD-ChannelisationCodeLCR,
    iE-Extensions                               ProtocolExtensionContainer { { HSSICH-Info-LCR-ExtIEs } }     OPTIONAL,
    ...
}

HSSICH-Info-LCR-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

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

HS-PDSCH-FDD-Code-Information ::= SEQUENCE {
    number-of-HS-PDSCH-codes                    INTEGER (0..maxCodeNrComp-1),
    hS-PDSCH-Start-code-number                  HS-PDSCH-Start-code-number     OPTIONAL,
-- Only included when number of HS-DSCH codes > 0
    ...
}

HS-PDSCH-Start-code-number ::=  INTEGER (0..maxCodeNrComp-1)

HS-SCCH-ID ::= INTEGER (0..31)

HS-SCCH-FDD-Code-Information ::= SEQUENCE {
    hS-SCCH-FDD-Code-List                       HS-SCCH-FDD-Code-List          OPTIONAL,
    ...
}

HS-SCCH-FDD-Code-List ::= SEQUENCE (SIZE (1..maxNrOfHSSCCHs)) OF HS-SCCH-FDD-Code-Information-Item

HS-SCCH-FDD-Code-Information-Item ::= INTEGER (0..maxCodeNrComp-1)

-- =========================================
--  I
-- =========================================

IB-OC-ID ::= INTEGER (1..16)

IB-SG-DATA ::= BIT STRING
```

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```
-- Contains SIB data fixed" or "SIB data variable" in segment as encoded in ref.[18].

IB-SG-POS ::= INTEGER (0..4094)
-- Only even positions allowed

IB-SG-REP ::= ENUMERATED {rep4, rep8, rep16, rep32, rep64, rep128, rep256, rep512, rep1024, rep2048, rep4096}

IB-Type ::= ENUMERATED {
    mIB,
    sB1,
    sB2,
    sIB1,
    sIB2,
    sIB3,
    sIB4,
    sIB5,
    sIB6,
    sIB7,
    sIB8,
    sIB9,
    sIB10,
    sIB11,
    sIB12,
    sIB13,
    sIB13dot1,
    sIB13dot2,
    sIB13dot3,
    sIB13dot4,
    sIB14,
    sIB15,
    sIB15dot1,
    sIB15dot2,
    sIB15dot3,
    sIB16,
    ...,
    sIB17,
    sIB15dot4,
    sIB18
}

IndicationType ::= ENUMERATED {
    noFailure,
    serviceImpacting,
    ...
}

InformationReportCharacteristics ::= CHOICE {
    onDemand                NULL,
    periodic                InformationReportCharacteristicsType-ReportPeriodicity,
    onModification          InformationReportCharacteristicsType-OnModification,
    ...
}

InformationReportCharacteristicsType-ReportPeriodicity ::= CHOICE {
```

*ETSI*

```
    min                 ReportPeriodicity-Scaledmin,
    hours               ReportPeriodicity-Scaledhour,
    ...
}

InformationReportCharacteristicsType-OnModification ::= SEQUENCE {
    information-thresholds      InformationThresholds    OPTIONAL,
    ie-Extensions               ProtocolExtensionContainer { { InformationReportCharacteristicsType-OnModification-ExtIEs} } OPTIONAL,
    ...
}

InformationReportCharacteristicsType-OnModification-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

InformationThresholds ::= CHOICE {
    dgps            DGPSThresholds,
    ...
}

InformationExchangeID ::= INTEGER (0..1048575)

InformationType ::= SEQUENCE {
    information-Type-Item      Information-Type-Item,
    gPSInformation            GPS-Information  OPTIONAL,
    iE-Extensions             ProtocolExtensionContainer { { Information-Type-ExtIEs} }      OPTIONAL,
...
}

Information-Type-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Information-Type-Item ::= ENUMERATED {
    gpsinformation,
    dgpscorrections,
    gpsrxpos,
    ...
}

InnerLoopDLPCStatus ::= ENUMERATED {
    active,
    inactive
}

IPDL-Indicator ::= ENUMERATED {
    active,
    inactive
```

```
}


IPDL-FDD-Parameters ::= SEQUENCE {
    iP-SpacingFDD                   ENUMERATED{sp5,sp7,sp10,sp15,sp20,sp30,sp40,sp50,...},
    iP-Length                       ENUMERATED{len5, len10},
    seed                            INTEGER(1..63),
    burstModeParams                 BurstModeParams    OPTIONAL,
    iE-Extensions           ProtocolExtensionContainer { { IPDLFDDParameter-ExtIEs} }   OPTIONAL,
    ...
}

IPDLFDDParameter-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

IPDL-TDD-Parameters ::= SEQUENCE {
    iP-SpacingTDD                   ENUMERATED{sp30,sp40,sp50,sp70,sp100,...},
    iP-Start                        INTEGER(0..4095),
    iP-Slot                         INTEGER(0..14),
    iP-PCCPCH                       ENUMERATED{switchOff-1-Frame,switchOff-2-Frames},
    burstModeParams                 BurstModeParams    OPTIONAL,
    iE-Extensions           ProtocolExtensionContainer { { IPDLTDDParameter-ExtIEs} }   OPTIONAL,
    ...
}

IPDL-TDD-Parameters-LCR ::= SEQUENCE {
    iP-SpacingTDD                   ENUMERATED{sp30,sp40,sp50,sp70,sp100,...},
    iP-Start                        INTEGER(0..4095),
    iP-Sub                          ENUMERATED{first,second,both},
    burstModeParams                 BurstModeParams    OPTIONAL,
    iE-Extensions           ProtocolExtensionContainer { { IPDLTDDParameterLCR-ExtIEs} }    OPTIONAL,
    ...
}

BurstModeParams ::= SEQUENCE {
    burstStart                      INTEGER(0..15),
    burstLenth                      INTEGER(10..25),
    burstFreq                       INTEGER(1..16),
    ...
}

IPDLTDDParameter-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

IPDLTDDParameterLCR-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- =========================================
--  J
-- =========================================
```

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```
-- =======================================
--  K
-- =======================================


-- =======================================
--  L
-- =======================================

Local-Cell-ID ::= INTEGER (0..268435455)


-- =======================================
--  M
-- =======================================

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

MACdPDU-Size-Indexlist ::= SEQUENCE (Size (1..maxNrOfMACdPDUIndexes)) OF MACdPDU-Size-IndexItem

MACdPDU-Size-IndexItem ::= SEQUENCE {
    sID                              INTEGER (0..7),
    macdPDU-Size                     MACdPDU-Size,
    iE-Extensions                    ProtocolExtensionContainer { { MACdPDU-Size-IndexItem-ExtIEs} }            OPTIONAL,
    ...
}

MACdPDU-Size-IndexItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

MACdPDU-Size-Indexlist-to-Modify ::= SEQUENCE (SIZE (1..maxNrOfMACdPDUIndexes)) OF MACdPDU-Size-IndexItem-to-Modify

MACdPDU-Size-IndexItem-to-Modify ::= SEQUENCE {
    sID                              INTEGER (0..7),
    macdPDU-Size                     MACdPDU-Size                                                 OPTIONAL,
    iE-Extensions                    ProtocolExtensionContainer { { MACdPDU-Size-IndexItem-to-Modify-ExtIEs} }    OPTIONAL,
    ...
}

MACdPDU-Size-IndexItem-to-Modify-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Measurement-Feedback-Reporting-Cycle ::= ENUMERATED {
    v0,
    v1,
    v5,
    v10,
    v20,
    v40,
    v80,
    ...
}

MaximumDL-PowerCapability ::=  INTEGER(0..500)
```

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```
-- Unit dBm, Range 0dBm .. 50dBm, Step +0.1dB

Maximum-PDSCH-Power ::= SEQUENCE {
    maximum-PDSCH-Power-SF4     DL-Power        OPTIONAL,
    maximum-PDSCH-Power-SF8     DL-Power        OPTIONAL,
    maximum-PDSCH-Power-SF16    DL-Power        OPTIONAL,
    maximum-PDSCH-Power-SF32    DL-Power        OPTIONAL,
    maximum-PDSCH-Power-SF64    DL-Power        OPTIONAL,
    maximum-PDSCH-Power-SF128   DL-Power        OPTIONAL,
    maximum-PDSCH-Power-SF256   DL-Power        OPTIONAL,
    iE-Extensions           ProtocolExtensionContainer { { Maximum-PDSCH-Power-ExtIEs} }        OPTIONAL,
    ...
}

Maximum-PDSCH-Power-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

MaximumTransmissionPower ::=  INTEGER(0..500)
-- Unit dBm, Range 0dBm .. 50dBm, Step +0.1dB

MaxNrOfUL-DPDCHs ::= INTEGER (1..6)

Max-Number-of-PCPCHes ::= INTEGER (1..64,...)

MaxPRACH-MidambleShifts ::= ENUMERATED {
    shift4,
    shift8,
    ...
}

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)

MidambleConfigurationBurstType1And3 ::=     ENUMERATED {v4, v8, v16}

MidambleConfigurationBurstType2 ::=     ENUMERATED {v3, v6}

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,
    iE-Extensions                ProtocolExtensionContainer { {MidambleShiftLCR-ExtIEs} }        OPTIONAL,
    ...
    }

MidambleAllocationMode ::= ENUMERATED {
    defaultMidamble,
    commonMidamble,
    uESpecificMidamble,
    ...
    }

MidambleShiftLCR-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

MinimumDL-PowerCapability ::=  INTEGER(0..800)
-- Unit dBm, Range -30dBm .. 50dBm, Step +0.1dB

MinSpreadingFactor ::= ENUMERATED {
      v4,
      v8,
      v16,
      v32,
      v64,
      v128,
      v256,
      v512
}
```

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

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

MultiplexingPosition ::= ENUMERATED {
    fixed,
    flexible
}

-- =========================================
-- N
-- =========================================

NCyclesPerSFNperiod ::= ENUMERATED {
    v1,
    v2,
    v4,
    v8,
    ...,
    v16,
    v32,
    v64
}

NEOT ::= INTEGER (0..8)

NFmax ::= INTEGER (1..64,...)

NRepetitionsPerCyclePeriod ::= INTEGER (2..10)

N-INSYNC-IND ::= INTEGER (1..256)

N-OUTSYNC-IND ::= INTEGER (1..256)

NeighbouringCellMeasurementInformation ::= SEQUENCE (SIZE (1..maxNrOfMeasNCell)) OF
        CHOICE {
                neighbouringFDDCellMeasurementInformation        NeighbouringFDDCellMeasurementInformation,
                neighbouringTDDCellMeasurementInformation        NeighbouringTDDCellMeasurementInformation,
                ...,
                extension-neighbouringCellMeasurementInformation    Extension-neighbouringCellMeasurementInformation
```

```
        }

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

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

NeighbouringFDDCellMeasurementInformation ::= SEQUENCE {
    uC-Id                           UC-Id,
    uARFCN                          UARFCN,
    primaryScramblingCode           PrimaryScramblingCode,
    iE-Extensions                   ProtocolExtensionContainer { { NeighbouringFDDCellMeasurementInformationItem-ExtIEs} } OPTIONAL,
    ...
}

NeighbouringFDDCellMeasurementInformationItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {

    ...
}

NeighbouringTDDCellMeasurementInformation ::= SEQUENCE {
    uC-Id                           UC-Id,
    uARFCN                          UARFCN,
    cellParameterID                 CellParameterID,
    timeSlot                        TimeSlot                 OPTIONAL,
    midambleShiftAndBurstType       MidambleShiftAndBurstType      OPTIONAL,
    iE-Extensions                   ProtocolExtensionContainer { { NeighbouringTDDCellMeasurementInformationItem-ExtIEs} } OPTIONAL,
    ...
}

NeighbouringTDDCellMeasurementInformationItem-ExtIEs NBAP-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 NBAP-PROTOCOL-EXTENSION ::= {

    ...
}

NodeB-CommunicationContextID ::= INTEGER (0..1048575)
```

```
NStartMessage ::= INTEGER (1..8)

NSubCyclesPerCyclePeriod ::= INTEGER (1..16,...)

-- =========================================
--   O
-- =========================================


-- =========================================
--   P
-- =========================================

PagingIndicatorLength ::= ENUMERATED {
    v2,
    v4,
    v8,
    ...
}

PayloadCRC-PresenceIndicator ::= ENUMERATED {
    cRC-Included,
    cRC-NotIncluded,
    ...
}

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 +0.1dB

PCP-Length ::= ENUMERATED{
    v0,
    v8
}

PDSCH-CodeMapping ::= SEQUENCE {
    dl-ScramblingCode                DL-ScramblingCode,
    signallingMethod                 CHOICE {
        code-Range                       PDSCH-CodeMapping-PDSCH-CodeMappingInformationList,
        tFCI-Range                       PDSCH-CodeMapping-DSCH-MappingInformationList,
        explicit                         PDSCH-CodeMapping-PDSCH-CodeInformationList,
        ...,
        replace                          PDSCH-CodeMapping-ReplacedPDSCH-CodeInformationList
    },
    iE-Extensions                    ProtocolExtensionContainer { { PDSCH-CodeMapping-ExtIEs} }        OPTIONAL,
    ...
}

PDSCH-CodeMapping-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PDSCH-CodeMapping-CodeNumberComp ::= INTEGER (0..maxCodeNrComp-1)
```

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```
PDSCH-CodeMapping-SpreadingFactor ::= ENUMERATED {
    v4,
    v8,
    v16,
    v32,
    v64,
    v128,
    v256,
    ...
}

PDSCH-CodeMapping-PDSCH-CodeMappingInformationList ::= SEQUENCE (SIZE (1..maxNrOfCodeGroups)) OF
    SEQUENCE {
        spreadingFactor            PDSCH-CodeMapping-SpreadingFactor,
        multi-CodeInfo             PDSCH-Multi-CodeInfo,
        start-CodeNumber             PDSCH-CodeMapping-CodeNumberComp,
        stop-CodeNumber            PDSCH-CodeMapping-CodeNumberComp,
        iE-Extensions                 ProtocolExtensionContainer { { PDSCH-CodeMapping-PDSCH-CodeMappingInformationList-ExtIEs} }    OPTIONAL,
        ...
}

PDSCH-CodeMapping-PDSCH-CodeMappingInformationList-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PDSCH-CodeMapping-DSCH-MappingInformationList ::= SEQUENCE (SIZE (1..maxNrOfTFCIGroups)) OF
    SEQUENCE {
        maxTFCI-field2-Value         PDSCH-CodeMapping-MaxTFCI-Field2-Value,
        spreadingFactor            PDSCH-CodeMapping-SpreadingFactor,
        multi-CodeInfo             PDSCH-Multi-CodeInfo,
        codeNumber                 PDSCH-CodeMapping-CodeNumberComp,
        iE-Extensions                 ProtocolExtensionContainer { { PDSCH-CodeMapping-DSCH-MappingInformationList-ExtIEs} }    OPTIONAL,
        ...
}

PDSCH-CodeMapping-DSCH-MappingInformationList-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PDSCH-CodeMapping-MaxTFCI-Field2-Value ::= INTEGER (1..1023)

PDSCH-CodeMapping-PDSCH-CodeInformationList ::= SEQUENCE (SIZE (1..maxNrOfTFCI2Combs)) OF
    SEQUENCE {
        spreadingFactor            PDSCH-CodeMapping-SpreadingFactor,
        multi-CodeInfo             PDSCH-Multi-CodeInfo,
        codeNumber                 PDSCH-CodeMapping-CodeNumberComp,
        iE-Extensions                 ProtocolExtensionContainer { { PDSCH-CodeMapping-PDSCH-CodeInformationList-ExtIEs} }    OPTIONAL,
        ...
}

PDSCH-CodeMapping-PDSCH-CodeInformationList-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

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```
PDSCH-CodeMapping-ReplacedPDSCH-CodeInformationList ::= SEQUENCE (SIZE (1..maxNrOfTFCI2Combs)) OF
    SEQUENCE {
        tfci-Field2                 TFCS-MaxTFCI-field2-Value,
        spreadingFactor             PDSCH-CodeMapping-SpreadingFactor,
        multi-CodeInfo              PDSCH-Multi-CodeInfo,
        codeNumber                  PDSCH-CodeMapping-CodeNumberComp,
        iE-Extensions               ProtocolExtensionContainer { { PDSCH-CodeMapping-ReplacedPDSCH-CodeInformationList-ExtIEs} }     OPTIONAL,
        ...
}

PDSCH-CodeMapping-ReplacedPDSCH-CodeInformationList-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PDSCH-Multi-CodeInfo ::= INTEGER (1..16)

PDSCH-ID ::= INTEGER (0..255)

PDSCHSet-ID ::= INTEGER (0..255)

PICH-Mode ::= ENUMERATED {
    v18,
    v36,
    v72,
    v144,
    ...
}

PICH-Power ::= INTEGER (-10..5)
-- Unit dB, Range -10dB .. +5dB, Step +1dB

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

PowerOffset ::= INTEGER (0..24)
-- PowerOffset = offset * 0.25
-- Unit dB, Range 0dB .. +6dB, Step +0.25dB

PowerRaiseLimit ::= INTEGER (0..10)

PRACH-Midamble ::= ENUMERATED {
    inverted,
    direct,
    ...
}

PRC ::= INTEGER (-2047..2047)
--pseudo range correction; scaling factor 0.32 meters

PRCDeviation ::= ENUMERATED {
```

```
    one,
    two,
    five,
    ten,
    ...
}

PreambleSignatures ::= BIT STRING {
                                    signature15(0),
                                    signature14(1),
                                    signature13(2),
                                    signature12(3),
                                    signature11(4),
                                    signature10(5),
                                    signature9(6),
                                    signature8(7),
                                    signature7(8),
                                    signature6(9),
                                    signature5(10),
                                    signature4(11),
                                    signature3(12),
                                    signature2(13),
                                    signature1(14),
                                    signature0(15)
                                    } (SIZE (16))

PreambleThreshold ::= INTEGER (0..72)
-- 0= -36.0dB, 1= -35.5dB, ... , 72= 0.0dB

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

Pre-emptionCapability ::= ENUMERATED {
    shall-not-trigger-pre-emption,
    may-trigger-pre-emption
}

Pre-emptionVulnerability ::= ENUMERATED {
    not-pre-emptable,
    pre-emptable
}

PrimaryCPICH-Power ::= INTEGER(-100..500)
-- step 0.1 (Range -10.0..50.0) Unit is dBm

PrimaryScramblingCode ::= INTEGER (0..511)

PriorityLevel                 ::= INTEGER (0..15)
-- 0 = spare, 1 = highest priority, ...14 = lowest priority and 15 = no priority

PriorityQueue-Id ::= INTEGER (0..maxNrOfPriorityQueues-1)
```

```
PriorityQueue-InfoList ::= SEQUENCE (SIZE (1..maxNrOfPriorityQueues)) OF PriorityQueue-InfoItem

PriorityQueue-InfoItem ::= SEQUENCE {
    priorityQueueId                  PriorityQueue-Id,
    schedulingPriorityIndicator      SchedulingPriorityIndicator,
    macdPDU-Size-Index               MACdPDU-Size-Indexlist,
    iE-Extensions                    ProtocolExtensionContainer { { PriorityQueue-InfoItem-ExtIEs} }          OPTIONAL,
    ...
}

PriorityQueue-InfoItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PriorityQueue-InfoList-to-Modify ::= SEQUENCE (SIZE (1..maxNrOfPriorityQueues)) OF PriorityQueue-InfoItem-to-Modify

PriorityQueue-InfoItem-to-Modify ::= SEQUENCE {
    priorityQueueId                  PriorityQueue-Id,
    schedulingPriorityIndicator      SchedulingPriorityIndicator                                       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 NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PrimaryCCPCH-RSCP ::= INTEGER (0..91)

PropagationDelay ::= INTEGER (0..255)
-- Unit: chips, step size 3 chips
-- example: 0 = 0chip, 1 = 3chips

SCH-TimeSlot ::= INTEGER (0..6)

PunctureLimit ::= INTEGER (0..15)
-- 0: 40%; 1: 44%; ... 14: 96%; 15: 100%

PUSCH-ID ::= INTEGER (0..255)

PUSCHSet-ID ::= INTEGER (0..255)

-- =========================================
--  Q
-- =========================================

QE-Selector ::= ENUMERATED {
    selected,
    non-selected
}

-- =========================================
```

```
-- R
-- =======================================

RACH-SlotFormat ::= ENUMERATED {
    v0,
    v1,
    v2,
    v3,
    ...
}

RACH-SubChannelNumbers ::= BIT STRING {
                                    subCh11(0),
                                    subCh10(1),
                                    subCh9(2),
                                    subCh8(3),
                                    subCh7(4),
                                    subCh6(5),
                                    subCh5(6),
                                    subCh4(7),
                                    subCh3(8),
                                    subCh2(9),
                                    subCh1(10),
                                    subCh0(11)
                                    } (SIZE (12))

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,
    transportlayeraddress   TransportLayerAddress                                 OPTIONAL,
    iE-Extensions           ProtocolExtensionContainer { { RL-Specific-DCH-Info-Item-ExtIEs} }  OPTIONAL,
    ...
}

RL-Specific-DCH-Info-Item-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Range-Correction-Rate ::= INTEGER (-127..127)
-- scaling factor 0.032 m/s

ReferenceClockAvailability ::= ENUMERATED {
    available,
    notAvailable
}

ReferenceSFNoffset ::= INTEGER (0..255)

RepetitionLength ::= INTEGER (1..63)

RepetitionPeriod ::= ENUMERATED {
    v1,
```

```
     v2,
     v4,
     v8,
     v16,
     v32,
     v64,
     ...
}

RepetitionNumber0 ::= INTEGER (0..255)


RepetitionNumber1 ::= INTEGER (1..256)


RefTFCNumber ::= INTEGER (0..3)

ReportCharacteristics ::= CHOICE {
     onDemand               NULL,
     periodic               ReportCharacteristicsType-ReportPeriodicity,
     event-a          ReportCharacteristicsType-EventA,
     event-b          ReportCharacteristicsType-EventB,
     event-c          ReportCharacteristicsType-EventC,
     event-d          ReportCharacteristicsType-EventD,
     event-e          ReportCharacteristicsType-EventE,
     event-f          ReportCharacteristicsType-EventF,
     ...,
     extension-ReportCharacteristics     Extension-ReportCharacteristics
}

Extension-ReportCharacteristics ::= ProtocolIE-Single-Container {{ Extension-ReportCharacteristicsIE }}


Extension-ReportCharacteristicsIE NBAP-PROTOCOL-IES ::= {
     { ID id-ReportCharacteristicsType-OnModification    CRITICALITY reject  TYPE ReportCharacteristicsType-OnModification    PRESENCE mandatory }
}

ReportCharacteristicsType-EventA ::= SEQUENCE {
     measurementThreshold          ReportCharacteristicsType-MeasurementThreshold,
     measurementHysteresisTime     ReportCharacteristicsType-ScaledMeasurementHysteresisTime                    OPTIONAL,
     iE-Extensions                 ProtocolExtensionContainer { { ReportCharacteristicsType-EventA-ExtIEs} }       OPTIONAL,
     ...
     }

ReportCharacteristicsType-EventA-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
     ...
}

ReportCharacteristicsType-EventB ::= SEQUENCE {
     measurementThreshold          ReportCharacteristicsType-MeasurementThreshold,
     measurementHysteresisTime     ReportCharacteristicsType-ScaledMeasurementHysteresisTime                    OPTIONAL,
     iE-Extensions                 ProtocolExtensionContainer { { ReportCharacteristicsType-EventB-ExtIEs} }       OPTIONAL,
     ...
     }

ReportCharacteristicsType-EventB-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
     ...
```

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```
}

ReportCharacteristicsType-EventC ::= SEQUENCE {
    measurementIncreaseThreshold    ReportCharacteristicsType-MeasurementIncreaseDecreaseThreshold,
    measurementChangeTime           ReportCharacteristicsType-ScaledMeasurementChangeTime,
    iE-Extensions                   ProtocolExtensionContainer { { ReportCharacteristicsType-EventC-ExtIEs} }        OPTIONAL,
    ...
    }

ReportCharacteristicsType-EventC-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

ReportCharacteristicsType-EventD ::= SEQUENCE {
    measurementDecreaseThreshold    ReportCharacteristicsType-MeasurementIncreaseDecreaseThreshold,
    measurementChangeTime           ReportCharacteristicsType-ScaledMeasurementChangeTime,
    iE-Extensions                   ProtocolExtensionContainer { { ReportCharacteristicsType-EventD-ExtIEs} }        OPTIONAL,
    ...
    }

ReportCharacteristicsType-EventD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

ReportCharacteristicsType-EventE ::= SEQUENCE {
    measurementThreshold1           ReportCharacteristicsType-MeasurementThreshold,
    measurementThreshold2           ReportCharacteristicsType-MeasurementThreshold           OPTIONAL,
    measurementHysteresisTime       ReportCharacteristicsType-ScaledMeasurementHysteresisTime   OPTIONAL,
    reportPeriodicity               ReportCharacteristicsType-ReportPeriodicity                 OPTIONAL,
    iE-Extensions                   ProtocolExtensionContainer { { ReportCharacteristicsType-EventE-ExtIEs} }        OPTIONAL,
    ...
    }

ReportCharacteristicsType-EventE-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

ReportCharacteristicsType-EventF ::= SEQUENCE {
    measurementThreshold1           ReportCharacteristicsType-MeasurementThreshold,
    measurementThreshold2           ReportCharacteristicsType-MeasurementThreshold           OPTIONAL,
    measurementHysteresisTime       ReportCharacteristicsType-ScaledMeasurementHysteresisTime   OPTIONAL,
    reportPeriodicity               ReportCharacteristicsType-ReportPeriodicity                 OPTIONAL,
    iE-Extensions                   ProtocolExtensionContainer { { ReportCharacteristicsType-EventF-ExtIEs} }        OPTIONAL,
    ...
    }

ReportCharacteristicsType-EventF-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

ReportCharacteristicsType-OnModification ::= SEQUENCE {
    measurementThreshold            ReportCharacteristicsType-MeasurementThreshold,
    iE-Extensions                   ProtocolExtensionContainer { { ReportCharacteristicsType-OnModification-ExtIEs} }    OPTIONAL,
        ...
```

```
    }

ReportCharacteristicsType-OnModification-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

ReportCharacteristicsType-MeasurementIncreaseDecreaseThreshold ::= CHOICE {
    received-total-wide-band-power                          Received-total-wide-band-power-Value-IncrDecrThres,
    transmitted-carrier-power       Transmitted-Carrier-Power-Value,
    ackowledged-prach-preambles        Acknowledged-PRACH-preambles-Value,
    uL-TimeslotISCP                 UL-TimeslotISCP-Value-IncrDecrThres,
    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,
    acknowledged-PCPCH-access-preambles     Acknowledged-PCPCH-access-preambles,
    detected-PCPCH-access-preambles         Detected-PCPCH-access-preambles,
    ...
}

ReportCharacteristicsType-MeasurementThreshold ::= CHOICE {
    received-total-wide-band-power                          Received-total-wide-band-power-Value,
    transmitted-carrier-power       Transmitted-Carrier-Power-Value,
    ackowledged-prach-preambles        Acknowledged-PRACH-preambles-Value,
    uL-TimeslotISCP                 UL-TimeslotISCP-Value,
    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,
    acknowledged-PCPCH-access-preambles     Acknowledged-PCPCH-access-preambles,
    detected-PCPCH-access-preambles         Detected-PCPCH-access-preambles,
    ...,
    extension-ReportCharacteristicsType-MeasurementThreshold        Extension-ReportCharacteristicsType-MeasurementThreshold
}

Extension-ReportCharacteristicsType-MeasurementThreshold    ::= ProtocolIE-Single-Container {{ Extension-ReportCharacteristicsType-
MeasurementThresholdIE }}

Extension-ReportCharacteristicsType-MeasurementThresholdIE NBAP-PROTOCOL-IES ::= {
    { ID id-TUTRANGPSMeasurementThresholdInformation    CRITICALITY reject  TYPE TUTRANGPSMeasurementThresholdInformation    PRESENCE mandatory }|
    { ID id-SFNSFNMeasurementThresholdInformation   CRITICALITY reject  TYPE SFNSFNMeasurementThresholdInformation    PRESENCE mandatory }
}

ReportCharacteristicsType-ScaledMeasurementChangeTime ::= CHOICE {
    msec                MeasurementChangeTime-Scaledmsec,
    ...
}

MeasurementChangeTime-Scaledmsec ::= INTEGER (1..6000,...)
-- MeasurementChangeTime-Scaledmsec = Time * 10
-- Unit ms, Range 10ms .. 60000ms(1min), Step 10ms
```

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```
ReportCharacteristicsType-ScaledMeasurementHysteresisTime ::= CHOICE {
    msec                 MeasurementHysteresisTime-Scaledmsec,
    ...
}

MeasurementHysteresisTime-Scaledmsec ::= INTEGER (1..6000,...)
-- MeasurementHysteresisTime-Scaledmsec = Time * 10
-- Unit ms, Range 10ms .. 60000ms(1min), Step 10ms

ReportCharacteristicsType-ReportPeriodicity ::= CHOICE {
    msec                 ReportPeriodicity-Scaledmsec,
    min                  ReportPeriodicity-Scaledmin,
    ...
}

ReportPeriodicity-Scaledmsec ::= INTEGER (1..6000,...)
-- ReportPeriodicity-msec = ReportPeriodicity * 10
-- Unit ms, Range 10ms .. 60000ms(1min), Step 10ms

ReportPeriodicity-Scaledmin ::= INTEGER (1..60,...)
-- Unit min, Range 1min .. 60min(hour), Step 1min

ReportPeriodicity-Scaledhour ::= INTEGER (1..24,...)
-- Unit hour, Range 1hour .. 24hours(day), Step 1hour

ResourceOperationalState ::= ENUMERATED {
    enabled,
    disabled
}

CommonTransportChannel-InformationResponse ::= SEQUENCE {
    commonTransportChannelID        CommonTransportChannelID,
    bindingID                       BindingID                 OPTIONAL,
    transportLayerAddress           TransportLayerAddress     OPTIONAL,
    iE-Extensions                   ProtocolExtensionContainer { { CommonTransportChannel-InformationResponse-ExtIEs} }   OPTIONAL,
    ...
}

CommonTransportChannel-InformationResponse-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

RL-ID ::= INTEGER (0..31)

RL-Set-ID              ::= INTEGER (0..31)

Round-Trip-Time-IncrDecrThres ::= INTEGER(0..32766)
```

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

Round-Trip-Time-Value ::= INTEGER(0..32767)
-- According to mapping in [22]

RSCP-Value ::= INTEGER (0..127)
-- According to mapping in [23]

RSCP-Value-IncrDecrThres ::= INTEGER (0..126)

Received-total-wide-band-power-Value ::= INTEGER(0..621)
-- According to mapping in [22]/[23]

Received-total-wide-band-power-Value-IncrDecrThres ::= INTEGER (0..620)

RequestedDataValueInformation ::= CHOICE {
    informationAvailable       InformationAvailable,
    informationnotAvailable    InformationnotAvailable
}

InformationAvailable::= SEQUENCE {
    requesteddataValue     RequestedDataValue,
    ie-Extensions          ProtocolExtensionContainer { { InformationAvailableItem-ExtIEs} }                    OPTIONAL,
    ...
}

InformationAvailableItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

InformationnotAvailable ::= NULL

RequestedDataValue ::= SEQUENCE {
    dgps-corrections      DGPSCorrections  OPTIONAL,
    gps-navandrecovery    GPS-NavigationModel-and-TimeRecovery   OPTIONAL,
    gps-ionos-model       GPS-Ionospheric-Model  OPTIONAL,
    gps-utc-model         GPS-UTC-Model          OPTIONAL,
    gps-almanac           GPS-Almanac            OPTIONAL,
    gps-rt-integrity      GPS-RealTime-Integrity  OPTIONAL,
    gpsrxpos              GPS-RX-POS              OPTIONAL,
    ...
}

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

Rx-Timing-Deviation-Value-LCR ::= INTEGER (0..255)

-- ========================================
-- S
-- ========================================
```

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```
AdjustmentPeriod            ::= INTEGER(1..256)
-- Unit Frame


SAT-ID ::= INTEGER (0..63)


SAT-Info-Almanac ::= SEQUENCE (SIZE (1..maxNoSat)) OF SAT-Info-Almanac-Item


SAT-Info-Almanac-Item ::= 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 { { SAT-Info-Almanac-Item-ExtIEs} }        OPTIONAL,
    ...
}


SAT-Info-Almanac-Item-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {

    ...
}


SAT-Info-DGPSCorrections ::= SEQUENCE (SIZE (1..maxNoSat)) OF SAT-Info-DGPSCorrections-Item


SAT-Info-DGPSCorrections-Item ::= SEQUENCE {
    sat-id                          SAT-ID,
    iode-dgps                       BIT STRING (SIZE (8)),
    udre                            UDRE,
    prc                             PRC,
    range-correction-rate           Range-Correction-Rate,
    ie-Extensions                   ProtocolExtensionContainer { { SAT-Info-DGPSCorrections-Item-ExtIEs} }  OPTIONAL,
    ...
}


SAT-Info-DGPSCorrections-Item-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {

    ...
}


SATInfo-RealTime-Integrity ::= SEQUENCE (SIZE (1..maxNoSat)) OF SAT-Info-RealTime-Integrity-Item


SAT-Info-RealTime-Integrity-Item ::= SEQUENCE {
  bad-sat-id      SAT-ID,
  ie-Extensions   ProtocolExtensionContainer { { SAT-Info-RealTime-Integrity-Item-ExtIEs} }                       OPTIONAL,
  ...
```

```
}

SAT-Info-RealTime-Integrity-Item-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

ScaledAdjustmentRatio           ::= INTEGER(0..100)
-- AdjustmentRatio  = ScaledAdjustmentRatio / 100

MaxAdjustmentStep          ::= INTEGER(1..10)
-- Unit Slot

SchedulingPriorityIndicator                 ::= INTEGER (0..15)      -- lowest (0), highest (15)

SID ::= INTEGER (0..maxNrOfMACdPDUIndexes-1)

ScramblingCodeNumber ::= INTEGER (0..15)

SecondaryCCPCH-SlotFormat ::= INTEGER(0..17,...)

Segment-Type ::= ENUMERATED {
        first-segment,
        first-segment-short,
        subsequent-segment,
        last-segment,
        last-segment-short,
        complete-SIB,
        complete-SIB-short,
        ...
}

S-FieldLength ::= ENUMERATED {
        v1,
        v2,
        ...
}

SFN ::= INTEGER (0..4095)

SFNSFN-FDD ::= INTEGER (0..614399)

SFNSFN-TDD ::= INTEGER (0..40961)

SFNSFNChangeLimit ::= INTEGER (1..256)
-- Unit chip, Step 1/16 chip, Range 1/16..16 chip

SFNSFNDriftRate ::= INTEGER (-100..100)
-- Unit chip/s, Step 1/256 chip/s, Range -100/256..+100/256 chip/s

SFNSFNDriftRateQuality ::= INTEGER (0..100)
-- Unit chip/s, Step 1/256 chip/s, Range 0..100/256 chip/s

SFNSFNMeasurementThresholdInformation::= SEQUENCE {
    sFNSFNChangeLimit                   SFNSFNChangeLimit                OPTIONAL,
```

*ETSI*

```
    predictedSFNSFNDeviationLimit        PredictedSFNSFNDeviationLimit        OPTIONAL,
    iE-Extensions                    ProtocolExtensionContainer { { SFNSFNMeasurementThresholdInformation-ExtIEs} }    OPTIONAL,
    ...
}


SFNSFNMeasurementThresholdInformation-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {

    ...
}


SFNSFNMeasurementValueInformation ::= SEQUENCE {
    successfullNeighbouringCellSFNSFNObservedTimeDifferenceMeasurementInformation    SEQUENCE (SIZE(1..maxNrOfMeasNCell)) OF
        SEQUENCE {
            uC-Id               UC-Id,
            sFNSFNValue       SFNSFNValue,
            sFNSFNQuality       SFNSFNQuality                OPTIONAL,
            sFNSFNDriftRate       SFNSFNDriftRate,
            sFNSFNDriftRateQuality    SFNSFNDriftRateQuality,
            sFNSFNTimeStampInformation          SFNSFNTimeStampInformation,
            iE-Extensions        ProtocolExtensionContainer { { SuccessfullNeighbouringCellSFNSFNObservedTimeDifferenceMeasurementInformationItem-
ExtIEs} }        OPTIONAL,
            ...
        },
    unsuccessfullNeighbouringCellSFNSFNObservedTimeDifferenceMeasurementInformation    SEQUENCE (SIZE(0..maxNrOfMeasNCell-1)) OF
        SEQUENCE {
            uC-Id               UC-Id,
            iE-Extensions        ProtocolExtensionContainer { { UnsuccessfullNeighbouringCellSFNSFNObservedTimeDifferenceMeasurementInformationItem-
ExtIEs} }        OPTIONAL,
            ...
        },
    iE-Extensions        ProtocolExtensionContainer { { SFNSFNMeasurementValueInformationItem-ExtIEs} }             OPTIONAL,
    ...
}


SFNSFNMeasurementValueInformationItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {

    ...
}


SuccessfullNeighbouringCellSFNSFNObservedTimeDifferenceMeasurementInformationItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {

    ...
}


UnsuccessfullNeighbouringCellSFNSFNObservedTimeDifferenceMeasurementInformationItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {

    ...
}


SFNSFNQuality ::= INTEGER (0..255)
-- Unit chip, Step 1/16 chip, Range 0.. 255/16 chip

ShutdownTimer ::= INTEGER (1..3600)
-- Unit sec
```

```
SIB-Originator ::= ENUMERATED {
    nodeB,
    cRNC,
    ...
}

SIR-Error-Value ::= INTEGER (0..125)

SFNSFNTimeStampInformation ::= CHOICE {
    sFNSFNTimeStamp-FDD     SFN,
    sFNSFNTimeStamp-TDD     SFNSFNTimeStamp-TDD,
    ...}

SFNSFNTimeStamp-TDD::= SEQUENCE {
    sFN             SFN,
    timeSlot        TimeSlot,
    iE-Extensions                   ProtocolExtensionContainer { { SFNSFNTimeStamp-ExtIEs} }                  OPTIONAL,
    ...
}

SFNSFNTimeStamp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

SFNSFNValue ::= CHOICE {
    sFNSFN-FDD      SFNSFN-FDD,
    sFNSFN-TDD      SFNSFN-TDD,
    ...
}

SIR-Error-Value-IncrDecrThres ::= INTEGER (0..124)

SIR-Value ::= INTEGER (0..63)
-- According to mapping in [22]/[23]

SIR-Value-IncrDecrThres ::= INTEGER (0..62)

SignallingBearerRequestIndicator::= ENUMERATED {bearerRequested}

SpecialBurstScheduling ::= INTEGER (1..256)

SSDT-Cell-Identity ::= ENUMERATED {a, b, c, d, e, f, g, h}

SSDT-CellID-Length ::= ENUMERATED {
    short,
    medium,
    long
}

SSDT-Indication ::= ENUMERATED {
```

```
    ssdt-active-in-the-UE,
    ssdt-not-active-in-the-UE
}


Start-Of-Audit-Sequence-Indicator ::= ENUMERATED {

    start-of-audit-sequence,
    not-start-of-audit-sequence
}

STTD-Indicator ::= ENUMERATED {
    active,
    inactive,
    ...
}

SSDT-SupportIndicator ::= ENUMERATED {
    sSDT-Supported,
    sSDT-not-supported
}

SyncCase ::= INTEGER (1..2,...)

SYNCDlCodeId ::= INTEGER (1..32,...)

SyncFrameNumber ::= INTEGER (1..10)

SynchronisationReportCharacteristics ::= SEQUENCE {
    synchronisationReportCharacteristicsType    SynchronisationReportCharacteristicsType,
    synchronisationReportCharactThreExc         SynchronisationReportCharactThreExc    OPTIONAL,
        -- Thie IE shall be included if the synchronisationReportCharacteristicsType IE is set to "thresholdExceeding".
    iE-Extensions                               ProtocolExtensionContainer { { SynchronisationReportCharacteristics-ExtIEs } } OPTIONAL,
    ...
}

SynchronisationReportCharacteristics-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    [ID id-SyncDLCodeIdThreInfoLCR  CRITICALITY ignore EXTENSION    SyncDLCodeIdThreInfoLCR    PRESENCE optional ],
    ...
}

SynchronisationReportCharactThreExc::=  SEQUENCE (SIZE (1..maxNrOfCellSyncBursts)) OF SynchronisationReportCharactThreInfoItem  -- Mandatory for
3.84Mcps TDD only

SynchronisationReportCharactThreInfoItem ::= SEQUENCE {
    syncFrameNumber           SyncFrameNumber,
    cellSyncBurstInformation  SEQUENCE (SIZE (1.. maxNrOfReceptsPerSyncFrame)) OF SynchronisationReportCharactCellSyncBurstInfoItem,
    iE-Extensions             ProtocolExtensionContainer { { SynchronisationReportCharactThreInfoItem-ExtIEs } }    OPTIONAL,
    ...
}

SynchronisationReportCharactThreInfoItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {

    ...
}

SynchronisationReportCharactCellSyncBurstInfoItem ::= SEQUENCE {
```

*ETSI*

```
    cellSyncBurstCode                CellSyncBurstCode,
    cellSyncBurstCodeShift           CellSyncBurstCodeShift,
    cellSyncBurstTiming              CellSyncBurstTiming              OPTIONAL,
    cellSyncBurstTimingThreshold     CellSyncBurstTimingThreshold    OPTIONAL,
    iE-Extensions                    ProtocolExtensionContainer { { SynchronisationReportCharactCellSyncBurstInfoItem-ExtIEs } }   OPTIONAL,
    ...
}

SynchronisationReportCharactCellSyncBurstInfoItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

SyncDLCodeIdThreInfoLCR ::= SEQUENCE (SIZE (0..maxNoOfSyncFramesLCR)) OF SyncDLCodeIdThreInfoList  --Mandatory for 1.28Mcps TDD only

SyncDLCodeIdThreInfoList ::= SEQUENCE {
    syncFrameNoToReceive             SyncFrameNumber,
    syncDLCodeIdInfoLCR              SyncDLCodeInfoListLCR,
    iE-Extensions                    ProtocolExtensionContainer { { SyncDLCodeIdThreInfoList-ExtIEs } }    OPTIONAL,
    ...
}

SyncDLCodeIdThreInfoList-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

SyncDLCodeInfoListLCR ::= SEQUENCE (SIZE (1..maxNoOfSyncDLCodesLCR)) OF SyncDLCodeInfoItemLCR

SyncDLCodeInfoItemLCR ::= SEQUENCE {
    syncDLCodeId                     SYNCDlCodeId,
    syncDLCodeIdArrivTime            CellSyncBurstTiming              OPTIONAL,
    syncDLCodeIdTimingThre           CellSyncBurstTimingThreshold     OPTIONAL,
    iE-Extensions                    ProtocolExtensionContainer { { SyncDLCodeInfoItem-LCR-ExtIEs } }    OPTIONAL,
    ...
}

SyncDLCodeInfoItem-LCR-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

SynchronisationReportCharacteristicsType ::= ENUMERATED {
    frameRelated,
    sFNperiodRelated,
    cycleLengthRelated,
    thresholdExceeding,
    frequencyAcquisitionCompleted,
    ...
}

SynchronisationReportType ::= ENUMERATED {
    initialPhase,
    steadyStatePhase,
    lateEntrantCell,
    frequencyAcquisition,
    ...
```

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```
}

-- =======================================
--  T
-- =======================================

T-Cell ::= ENUMERATED {
    v0,
    v1,
    v2,
    v3,
    v4,
    v5,
    v6,
    v7,
    v8,
    v9
}

T-RLFAILURE ::= INTEGER (0..255)
-- Unit seconds, Range 0s .. 25.5s, Step 0.1s

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-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 NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TDD-DL-Code-LCR-Information ::= SEQUENCE (SIZE (1..maxNrOfDPCHLCRs)) OF TDD-DL-Code-LCR-InformationItem

TDD-DL-Code-LCR-InformationItem ::= SEQUENCE {
    dPCH-ID                            DPCH-ID,
    tdd-ChannelisationCodeLCR          TDD-ChannelisationCodeLCR,
    iE-Extensions                      ProtocolExtensionContainer { { TDD-DL-Code-LCR-InformationItem-ExtIEs} }     OPTIONAL,
    ...
}

TDD-DL-Code-LCR-InformationItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

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,
    ...
}

TransportFormatCombination-Beta ::= CHOICE {
    signalledGainFactors      SEQUENCE {
        gainFactor                CHOICE {
            fdd                        SEQUENCE {
                betaC                      BetaCD,
```

```
            betaD                           BetaCD,
            iE-Extensions          ProtocolExtensionContainer { { GainFactorFDD-ExtIEs } }       OPTIONAL,
            ...
        },
        tdd                       BetaCD,
        ...
    },
    refTFCNumber               RefTFCNumber    OPTIONAL,
    iE-Extensions              ProtocolExtensionContainer { { SignalledGainFactors-ExtIEs } }                     OPTIONAL,
    ...
    },
    computedGainFactors        RefTFCNumber,
    ...
}

GainFactorFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

SignalledGainFactors-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

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 NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TDD-UL-Code-LCR-Information ::= SEQUENCE (SIZE (1..maxNrOfDPCHLCRs)) OF TDD-UL-Code-LCR-InformationItem

TDD-UL-Code-LCR-InformationItem ::= SEQUENCE {
    dPCH-ID                           DPCH-ID,
    tdd-ChannelisationCodeLCR         TDD-ChannelisationCodeLCR,
    iE-Extensions                     ProtocolExtensionContainer { { TDD-UL-Code-LCR-InformationItem-ExtIEs} }     OPTIONAL,
    ...
}

TDD-UL-Code-LCR-InformationItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TFCI-Coding ::= ENUMERATED {
    v4,
    v8,
    v16,
    v32,
```

```
    ...
}

TFCI-Presence ::= ENUMERATED {
    present,
    not-present
}

TFCI-SignallingMode ::= SEQUENCE {
    tFCI-SignallingOption        TFCI-SignallingMode-TFCI-SignallingOption,
    splitType                TFCI-SignallingMode-SplitType              OPTIONAL,
    -- This IE shall be present if the TFCI signalling option is split --
    lengthOfTFCI2                TFCI-SignallingMode-LengthOfTFCI2         OPTIONAL,
    iE-Extensions            ProtocolExtensionContainer { { TFCI-SignallingMode-ExtIEs} }                    OPTIONAL,
    ...
}

TFCI-SignallingMode-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TFCI-SignallingMode-LengthOfTFCI2 ::= INTEGER (1..10)

TFCI-SignallingMode-SplitType ::= ENUMERATED {
    hard,
    logical
}

TFCI-SignallingMode-TFCI-SignallingOption ::= ENUMERATED {
    normal,
    split
}

TFCI2-BearerInformationResponse ::= SEQUENCE {
    bindingID                             BindingID,
    transportLayerAddress                 TransportLayerAddress,
    iE-Extensions                         ProtocolExtensionContainer { { TFCI2-BearerInformationResponse-ExtIEs} }   OPTIONAL,
    ...
}

TFCI2-BearerInformationResponse-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}


TFCI2BearerRequestIndicator::= ENUMERATED {newBearerRequested}


TGD               ::= INTEGER (0|15..269)
-- 0 = Undefined, only one transmission gap in the transmission gap pattern sequence


TGPRC              ::= INTEGER (0..511)
-- 0 = infinity
```

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```
TGPSID              ::= INTEGER (1.. maxTGPS)


TGSN                ::= INTEGER (0..14)

TimeSlot ::= INTEGER (0..14)

TimeSlotDirection ::= ENUMERATED {
    ul,
    dl,
    ...
}

TimeSlotLCR ::= INTEGER (0..6)

TimeSlotStatus ::= ENUMERATED {
    active,
    not-active,
    ...
}

TimingAdjustmentValue ::= CHOICE {
    initialPhase        INTEGER (0..255),
    steadyStatePhase    INTEGER (0..1048575)
}

TimingAdvanceApplied ::= ENUMERATED {
    yes,
    no
}
-- For 1.28Mcps TDD TimingAdvanceApplied = No

ToAWE ::= INTEGER (0..2559)
-- Unit ms

ToAWS ::= INTEGER (0..1279)
-- Unit ms

Transmission-Gap-Pattern-Sequence-Information ::= SEQUENCE (SIZE (1..maxTGPS)) OF
    SEQUENCE {
        tGPSID          TGPSID,
        tGSN            TGSN,
        tGL1            GapLength,
        tGL2            GapLength   OPTIONAL,
        tGD             TGD,
        tGPL1           GapDuration,
        tGPL2           GapDuration OPTIONAL,
        uL-DL-mode      UL-DL-mode,
        downlink-Compressed-Mode-Method    Downlink-Compressed-Mode-Method    OPTIONAL,
```

```
            -- This IE shall be present if the UL/DL mode IE is set to "DL only" or "UL/DL"
        uplink-Compressed-Mode-Method       Uplink-Compressed-Mode-Method      OPTIONAL,
            -- This IE shall be present if the UL/DL mode IE is set to "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 NBAP-PROTOCOL-EXTENSION ::= {
    ...
}


TransmissionGapPatternSequenceCodeInformation   ::= ENUMERATED{
    code-change,
    nocode-change
}

Transmitted-Carrier-Power-Value ::= INTEGER(0..100)
-- According to mapping in [4]/[5]

Transmitted-Code-Power-Value ::= INTEGER (0..127)
-- According to mapping in [4]/[5]

Transmitted-Code-Power-Value-IncrDecrThres ::= INTEGER (0..112,...)

TransmissionDiversityApplied ::= BOOLEAN
-- true: applied, false: not applied

TransmitDiversityIndicator ::= ENUMERATED {
    active,
    inactive
}

TFCS ::= SEQUENCE {
    tFCSvalues                  CHOICE {
        no-Split-in-TFCI            TFCS-TFCSList,
        split-in-TFCI               SEQUENCE {
            transportFormatCombination-DCH    TFCS-DCHList,
            signallingMethod                  CHOICE {
                tFCI-Range                  TFCS-MapingOnDSCHList,
                explicit                      TFCS-DSCHList,
                ...
            },
            iE-Extensions                       ProtocolExtensionContainer { { Split-in-TFCI-ExtIEs } }         OPTIONAL,
```

```
            ...
        },
    ...
    },
    iE-Extensions        ProtocolExtensionContainer { { TFCS-ExtIEs} }        OPTIONAL,
    ...
}

Split-in-TFCI-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TFCS-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TFCS-TFCSList ::= SEQUENCE (SIZE (1..maxNrOfTFCs)) OF
    SEQUENCE {
        cTFC               TFCS-CTFC,
        tFC-Beta          TransportFormatCombination-Beta    OPTIONAL,
        iE-Extensions        ProtocolExtensionContainer { { TFCS-TFCSList-ExtIEs} }    OPTIONAL,
        ...
}

TFCS-TFCSList-ExtIEs NBAP-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)
}

TFCS-DCHList ::= SEQUENCE (SIZE (1..maxNrOfTFCI1Combs)) OF
    SEQUENCE {
        cTFC               TFCS-CTFC,
        iE-Extensions        ProtocolExtensionContainer { { TFCS-DCHList-ExtIEs} }    OPTIONAL,
        ...
}

TFCS-DCHList-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TFCS-MapingOnDSCHList ::= SEQUENCE (SIZE (1..maxNrOfTFCIGroups)) OF
    SEQUENCE {
        maxTFCI-field2-Value       TFCS-MaxTFCI-field2-Value,
        cTFC-DSCH              TFCS-CTFC,
        iE-Extensions                ProtocolExtensionContainer { { TFCS-MapingOnDSCHList-ExtIEs} }                OPTIONAL,
```

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```
    ...
}

TFCS-MapingOnDSCHList-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TFCS-MaxTFCI-field2-Value ::= INTEGER (1..maxNrOfTFCI2Combs-1)

TFCS-DSCHList ::= SEQUENCE (SIZE (1..maxNrOfTFCI2Combs)) OF
    SEQUENCE {
        cTFC-DSCH                TFCS-CTFC,
        iE-Extensions            ProtocolExtensionContainer { { TFCS-DSCHList-ExtIEs} }    OPTIONAL,
        ...
}

TFCS-DSCHList-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TransportBearerRequestIndicator ::= ENUMERATED {
    bearerRequested,
    bearerNotRequested,
    ...
}

TransportFormatSet ::= SEQUENCE {
    dynamicParts             TransportFormatSet-DynamicPartList,
    semi-staticPart          TransportFormatSet-Semi-staticPart,
    iE-Extensions            ProtocolExtensionContainer { { TransportFormatSet-ExtIEs} }      OPTIONAL,
    ...
}

TransportFormatSet-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TransportFormatSet-DynamicPartList ::= SEQUENCE (SIZE (1..maxNrOfTFs)) OF
    SEQUENCE {
        nrOfTransportBlocks       TransportFormatSet-NrOfTransportBlocks,
        transportBlockSize        TransportFormatSet-TransportBlockSize      OPTIONAL,
        -- This IE shall be present if the Number of Transport Blocks IE is set to a value greater than 0
        mode                      TransportFormatSet-ModeDP,
        iE-Extensions             ProtocolExtensionContainer { { TransportFormatSet-DynamicPartList-ExtIEs} }     OPTIONAL,
        ...
    }

TransportFormatSet-DynamicPartList-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TDD-TransportFormatSet-ModeDP ::= SEQUENCE {
    transmissionTimeIntervalInformation    TransmissionTimeIntervalInformation    OPTIONAL,
    -- This IE shall be present if the Transmission Time Interval IE in the Semi-static Transport Format Information IE is set to "dynamic"
```

*ETSI*

```
    iE-Extensions                           ProtocolExtensionContainer { {TDD-TransportFormatSet-ModeDP-ExtIEs} } OPTIONAL,
    ...
    }

TDD-TransportFormatSet-ModeDP-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TransmissionTimeIntervalInformation ::= SEQUENCE (SIZE (1..maxTTI-count)) OF
    SEQUENCE {
        transmissionTimeInterval        TransportFormatSet-TransmissionTimeIntervalDynamic,
    iE-Extensions                       ProtocolExtensionContainer { { TransmissionTimeIntervalInformation-ExtIEs} }    OPTIONAL,
    ...
}

TransmissionTimeIntervalInformation-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TransportFormatSet-Semi-staticPart ::= SEQUENCE {
    transmissionTimeInterval            TransportFormatSet-TransmissionTimeIntervalSemiStatic,
    channelCoding                       TransportFormatSet-ChannelCodingType,
    codingRate                          TransportFormatSet-CodingRate            OPTIONAL,
    -- This IE shall be present if the Type of channel coding IE is set to 'convolutional' or 'turbo'
    rateMatcingAttribute        TransportFormatSet-RateMatchingAttribute,
    cRC-Size                    TransportFormatSet-CRC-Size,
    mode                        TransportFormatSet-ModeSSP  ,
    iE-Extensions               ProtocolExtensionContainer { { TransportFormatSet-Semi-staticPart-ExtIEs} }        OPTIONAL,
    ...
}

TransportFormatSet-Semi-staticPart-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TransportFormatSet-ChannelCodingType ::= ENUMERATED {
    no-codingTDD,
    convolutional-coding,
    turbo-coding,
    ...
}

TransportFormatSet-CodingRate ::= ENUMERATED {
    half,
    third,
    ...
}

TransportFormatSet-CRC-Size ::= ENUMERATED {
    v0,
    v8,
    v12,
    v16,
    v24,
```

```
    ...
}

TransportFormatSet-ModeDP ::= CHOICE {
    tdd                 TDD-TransportFormatSet-ModeDP,
    notApplicable               NULL,
    ...
}

TransportFormatSet-ModeSSP ::= CHOICE {
    tdd             TransportFormatSet-SecondInterleavingMode,
    notApplicable               NULL,
    ...
}

TransportFormatSet-NrOfTransportBlocks ::= INTEGER (0..512)

TransportFormatSet-RateMatchingAttribute ::= INTEGER (1..maxRateMatching)

TransportFormatSet-SecondInterleavingMode ::= ENUMERATED {
    frame-rlated,
    timeSlot-related,
    ...
}

TransportFormatSet-TransmissionTimeIntervalDynamic ::= ENUMERATED {
    msec-10,
    msec-20,
    msec-40,
    msec-80,
    ...
}

TransportFormatSet-TransmissionTimeIntervalSemiStatic ::= ENUMERATED {
    msec-10,
    msec-20,
    msec-40,
    msec-80,
    dynamic,
    ...,
    msec-5
}

TransportFormatSet-TransportBlockSize ::= INTEGER (0..5000)

TransportLayerAddress ::= BIT STRING (SIZE (1..160, ...))

TSTD-Indicator ::= ENUMERATED {
    active,
    inactive
}

TUTRANGPS ::= SEQUENCE {
    ms-part     INTEGER (0..16383),
```

*ETSI*

```
    ls-part      INTEGER (0..4294967295)
}

TUTRANGPSChangeLimit ::= INTEGER (1..256)
-- Unit chip, Step 1/16 chip, Range 1/16..16 chip

TUTRANGPSDriftRate ::= INTEGER (-50..50)
-- Unit chip/s, Step 1/256 chip/s, Range -50/256..+50/256 chip/s

TUTRANGPSDriftRateQuality ::= INTEGER (0..50)
-- Unit chip/s, Step 1/256 chip/s, Range 0..50/256 chip/s

TUTRANGPSAccuracyClass ::= ENUMERATED {
    accuracy-class-A,
    accuracy-class-B,
    accuracy-class-C,
    ...
}

TUTRANGPSMeasurementThresholdInformation ::= SEQUENCE {
    tUTRANGPSChangeLimit                      TUTRANGPSChangeLimit                      OPTIONAL,
    predictedTUTRANGPSDeviationLimit          PredictedTUTRANGPSDeviationLimit          OPTIONAL,
    iE-Extensions                     ProtocolExtensionContainer { { TUTRANGPSMeasurementThresholdInformation-ExtIEs} }    OPTIONAL,
    ...
}

TUTRANGPSMeasurementThresholdInformation-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {

    ...
}

TUTRANGPSMeasurementValueInformation ::= SEQUENCE {
        tUTRANGPS                       TUTRANGPS,
        tUTRANGPSQuality                TUTRANGPSQuality,
        tUTRANGPSDriftRate              TUTRANGPSDriftRate,
        tUTRANGPSDriftRateQuality       TUTRANGPSDriftRateQuality,
        iE-Extensions                   ProtocolExtensionContainer { {TUTRANGPSMeasurementValueInformationItem-ExtIEs} }    OPTIONAL,
        ...
}

TUTRANGPSMeasurementValueInformationItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {

    ...
}

TUTRANGPSQuality ::= INTEGER (0..255)
-- Unit chip, Step 1/16 chip, Range 0.. 255/16 chip

TypeOfError ::= ENUMERATED {
    not-understood,
    missing,
    ...
}
```

```
-- =========================================
-- U
-- =========================================

UARFCN ::= INTEGER (0..16383, ...)
-- corresponds to 1885.2MHz .. 2024.8MHz

UC-Id ::= SEQUENCE {
    rNC-ID               RNC-ID,
    c-ID                 C-ID,
    iE-Extensions        ProtocolExtensionContainer { {UC-Id-ExtIEs} } OPTIONAL,
    ...
}
UC-Id-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UDRE ::= ENUMERATED {
    udre-minusequal-one-m,
    udre-betweenoneandfour-m,
    udre-betweenfourandeight-m,
    udre-greaterequaleight-m
}

UE-Capability-InformationFDD ::= SEQUENCE {
    hSDSCH-TrCH-Bits-Per-HSDSCH-TTI      ENUMERATED {v7300, v14600, v20456, v28800,...},
    hSDSCH-Multi-Code-Capability         ENUMERATED {v5, v10, v15,...},
    min-Inter-TTI-Interval               INTEGER (1..3,...),
    mAChs-Reordering-Buffer-Size         INTEGER (1..300,...),
    iE-Extensions                        ProtocolExtensionContainer { { UE-Capability-InformationFDD-ExtIEs } }      OPTIONAL,
    ...
}

UE-Capability-InformationFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UE-Capability-InformationTDD ::= SEQUENCE {
    hsDSCHTrCHBitsPerTTI                 ENUMERATED { v7040, v10228, v14080, ... },
    hSDSCH-Multi-Code-Capability         ENUMERATED {v8, v12, v16,...},
    mAChs-Reordering-Buffer-Size         INTEGER (1..300,...),
    iE-Extensions                        ProtocolExtensionContainer { { UE-Capability-InformationTDD-ExtIEs } }      OPTIONAL,
    ...
}

UE-Capability-InformationTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-CapacityCredit ::= INTEGER (0..65535)

UL-DL-mode ::= ENUMERATED {
    ul-only,
```

*ETSI*

```
    dl-only,
    both-ul-and-dl
}


Uplink-Compressed-Mode-Method   ::= ENUMERATED {
    sFdiv2,
    higher-layer-scheduling,
    ...
}

UL-Timeslot-Information ::= SEQUENCE (SIZE (1..maxNrOfULTSs)) OF UL-Timeslot-InformationItem

UL-Timeslot-InformationItem ::= SEQUENCE {
    timeSlot                          TimeSlot,
    midambleShiftAndBurstType         MidambleShiftAndBurstType,
    tFCI-Presence                     TFCI-Presence,
    uL-Code-InformationList           TDD-UL-Code-Information,
    iE-Extensions                     ProtocolExtensionContainer { { UL-Timeslot-InformationItem-ExtIEs} }     OPTIONAL,
    ...
}

UL-Timeslot-InformationItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-TimeslotLCR-Information ::= SEQUENCE (SIZE (1..maxNrOfULTSLCRs)) OF UL-TimeslotLCR-InformationItem

UL-TimeslotLCR-InformationItem ::= SEQUENCE {
    timeSlotLCR                       TimeSlotLCR,
    midambleShiftLCR                  MidambleShiftLCR,
    tFCI-Presence                     TFCI-Presence,
    uL-Code-InformationList           TDD-UL-Code-LCR-Information,
    iE-Extensions                     ProtocolExtensionContainer { { UL-TimeslotLCR-InformationItem-ExtIEs} }   OPTIONAL,
    ...
}

UL-TimeslotLCR-InformationItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-DPCCH-SlotFormat ::= INTEGER (0..5,...)

UL-SIR ::= INTEGER (-82..173)
-- According to mapping in [16]

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 NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-ScramblingCodeNumber ::= INTEGER (0..16777215)

UL-ScramblingCodeLength ::= ENUMERATED {
    short,
    long
}

UL-TimeSlot-ISCP-Info ::= SEQUENCE (SIZE (1..maxNrOfULTSs)) OF  UL-TimeSlot-ISCP-InfoItem

UL-TimeSlot-ISCP-InfoItem ::= SEQUENCE {
    timeSlot                    TimeSlot,
    iSCP                        UL-TimeslotISCP-Value,
    iE-Extensions               ProtocolExtensionContainer { { UL-TimeSlot-ISCP-InfoItem-ExtIEs} }         OPTIONAL,
    ...
 }

UL-TimeSlot-ISCP-InfoItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-TimeSlot-ISCP-LCR-Info ::= SEQUENCE (SIZE (1..maxNrOfULTSLCRs)) OF   UL-TimeSlot-ISCP-LCR-InfoItem

UL-TimeSlot-ISCP-LCR-InfoItem ::= SEQUENCE {
    timeSlotLCR                 TimeSlotLCR,
    iSCP                        UL-TimeslotISCP-Value,
    iE-Extensions               ProtocolExtensionContainer { { UL-TimeSlot-ISCP-LCR-InfoItem-ExtIEs} }        OPTIONAL,
    ...
 }

UL-TimeSlot-ISCP-LCR-InfoItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

USCH-Information ::= SEQUENCE (SIZE (1..maxNrOfUSCHs)) OF USCH-InformationItem

USCH-InformationItem ::= SEQUENCE {
    uSCH-ID                             USCH-ID,
    cCTrCH-ID                           CCTrCH-ID,
    transportFormatSet                  TransportFormatSet,
```

```
        allocationRetentionPriority           AllocationRetentionPriority,
        iE-Extensions                         ProtocolExtensionContainer { { USCH-InformationItem-ExtIEs} }           OPTIONAL,
        ...
}

USCH-InformationItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-bindingID                         CRITICALITY ignore    EXTENSION    BindingID        PRESENCE         optional }|
    { ID id-transportlayeraddress             CRITICALITY ignore    EXTENSION    TransportLayerAddress                    PRESENCE    optional },
    ...
}

USCH-InformationResponse ::= SEQUENCE (SIZE (1..maxNrOfUSCHs)) OF USCH-InformationResponseItem

USCH-InformationResponseItem ::= SEQUENCE {
    uSCH-ID                               USCH-ID,
    bindingID                             BindingID            OPTIONAL,
    transportLayerAddress                 TransportLayerAddress   OPTIONAL,
    iE-Extensions                         ProtocolExtensionContainer { { USCH-InformationResponseItem-ExtIEs} }    OPTIONAL,
    ...
}

USCH-InformationResponseItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-TimeslotISCP-Value ::= INTEGER (0..127)
-- According to mapping in [23]

UL-TimeslotISCP-Value-IncrDecrThres ::= INTEGER (0..126)

USCH-ID ::= INTEGER (0..255)


-- =========================================
-- V
-- =========================================


-- =========================================
-- W
-- =========================================


-- =========================================
-- X
-- =========================================


-- =========================================
-- Y
-- =========================================


-- =========================================
-- Z
-- =========================================


END
```

## 9.3.5    Common Definitions

```
-- ***************************************************************
--
-- Common definitions
--
-- ***************************************************************

NBAP-CommonDataTypes {
itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
umts-Access (20) modules (3) nbap (2) version1 (1) nbap-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 }

MessageDiscriminator    ::= ENUMERATED { common, dedicated }

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, unsuccessfull-outcome, outcome }

END
```

## 9.3.6    Constant Definitions

```
-- *************************************************************
--
-- Constant definitions
--
-- *************************************************************

NBAP-Constants {
itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
umts-Access (20) modules (3) nbap (2) version1 (1) nbap-Constants (4)}

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

IMPORTS
    ProcedureCode,
    ProtocolIE-ID
FROM NBAP-CommonDataTypes;

-- *************************************************************
--
-- Elementary Procedures
--
-- *************************************************************

id-audit                                    ProcedureCode ::= 0
id-auditRequired                            ProcedureCode ::= 1
id-blockResource                            ProcedureCode ::= 2
id-cellDeletion                             ProcedureCode ::= 3
id-cellReconfiguration                      ProcedureCode ::= 4
id-cellSetup                                ProcedureCode ::= 5
id-cellSynchronisationInitiation            ProcedureCode ::= 45
id-cellSynchronisationReconfiguration       ProcedureCode ::= 46
id-cellSynchronisationReporting             ProcedureCode ::= 47
id-cellSynchronisationTermination           ProcedureCode ::= 48
id-cellSynchronisationFailure               ProcedureCode ::= 49
id-commonMeasurementFailure                 ProcedureCode ::= 6
id-commonMeasurementInitiation              ProcedureCode ::= 7
id-commonMeasurementReport                  ProcedureCode ::= 8
id-commonMeasurementTermination             ProcedureCode ::= 9
id-commonTransportChannelDelete             ProcedureCode ::= 10
id-commonTransportChannelReconfigure        ProcedureCode ::= 11
id-commonTransportChannelSetup              ProcedureCode ::= 12
```

```
id-compressedModeCommand                                ProcedureCode ::= 14
id-dedicatedMeasurementFailure                          ProcedureCode ::= 16
id-dedicatedMeasurementInitiation                       ProcedureCode ::= 17
id-dedicatedMeasurementReport                           ProcedureCode ::= 18
id-dedicatedMeasurementTermination                      ProcedureCode ::= 19
id-downlinkPowerControl                                 ProcedureCode ::= 20
id-downlinkPowerTimeslotControl                         ProcedureCode ::= 38
id-errorIndicationForCommon                             ProcedureCode ::= 35
id-errorIndicationForDedicated                          ProcedureCode ::= 21
id-informationExchangeFailure                           ProcedureCode ::= 40
id-informationExchangeInitiation                        ProcedureCode ::= 41
id-informationExchangeTermination                       ProcedureCode ::= 42
id-informationReporting                                 ProcedureCode ::= 43
id-BearerRearrangement                                  ProcedureCode ::= 50
id-physicalSharedChannelReconfiguration                 ProcedureCode ::= 37
id-privateMessageForCommon                              ProcedureCode ::= 36
id-privateMessageForDedicated                           ProcedureCode ::= 22
id-radioLinkAddition                                    ProcedureCode ::= 23
id-radioLinkDeletion                                    ProcedureCode ::= 24
id-radioLinkFailure                                     ProcedureCode ::= 25
id-radioLinkPreemption                                  ProcedureCode ::= 39
id-radioLinkRestoration                                 ProcedureCode ::= 26
id-radioLinkSetup                                       ProcedureCode ::= 27
id-reset                                                ProcedureCode ::= 13
id-resourceStatusIndication                             ProcedureCode ::= 28
id-cellSynchronisationAdjustment                        ProcedureCode ::= 44
id-synchronisedRadioLinkReconfigurationCancellation     ProcedureCode ::= 29
id-synchronisedRadioLinkReconfigurationCommit           ProcedureCode ::= 30
id-synchronisedRadioLinkReconfigurationPreparation      ProcedureCode ::= 31
id-systemInformationUpdate                              ProcedureCode ::= 32
id-unblockResource                                      ProcedureCode ::= 33
id-unSynchronisedRadioLinkReconfiguration               ProcedureCode ::= 34
id-radioLinkActivation                                  ProcedureCode ::= 51


-- **************************************************************
--
-- Lists
--
-- **************************************************************


maxNrOfCodes             INTEGER ::= 10
maxNrOfDLTSs             INTEGER ::= 15
maxNrOfDLTSLCRs          INTEGER ::= 6
maxNrOfErrors            INTEGER ::= 256
maxNrOfTFs               INTEGER ::= 32
maxNrOfTFCs              INTEGER ::= 1024
maxNrOfRLs               INTEGER ::= 16
maxNrOfRLs-1             INTEGER ::= 15  -- maxNrOfRLs - 1
maxNrOfRLs-2             INTEGER ::= 14  -- maxNrOfRLs - 2
maxNrOfRLSets            INTEGER ::= maxNrOfRLs
maxNrOfDPCHs             INTEGER ::= 240
maxNrOfDPCHLCRs          INTEGER ::= 240
maxNrOfSCCPCHs           INTEGER ::= 8
maxNrOfCPCHs             INTEGER ::= 16
```

```
maxNrOfPCPCHs                INTEGER ::= 64
maxNrOfDCHs                  INTEGER ::= 128
maxNrOfDSCHs                 INTEGER ::= 32
maxNrOfFACHs                 INTEGER ::= 8
maxNrOfCCTrCHs               INTEGER ::= 16
maxNrOfPDSCHs                INTEGER ::= 256
maxNrOfPUSCHs                INTEGER ::= 256
maxNrOfPDSCHSets             INTEGER ::= 256
maxNrOfPRACHLCRs             INTEGER ::= 8
maxNrOfPUSCHSets             INTEGER ::= 256
maxNrOfSCCPCHLCRs            INTEGER ::= 8
maxNrOfULTSs                 INTEGER ::= 15
maxNrOfULTSLCRs              INTEGER ::= 6
maxNrOfUSCHs                 INTEGER ::= 32
maxAPSigNum                  INTEGER ::= 16
maxNrOfSlotFormatsPRACH      INTEGER ::= 8
maxCellinNodeB               INTEGER ::= 256
maxCCPinNodeB                INTEGER ::= 256
maxCPCHCell                  INTEGER ::= maxNrOfCPCHs
maxCTFC                      INTEGER ::= 16777215
maxLocalCellinNodeB          INTEGER ::= maxCellinNodeB
maxNoofLen                   INTEGER ::= 7
maxFPACHCell                 INTEGER ::= 8
maxRACHCell                  INTEGER ::= maxPRACHCell
maxPRACHCell                 INTEGER ::= 16
maxPCPCHCell                 INTEGER ::= 64
maxSCCPCHCell                INTEGER ::= 32
maxSCPICHCell                INTEGER ::= 32
maxTTI-count                 INTEGER ::= 4
maxIBSEG                     INTEGER ::= 16
maxIB                        INTEGER ::= 64
maxFACHCell                  INTEGER ::= 256 -- maxNrOfFACHs * maxSCCPCHCell
maxRateMatching              INTEGER ::= 256
maxCodeNrComp-1              INTEGER ::= 256
maxNrOfCellSyncBursts        INTEGER ::= 10
maxNrOfCodeGroups            INTEGER ::= 256
maxNrOfReceptsPerSyncFrame   INTEGER ::= 16
maxNrOfMeasNCell             INTEGER ::= 96
maxNrOfMeasNCell-1           INTEGER ::= 95  -- maxNrOfMeasNCell - 1
maxNrOfTFCIGroups            INTEGER ::= 256
maxNrOfTFCI1Combs            INTEGER ::= 512
maxNrOfTFCI2Combs            INTEGER ::= 1024
maxNrOfTFCI2Combs-1          INTEGER ::= 1023
maxNrOfSF                    INTEGER ::= 8
maxTGPS                      INTEGER ::= 6
maxCommunicationContext      INTEGER ::= 1048575
maxNrOfLevels                INTEGER ::= 256
maxNoSat                     INTEGER ::= 16
maxNoGPSItems                INTEGER ::= 8
maxNrOfHSSCCHs               INTEGER ::= 32
maxNoOfSyncFramesLCR         INTEGER ::= 512
maxNrofreceptionsperSyncFrameLCR    INTEGER ::= 8
maxNrOfHSSCCHCodes           INTEGER ::= 128
maxNrOfMACdFlows             INTEGER ::= 8
```

```
maxNrOfMACdFlows-1             INTEGER ::= 7   -- maxNrOfMACdFlows - 1
maxNrOfMACdPDUIndexes          INTEGER ::= 8
maxNrOfMACdPDUIndexes-1        INTEGER ::= 7   -- maxNoOfMACdPDUIndexes - 1
maxNrOfPriorityQueues          INTEGER ::= 8
maxNrOfPriorityQueues-1        INTEGER ::= 7   -- maxNoOfPriorityQueues - 1
maxNrOfHARQProcesses           INTEGER ::= 8


-- ***************************************************************
--
-- IEs
--
-- ***************************************************************

id-AICH-Information                                    ProtocolIE-ID ::= 0
id-AICH-InformationItem-ResourceStatusInd              ProtocolIE-ID ::= 1
id-BCH-Information                                     ProtocolIE-ID ::= 7
id-BCH-InformationItem-ResourceStatusInd               ProtocolIE-ID ::= 8
id-BCCH-ModificationTime                               ProtocolIE-ID ::= 9
id-BlockingPriorityIndicator                           ProtocolIE-ID ::= 10
id-Cause                                               ProtocolIE-ID ::= 13
id-CCP-InformationItem-AuditRsp                        ProtocolIE-ID ::= 14
id-CCP-InformationList-AuditRsp                        ProtocolIE-ID ::= 15
id-CCP-InformationItem-ResourceStatusInd               ProtocolIE-ID ::= 16
id-Cell-InformationItem-AuditRsp                       ProtocolIE-ID ::= 17
id-Cell-InformationItem-ResourceStatusInd              ProtocolIE-ID ::= 18
id-Cell-InformationList-AuditRsp                       ProtocolIE-ID ::= 19
id-CellParameterID                                     ProtocolIE-ID ::= 23
id-CFN                                                 ProtocolIE-ID ::= 24
id-C-ID                                                ProtocolIE-ID ::= 25
id-CommonMeasurementAccuracy                           ProtocolIE-ID ::= 39
id-CommonMeasurementObjectType-CM-Rprt                 ProtocolIE-ID ::= 31
id-CommonMeasurementObjectType-CM-Rqst                 ProtocolIE-ID ::= 32
id-CommonMeasurementObjectType-CM-Rsp                  ProtocolIE-ID ::= 33
id-CommonMeasurementType                               ProtocolIE-ID ::= 34
id-CommonPhysicalChannelID                             ProtocolIE-ID ::= 35
id-CommonPhysicalChannelType-CTCH-SetupRqstFDD         ProtocolIE-ID ::= 36
id-CommonPhysicalChannelType-CTCH-SetupRqstTDD         ProtocolIE-ID ::= 37
id-CommunicationControlPortID                          ProtocolIE-ID ::= 40
id-ConfigurationGenerationID                           ProtocolIE-ID ::= 43
id-CRNC-CommunicationContextID                         ProtocolIE-ID ::= 44
id-CriticalityDiagnostics                              ProtocolIE-ID ::= 45
id-DCHs-to-Add-FDD                                     ProtocolIE-ID ::= 48
id-DCH-AddList-RL-ReconfPrepTDD                        ProtocolIE-ID ::= 49
id-DCHs-to-Add-TDD                                     ProtocolIE-ID ::= 50
id-DCH-DeleteList-RL-ReconfPrepFDD                     ProtocolIE-ID ::= 52
id-DCH-DeleteList-RL-ReconfPrepTDD                     ProtocolIE-ID ::= 53
id-DCH-DeleteList-RL-ReconfRqstFDD                     ProtocolIE-ID ::= 54
id-DCH-DeleteList-RL-ReconfRqstTDD                     ProtocolIE-ID ::= 55
id-DCH-FDD-Information                                 ProtocolIE-ID ::= 56
id-DCH-TDD-Information                                 ProtocolIE-ID ::= 57
id-DCH-InformationResponse                             ProtocolIE-ID ::= 59
id-FDD-DCHs-to-Modify                                  ProtocolIE-ID ::= 62
id-TDD-DCHs-to-Modify                                  ProtocolIE-ID ::= 63
id-DCH-ModifyList-RL-ReconfRqstTDD                     ProtocolIE-ID ::= 65
```

```
id-DCH-RearrangeList-Bearer-RearrangeInd                        ProtocolIE-ID ::= 135
id-DedicatedMeasurementObjectType-DM-Rprt                       ProtocolIE-ID ::= 67
id-DedicatedMeasurementObjectType-DM-Rqst                       ProtocolIE-ID ::= 68
id-DedicatedMeasurementObjectType-DM-Rsp                        ProtocolIE-ID ::= 69
id-DedicatedMeasurementType                                     ProtocolIE-ID ::= 70
id-DL-CCTrCH-InformationItem-RL-SetupRqstTDD                    ProtocolIE-ID ::= 72
id-DL-CCTrCH-InformationList-RL-AdditionRqstTDD                 ProtocolIE-ID ::= 73
id-DL-CCTrCH-InformationList-RL-SetupRqstTDD                    ProtocolIE-ID ::= 76
id-DL-DPCH-InformationItem-RL-AdditionRqstTDD                   ProtocolIE-ID ::= 77
id-DL-DPCH-InformationList-RL-SetupRqstTDD                      ProtocolIE-ID ::= 79
id-DL-DPCH-Information-RL-ReconfPrepFDD                         ProtocolIE-ID ::= 81
id-DL-DPCH-Information-RL-ReconfRqstFDD                         ProtocolIE-ID ::= 82
id-DL-DPCH-Information-RL-SetupRqstFDD                          ProtocolIE-ID ::= 83
id-DL-DPCH-TimingAdjustment                                     ProtocolIE-ID ::= 21
id-DL-ReferencePowerInformationItem-DL-PC-Rqst                  ProtocolIE-ID ::= 84
id-DLReferencePower                                             ProtocolIE-ID ::= 85
id-DLReferencePowerList-DL-PC-Rqst                              ProtocolIE-ID ::= 86
id-DSCH-AddItem-RL-ReconfPrepFDD                                ProtocolIE-ID ::= 87
id-DSCHs-to-Add-FDD                                             ProtocolIE-ID ::= 89
id-DSCH-DeleteItem-RL-ReconfPrepFDD                             ProtocolIE-ID ::= 91
id-DSCH-DeleteList-RL-ReconfPrepFDD                             ProtocolIE-ID ::= 93
id-DSCHs-to-Add-TDD                                             ProtocolIE-ID ::= 96
id-DSCH-Information-DeleteList-RL-ReconfPrepTDD                 ProtocolIE-ID ::= 98
id-DSCH-Information-ModifyList-RL-ReconfPrepTDD                 ProtocolIE-ID ::= 100
id-DSCH-InformationResponse                                     ProtocolIE-ID ::= 105
id-DSCH-FDD-Information                                         ProtocolIE-ID ::= 106
id-DSCH-TDD-Information                                         ProtocolIE-ID ::= 107
id-DSCH-ModifyItem-RL-ReconfPrepFDD                             ProtocolIE-ID ::= 108
id-DSCH-ModifyList-RL-ReconfPrepFDD                             ProtocolIE-ID ::= 112
id-DSCH-RearrangeList-Bearer-RearrangeInd                       ProtocolIE-ID ::= 136
id-End-Of-Audit-Sequence-Indicator                             ProtocolIE-ID ::= 113
id-FACH-Information                                             ProtocolIE-ID ::= 116
id-FACH-InformationItem-ResourceStatusInd                      ProtocolIE-ID ::= 117
id-FACH-ParametersList-CTCH-ReconfRqstTDD                       ProtocolIE-ID ::= 120
id-FACH-ParametersListIE-CTCH-SetupRqstFDD                      ProtocolIE-ID ::= 121
id-FACH-ParametersListIE-CTCH-SetupRqstTDD                      ProtocolIE-ID ::= 122
id-IndicationType-ResourceStatusInd                            ProtocolIE-ID ::= 123
id-Local-Cell-ID                                                ProtocolIE-ID ::= 124
id-Local-Cell-Group-InformationItem-AuditRsp                   ProtocolIE-ID ::= 2
id-Local-Cell-Group-InformationItem-ResourceStatusInd          ProtocolIE-ID ::= 3
id-Local-Cell-Group-InformationItem2-ResourceStatusInd         ProtocolIE-ID ::= 4
id-Local-Cell-Group-InformationList-AuditRsp                   ProtocolIE-ID ::= 5
id-Local-Cell-InformationItem-AuditRsp                         ProtocolIE-ID ::= 125
id-Local-Cell-InformationItem-ResourceStatusInd               ProtocolIE-ID ::= 126
id-Local-Cell-InformationItem2-ResourceStatusInd              ProtocolIE-ID ::= 127
id-Local-Cell-InformationList-AuditRsp                         ProtocolIE-ID ::= 128
id-AdjustmentPeriod                                             ProtocolIE-ID ::= 129
id-MaxAdjustmentStep                                            ProtocolIE-ID ::= 130
id-MaximumTransmissionPower                                     ProtocolIE-ID ::= 131
id-MeasurementFilterCoefficient                                ProtocolIE-ID ::= 132
id-MeasurementID                                                ProtocolIE-ID ::= 133
id-MessageStructure                                             ProtocolIE-ID ::= 115
id-MIB-SB-SIB-InformationList-SystemInfoUpdateRqst             ProtocolIE-ID ::= 134
id-NodeB-CommunicationContextID                                ProtocolIE-ID ::= 143
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id-NeighbouringCellMeasurementInformation                    ProtocolIE-ID ::= 455
id-P-CCPCH-Information                                        ProtocolIE-ID ::= 144
id-P-CCPCH-InformationItem-ResourceStatusInd                 ProtocolIE-ID ::= 145
id-P-CPICH-Information                                        ProtocolIE-ID ::= 146
id-P-CPICH-InformationItem-ResourceStatusInd                 ProtocolIE-ID ::= 147
id-P-SCH-Information                                          ProtocolIE-ID ::= 148
id-PCCPCH-Information-Cell-ReconfRqstTDD                      ProtocolIE-ID ::= 150
id-PCCPCH-Information-Cell-SetupRqstTDD                       ProtocolIE-ID ::= 151
id-PCH-Parameters-CTCH-ReconfRqstTDD                         ProtocolIE-ID ::= 155
id-PCH-ParametersItem-CTCH-SetupRqstFDD                       ProtocolIE-ID ::= 156
id-PCH-ParametersItem-CTCH-SetupRqstTDD                       ProtocolIE-ID ::= 157
id-PCH-Information                                            ProtocolIE-ID ::= 158
id-PDSCH-Information-AddListIE-PSCH-ReconfRqst                ProtocolIE-ID ::= 161
id-PDSCH-Information-ModifyListIE-PSCH-ReconfRqst             ProtocolIE-ID ::= 162
id-PDSCHSets-AddList-PSCH-ReconfRqst                         ProtocolIE-ID ::= 163
id-PDSCHSets-DeleteList-PSCH-ReconfRqst                      ProtocolIE-ID ::= 164
id-PDSCHSets-ModifyList-PSCH-ReconfRqst                      ProtocolIE-ID ::= 165
id-PICH-Information                                           ProtocolIE-ID ::= 166
id-PICH-Parameters-CTCH-ReconfRqstTDD                        ProtocolIE-ID ::= 168
id-PowerAdjustmentType                                       ProtocolIE-ID ::= 169
id-PRACH-Information                                          ProtocolIE-ID ::= 170
id-PrimaryCCPCH-Information-Cell-ReconfRqstFDD                ProtocolIE-ID ::= 175
id-PrimaryCCPCH-Information-Cell-SetupRqstFDD                 ProtocolIE-ID ::= 176
id-PrimaryCPICH-Information-Cell-ReconfRqstFDD                ProtocolIE-ID ::= 177
id-PrimaryCPICH-Information-Cell-SetupRqstFDD                 ProtocolIE-ID ::= 178
id-PrimarySCH-Information-Cell-ReconfRqstFDD                  ProtocolIE-ID ::= 179
id-PrimarySCH-Information-Cell-SetupRqstFDD                   ProtocolIE-ID ::= 180
id-PrimaryScramblingCode                                     ProtocolIE-ID ::= 181
id-SCH-Information-Cell-ReconfRqstTDD                         ProtocolIE-ID ::= 183
id-SCH-Information-Cell-SetupRqstTDD                          ProtocolIE-ID ::= 184
id-PUSCH-Information-AddListIE-PSCH-ReconfRqst                ProtocolIE-ID ::= 185
id-PUSCH-Information-ModifyListIE-PSCH-ReconfRqst             ProtocolIE-ID ::= 186
id-PUSCHSets-AddList-PSCH-ReconfRqst                         ProtocolIE-ID ::= 187
id-PUSCHSets-DeleteList-PSCH-ReconfRqst                      ProtocolIE-ID ::= 188
id-PUSCHSets-ModifyList-PSCH-ReconfRqst                      ProtocolIE-ID ::= 189
id-RACH-Information                                           ProtocolIE-ID ::= 190
id-RACH-ParametersItem-CTCH-SetupRqstFDD                      ProtocolIE-ID ::= 196
id-RACH-ParameterItem-CTCH-SetupRqstTDD                       ProtocolIE-ID ::= 197
id-ReportCharacteristics                                     ProtocolIE-ID ::= 198
id-Reporting-Object-RL-FailureInd                            ProtocolIE-ID ::= 199
id-Reporting-Object-RL-RestoreInd                            ProtocolIE-ID ::= 200
id-RL-InformationItem-DM-Rprt                                ProtocolIE-ID ::= 202
id-RL-InformationItem-DM-Rqst                                ProtocolIE-ID ::= 203
id-RL-InformationItem-DM-Rsp                                 ProtocolIE-ID ::= 204
id-RL-InformationItem-RL-AdditionRqstFDD                     ProtocolIE-ID ::= 205
id-RL-informationItem-RL-DeletionRqst                        ProtocolIE-ID ::= 206
id-RL-InformationItem-RL-FailureInd                          ProtocolIE-ID ::= 207
id-RL-InformationItem-RL-PreemptRequiredInd                  ProtocolIE-ID ::= 286
id-RL-InformationItem-RL-ReconfPrepFDD                       ProtocolIE-ID ::= 208
id-RL-InformationItem-RL-ReconfRqstFDD                       ProtocolIE-ID ::= 209
id-RL-InformationItem-RL-RestoreInd                          ProtocolIE-ID ::= 210
id-RL-InformationItem-RL-SetupRqstFDD                        ProtocolIE-ID ::= 211
id-RL-InformationList-RL-AdditionRqstFDD                     ProtocolIE-ID ::= 212
id-RL-informationList-RL-DeletionRqst                        ProtocolIE-ID ::= 213
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id-RL-InformationList-RL-PreemptRequiredInd                    ProtocolIE-ID ::= 237
id-RL-InformationList-RL-ReconfPrepFDD                         ProtocolIE-ID ::= 214
id-RL-InformationList-RL-ReconfRqstFDD                         ProtocolIE-ID ::= 215
id-RL-InformationList-RL-SetupRqstFDD                          ProtocolIE-ID ::= 216
id-RL-InformationResponseItem-RL-AdditionRspFDD               ProtocolIE-ID ::= 217
id-RL-InformationResponseItem-RL-ReconfReady                  ProtocolIE-ID ::= 218
id-RL-InformationResponseItem-RL-ReconfRsp                    ProtocolIE-ID ::= 219
id-RL-InformationResponseItem-RL-SetupRspFDD                  ProtocolIE-ID ::= 220
id-RL-InformationResponseList-RL-AdditionRspFDD               ProtocolIE-ID ::= 221
id-RL-InformationResponseList-RL-ReconfReady                  ProtocolIE-ID ::= 222
id-RL-InformationResponseList-RL-ReconfRsp                    ProtocolIE-ID ::= 223
id-RL-InformationResponseList-RL-SetupRspFDD                  ProtocolIE-ID ::= 224
id-RL-InformationResponse-RL-AdditionRspTDD                   ProtocolIE-ID ::= 225
id-RL-InformationResponse-RL-SetupRspTDD                      ProtocolIE-ID ::= 226
id-RL-Information-RL-AdditionRqstTDD                          ProtocolIE-ID ::= 227
id-RL-Information-RL-ReconfRqstTDD                            ProtocolIE-ID ::= 228
id-RL-Information-RL-ReconfPrepTDD                            ProtocolIE-ID ::= 229
id-RL-Information-RL-SetupRqstTDD                             ProtocolIE-ID ::= 230
id-RL-ReconfigurationFailureItem-RL-ReconfFailure            ProtocolIE-ID ::= 236
id-RL-Set-InformationItem-DM-Rprt                             ProtocolIE-ID ::= 238
id-RL-Set-InformationItem-DM-Rsp                              ProtocolIE-ID ::= 240
id-RL-Set-InformationItem-RL-FailureInd                       ProtocolIE-ID ::= 241
id-RL-Set-InformationItem-RL-RestoreInd                       ProtocolIE-ID ::= 242
id-S-CCPCH-Information                                         ProtocolIE-ID ::= 247
id-S-CPICH-Information                                         ProtocolIE-ID ::= 249
id-SCH-Information                                             ProtocolIE-ID ::= 251
id-S-SCH-Information                                           ProtocolIE-ID ::= 253
id-Secondary-CCPCHListIE-CTCH-ReconfRqstTDD                   ProtocolIE-ID ::= 257
id-Secondary-CCPCH-parameterListIE-CTCH-SetupRqstTDD         ProtocolIE-ID ::= 258
id-Secondary-CCPCH-Parameters-CTCH-ReconfRqstTDD             ProtocolIE-ID ::= 259
id-SecondaryCPICH-InformationItem-Cell-ReconfRqstFDD         ProtocolIE-ID ::= 260
id-SecondaryCPICH-InformationItem-Cell-SetupRqstFDD          ProtocolIE-ID ::= 261
id-SecondaryCPICH-InformationList-Cell-ReconfRqstFDD         ProtocolIE-ID ::= 262
id-SecondaryCPICH-InformationList-Cell-SetupRqstFDD          ProtocolIE-ID ::= 263
id-SecondarySCH-Information-Cell-ReconfRqstFDD               ProtocolIE-ID ::= 264
id-SecondarySCH-Information-Cell-SetupRqstFDD                ProtocolIE-ID ::= 265
id-SegmentInformationListIE-SystemInfoUpdate                 ProtocolIE-ID ::= 266
id-SFN                                                         ProtocolIE-ID ::= 268
id-SignallingBearerRequestIndicator                           ProtocolIE-ID ::= 138
id-ShutdownTimer                                              ProtocolIE-ID ::= 269
id-Start-Of-Audit-Sequence-Indicator                          ProtocolIE-ID ::= 114
id-Successful-RL-InformationRespItem-RL-AdditionFailureFDD   ProtocolIE-ID ::= 270
id-Successful-RL-InformationRespItem-RL-SetupFailureFDD      ProtocolIE-ID ::= 271
id-SyncCase                                                   ProtocolIE-ID ::= 274
id-SyncCaseIndicatorItem-Cell-SetupRqstTDD-PSCH             ProtocolIE-ID ::= 275
id-T-Cell                                                     ProtocolIE-ID ::= 276
id-TargetCommunicationControlPortID                           ProtocolIE-ID ::= 139
id-TimeSlotConfigurationList-Cell-ReconfRqstTDD             ProtocolIE-ID ::= 277
id-TimeSlotConfigurationList-Cell-SetupRqstTDD              ProtocolIE-ID ::= 278
id-TransmissionDiversityApplied                               ProtocolIE-ID ::= 279
id-TypeOfError                                                ProtocolIE-ID ::= 508
id-UARFCNforNt                                                ProtocolIE-ID ::= 280
id-UARFCNforNd                                                ProtocolIE-ID ::= 281
id-UARFCNforNu                                                ProtocolIE-ID ::= 282
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id-UL-CCTrCH-InformationItem-RL-SetupRqstTDD                    ProtocolIE-ID ::= 284
id-UL-CCTrCH-InformationList-RL-AdditionRqstTDD                 ProtocolIE-ID ::= 285
id-UL-CCTrCH-InformationList-RL-SetupRqstTDD                    ProtocolIE-ID ::= 288
id-UL-DPCH-InformationItem-RL-AdditionRqstTDD                   ProtocolIE-ID ::= 289
id-UL-DPCH-InformationList-RL-SetupRqstTDD                      ProtocolIE-ID ::= 291
id-UL-DPCH-Information-RL-ReconfPrepFDD                         ProtocolIE-ID ::= 293
id-UL-DPCH-Information-RL-ReconfRqstFDD                         ProtocolIE-ID ::= 294
id-UL-DPCH-Information-RL-SetupRqstFDD                          ProtocolIE-ID ::= 295
id-Unsuccessful-RL-InformationRespItem-RL-AdditionFailureFDD    ProtocolIE-ID ::= 296
id-Unsuccessful-RL-InformationRespItem-RL-SetupFailureFDD       ProtocolIE-ID ::= 297
id-Unsuccessful-RL-InformationResp-RL-AdditionFailureTDD        ProtocolIE-ID ::= 300
id-Unsuccessful-RL-InformationResp-RL-SetupFailureTDD           ProtocolIE-ID ::= 301
id-USCH-Information-Add                                         ProtocolIE-ID ::= 302
id-USCH-Information-DeleteList-RL-ReconfPrepTDD                 ProtocolIE-ID ::= 304
id-USCH-Information-ModifyList-RL-ReconfPrepTDD                 ProtocolIE-ID ::= 306
id-USCH-InformationResponse                                    ProtocolIE-ID ::= 309
id-USCH-Information                                            ProtocolIE-ID ::= 310
id-USCH-RearrangeList-Bearer-RearrangeInd                      ProtocolIE-ID ::= 141
id-Active-Pattern-Sequence-Information                         ProtocolIE-ID ::= 315
id-AICH-ParametersListIE-CTCH-ReconfRqstFDD                    ProtocolIE-ID ::= 316
id-AdjustmentRatio                                            ProtocolIE-ID ::= 317
id-AP-AICH-Information                                         ProtocolIE-ID ::= 320
id-AP-AICH-ParametersListIE-CTCH-ReconfRqstFDD                ProtocolIE-ID ::= 322
id-FACH-ParametersListIE-CTCH-ReconfRqstFDD                   ProtocolIE-ID ::= 323
id-CauseLevel-PSCH-ReconfFailureTDD                           ProtocolIE-ID ::= 324
id-CauseLevel-RL-AdditionFailureFDD                           ProtocolIE-ID ::= 325
id-CauseLevel-RL-AdditionFailureTDD                           ProtocolIE-ID ::= 326
id-CauseLevel-RL-ReconfFailure                                ProtocolIE-ID ::= 327
id-CauseLevel-RL-SetupFailureFDD                              ProtocolIE-ID ::= 328
id-CauseLevel-RL-SetupFailureTDD                              ProtocolIE-ID ::= 329
id-CDCA-ICH-Information                                        ProtocolIE-ID ::= 330
id-CDCA-ICH-ParametersListIE-CTCH-ReconfRqstFDD               ProtocolIE-ID ::= 332
id-Closed-Loop-Timing-Adjustment-Mode                         ProtocolIE-ID ::= 333
id-CommonPhysicalChannelType-CTCH-ReconfRqstFDD               ProtocolIE-ID ::= 334
id-Compressed-Mode-Deactivation-Flag                          ProtocolIE-ID ::= 335
id-CPCH-Information                                            ProtocolIE-ID ::= 336
id-CPCH-Parameters-CTCH-SetupRsp                              ProtocolIE-ID ::= 342
id-CPCH-ParametersListIE-CTCH-ReconfRqstFDD                   ProtocolIE-ID ::= 343
id-DL-CCTrCH-InformationAddList-RL-ReconfPrepTDD              ProtocolIE-ID ::= 346
id-DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD           ProtocolIE-ID ::= 347
id-DL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD           ProtocolIE-ID ::= 348
id-DL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD           ProtocolIE-ID ::= 349
id-DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD           ProtocolIE-ID ::= 350
id-DL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD           ProtocolIE-ID ::= 351
id-DL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD           ProtocolIE-ID ::= 352
id-DL-DPCH-InformationAddListIE-RL-ReconfPrepTDD              ProtocolIE-ID ::= 353
id-DL-DPCH-InformationModify-AddListIE-RL-ReconfPrepTDD       ProtocolIE-ID ::= 355
id-DL-DPCH-InformationModify-DeleteListIE-RL-ReconfPrepTDD    ProtocolIE-ID ::= 356
id-DL-DPCH-InformationModify-ModifyListIE-RL-ReconfPrepTDD    ProtocolIE-ID ::= 357
id-DL-TPC-Pattern01Count                                      ProtocolIE-ID ::= 358
id-DPC-Mode                                                   ProtocolIE-ID ::= 450
id-DPCHConstant                                               ProtocolIE-ID ::= 359
id-DSCH-FDD-Common-Information                                ProtocolIE-ID ::= 94
id-EnhancedDSCHPC                                             ProtocolIE-ID ::= 110
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id-EnhancedDSCHPCIndicator                                           ProtocolIE-ID ::= 111
id-FACH-ParametersList-CTCH-SetupRsp                                 ProtocolIE-ID ::= 362
id-Limited-power-increase-information-Cell-SetupRqstFDD              ProtocolIE-ID ::= 369
id-PCH-Parameters-CTCH-SetupRsp                                      ProtocolIE-ID ::= 374
id-PCH-ParametersItem-CTCH-ReconfRqstFDD                             ProtocolIE-ID ::= 375
id-PCPCH-Information                                                 ProtocolIE-ID ::= 376
id-PICH-ParametersItem-CTCH-ReconfRqstFDD                            ProtocolIE-ID ::= 380
id-PRACHConstant                                                     ProtocolIE-ID ::= 381
id-PRACH-ParametersListIE-CTCH-ReconfRqstFDD                         ProtocolIE-ID ::= 383
id-PUSCHConstant                                                     ProtocolIE-ID ::= 384
id-RACH-Parameters-CTCH-SetupRsp                                     ProtocolIE-ID ::= 385
id-SSDT-CellIDforEDSCHPC                                             ProtocolIE-ID ::= 443
id-Synchronisation-Configuration-Cell-ReconfRqst                    ProtocolIE-ID ::= 393
id-Synchronisation-Configuration-Cell-SetupRqst                     ProtocolIE-ID ::= 394
id-Transmission-Gap-Pattern-Sequence-Information                    ProtocolIE-ID ::= 395
id-UL-CCTrCH-InformationAddList-RL-ReconfPrepTDD                     ProtocolIE-ID ::= 396
id-UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD                  ProtocolIE-ID ::= 397
id-UL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD                  ProtocolIE-ID ::= 398
id-UL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD                  ProtocolIE-ID ::= 399
id-UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD                  ProtocolIE-ID ::= 400
id-UL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD                  ProtocolIE-ID ::= 401
id-UL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD                  ProtocolIE-ID ::= 402
id-UL-DPCH-InformationAddListIE-RL-ReconfPrepTDD                     ProtocolIE-ID ::= 403
id-UL-DPCH-InformationModify-AddListIE-RL-ReconfPrepTDD              ProtocolIE-ID ::= 405
id-UL-DPCH-InformationModify-DeleteListIE-RL-ReconfPrepTDD           ProtocolIE-ID ::= 406
id-UL-DPCH-InformationModify-ModifyListIE-RL-ReconfPrepTDD           ProtocolIE-ID ::= 407
id-Unsuccessful-PDSCHSetItem-PSCH-ReconfFailureTDD                   ProtocolIE-ID ::= 408
id-Unsuccessful-PUSCHSetItem-PSCH-ReconfFailureTDD                   ProtocolIE-ID ::= 409
id-CommunicationContextInfoItem-Reset                               ProtocolIE-ID ::= 412
id-CommunicationControlPortInfoItem-Reset                           ProtocolIE-ID ::= 414
id-ResetIndicator                                                   ProtocolIE-ID ::= 416
id-TFCI2-Bearer-Information-RL-SetupRqstFDD                          ProtocolIE-ID ::= 417
id-TFCI2-BearerSpecificInformation-RL-ReconfPrepFDD                 ProtocolIE-ID ::= 418
id-TFCI2-BearerInformationResponse                                  ProtocolIE-ID ::= 419
id-TFCI2BearerRequestIndicator                                      ProtocolIE-ID ::= 142
id-TimingAdvanceApplied                                             ProtocolIE-ID ::= 287
id-CFNReportingIndicator                                            ProtocolIE-ID ::= 6
id-SFNReportingIndicator                                            ProtocolIE-ID ::= 11
id-InnerLoopDLPCStatus                                              ProtocolIE-ID ::= 12
id-TimeslotISCPInfo                                                 ProtocolIE-ID ::= 283
id-PICH-ParametersItem-CTCH-SetupRqstTDD                            ProtocolIE-ID ::= 167
id-PRACH-ParametersItem-CTCH-SetupRqstTDD                           ProtocolIE-ID ::= 20
id-CCTrCH-InformationItem-RL-FailureInd                             ProtocolIE-ID ::= 46
id-CCTrCH-InformationItem-RL-RestoreInd                             ProtocolIE-ID ::= 47
id-CauseLevel-SyncAdjustmntFailureTDD                               ProtocolIE-ID ::= 420
id-CellAdjustmentInfo-SyncAdjustmntRqstTDD                          ProtocolIE-ID ::= 421
id-CellAdjustmentInfoItem-SyncAdjustmentRqstTDD                     ProtocolIE-ID ::= 494
id-CellSyncBurstInfoList-CellSyncReconfRqstTDD                      ProtocolIE-ID ::= 482
id-CellSyncBurstTransInit-CellSyncInitiationRqstTDD                 ProtocolIE-ID ::= 422
id-CellSyncBurstMeasureInit-CellSyncInitiationRqstTDD               ProtocolIE-ID ::= 423
id-CellSyncBurstTransReconfiguration-CellSyncReconfRqstTDD          ProtocolIE-ID ::= 424
id-CellSyncBurstMeasReconfiguration-CellSyncReconfRqstTDD           ProtocolIE-ID ::= 425
id-CellSyncBurstTransInfoList-CellSyncReconfRqstTDD                 ProtocolIE-ID ::= 426
id-CellSyncBurstMeasInfoList-CellSyncReconfRqstTDD                  ProtocolIE-ID ::= 427
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id-CellSyncBurstTransReconfInfo-CellSyncReconfRqstTDD            ProtocolIE-ID ::= 428
id-CellSyncInfo-CellSyncReprtTDD                                 ProtocolIE-ID ::= 429
id-CSBTransmissionID                                            ProtocolIE-ID ::= 430
id-CSBMeasurementID                                            ProtocolIE-ID ::= 431
id-IntStdPhCellSyncInfoItem-CellSyncReprtTDD                     ProtocolIE-ID ::= 432
id-NCyclesPerSFNperiod                                          ProtocolIE-ID ::= 433
id-NRepetitionsPerCyclePeriod                                  ProtocolIE-ID ::= 434
id-SyncFrameNumber                                             ProtocolIE-ID ::= 437
id-SynchronisationReportType                                    ProtocolIE-ID ::= 438
id-SynchronisationReportCharacteristics                         ProtocolIE-ID ::= 439
id-Unsuccessful-cell-InformationRespItem-SyncAdjustmntFailureTDD  ProtocolIE-ID ::= 440
id-LateEntranceCellSyncInfoItem-CellSyncReprtTDD                ProtocolIE-ID ::= 119
id-ReferenceClockAvailability                                   ProtocolIE-ID ::= 435
id-ReferenceSFNoffset                                          ProtocolIE-ID ::= 436
id-InformationExchangeID                                        ProtocolIE-ID ::= 444
id-InformationExchangeObjectType-InfEx-Rqst                     ProtocolIE-ID ::= 445
id-InformationType                                             ProtocolIE-ID ::= 446
id-InformationReportCharacteristics                             ProtocolIE-ID ::= 447
id-InformationExchangeObjectType-InfEx-Rsp                      ProtocolIE-ID ::= 448
id-InformationExchangeObjectType-InfEx-Rprt                     ProtocolIE-ID ::= 449
id-IPDLParameter-Information-Cell-ReconfRqstFDD                  ProtocolIE-ID ::= 451
id-IPDLParameter-Information-Cell-SetupRqstFDD                   ProtocolIE-ID ::= 452
id-IPDLParameter-Information-Cell-ReconfRqstTDD                  ProtocolIE-ID ::= 453
id-IPDLParameter-Information-Cell-SetupRqstTDD                   ProtocolIE-ID ::= 454
id-DL-DPCH-LCR-Information-RL-SetupRqstTDD                       ProtocolIE-ID ::= 74
id-DL-DPCH-LCR-InformationList-RL-SetupRqstTDD                   ProtocolIE-ID ::= 75
id-DwPCH-LCR-Information                                        ProtocolIE-ID ::= 78
id-DwPCH-LCR-Information-AuditRsp                               ProtocolIE-ID ::= 80
id-DwPCH-LCR-InformationList-AuditRsp                           ProtocolIE-ID ::= 90
id-DwPCH-LCR-Information-Cell-SetupRqstTDD                       ProtocolIE-ID ::= 97
id-DwPCH-LCR-Information-Cell-ReconfRqstTDD                      ProtocolIE-ID ::= 99
id-DwPCH-LCR-Information-ResourceStatusInd                       ProtocolIE-ID ::= 101
id-maxFACH-Power-LCR-CTCH-SetupRqstTDD                          ProtocolIE-ID ::= 154
id-maxFACH-Power-LCR-CTCH-ReconfRqstTDD                         ProtocolIE-ID ::= 174
id-FPACH-LCR-Information                                        ProtocolIE-ID ::= 290
id-FPACH-LCR-Information-AuditRsp                               ProtocolIE-ID ::= 292
id-FPACH-LCR-InformationList-AuditRsp                           ProtocolIE-ID ::= 22
id-FPACH-LCR-InformationList-ResourceStatusInd                  ProtocolIE-ID ::= 311
id-FPACH-LCR-Parameters-CTCH-SetupRqstTDD                       ProtocolIE-ID ::= 312
id-FPACH-LCR-ParametersItem-CTCH-SetupRqstTDD                   ProtocolIE-ID ::= 313
id-FPACH-LCR-Parameters-CTCH-ReconfRqstTDD                      ProtocolIE-ID ::= 314
id-PCCPCH-LCR-Information-Cell-SetupRqstTDD                      ProtocolIE-ID ::= 456
id-PCH-Power-LCR-CTCH-SetupRqstTDD                              ProtocolIE-ID ::= 457
id-PCH-Power-LCR-CTCH-ReconfRqstTDD                             ProtocolIE-ID ::= 458
id-PICH-LCR-Parameters-CTCH-SetupRqstTDD                        ProtocolIE-ID ::= 459
id-PICH-LCR-ParametersItem-CTCH-SetupRqstTDD                    ProtocolIE-ID ::= 460
id-PRACH-LCR-ParametersList-CTCH-SetupRqstTDD                   ProtocolIE-ID ::= 461
id-PRACH-LCR-ParametersListIE-CTCH-SetupRqstTDD                 ProtocolIE-ID ::= 462
id-RL-InformationResponse-LCR-RL-SetupRspTDD                    ProtocolIE-ID ::= 463
id-Secondary-CCPCH-LCR-parameterListIE-CTCH-SetupRqstTDD        ProtocolIE-ID ::= 464
id-Secondary-CCPCH-LCR-parameterList-CTCH-SetupRqstTDD          ProtocolIE-ID ::= 465
id-TimeSlot                                                    ProtocolIE-ID ::= 495
id-TimeSlotConfigurationList-LCR-Cell-ReconfRqstTDD             ProtocolIE-ID ::= 466
id-TimeSlotConfigurationList-LCR-Cell-SetupRqstTDD             ProtocolIE-ID ::= 467
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id-TimeslotISCP-LCR-InfoList-RL-SetupRqstTDD                          ProtocolIE-ID ::= 468
id-TimeSlotLCR-CM-Rqst                                               ProtocolIE-ID ::= 469
id-UL-DPCH-LCR-Information-RL-SetupRqstTDD                            ProtocolIE-ID ::= 470
id-UL-DPCH-LCR-InformationList-RL-SetupRqstTDD                       ProtocolIE-ID ::= 471
id-DL-DPCH-InformationItem-LCR-RL-AdditionRqstTDD                    ProtocolIE-ID ::= 472
id-UL-DPCH-InformationItem-LCR-RL-AdditionRqstTDD                    ProtocolIE-ID ::= 473
id-TimeslotISCP-InformationList-LCR-RL-AdditionRqstTDD               ProtocolIE-ID ::= 474
id-DL-DPCH-LCR-InformationAddList-RL-ReconfPrepTDD                   ProtocolIE-ID ::= 475
id-DL-DPCH-LCR-InformationAddListIE-RL-ReconfPrepTDD                 ProtocolIE-ID ::= 476
id-DL-DPCH-LCR-InformationModify-AddList-RL-ReconfPrepTDD            ProtocolIE-ID ::= 477
id-DL-DPCH-LCR-InformationModify-AddListIE-RL-ReconfPrepTDD          ProtocolIE-ID ::= 478
id-DL-Timeslot-LCR-InformationModify-ModifyList-RL-ReconfPrepTDD     ProtocolIE-ID ::= 479
id-TimeslotISCPInfoList-LCR-DL-PC-RqstTDD                            ProtocolIE-ID ::= 480
id-UL-DPCH-LCR-InformationAddListIE-RL-ReconfPrepTDD                 ProtocolIE-ID ::= 481
id-UL-DPCH-LCR-InformationModify-AddList                             ProtocolIE-ID ::= 483
id-UL-DPCH-LCR-InformationModify-AddListIE-RL-ReconfPrepTDD          ProtocolIE-ID ::= 484
id-UL-TimeslotLCR-Information-RL-ReconfPrepTDD                       ProtocolIE-ID ::= 485
id-UL-SIRTarget                                                     ProtocolIE-ID ::= 510
id-PDSCH-AddInformation-LCR-PSCH-ReconfRqst                          ProtocolIE-ID ::= 486
id-PDSCH-AddInformation-LCR-AddListIE-PSCH-ReconfRqst                ProtocolIE-ID ::= 487
id-PDSCH-Information-Cell-SetupRqstFDD                               ProtocolIE-ID ::=  26
id-PDSCH-Information-Cell-ReconfRqstFDD                              ProtocolIE-ID ::=  27
id-PDSCH-ModifyInformation-LCR-PSCH-ReconfRqst                       ProtocolIE-ID ::= 488
id-PDSCH-ModifyInformation-LCR-ModifyListIE-PSCH-ReconfRqst          ProtocolIE-ID ::= 489
id-PUSCH-AddInformation-LCR-PSCH-ReconfRqst                          ProtocolIE-ID ::= 490
id-PUSCH-AddInformation-LCR-AddListIE-PSCH-ReconfRqst                ProtocolIE-ID ::= 491
id-PUSCH-ModifyInformation-LCR-PSCH-ReconfRqst                       ProtocolIE-ID ::= 492
id-PUSCH-ModifyInformation-LCR-ModifyListIE-PSCH-ReconfRqst          ProtocolIE-ID ::= 493
id-timeslotInfo-CellSyncInitiationRqstTDD                            ProtocolIE-ID ::= 496
id-SyncReportType-CellSyncReprtTDD                                   ProtocolIE-ID ::= 497
id-Power-Local-Cell-Group-InformationItem-AuditRsp                  ProtocolIE-ID ::= 498
id-Power-Local-Cell-Group-InformationItem-ResourceStatusInd         ProtocolIE-ID ::= 499
id-Power-Local-Cell-Group-InformationItem2-ResourceStatusInd        ProtocolIE-ID ::= 500
id-Power-Local-Cell-Group-InformationList-AuditRsp                  ProtocolIE-ID ::= 501
id-Power-Local-Cell-Group-InformationList-ResourceStatusInd         ProtocolIE-ID ::= 502
id-Power-Local-Cell-Group-InformationList2-ResourceStatusInd        ProtocolIE-ID ::= 503
id-Power-Local-Cell-Group-ID                                        ProtocolIE-ID ::= 504
id-PUSCH-Info-DM-Rqst                                               ProtocolIE-ID ::= 505
id-PUSCH-Info-DM-Rsp                                                ProtocolIE-ID ::= 506
id-PUSCH-Info-DM-Rprt                                               ProtocolIE-ID ::= 507
id-InitDL-Power                                                     ProtocolIE-ID ::= 509
id-cellSyncBurstRepetitionPeriod                                    ProtocolIE-ID ::= 511
id-ReportCharacteristicsType-OnModification                         ProtocolIE-ID ::= 512
id-SFNSFNMeasurementValueInformation                                ProtocolIE-ID ::= 513
id-SFNSFNMeasurementThresholdInformation                            ProtocolIE-ID ::= 514
id-TUTRANGPSMeasurementValueInformation                             ProtocolIE-ID ::= 515
id-TUTRANGPSMeasurementThresholdInformation                         ProtocolIE-ID ::= 516
id-Rx-Timing-Deviation-Value-LCR                                    ProtocolIE-ID ::= 520
id-RL-InformationResponse-LCR-RL-AdditionRspTDD                     ProtocolIE-ID ::= 51
id-DL-PowerBalancing-Information                                     ProtocolIE-ID ::= 28
id-DL-PowerBalancing-ActivationIndicator                            ProtocolIE-ID ::= 29
id-DL-PowerBalancing-UpdatedIndicator                               ProtocolIE-ID ::= 30
id-CCTrCH-Initial-DL-Power-RL-SetupRqstTDD                          ProtocolIE-ID ::= 517
id-CCTrCH-Initial-DL-Power-RL-AdditionRqstTDD                       ProtocolIE-ID ::= 518
```

```
id-CCTrCH-Initial-DL-Power-RL-ReconfPrepTDD              ProtocolIE-ID ::= 519
id-IPDLParameter-Information-LCR-Cell-SetupRqstTDD       ProtocolIE-ID ::= 41
id-IPDLParameter-Information-LCR-Cell-ReconfRqstTDD      ProtocolIE-ID ::= 42
id-HS-PDSCH-HS-SCCH-MaxPower-PSCH-ReconfRqst            ProtocolIE-ID ::= 522
id-HS-PDSCH-HS-SCCH-ScramblingCode-PSCH-ReconfRqst     ProtocolIE-ID ::= 523
id-HS-PDSCH-FDD-Code-Information-PSCH-ReconfRqst       ProtocolIE-ID ::= 524
id-HS-SCCH-FDD-Code-Information-PSCH-ReconfRqst        ProtocolIE-ID ::= 525
id-HS-PDSCH-TDD-Information-PSCH-ReconfRqst            ProtocolIE-ID ::= 526
id-Add-To-HS-SCCH-Resource-Pool-PSCH-ReconfRqst       ProtocolIE-ID ::= 527
id-Modify-HS-SCCH-Resource-Pool-PSCH-ReconfRqst       ProtocolIE-ID ::= 528
id-Delete-From-HS-SCCH-Resource-Pool-PSCH-ReconfRqst  ProtocolIE-ID ::= 529
id-bindingID                                           ProtocolIE-ID ::= xxx
id-RL-Specific-DCH-Info                                ProtocolIE-ID ::= xxx
id-transportlayeraddress                               ProtocolIE-ID ::= xxx
id-DelayedActivation                                   ProtocolIE-ID ::= 231
id-DelayedActivationList-RL-ActivationCmdFDD           ProtocolIE-ID ::= 232
id-DelayedActivationInformation-RL-ActivationCmdFDD    ProtocolIE-ID ::= 233
id-DelayedActivationList-RL-ActivationCmdTDD           ProtocolIE-ID ::= 234
id-DelayedActivationInformation-RL-ActivationCmdTDD    ProtocolIE-ID ::= 235
id-neighbouringTDDCellMeasurementInformationLCR        ProtocolIE-ID ::= 58
id-SYNCDlCodeId-TransInitLCR-CellSyncInitiationRqstTDD ProtocolIE-ID ::= 543
id-SYNCDlCodeId-MeasureInitLCR-CellSyncInitiationRqstTDD ProtocolIE-ID ::= 544
id-SYNCDlCodeIdTransReconfInfoLCR-CellSyncReconfRqstTDD ProtocolIE-ID ::= 545
id-SYNCDlCodeIdMeasReconfigurationLCR-CellSyncReconfRqstTDD ProtocolIE-ID ::= 546
id-SYNCDlCodeIdMeasInfoList-CellSyncReconfRqstTDD      ProtocolIE-ID ::= 547
id-SyncDLCodeIdsMeasInfoList-CellSyncReprtTDD          ProtocolIE-ID ::= 548
id-SyncDLCodeIdThreInfoLCR                             ProtocolIE-ID ::= 549
id-NSubCyclesPerCyclePeriod-CellSyncReconfRqstTDD      ProtocolIE-ID ::= 550
id-DwPCH-Power                                         ProtocolIE-ID ::= 551
id-Angle-Of-Arrival-Value-LCR                          ProtocolIE-ID ::= 521
id-HSDSCH-FDD-Information                              ProtocolIE-ID ::= 530
id-HSDSCH-FDD-Information-Response                     ProtocolIE-ID ::= 531
id-HSDSCH-FDD-Information-to-Add                       ProtocolIE-ID ::= 532
id-HSDSCH-FDD-Information-to-Delete                    ProtocolIE-ID ::= 533
id-HSDSCH-Information-to-Modify                        ProtocolIE-ID ::= 534
id-HSDSCH-RNTI                                         ProtocolIE-ID ::= 535
id-HSDSCH-TDD-Information                              ProtocolIE-ID ::= 536
id-HSDSCH-TDD-Information-Response                     ProtocolIE-ID ::= 537
id-HSDSCH-TDD-Information-Response-LCR                 ProtocolIE-ID ::= 538
id-HSDSCH-TDD-Information-to-Add                       ProtocolIE-ID ::= 539
id-HSDSCH-TDD-Information-to-Delete                    ProtocolIE-ID ::= 540
id-HSPDSCH-RL-ID                                       ProtocolIE-ID ::= 541
id-PrimCCPCH-RSCP-DL-PC-RqstTDD                        ProtocolIE-ID ::= 542

END
```

## 9.3.7    Container Definitions

```
-- *************************************************************
--
-- Container definitions
--
-- *************************************************************
```

```
NBAP-Containers {
itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
umts-Access (20) modules (3) nbap (2) version1 (1) nbap-Containers (5) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

-- **************************************************************
--
-- IE parameter types from other modules.
--
-- **************************************************************

IMPORTS
    maxProtocolExtensions,
    maxPrivateIEs,
    maxProtocolIEs,
    Criticality,
    Presence,
    PrivateIE-ID,
    ProtocolIE-ID
FROM NBAP-CommonDataTypes;

-- **************************************************************
--
-- Class Definition for Protocol IEs
--
-- **************************************************************

NBAP-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
--
-- **************************************************************

NBAP-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
--
-- ************************************************************

NBAP-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
--
-- ************************************************************

NBAP-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 {NBAP-PROTOCOL-IES : IEsSetParam} ::=
    SEQUENCE (SIZE (0..maxProtocolIEs)) OF
    ProtocolIE-Field {{IEsSetParam}}

ProtocolIE-Single-Container {NBAP-PROTOCOL-IES : IEsSetParam} ::=
    ProtocolIE-Field {{IEsSetParam}}

ProtocolIE-Field {NBAP-PROTOCOL-IES : IEsSetParam} ::= SEQUENCE {
    id          NBAP-PROTOCOL-IES.&id        ({IEsSetParam}),
    criticality     NBAP-PROTOCOL-IES.&criticality  ({IEsSetParam}{@id}),
    value       NBAP-PROTOCOL-IES.&Value     ({IEsSetParam}{@id})
}

-- **************************************************************
--
-- Container for Protocol IE Pairs
--
-- **************************************************************

ProtocolIE-ContainerPair {NBAP-PROTOCOL-IES-PAIR : IEsSetParam} ::=
    SEQUENCE (SIZE (0..maxProtocolIEs)) OF
    ProtocolIE-FieldPair {{IEsSetParam}}

ProtocolIE-FieldPair {NBAP-PROTOCOL-IES-PAIR : IEsSetParam} ::= SEQUENCE {
    id              NBAP-PROTOCOL-IES-PAIR.&id          ({IEsSetParam}),
    firstCriticality        NBAP-PROTOCOL-IES-PAIR.&firstCriticality   ({IEsSetParam}{@id}),
    firstValue          NBAP-PROTOCOL-IES-PAIR.&FirstValue ({IEsSetParam}{@id}),
    secondCriticality       NBAP-PROTOCOL-IES-PAIR.&secondCriticality  ({IEsSetParam}{@id}),
    secondValue         NBAP-PROTOCOL-IES-PAIR.&SecondValue ({IEsSetParam}{@id})
}

-- **************************************************************
--
-- Container Lists for Protocol IE Containers
--
-- **************************************************************

ProtocolIE-ContainerList {INTEGER : lowerBound, INTEGER : upperBound, NBAP-PROTOCOL-IES : IEsSetParam} ::=
    SEQUENCE (SIZE (lowerBound..upperBound)) OF
    ProtocolIE-Container {{IEsSetParam}}

ProtocolIE-ContainerPairList {INTEGER : lowerBound, INTEGER : upperBound, NBAP-PROTOCOL-IES-PAIR : IEsSetParam} ::=
    SEQUENCE (SIZE (lowerBound..upperBound)) OF
    ProtocolIE-ContainerPair {{IEsSetParam}}

-- **************************************************************
--
-- Container for Protocol Extensions
--
-- **************************************************************
```

```
ProtocolExtensionContainer {NBAP-PROTOCOL-EXTENSION : ExtensionSetParam} ::=
    SEQUENCE (SIZE (1..maxProtocolExtensions)) OF
    ProtocolExtensionField {{ExtensionSetParam}}

ProtocolExtensionField {NBAP-PROTOCOL-EXTENSION : ExtensionSetParam} ::= SEQUENCE {
    id        NBAP-PROTOCOL-EXTENSION.&id ({ExtensionSetParam}),
    criticality NBAP-PROTOCOL-EXTENSION.&criticality    ({ExtensionSetParam}{@id}),
    extensionValue  NBAP-PROTOCOL-EXTENSION.&Extension  ({ExtensionSetParam}{@id})
}

-- ************************************************************
--
-- Container for Private IEs
--
-- ************************************************************

PrivateIE-Container {NBAP-PRIVATE-IES : IEsSetParam} ::=
    SEQUENCE (SIZE (1..maxPrivateIEs)) OF
    PrivateIE-Field {{IEsSetParam}}

PrivateIE-Field {NBAP-PRIVATE-IES : IEsSetParam} ::= SEQUENCE {
    id          NBAP-PRIVATE-IES.&id
    ({IEsSetParam}),
    criticality         NBAP-PRIVATE-IES.&criticality
    ({IEsSetParam}{@id}),
    value       NBAP-PRIVATE-IES.&Value
    ({IEsSetParam}{@id})
}

END
```

## 9.4 Message Transfer Syntax

NBAP shall use the ASN.1 Basic Packed Encoding Rules (BASIC-PER) Aligned Variant as transfer syntax as specified in ref. [11].

The following encoding rules apply in addition to what has been specified in X.691 [11]:

When a bitstring value is placed in a bit-field as specified in 15.6 to 15.11 in [11], the leading bit of the bitstring value shall be placed in the leading bit of the bit-field, and the trailing bit of the bitstring value shall be placed in the trailing bit of the bit-field.

NOTE - When using the "bstring" notation, the leading bit of the bitstring value is on the left, and the trailing bit of the bitstring value is on the right. The term 'leading bit' is to be interpreted as equal to the term 'first bit' defined in [12].

## 9.5 Timers

$T_{Preempt}$

- Specifies the maximum time that a Node B 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:

- Transfer Syntax Error

- Abstract Syntax Error

- Logical Error

Protocol errors can occur in the following functions within a receiving node:
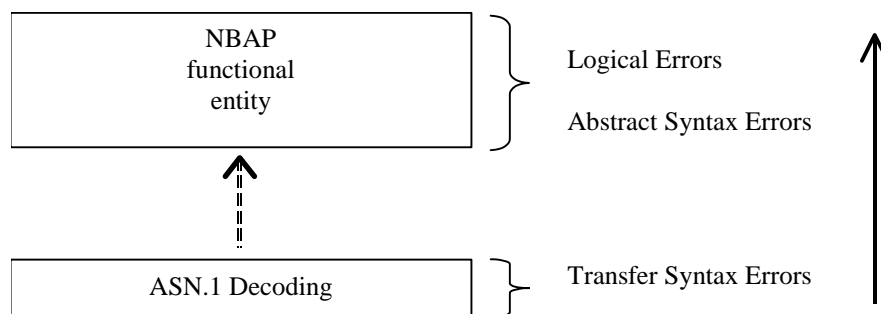


**Figure 38: Protocol Errors in NBAP.**

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, than 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 NBAP entity:

1.   receives IEs or IE groups that cannot be understood (unknown 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 concerning 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 concerning 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 NBAP 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:

- Reject IE

- Ignore IE and Notify Sender

-  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 the receiving entity (some may still remain unsupported).

   Note that this restriction is applicable to a sending entity for constructing messages.

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.

When the criticality information cannot even be decoded in a not comprehended IE or IE group, the Error Indication procedure shall be initiated with an appropriate cause value.

## 10.3.3    Presence Information

For many IEs/IE groups which are optional according to the ASN.1 transfer syntax, NBAP 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 concerning object of class NBAP-PROTOCOL-IES, NBAP-PROTOCOL-IES-PAIR, NBAP-PROTOCOL-EXTENSION or NBAP-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* 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 shall 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 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 failure message, the failure 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 failure message, 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.

<u>**Class 2:**</u>

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 subclause 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, failure 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.

# Annex A (normative):
# Allocation and Pre-emption of Radio Links in the Node B

## 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 Node B Communication Context in the Node B 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 Node B Communication Context in the Node B,
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 Node B Communication Context in the Node B 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 Node B 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 Link 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 cell.

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 Node B 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 Node B shall initiate the Radio Link Pre-emption procedure for all the Node B Communication 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 Node B 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 Node B shall regard the procedure that triggered the pre-emption process as failed 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.
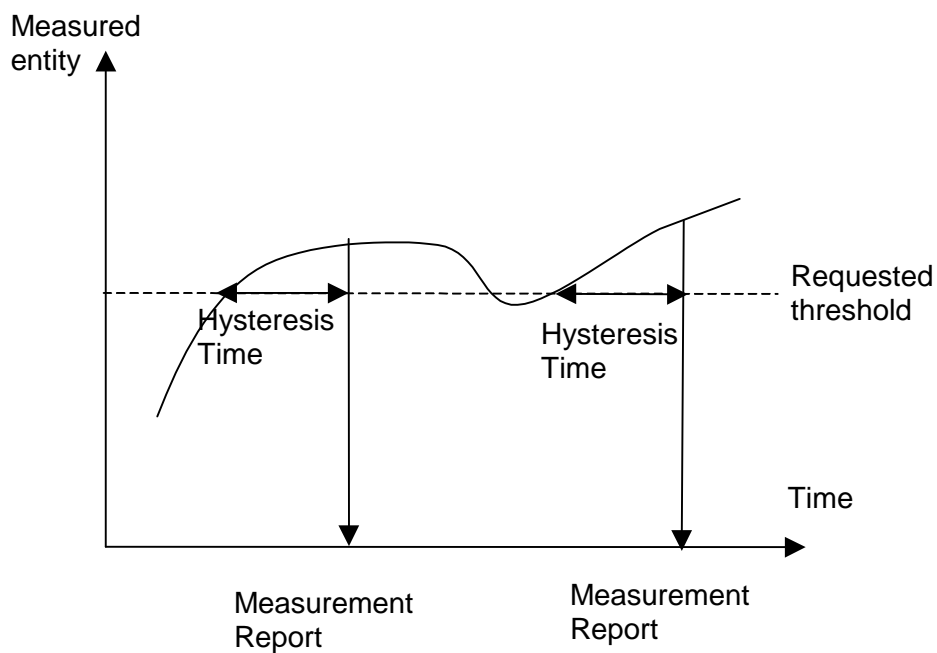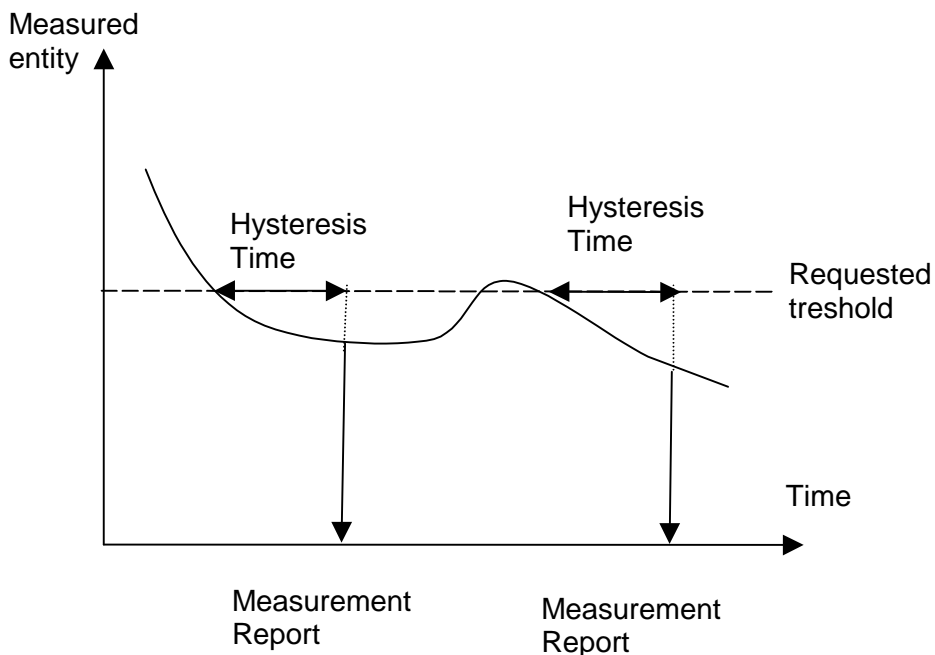


**Figure B.1: Event A reporting with Hysteresis Time specified**

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.
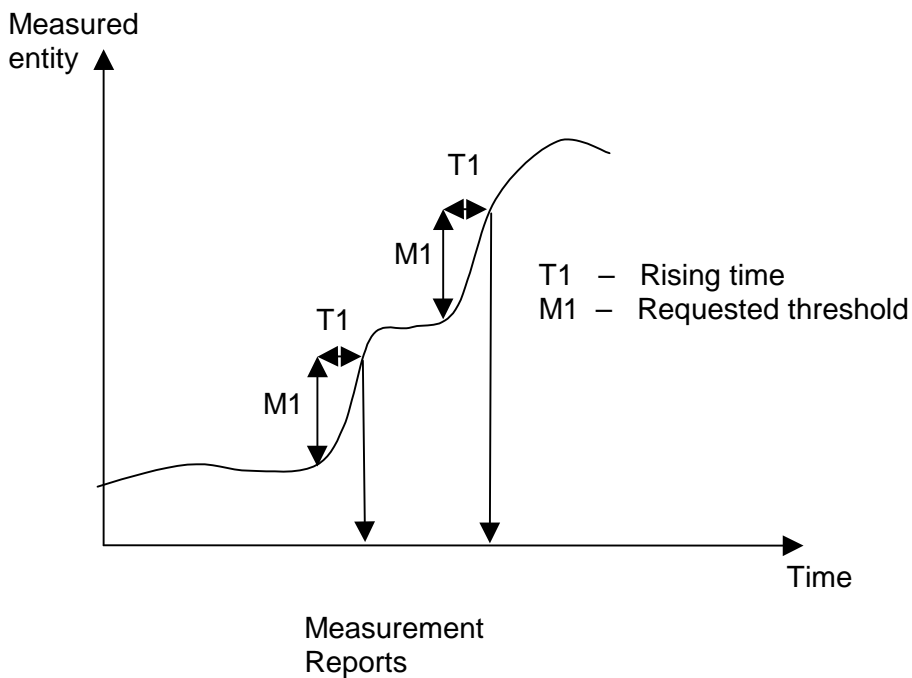


**Figure B.3: Event C reporting**

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.
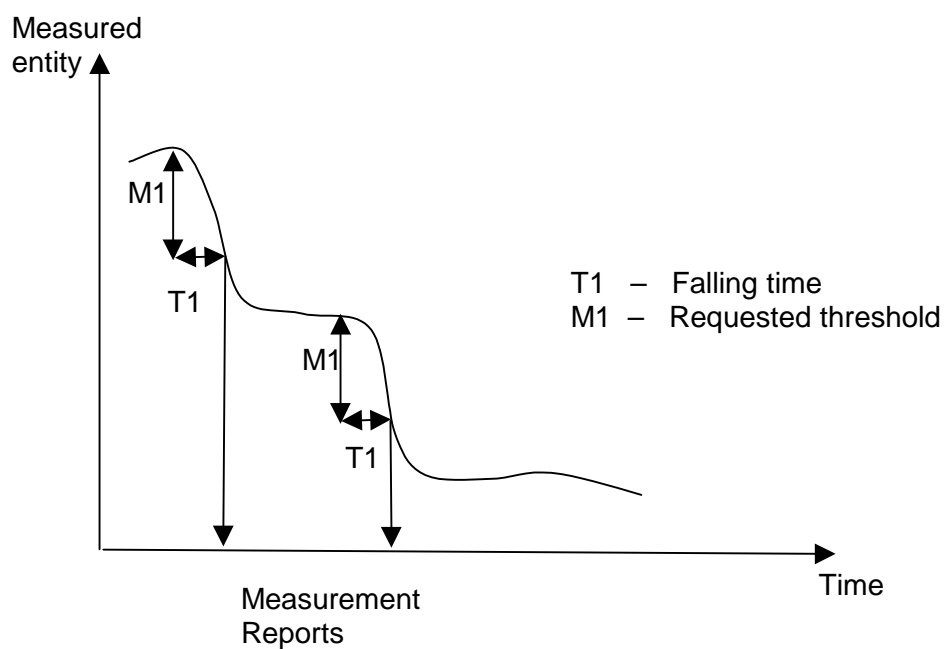
**Figure B.4: Event D reporting**

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 Node B 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) Measurement Reporting procedure (Report B) is initiated and the periodic reporting is terminated.
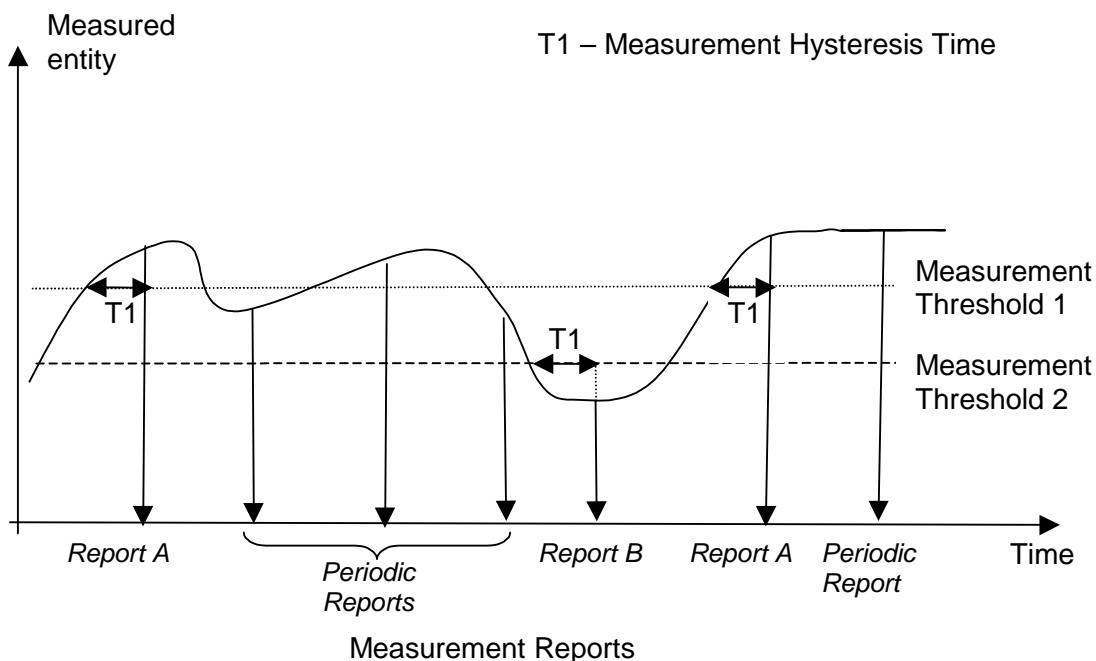
**Figure B.5: Event E reporting with Hysteresis Time specified and Periodic Reporting requested**

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 Node B 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.
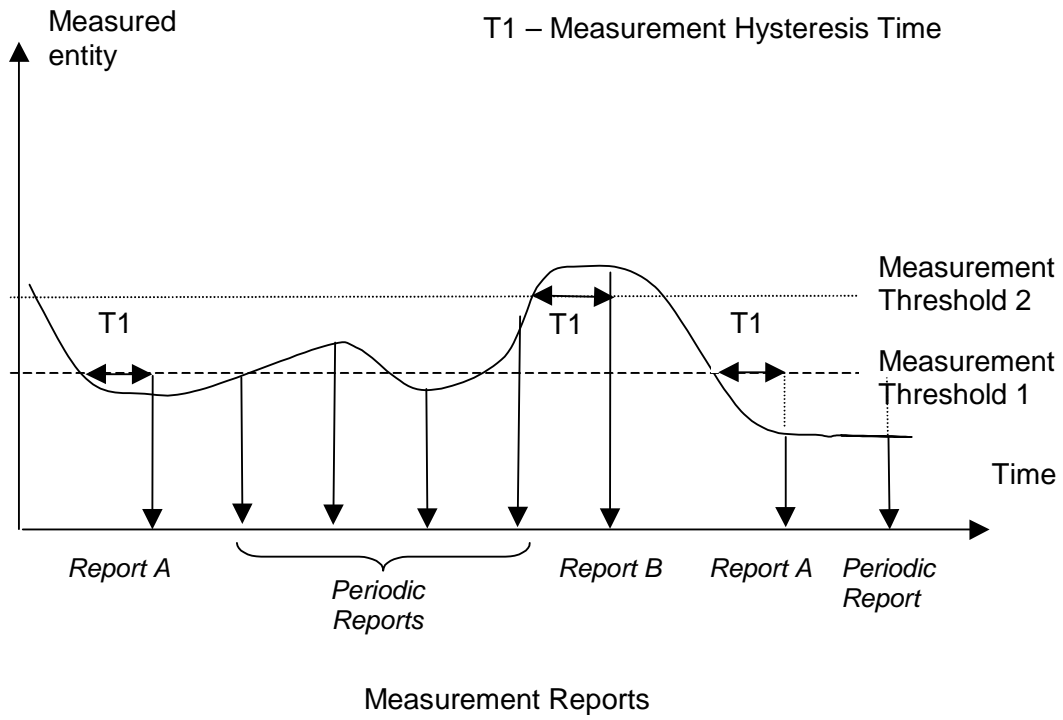
Measurement Reports

**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.
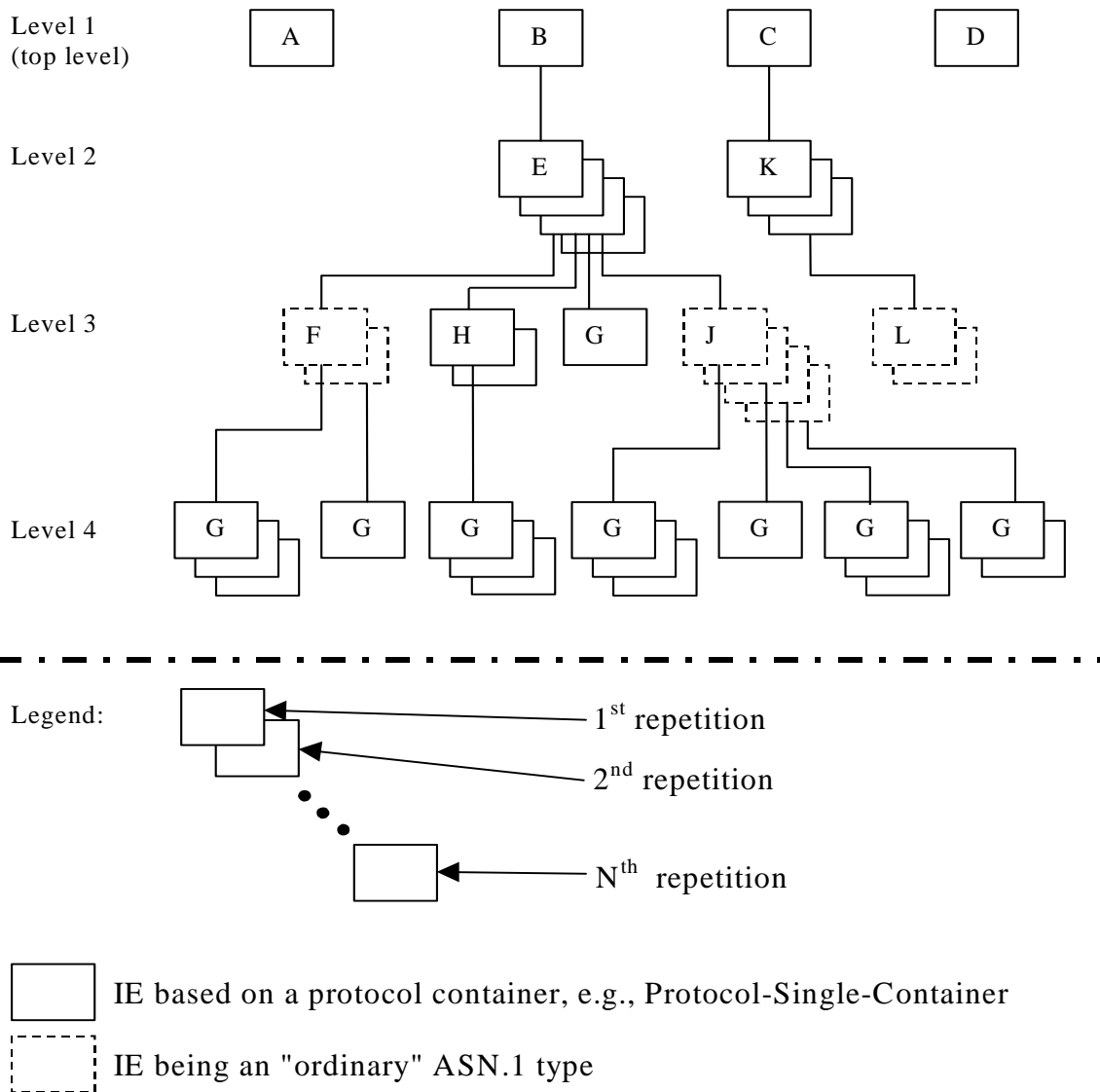


**Figure C.1: Example of content of a received NBAP message based on the EXAMPLE MESSAGE**

# C.3 Content of Criticality Diagnostics

## C.3.1 Example 1

Level 1
(top level)

Level 2

Level 3

Level 4

Included in the *Information Element Criticality Diagnostics* IE:
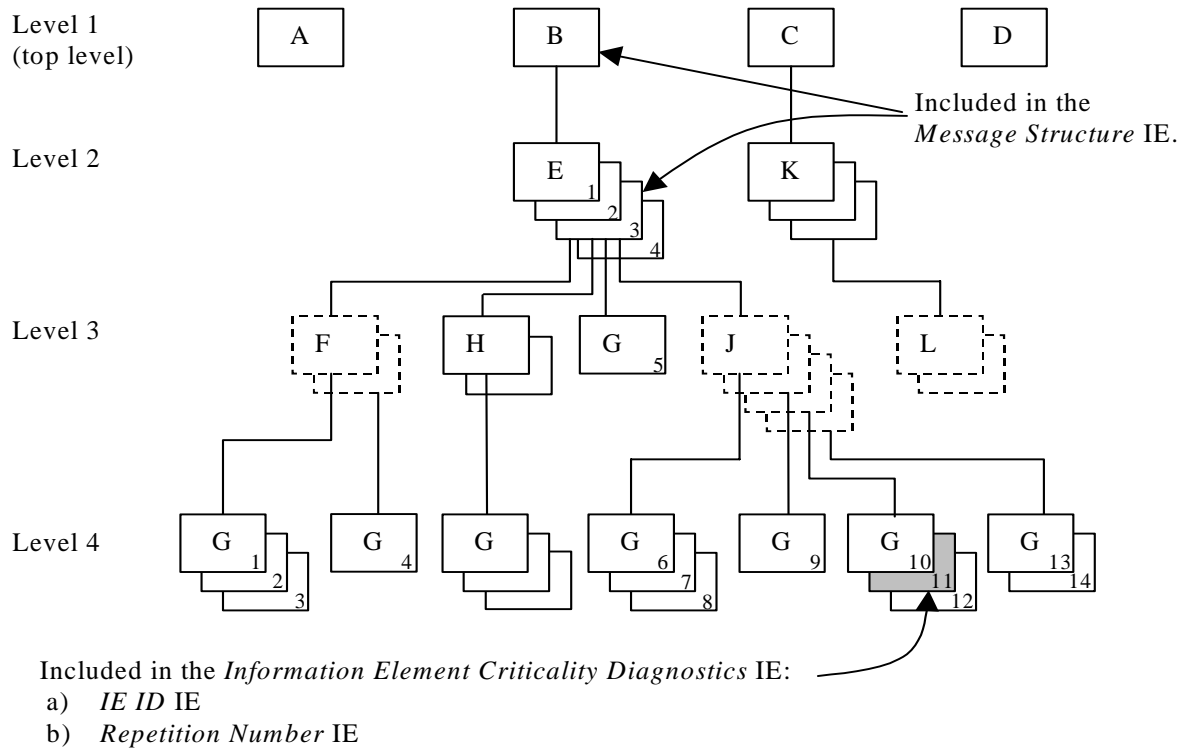a) *IE ID* IE
b) *Repetition Number* IE

**Figure C.2: Example of a received NBAP message containing a not comprehended IE**
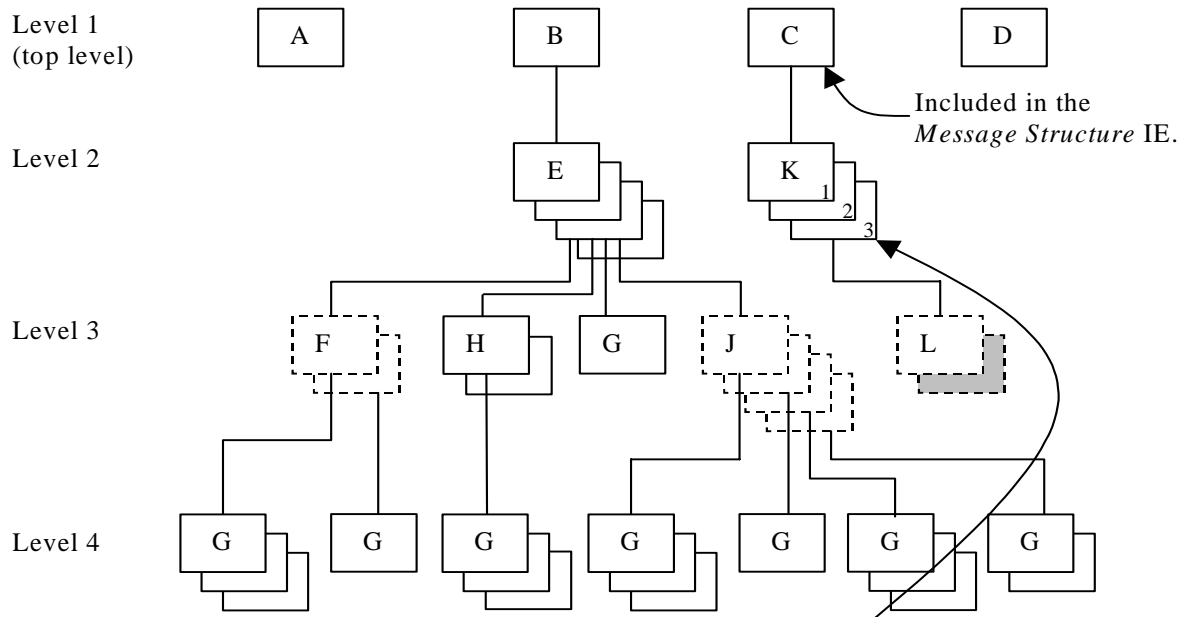
If there is an error within the instance marked as grey in the IE G in the IE J shown in the figure C.2 above, this will be reported within the *Information Element Criticality Diagnostics* IE within the *Criticality Diagnostics* IE as follows:

| 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 *Message Structure* IE this is the eleventh occurrence of IE G within the IE E (level 2). |
| Type of Error | not underst ood | |
| Message Structure, *first repetition* | | |
| >IE ID | id-B | IE ID from level 1. |
| Message Structure, *second repetition* | | |
| >IE ID | id-E | IE ID from the lowest level above the reported level, i.e. level 2. |
| >Repetition Number | 3 | Repetition number from the lowest level above the reported level, i.e. level 2. |

Note 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



Included in the *Information Element Criticality Diagnostics* IE:
a)   *IE ID* IE
b)   *Repetition Number* IE

**Figure C.3: Example of a received NBAP 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 underst ood | |
| Message Structure, *first repetition* | | |
| >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



Included in the *Information Element Criticality Diagnostics* IE:
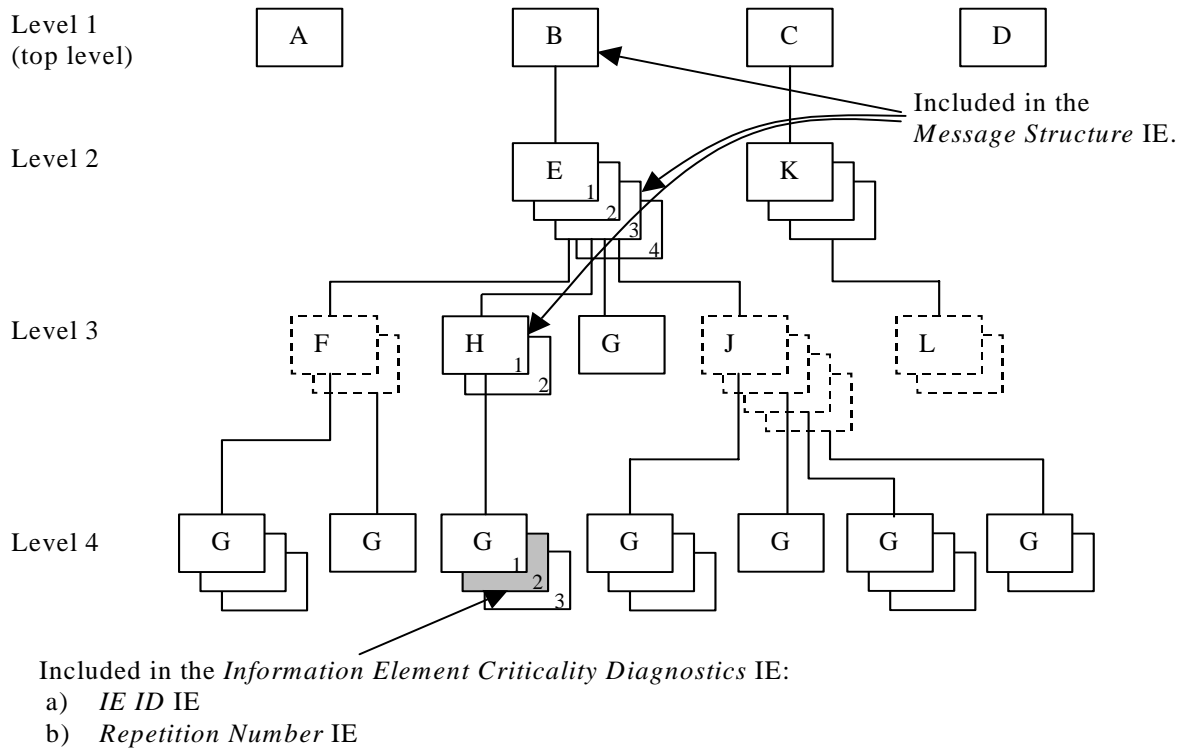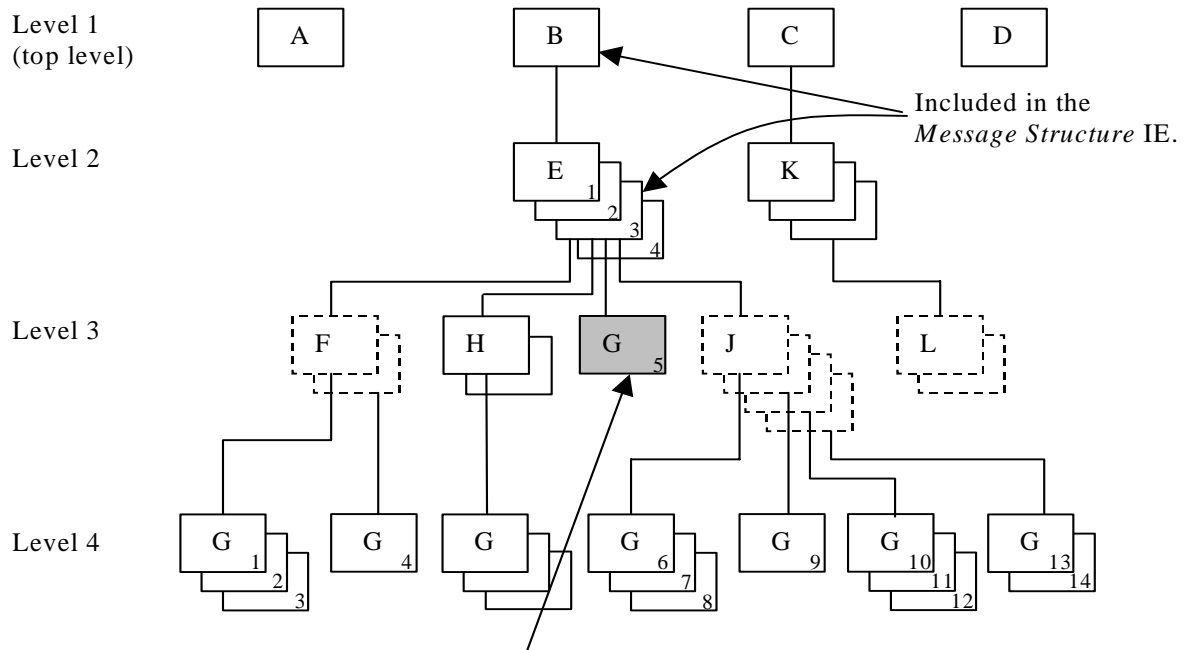a) *IE ID* IE
b) *Repetition Number* IE

**Figure C.4: Example of a received NBAP 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 | 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 | 2 | Repetition number on the reported level, i.e. level 4. |
| Type of Error | not understood | |
| Message Structure, *first repetition* | | |
| >IE ID | id-B | IE ID from level 1. |
| Message Structure, *second repetition* | | |
| >IE ID | id-E | IE ID from level 2. |
| >Repetition Number | 3 | Repetition number from level 2. |
| Message Structure, *third repetition* | | |
| >IE ID | id-H | IE ID from the lowest level above the reported level, i.e. level 3. |
| >Repetition Number | 1 | Repetition number from the lowest level above the reported level, i.e. level 3. |

Note 5. The repetition number of level 4 indicates the number of repetitions of IE G received up to the detected erroneous repetition, counted below the same instance of the previous level with assigned criticality (instance 1 of IE H on level 3).

## C.3.4    Example 4



Included in the *Information Element Criticality Diagnostics* IE:
a)    *IE ID* IE
b)    *Repetition Number* IE

**Figure C.5: Example of a received NBAP 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 *Message Structure* IE this is the fifth occurrence of IE G within the IE E (level 2). |
| Type of Error | not understood | |
| Message Structure, *first repetition* | | |
| >IE ID | id-B | IE ID from level 1. |
| Message Structure, *second repetition* | | |
| >IE ID | id-E | IE ID from the lowest level above the reported level, i.e. level 2. |
| >Repetition Number | 3 | Repetition number from the lowest level above the reported level, i.e. level 2. |

Note 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



Included in the *Message Structure* IE.

Included in the *Information Element Criticality Diagnostics* IE:
a)   *IE ID* IE
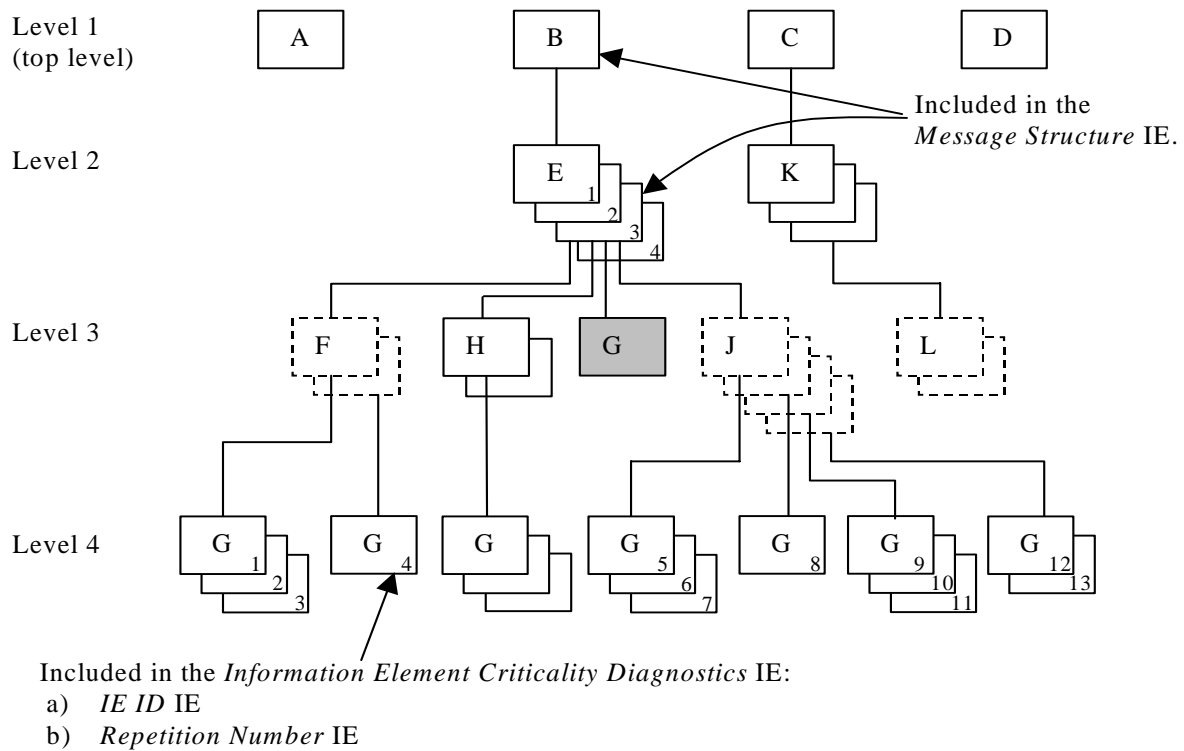b)   *Repetition Number* IE

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

If the instance marked as grey in the IE G in the IE E shown in the figure C.6 above, is missing this will be reported within the *Information Element Criticality Diagnostics* IE within the *Criticality Diagnostics* IE as follows:

| IE name | Value | Comment |
|---|---|---|
| IE Criticality | reject | Criticality for IE on the reported level, i.e. level 3. |
| IE ID | id-G | IE ID from the reported level, i.e. level 3. |
| Repetition Number | 4 | Repetition number up to the missing IE on the reported level, i.e. level 3. (Since the IE E (level 2) is the lowest level included in the *Message Structure* IE there have been four occurrences of IE G within the IE E (level 2) up to the missing occurrence. |
| Type of Error | missing | |
| Message Structure, *first repetition* | | |
| >IE ID | id-B | IE ID from level 1. |
| Message Structure, *second repetition* | | |
| >IE ID | id-E | IE ID from the lowest level above the reported level, i.e. level 2. |
| >Repetition Number | 3 | Repetition number from the lowest level above the reported level, i.e. level 2. |

Note 7.    The repetition number of the reported IE indicates the number of repetitions of IE G received up to but not including the missing occurrence, counting all occurrences of the IE G below the same instance of the previous level with assigned criticality (instance 3 of IE E on level 2).

# C.4    ASN.1 of EXAMPLE MESSAGE

```
ExampleMessage ::= SEQUENCE {
    ProtocolIEs         ProtocolIE-Container       {{ExampleMessage-IEs}},
    ProtocolExtensions  ProtocolExtensionContainer {{ExampleMessage-Extensions}}   OPTIONAL,
    ...
}

ExampleMessage-IEs NBAP-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 NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

E-List ::= SEQUENCE (SIZE (1..maxE)) OF ProtocolIE-Single-Container { {E-IEs} }

E-IEs NBAP-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 NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

F-List ::= SEQUENCE (SIZE (1..maxF)) OF F

F ::= SEQUENCE {
    g               G-List2 OPTIONAL,
    iE-Extensions   ProtocolExtensionContainer { {F-ExtIEs} }   OPTIONAL,
    ...
}

F-ExtIEs    NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

G-List2 ::= SEQUENCE (SIZE (1..3, ...)) OF ProtocolIE-Single-Container { {G2-IEs} }

G2-IEs NBAP-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 NBAP-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 NBAP-PROTOCOL-EXTENSION ::= {
```

```
    ...
}

G-List3 ::= SEQUENCE (SIZE (1..3, ...)) OF ProtocolIE-Single-Container { {G3-IEs} }

G3-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-G   CRITICALITY notify  TYPE G  PRESENCE mandatory  }
}

G-List1 ::= ProtocolIE-Single-Container { {G1-IEs} }

G1-IEs NBAP-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    NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

G-List4 ::= SEQUENCE (SIZE (1..3, ...)) OF ProtocolIE-Single-Container { {G4-IEs} }

G4-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-G   CRITICALITY reject  TYPE G  PRESENCE mandatory  }
}

C ::= SEQUENCE {
    k               K-List,
    iE-Extensions   ProtocolExtensionContainer { {C-ExtIEs} }   OPTIONAL,
    ...
}

C-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

K-List ::= SEQUENCE (SIZE (1..maxK)) OF ProtocolIE-Single-Container { {K-IEs} }

K-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-K   CRITICALITY notify  TYPE K  PRESENCE mandatory  }
}

K ::= SEQUENCE {
    l               L-List,
    iE-Extensions   ProtocolExtensionContainer { {K-ExtIEs} }   OPTIONAL,
    ...
}

K-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

L-List ::= SEQUENCE (SIZE (1..maxL)) OF L

L ::= SEQUENCE {
    m               M   OPTIONAL,
    iE-Extensions   ProtocolExtensionContainer { {L-ExtIEs} }   OPTIONAL,
    ...
}

L-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

ExampleMessage-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

# Annex D (informative): Change history

| | | | | | Change history |
|---|---|---|---|---|---|
| TSG RAN# | Version | CR | Tdoc RAN | New Version | Subject/Comment |
| RAN_06 | - | - | RP-99764 | 3.0.0 | Approved at TSG RAN #6 and placed under Change Control |
| RAN_07 | 3.0.0 | - | - | 3.1.0 | Approved at TSG RAN #7 |
| RAN_08 | 3.1.0 | - | RP-000250 | 3.2.0 | Approved at TSG RAN #8 |
| RAN_08 | 3.1.0 | - | RP-000251 | 3.2.0 | Approved at TSG RAN #8 |
| RAN_08 | 3.1.0 | - | RP-000252 | 3.2.0 | Approved at TSG RAN #8 |
| RAN_08 | 3.1.0 | - | RP-000253 | 3.2.0 | Approved at TSG RAN #8 |
| RAN_09 | 3.2.0 | 165 168-170, 173-178, 180-189 | RP-000386 | 3.3.0 | Approved at TSG RAN #9 |
| RAN_09 | 3.2.0 | 190-200, 203 205 207 208 211 214 218-219 | RP-000387 | 3.3.0 | Approved at TSG RAN #9 |
| RAN_09 | 3.2.0 | 221 222 224-228 233 244, 246 | RP-000388 | 3.3.0 | Approved at TSG RAN #9 |
| RAN_09 | 3.2.0 | 247-248 | RP-000389 | 3.3.0 | Approved at TSG RAN #9 |
| RAN_10 | 3.3.0 | 250-324 | RP-000627 RP-000628 RP-000630 RP-000697 | 3.4.0 | Approved at TSG RAN #10 |
| RAN_10 | 3.4.0 | | | 3.4.1 | Correct of headers |
| RAN_11 | 3.4.1 | 325-330, 333-336, 339-342, 344, 346-348, 350-356, 365, 367-371, 377-379, 383, 385-386, 388 | RP-010125 RP-010126 | 3.5.0 | Approved at TSG RAN #11 |

| Change history | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Date** | **TSG #** | **TSG Doc.** | **CR** | **Rev** | **Subject/Comment** | | **Old** | **New** |
| March 01 | 11 | RP-010160 | 373, 387 | | Approved at TSG RAN #11 and placed under Change Control | | - | 4.0.0 |
| March 01 | 11 | RP-010166 | 361 | | Approved at TSG RAN #11 and placed under Change Control | | - | 4.0.0 |
| March 01 | 11 | RP-010159 | 372, 374, 381 | | Approved at TSG RAN #11 and placed under Change Control | | - | 4.0.0 |
| March 01 | 11 | RP-010164 | 358, 359 | | Approved at TSG RAN #11 and placed under Change Control | | - | 4.0.0 |
| March 01 | 11 | RP-010167 | 362 | | Approved at TSG RAN #11 and placed under Change Control | | - | 4.0.0 |
| 06/2001 | 12 | RP-010383 | 390, 392, 394, 396, 398, 400, 402, 404, 406 | | Approved at TSG RAN #12 | | 4.0.0 | 4.1.0 |
| 06/2001 | 12 | RP-010384 | 412, 416, 421, 423, 427, 431, 433, 437, 439, 441 | | Approved at TSG RAN #12 | | 4.0.0 | 4.1.0 |
| 06/2001 | 12 | RP-010385 | 449, 456, 462, 464, 467 | | Approved at TSG RAN #12 | | 4.0.0 | 4.1.0 |
| 06/2001 | 12 | RP-010396 | 413, 414, 415, 416, 417, 418, 419, 450, 451, 452, 453, 454, 465 | | Approved at TSG RAN #12 | | 4.0.0 | 4.1.0 |
| 09/2001 | 13 | RP-010587 | 410 | 2 | Ambiguity in CM handling | | 4.1.0 | 4.2.0 |
| 09/2001 | 13 | RP-010587 | 472 | | Correction to Information Block Deletion | | 4.1.0 | 4.2.0 |
| 09/2001 | 13 | RP-010587 | 476 | | Clarification of the AICH power | | 4.1.0 | 4.2.0 |
| 09/2001 | 13 | RP-010587 | 479 | 1 | Transport bearer replacement clarification | | 4.1.0 | 4.2.0 |
| 09/2001 | 13 | RP-010587 | 481 | 1 | Corrections to the PDSCH Code Mapping IE | | 4.1.0 | 4.2.0 |
| 09/2001 | 13 | RP-010587 | 484 | 1 | Correction to the handling of DL Code Information in RL Reconfiguration procedures | | 4.1.0 | 4.2.0 |
| 09/2001 | 13 | RP-010587 | 485 | 1 | Correction to the Error handling of the ERROR INDICATION message | | 4.1.0 | 4.2.0 |
| 09/2001 | 13 | RP-010587 | 486 | | Correct max Codes discrepancy between tabular and ASN.1 | | 4.1.0 | 4.2.0 |
| 09/2001 | 13 | RP-010587 | 488 | | S-CCPCH Corrections for TDD | | 4.1.0 | 4.2.0 |
| 09/2001 | 13 | RP-010587 | 491 | 1 | Nbap criticality | | 4.1.0 | 4.2.0 |
| 09/2001 | 13 | RP-010588 | 500 | 1 | Clarification of Abnormal Conditions/Unsuccessful Operation | | 4.1.0 | 4.2.0 |
| 09/2001 | 13 | RP-010588 | 504 | | Error handling of erroneously present conditional IEs | | 4.1.0 | 4.2.0 |
| 09/2001 | 13 | RP-010588 | 507 | 1 | Correction for maxNrOfCPCHs | | 4.1.0 | 4.2.0 |
| 09/2001 | 13 | RP-010588 | 509 | 1 | Correction for N_EOT | | 4.1.0 | 4.2.0 |
| 09/2001 | 13 | RP-010588 | 513 | | Bitstrings ordering | | 4.1.0 | 4.2.0 |
| 09/2001 | 13 | RP-010588 | 517 | | Mapping of TFCS to TFCI | | 4.1.0 | 4.2.0 |
| 09/2001 | 13 | RP-010588 | 519 | | Correction of implementation of RAN#12 CRs | | 4.1.0 | 4.2.0 |
| 09/2001 | 13 | RP-010588 | 521 | | TDD Channelisation code range definition | | 4.1.0 | 4.2.0 |
| 09/2001 | 13 | RP-010588 | 524 | 1 | Clarification of chapter 10 | | 4.1.0 | 4.2.0 |
| 09/2001 | 13 | RP-010588 | 526 | | Clarification of use of Diversity Control Indicator | | 4.1.0 | 4.2.0 |
| 09/2001 | 13 | RP-010588 | 528 | 3 | Clarification of coordinated DCHs | | 4.1.0 | 4.2.0 |
| 09/2001 | 13 | RP-010599 | 468 | 2 | Allowed Combinations of Dedicated Measurement Type and the Reporting Characteristics Type | | 4.1.0 | 4.2.0 |
| 09/2001 | 13 | RP-010599 | 470 | | Support of 8PSK modulation for LCR TDD | | 4.1.0 | 4.2.0 |

| 09/2001 | 13 | RP-010599 | 473 | | DPC Mode in Radio Link Addition procedure | 4.1.0 | 4.2.0 |
|---|---|---|---|---|---|---|---|
| 09/2001 | 13 | RP-010599 | 475 | | Correction on NBAP function | 4.1.0 | 4.2.0 |
| 09/2001 | 13 | RP-010599 | 498 | 1 | Adding protocol container in CHOICE type IE | 4.1.0 | 4.2.0 |
| 09/2001 | 13 | RP-010599 | 501 | 1 | Clarification of Abnormal Conditions/Unsuccessful Operation | 4.1.0 | 4.2.0 |
| 09/2001 | 13 | RP-010599 | 515 | 1 | Corrections to position reporting | 4.1.0 | 4.2.0 |
| 09/2001 | 13 | RP-010599 | 518 | 2 | CR to 25.433 v4.1.0: RX timing deviation as dedicated measurement for 1.28Mcps TDD | 4.1.0 | 4.2.0 |
| 09/2001 | 13 | RP-010599 | 522 | 1 | Clarification on the Time Slot LCR | 4.1.0 | 4.2.0 |
| 10/2001 | - | - | - | - | Editorial correction to correct the header | 4.2.0 | 4.2.1 |
| 12/2001 | 14 | RP-010897 | 530 | 2 | CR on Priority range | 4.2.1 | 4.3.0 |
| 12/2001 | 14 | RP-010862 | 534 | | Bitstrings ordering | 4.2.1 | 4.3.0 |
| 12/2001 | 14 | RP-010862 | 536 | | Added UTRAN modes in the IE Type and Reference and Semantics Description in IEs in NBAP messages | 4.2.1 | 4.3.0 |
| 12/2001 | 14 | RP-010862 | 538 | | Alignment to RAN4 spec for Transmitted Code Power Measurement | 4.2.1 | 4.3.0 |
| 12/2001 | 14 | RP-010862 | 540 | | Correction the Clause 10 Error Handling | 4.2.1 | 4.3.0 |
| 12/2001 | 14 | RP-010862 | 542 | | Clarification of TrCh Ordering in TFCS | 4.2.1 | 4.3.0 |
| 12/2001 | 14 | RP-010862 | 544 | | Addition of SIB15.4 and SIB18 to tabular | 4.2.1 | 4.3.0 |
| 12/2001 | 14 | RP-010862 | 550 | | Transmit Diversity for TDD | 4.2.1 | 4.3.0 |
| 12/2001 | 14 | RP-010862 | 552 | | Clarification for the definition of the ASN.1 constants | 4.2.1 | 4.3.0 |
| 12/2001 | 14 | RP-010862 | 559 | 1 | Terminology Corrections | 4.2.1 | 4.3.0 |
| 12/2001 | 14 | RP-010863 | 560 | 1 | Rel-4 specific terminology corrections | 4.2.1 | 4.3.0 |
| 12/2001 | 14 | RP-010863 | 562 | | Procedure Code Criticality in Error Indication | 4.2.1 | 4.3.0 |
| 12/2001 | 14 | RP-010863 | 565 | | Clarification for the Power Adjustment Type IE in the DL POWER CONTROL REQUEST message | 4.2.1 | 4.3.0 |
| 12/2001 | 14 | RP-010863 | 567 | 1 | Forward Compatibility for DL Power Balancing | 4.2.1 | 4.3.0 |
| 12/2001 | 14 | RP-010863 | 569 | | Reconfiguration clarification | 4.2.1 | 4.3.0 |
| 12/2001 | 14 | RP-010863 | 571 | 2 | Addition of amendment to clarify the PER encoding of bitstrings | 4.2.1 | 4.3.0 |
| 12/2001 | 14 | RP-010863 | 575 | 2 | Transport Bearer replacement clarification for the DSCH case | 4.2.1 | 4.3.0 |
| 12/2001 | 14 | RP-010863 | 577 | | Clarification of the Transaction ID | 4.2.1 | 4.3.0 |
| 12/2001 | 14 | RP-010863 | 579 | 1 | CPCH-related corrections | 4.2.1 | 4.3.0 |
| 12/2001 | 14 | RP-010863 | 582 | | Correction of S field length | 4.2.1 | 4.3.0 |
| 12/2001 | 14 | RP-010874 | 546 | 1 | Correction of drift rate resolution | 4.2.1 | 4.3.0 |
| 12/2001 | 14 | RP-010874 | 547 | | Cell Parameter ID IE definition for 1.28Mcps TDD | 4.2.1 | 4.3.0 |
| 12/2001 | 14 | RP-010874 | 548 | | Amendment of the RADIO LINK ADDITION RESPONSE TDD message for LCR TDD | 4.2.1 | 4.3.0 |
| 12/2001 | 14 | RP-010874 | 580 | 2 | SFN-SFN quality indication | 4.2.1 | 4.3.0 |
| 12/2001 | 14 | RP-010912 | 545 | 1 | Correction to SFN-SFN Observed Time Difference Measurement report mapping | 4.2.1 | 4.3.0 |
| 03/2002 | 15 | RP-020174 | 591 | 1 | Incorrect Physical Shared Channel TDD Procedure definition in ASN.1 | 4.3.0 | 4.4.0 |
| 03/2002 | 15 | RP-020174 | 593 | | Removal of criticality information for Transaction ID in the ERROR INDICATION message | 4.3.0 | 4.4.0 |
| 03/2002 | 15 | RP-020174 | 600 | | Clarification to measurement unit at Higher Layer Filtering. | 4.3.0 | 4.4.0 |
| 03/2002 | 15 | RP-020174 | 605 | | Correction of the Limited Power Increase in Synchronised Radio Link Reconfiguration Preparation | 4.3.0 | 4.4.0 |
| 03/2002 | 15 | RP-020174 | 623 | 1 | Correction to physical channels which SCTD can be applied (Iub) | 4.3.0 | 4.4.0 |
| 03/2002 | 15 | RP-020182 | 585 | 1 | Corrections to the Information Exchange Initiation procedure | 4.3.0 | 4.4.0 |
| 03/2002 | 15 | RP-020182 | 586 | 1 | Correction to UE position measurements quality and threshold information | 4.3.0 | 4.4.0 |
| 03/2002 | 15 | RP-020182 | 587 | 1 | Correction to UE position measurements change and deviation limit formulas | 4.3.0 | 4.4.0 |
| 03/2002 | 15 | RP-020182 | 601 | 1 | Modification of the T_utran-gps length | 4.3.0 | 4.4.0 |
| 03/2002 | 15 | RP-020182 | 606 | | Amendment of the COMMON MEASUREMENT INITIATION REQUEST message | 4.3.0 | 4.4.0 |
| 03/2002 | 15 | RP-020182 | 609 | 1 | ASN.1 and tabular amendments for LCR TDD | 4.3.0 | 4.4.0 |
| 03/2002 | 15 | RP-020182 | 610 | | Midamble shift LCR in the PHYSICAL SAHRED SCHANNEL RECONFIGURATION REQUEST [TDD] message | 4.3.0 | 4.4.0 |
| 03/2002 | 15 | RP-020182 | 617 | | NBAP Rapporteur corrections | 4.3.0 | 4.4.0 |
| 03/2002 | 15 | RP-020231 | 628 | 2 | Removing of channel coding option "no coding" for FDD | 4.3.0 | 4.4.0 |
| 03/2002 | 15 | RP-020188 | 425 | 4 | DL Power Capability as a shared resource between Cells | 4.4.0 | 5.0.0 |
| 03/2002 | 15 | RP-020188 | 496 | 4 | Power Balancing Activation with Radio Link Setup and Radio Link Addition procedures in NBAP | 4.4.0 | 5.0.0 |
| 03/2002 | 15 | RP-020188 | 497 | 3 | Power Balancing Restart with Radio Link Reconfiguration procedure in NBAP | 4.4.0 | 5.0.0 |

| 03/2002 | 15 | RP-020188 | 502 | 2 | Initial DL Power After addition of CCTrCH in Synchronized Reconfiguration | 4.4.0 | 5.0.0 |
|---|---|---|---|---|---|---|---|
| 03/2002 | 15 | RP-020194 | 583 | | NBAP Signalling support for flexible hard split | 4.4.0 | 5.0.0 |
| 03/2002 | 15 | RP-020193 | 584 | 3 | Add IPDL parameters for LCR TDD in CELL SETUP REQUEST and CELL RECONFIGURATION REQUEST in NBAP message. | 4.4.0 | 5.0.0 |
| 03/2002 | 15 | RP-020198 | 588 | 1 | Re-arrangement of Iub Transport Bearers | 4.4.0 | 5.0.0 |
| 03/2002 | 15 | RP-020190 | 589 | 2 | HSDPA NBAP Common Procedure Modifications | 4.4.0 | 5.0.0 |
| 03/2002 | 15 | RP-020189 | 597 | 2 | Introduction of IP Transport option in UTRAN | 4.4.0 | 5.0.0 |
| 03/2002 | 15 | RP-020188 | 598 | | Introduction separate max PDSCH power limitation | 4.4.0 | 5.0.0 |
| 03/2002 | 15 | RP-020199 | 602 | 2 | Separation of Resource Reservation and Radio Link Activation | 4.4.0 | 5.0.0 |
| 03/2002 | 15 | RP-020196 | 603 | | Introduction of RL Timing Adjustment support | 4.4.0 | 5.0.0 |
| 03/2002 | 15 | RP-020193 | 607 | 1 | Introduction of the Neighbouring TDD Cell Measurement Information LCR | 4.4.0 | 5.0.0 |
| 03/2002 | 15 | RP-020191 | 608 | 2 | Node B synchronisation for 1.28Mcps TDD | 4.4.0 | 5.0.0 |
| 03/2002 | 15 | RP-020190 | 612 | 3 | HSDPA RL-Level Signalling for TDD & FDD | 4.4.0 | 5.0.0 |
| 03/2002 | 15 | RP-020193 | 613 | 1 | Introduction of Angle of Arrival enhanced UE positioning for 1.28Mcps TDD in NBAP | 4.4.0 | 5.0.0 |
| 03/2002 | 15 | RP-020194 | 626 | | NBAP changes for TFCI power control in DSCH hard split mode | 4.4.0 | 5.0.0 |
| | | | | | | | |

# History

| Document history | | |
|---|---|---|
| V5.0.0 | March 2002 | Publication |
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