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Technical Specification

**Universal Mobile Telecommunications System (UMTS);
UTRAN Iub interface NBAP signalling
(3GPP TS 25.433 version 5.6.0 Release 5)**

Reference

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Foreword

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Contents

Foreword

This Technical Specification has been produced by the 3GPP.

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y   the second digit is incremented for all changes of substance, i.e. technical enhancements, corrections, updates, etc.

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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: "Requirements for support of Radio Resource management (FDD)".

[23]   3GPP TS 25.123: "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 ".

[32]   3GPP TS 25.321: "MAC protocol specification".

[33]   3GPP TS 25.306: "UE Radio Access capabilities".

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. For requirements on including *Criticality Diagnostics* IE, see section 10. For examples on how to use the *Criticality Diagnostics* IE, see Annex C.

4.2 Forwards and Backwards Compatibility

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

4.3 Specification Notations

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

[FDD] This tagging of a word indicates that the word preceding the tag "[FDD]" applies only to FDD. This tagging of a heading indicates that the heading preceding the tag "[FDD]" and the section following the heading applies only to FDD.

[TDD] This tagging of a word indicates that the word preceding the tag "[TDD]" applies only to TDD, including 3.84Mcps TDD and 1.28Mcps TDD. This tagging of a heading indicates that the heading preceding the tag "[TDD]" and the section following the heading applies only to TDD, including 3.84Mcps TDD and 1.28Mcps TDD.

[3.84Mcps TDD] This tagging of a word indicates that the word preceding the tag "[3.84Mcps TDD]" applies only to 3.84Mcps TDD. This tagging of a heading indicates that the heading preceding the tag "[3.84Mcps TDD]" and the section following the heading applies only to 3.84Mcps TDD.

[1.28Mcps TDD] This tagging of a word indicates that the word preceding the tag "[1.28Mcps TDD]" applies only to 1.28Mcps TDD. This tagging of a heading indicates that the heading preceding the tag "[1.28Mcps TDD]" and the section following the heading applies only to 1.28Mcps TDD.

[FDD - …] This tagging indicates that the enclosed text following the "[FDD - " applies only to FDD. Multiple sequential paragraphs applying only to FDD are enclosed separately to enable insertion of TDD specific (or common) paragraphs between the FDD specific paragraphs.

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

[3.84Mcps TDD - …] This tagging indicates that the enclosed text following the "[3.84Mcps TDD - " applies only to 3.84Mcps TDD. Multiple sequential paragraphs applying only to 3.84Mcps TDD are enclosed separately to enable insertion of FDD and TDD specific (or common) paragraphs between the 3.84Mcps TDD specific paragraphs.

[1.28Mcps TDD - …] This tagging indicates that the enclosed text following the "[1.28Mcps TDD - " applies only to 1.28Mcps TDD. Multiple sequential paragraphs applying only to 1.28Mcps TDD are enclosed separately to enable insertion of FDD and TDD specific (or common) paragraphs between the 1.28Mcps TDD specific paragraphs.

Procedure When referring to an elementary procedure in the specification the Procedure Name is written with the first letters in each word in upper case characters followed by the word "procedure", e.g. Radio Link Setup procedure.

Message When referring to a message in the specification the MESSAGE NAME is written with all letters in upper case characters followed by the word "message", e.g. RADIO LINK SETUP REQUEST message.

IE   When referring to an information element (IE) in the specification the *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 on common resources 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 on dedicated resources 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 the Node B to indicate the need for bearer re-arrangement for a Node B Communication Context. The function also allows the CRNC to re-arrange bearers for a Node B Communication 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 b) Cell Reconfiguration c) Cell Deletion
Common Transport Channel Management	a) Common Transport Channel Setup b) Common Transport Channel Reconfiguration c) Common Transport Channel Deletion
System Information Management	System Information Update
Resource Event Management	a) Block Resource b) Unblock Resource c) Resource Status Indication
Configuration Alignment	a) Audit Required b) Audit c) Reset
Measurements on Common Resources	a) Common Measurement Initiation b) Common Measurement Reporting c) Common Measurement Termination d) Common Measurement Failure
Radio Link Management.	a) Radio Link Setup b) Radio Link Addition c) Radio Link Deletion d) Unsynchronised Radio Link Reconfiguration e) Synchronised Radio Link Reconfiguration Preparation f) Synchronised Radio Link Reconfiguration Commit g) Synchronised Radio Link Reconfiguration Cancellation h) Radio Link Pre-emption i) Radio Link Parameter Update
Radio Link Supervision.	a) Radio Link Failure b) Radio Link Restoration
Compressed Mode Control [FDD]	a) Radio Link Setup b) Radio Link Addition c) Compressed Mode Command d) Unsynchronised Radio Link Reconfiguration e) Synchronised Radio Link Reconfiguration Preparation f) Synchronised Radio Link Reconfiguration Commit g) Synchronised Radio Link Reconfiguration Cancellation
Measurements on Dedicated Resources	a) Dedicated Measurement Initiation b) Dedicated Measurement Reporting c) Dedicated Measurement Termination d) Dedicated Measurement Failure
DL Power Drifting Correction [FDD]	Downlink Power Control
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 b) Cell Synchronisation Reconfiguration c) Cell Synchronisation Reporting d) Cell Synchronisation Termination e) Cell Synchronisation Failure f) Cell Synchronisation Adjustment
Information Exchange	a) Information Exchange Initiation b) Information Reporting c) Information Exchange Termination d) Information Exchange Failure

Function	Elementary Procedure(s)
Bearer Re-arrangement	a) Bearer Re-arrangement Indication b) Unsynchronised Radio Link Reconfiguration c) Synchronised Radio Link Reconfiguration Preparation d) Synchronised Radio Link Reconfiguration Commit 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 Node B Communication 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 Node B Communication Context in Node B. This Node B Communication Context is identified by a Node B Communication 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 CANCEL
Radio Link Failure	RADIO LINK FAILURE INDICATION
Radio Link Restoration	RADIO LINK RESTORE INDICATION
Dedicated Measurement Reporting	DEDICATED MEASUREMENT REPORT
Dedicated Measurement Termination	DEDICATED MEASUREMENT TERMINATION REQUEST
Dedicated Measurement Failure	DEDICATED MEASUREMENT FAILURE INDICATION
Downlink Power Control [FDD]	DL POWER CONTROL REQUEST
Compressed Mode Command [FDD]	COMPRESSED MODE COMMAND
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
Radio Link Parameter Update	RADIO LINK PARAMETER UPDATE 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
|<---
|
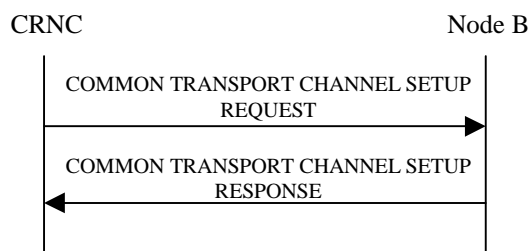
Figure 1: Common Transport Channel Setup procedure, Successful Operation

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

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 FACHs, 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 the *Secondary CCPCH* IE, the Node B shall configure and activate the indicated Secondary CCPCH according to the COMMON TRANSPORT CHANNEL SETUP REQUEST message.]

[TDD - When the COMMON TRANSPORT CHANNEL SETUP REQUEST message contains the *Secondary CCPCH* IE, the Node B shall configure and activate the indicated Secondary CCPCH(s) 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 the *FACH Parameters* IE, the Node B shall configure and activate the indicated FACH(s) according to the COMMON TRANSPORT CHANNEL SETUP REQUEST message.

If the COMMON TRANSPORT CHANNEL SETUP REQUEST message contains the *PCH Parameters* IE, the Node B shall configure and activate the concerned PCH and the associated PICH according to the COMMON TRANSPORT CHANNEL SETUP REQUEST message.

[1.28Mcps TDD - If the *PCH Power* IE is included in the *PCH Parameters* IE of the COMMON TRANSPORT CHANNEL SETUP REQUEST, the Node B shall use this value as the power at which the PCH shall be transmitted.]

PRACH:

When the COMMON TRANSPORT CHANNEL SETUP REQUEST message contains the *PRACH* IE, the Node B shall configure and activate the indicated PRACH and the associated RACH [FDD - and the associated AICH] according to the COMMON TRANSPORT CHANNEL SETUP REQUEST message.

[1.28Mcps TDD - FPACH]:

If the COMMON TRANSPORT CHANNEL SETUP REQUEST message contains the *FPACH* IE, the Node B shall configure and activate the indicated FPACH according to the COMMON TRANSPORT CHANNEL SETUP REQUEST message.

[FDD - PCPCHs]:

When the COMMON TRANSPORT CHANNEL SETUP REQUEST message contains the *CPCH Parameters* IE, the Node B shall configure and activate the indicated CPCH and the associated PCPCH(s), AP-AICH and CD/CA-ICH 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. Otherwise, the Node B may use all the CD signatures on CD/CA-ICH.

If the COMMON TRANSPORT CHANNEL SETUP REQUEST message includes *CD Sub Channel Numbers* IE, the Node B may use only the given CD Sub Channels on CD/CA-ICH. Otherwise, the Node B may use all the CD Sub Channels 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 only these AP sub channel number to distinguish the configured PCPCH. Otherwise all AP subchannel numbers are used to distinguish the configured PCPCH.

If the COMMON TRANSPORT CHANNEL SETUP REQUEST message includes *AP Sub Channel Number* IE in *SF Request Parameters* IE, the Node B shall use only these AP sub channel number to distinguish the requested Spreading Factors. Otherwise all AP subchannel numbers are used to distinguish the configured Spreading Factor.

General:

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 Address* 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 the Node B and the common physical channels exist on the Uu interface.

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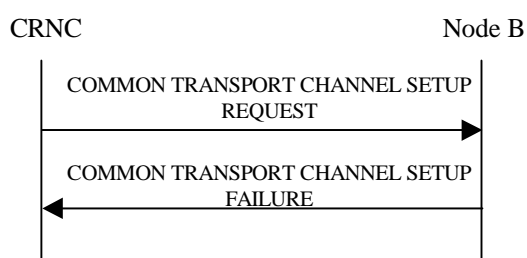
Figure 2: Common Transport Channel Setup procedure, Unsuccessful Operation

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, then 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.]

[1.28Mcps TDD - If the *Common Transport Channel ID* IE, and the *Transport Format Set* IE are not equal for each RACH configured in PRACH, 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
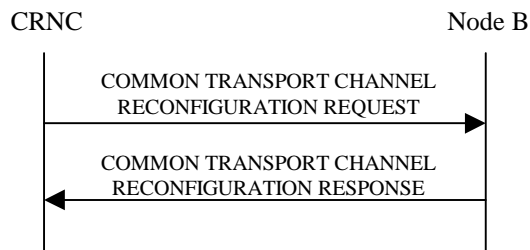
Figure 3: Common Transport Channel Reconfiguration, Successful Operation

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

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].

SCCPCH:

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

FACH:

If the *FACH Parameters* IE is present, the Node B shall reconfigure the indicated FACH(s).

[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 indicated 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 indicated 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 indicated 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 indicated FACH shall use.

PCH:

If the *PCH Parameters* IE is present, the 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:

If the *PICH Parameters* IE is present, the 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]:

If the *PRACH Parameters* IE is present, the Node B shall reconfigure the indicated PRACH(s).

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

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

If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes the *RACH Sub Channel Numbers* IE, the Node B shall reconfigure the sub channel numbers that the indicated PRACH shall use.

[FDD - AICH]:

If the *AICH Parameters* IE is present, the Node B shall reconfigure the indicated AICH(s).

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

[FDD - CPCH]:

If the *CPCH Parameters* IE is present, the Node B shall reconfigure the indicated CPCH.

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

If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes the *Initial DL Transmission Power* IE, the Node B shall reconfigure the Initial DL Transmission Power for the indicated CPCH.

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

[FDD - AP-AICH]:

If the *AP-AICH Parameters* IE is present, the 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]:

If the *CD/CA-ICH Parameters* IE is present, the 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 Parameters* IE 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.

General:

After a successful procedure, the channels will have adopted the new configuration in the Node B. The channels in the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message shall remain in the same state as prior to the procedure. The 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
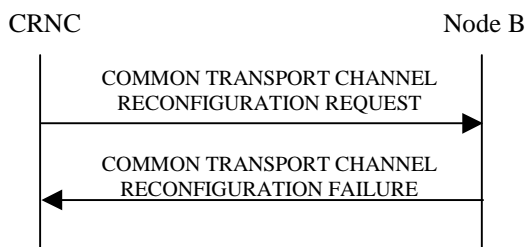
Figure 4: Common Transport Channel Reconfiguration procedure, Unsuccessful Operation

If the Node B is not able to support all or part 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 RECONFIGURATION 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

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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
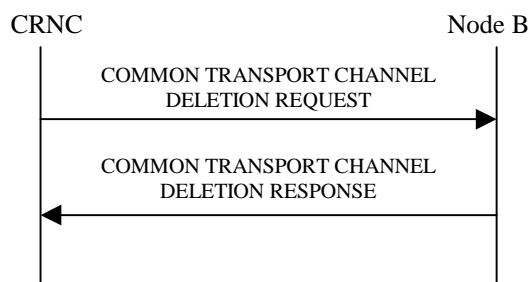
Figure 5: Common Transport Channel Deletion procedure, Successful Operation

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

Secondary CCPCH:

If the *Common Physical Channel ID* IE contained in the COMMON TRANSPORT CHANNEL DELETION REQUEST message indicates a Secondary CCPCH, the 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:

If the *Common Physical Channel ID* IE contained in the COMMON TRANSPORT CHANNEL DELETION REQUEST message indicates a PRACH, the 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 - PCPCHs]:

If the *Common Physical Channel ID* IE contained in the COMMON TRANSPORT CHANNEL DELETION REQUEST message indicates one of the PCPCHs for a CPCH, the Node B shall delete all PCPCHs associated with the indicated channel and the CPCH supported by these PCPCHs. The AP-AICH and CD/CA-ICH associated with the CPCH shall also be deleted.

General:

[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 the Node B. The channels in the COMMON TRANSPORT CHANNEL DELETION REQUEST message shall be set to state Not Existing ref. [6]. The 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

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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
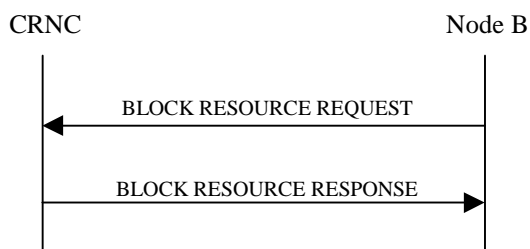
Figure 6: Block Resource procedure, Successful Operation

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

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.

If the *Blocking Priority Indicator* IE in the BLOCK RESOURCE REQUEST message 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 by the *Shutdown Timer* IE in the BLOCK RESOURCE REQUEST 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)], [1.28Mcps 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
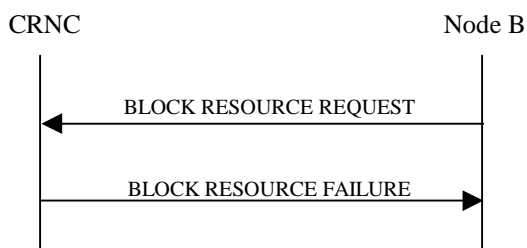
Figure 7: Block Resource procedure, Unsuccessful Operation

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

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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 using the Node B Control Port. The 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.

All physical channels and transport channels associated to the cell that is unblocked are also 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
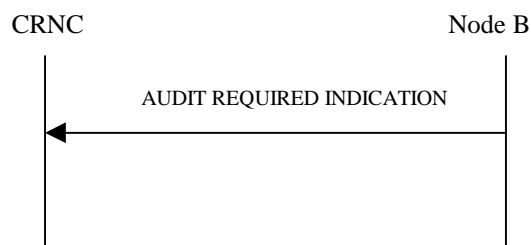
Figure 9: Audit Required procedure, Successful Operation

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

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

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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-synchronise 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

Figure 10: Audit procedure, Successful Operation

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

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, the *Minimum Spreading Factor* 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 the Node B internal resources are pooled for a group of cells, the Node B shall include one *Local Cell Group Information* IE containing the Node B internal resource capacity and the consumption laws per group of cells. If the *UL Capacity Credit* IE is not present in the *Local Cell Group Information* IE, then the internal resource capabilities of the Node B for the Local Cell Group 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 in the *Local Cell Information* IE, 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

CRNC   Node B

AUDIT REQUEST
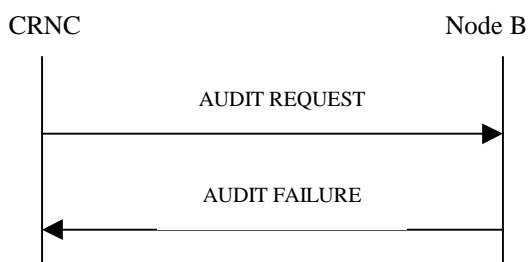
AUDIT FAILURE

Figure 10A: Audit procedure, Unsuccessful Operation

If the Node B cannot perform an audit of the configuration and status of the logical resources, it shall send a AUDIT FAILURE message 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

CRNC   Node B

COMMON MEASUREMENT INITIATION
REQUEST

COMMON MEASUREMENT INITIATION
RESPONSE
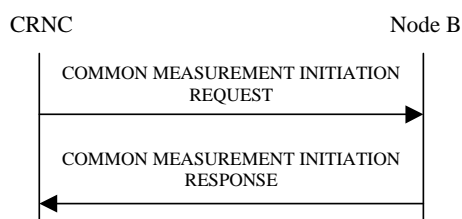
Figure 11: Common Measurement Initiation procedure, Successful Operation

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 [3.84Mcps TDD - *Time Slot* IE] [1.28Mcps TDD - *Time Slot LCR* IE] is present in the COMMON MEASUREMENT INITIATION REQUEST message, the measurement request shall apply to the requested time slot individually.]

[FDD - If the *Spreading Factor* IE is present in the COMMON MEASUREMENT INITIATION REQUEST message, the measurement request shall apply to the PCPCHs whose minimum allowed spreading factor (Min UL Channelisation Code Length) is equal to the value of the *Spreading Factor* IE.]

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 COMMON MEASUREMENT REPORT message or in the COMMON MEASUREMENT RESPONSE message, 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.

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 in the *Neighbouring Cell Measurement Information* 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" and if the *SFN* IE is not provided, the Node B shall return the result of the requested measurement immediately. If the *SFN* IE is provided, it indicates the frame for which the measurement value shall be provided. The provided measurement value shall be the one reported by the layer 3 filter, referred to as point C in the measurement model [25].

If the *Report Characteristics* IE is set to "Periodic", the Node B shall periodically initiate a Common 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 *SFN* IE is provided, it indicates the frame for which the first measurement value of a periodic reporting 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].

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 the *Measurement Hysteresis Time* IE is not included, 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 the *Measurement Hysteresis Time* IE is not included, 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 time specified by the *Measurement Change Time* IE 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 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 falling time specified by the *Measurement Change Time* IE 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 the *Measurement Threshold 2* IE is not present, the Node B shall use the value of the *Measurement Threshold 1* IE instead. If the *Measurement Hysteresis Time* IE is not included, 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 the *Measurement Threshold 2* IE is not present, the Node B shall use the value of the *Measurement Threshold 1* IE instead. If the *Measurement Hysteresis Time* IE is not included, 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" and if the *SFN* IE is not provided, the Node B shall report the result of the requested measurement immediately. If the *SFN* IE is provided, it indicates the frame for which the measurement value shall be provided. The provided measurement value shall be the one reported by the layer 3 filter, referred to as point C in the measurement model [25]. 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 Frames for UE Positioning":

    - 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 $T_{UTRAN-GPS}$ value expressed in unit [1/16 chip] when n measurement results have been received after the first Common Measurement Reporting at initiation or after the last event was triggered.

        M_n is the latest measurement result received after point C in the measurement model [25], measured at SFN_n.

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

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

        M_0 is equal to the value reported in the first Common Measurement Reporting at initiation or in the Common Measurement Reporting when the event was triggered.

    - If the *Predicted $T_{UTRAN-GPS}$ Deviation Limit* IE is included in the $T_{UTRAN-GPS}$ *Measurement Threshold Information* IE, the 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 $T_{UTRAN-GPS}$ 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 $T_{UTRAN-GPS}$ value when n measurement results have been received after the first Common Measurement Reporting at initiation or after the last event was triggered.

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

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

        F_n is the deviation of the last measurement result from the predicted $T_{UTRAN-GPS}$ value (P_n) when n measurements have been received after the first Common Measurement Reporting at initiation or after the last event was triggered.

        M_n is the latest measurement result received after point C in the measurement model [25], measured at SFN_n.

M_1 is the first measurement result received after point C in the measurement model [25], after the 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:

     $F_n=0 \quad for\ n=0$

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

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

     F_n is the change of the SFN-SFN value expressed in unit [1/16 chip] when n measurement results have been received after the first Common Measurement Reporting at initiation or after the last event was triggered.

     a is the last reported SFN-SFN.

     M_n is the latest measurement result received after point C in the measurement model [25], measured at SFN_n.

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

   - If the *Predicted SFN-SFN Deviation Limit* IE is included in the *SFN-SFN Measurement Threshold Information* IE, the 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 - $P_n = ((a/16) * ((SFN_n - SFN_{n-1})\ mod\ 4096)/100 + P_{n-1})\ mod\ 614400 \quad for\ n>0$]

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

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

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

     P_n is the predicted *SFN-SFN* value when n measurement results have been received after the first Common Measurement Reporting at initiation or after the last event was triggered.

     a is the last reported SFN-SFN Drift Rate value.

     b is the last reported SFN-SFN value.

     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 have been received after the first Common Measurement Reporting at initiation or after the last event was triggered.

     M_n is the latest measurement result received after point C in the measurement model [25], measured at [TDD - the Time Slot TS_n of] the Frame SFN_n.

     M_1 is the first measurement result received after point C in the measurement model [25] after the 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 anymore, 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 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 Frames for UE Positioning", 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 where 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 Frames for UE Positioning".

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. For all available measurement results, the Node

B shall include in the *Successful Neighbouring Cell SFN-SFN Observed Time Difference Measurement Information* IE the *SFN-SFN Quality* IE and the *SFN-SFN Drift Rate Quality* IE, if available.

If the *Common Measurement Type* IE is set to "UTRAN GPS Timing of Cell Frames for UE Positioning" and the *Report Characteristics* IE is set to "On Demand" or "On Modification", the Node B shall include in the $T_{UTRAN-GPS}$ *Measurement Value Information* IE the $T_{UTRAN-GPS}$ *Quality* IE and the $T_{UTRAN-GPS}$ *Drift Rate Quality* IE, if available.

8.2.8.3 Unsuccessful Operation

CRNC   Node B

COMMON MEASUREMENT INITIATION
REQUEST

COMMON MEASUREMENT
INITIATION FAILURE
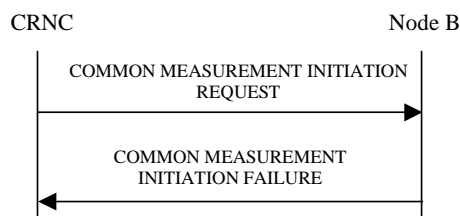
Figure 12: Common Measurement Initiation procedure, Unsuccessful Operation

If the requested measurement cannot be initiated, the Node B shall send a COMMON MEASUREMENT INITIATION FAILURE message 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, except for the "HS-DSCH Required Power" and the "HS-DSCH Provided Bit Rate", is not defined in ref. [4] or [5] to be measured on the Common Measurement Object Type received 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 Slot LCR* IE] is not present 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 Frames for UE Positioning", 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 UE Positioning	X	X							X
SFN-SFN Observed Time Difference	X	X							X
Transmitted carrier power of all codes not used for HS-PDSCH or HS-SCCH transmission	X	X	X	X	X	X	X	X	
HS-DSCH Required Power	X	X	X	X			X	X	
HS-DSCH Provided Bit Rate	X	X	X	X			X	X	

If the *SFN* IE is included in the COMMON MEASUREMENT INITIATION REQUEST message and the *Report Characteristics* IE is other than "Periodic", "On Demand" or "On Modification", the Node B shall regard the Common Measurement Initiation procedure as failed.

8.2.9   Common Measurement Reporting

8.2.9.1   General

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

8.2.9.2 Successful Operation

CRNC   Node B

COMMON MEASUREMENT REPORT

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 *Measurement ID* IE shall be set to the 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 *Common Measurement Value Information* IE shall indicate Measurement not Available.

For measurements included in the *Successful Neighbouring Cell SFN-SFN Observed Time Difference Measurement Information* IE, the Node B shall include the *SFN-SFN Quality* IE and the *SFN-SFN Drift Rate Quality* IE if available.

If the Common Measurement Type provided by RNC when initiating the measurement with the Common Measurement Initiation procedure was "UTRAN GPS Timing of Cell Frames for UE Positioning", then the Node B shall include in the $T_{UTRAN\text{-}GPS}$ *Measurement Value Information* IE the $T_{UTRAN\text{-}GPS}$ *Quality* IE and the $T_{UTRAN\text{-}GPS}$ *Drift Rate Quality* IE, if available.

8.2.9.3 Abnormal Conditions

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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 common measurements corresponding to the received *Measurement ID* IE.

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

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 the Node B. The CRNC takes the cell, identified via the *C-ID* IE, into service and uses the resources in the Node B identified via the *Local Cell ID* IE.

8.2.12.2 Successful Operation
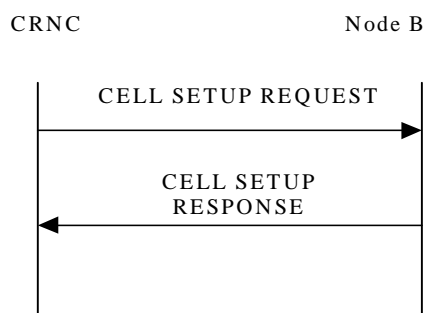
Figure 16: Cell Setup procedure, Successful Operation

The procedure is initiated with a CELL SETUP REQUEST message sent from the CRNC to the Node B using the Node B Control Port. 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, the 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 Bs 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. If the *Burst Mode Parameters* IE is included in the *IPDL FDD Information* IE, the IPDL shall be operated in burst mode according to ref [10].]

[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. If the *Burst Mode Parameters* IE is included in the *IPDL TDD Information* IE, the IPDL shall be operated in burst mode according to ref [21].]

[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. If the *Burst Mode Parameters* IE is included in the *IPDL TDD Information LCR* IE, the IPDL shall be operated in burst mode according to ref [21].]

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 the CPICH(s), Primary SCH, Secondary SCH, Primary CCPCH and BCH exist.][3.84Mcps TDD - When the cell is successfully configured the 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, the 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 the 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.]

[TDD - The Node B shall ignore the *DPCH/PUSCH/PRACH Constant Value* IEs.]

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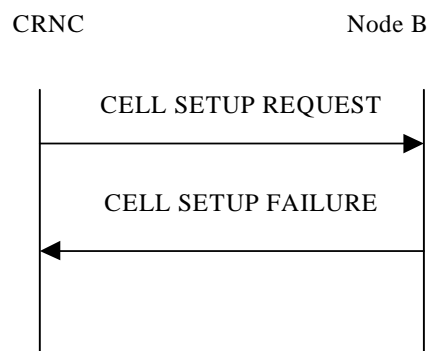
Figure 17: Cell Setup procedure: Unsuccessful Operation

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 the CRNC.

In this case, the cell is Not Existing in the Node B. The Configuration Generation ID shall not be changed in the 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 the Node B, it shall reject the configuration of the cell and all channels in the CELL SETUP REQUEST message by sending a CELL SETUP FAILURE 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 the Node B.

8.2.13.2 Successful Operation
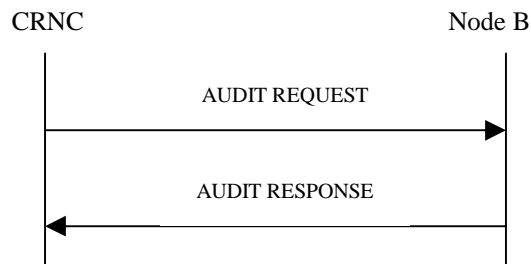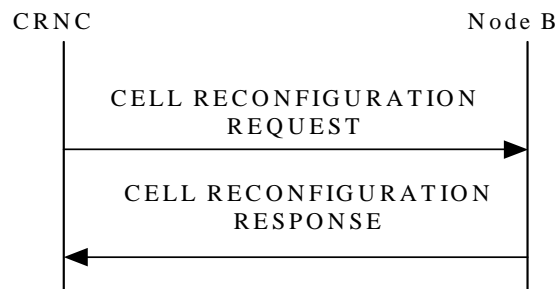

Figure 18: Cell Reconfiguration procedure, Successful Operation

The procedure is initiated with a CELL RECONFIGURATION REQUEST message sent from the CRNC to the Node B using the Node B Control Port. 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 the 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 the 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 the Primary CPICH power in the cell according to the *Primary CPICH Power* IE value. The 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 the 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 the 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 the P-CCPCH power in the cell according to the *PCCPCH Power* IE value. The 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.

[3.84Mcps TDD - If the CELL RECONFIGURATION REQUEST message includes the *Time Slot Configuration* IE, the Node B shall reconfigure switching-point structure in the cell according to the *Time Slot* IE value.]

[1.28Mcps TDD - If the CELL RECONFIGURATION REQUEST message includes the *Time Slot Configuration LCR* IE, the Node B shall reconfigure switching-point structure in the cell according to the *Time Slot LCR* IE value.]

[TDD - If the CELL RECONFIGURATION REQUEST message includes any of the *DPCH/PUSCH/PRACH Constant Value* IEs, the Node B shall ignore them]

[1.28Mcps TDD - If the CELL RECONFIGURATION REQUEST message includes the *DwPCH Information* IE, the Node B shall reconfigure the DwPCH power in the Cell according to the *DwPCH Power* IE]

[FDD -If CELL RECONFIGURATION REQUEST message includes the *IPDL Parameter Information* IE with the *IPDL Indicator* IE set to the value "Active" the Node B shall apply the IPDL in that cell according to the latest received parameters defined by the *IPDL FDD Parameters* IE. If the *Burst Mode Parameters* IE is included in the *IPDL FDD Information* IE, the IPDL shall be operated in burst mode according to ref [10].]

[3.84Mcps TDD - If the CELL RECONFIGURATION REQUEST message includes the *IPDL Parameter Information* IE with the *IPDL Indicator* IE set to the value "Active", the Node B shall apply the IPDL in that cell according to the latest received parameters defined by the *IPDL TDD Parameters* IE. If the *Burst Mode Parameters* IE is included in the *IPDL TDD Information LCR* IE, the IPDL shall be operated in burst mode according to ref [21].]

[1.28Mcps TDD - If the CELL RECONFIGURATION REQUEST message includes the *IPDL Parameter Information LCR* IE with the *IPDL Indicator* IE set to the value "Active", the Node B shall apply the IPDL in that cell according to the latest received parameters defined by the *IPDL TDD Parameters LCR* IE. If the *Burst Mode Parameters* IE is included in the *IPDL TDD Information LCR* IE, the IPDL shall be operated in burst mode according to ref [21].]

If the CELL RECONFIGURATION REQUEST message includes the *IPDL Parameter Information* IE with *the IPDL Indicator* IE set to 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 value of the *N_INSYNC_IND*, *N_OUTSYNC_IND* and *T_RLFAILURE* IEs. 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
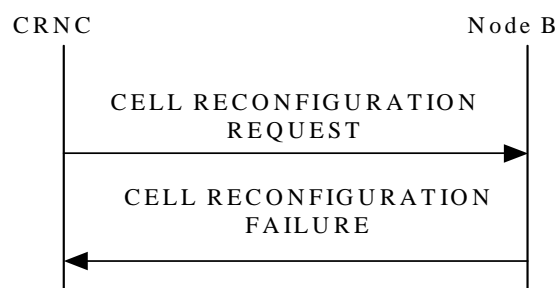
Figure 19: Cell Reconfiguration procedure: Unsuccessful Operation

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 the 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 the 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 set to 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 respond with the CELL RECONFIGURATION FAILURE message with the cause value "IPDL already activated".

If the *IPDL Indicator* IE set to the value "Active" is included in the CELL RECONFIGURATION REQUEST message and there is no IPDL stored in the Node B defining the IPDL, the Node B shall respond with the 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 the Node B.

8.2.14.2 Successful Operation

CRNC   Node B

CELL DELETION REQUEST

CELL DELETION RESPONSE
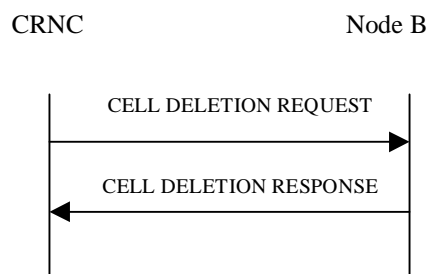
Figure 20: Cell Deletion procedure, Successful Operation

The procedure is initiated with a CELL DELETION REQUEST message sent from the CRNC to the Node B using the Node B Control Port. 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 the 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. becomes 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 the Node B.

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

6. When a Communication Control Port has 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

Figure 21: Resource Status Indication procedure, Successful Operation

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

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 containing a "No Failure" Indication, 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 has not already been 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 is not present, then the internal resource capabilities of the Local Cell Group 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 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 the Node B, i.e. becomes Not Existing, the Node B shall withdraw the Local Cell from the CRNC by sending a RESOURCE STATUS INDICATION message containing a "No Failure" Indication, the *Local Cell ID* IE and the *Add/Delete Indicator* IE set 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 containing a "Service Impacting" Indication and the *Local Cell ID* IE.

The Node B shall include the *Minimum DL Power Capability* IE when it is known by the Node B.

If the maximum DL power capability of the Local Cell has changed, the new capability shall be indicated in the *Maximum 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 Capacity Consumption Law for Common Channels has changed for the Local Cell, the new law shall be reported by the Node B in the *Common Channels Capacity Consumption Law* IE.

If the Capacity Consumption Law for Dedicated Channels has changed for the Local Cell, the new law shall be reported by the Node B in the *Dedicated Channels Capacity Consumption Law* 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 containing a "Service Impacting" Indication, 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 containing a "Service Impacting" Indication, 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 the Node B, 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 containing a "Service Impacting" Indication 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 containing a "Service Impacting" Indication 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* IE and the *UL Capacity Credit* IE, then 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.

If the Capacity Consumption Law for Common Channels has changed for the Local Cell Group, the new law shall be reported by the Node B in the *Common Channels Capacity Consumption Law* IE.

If the Capacity Consumption Law for Dedicated Channels has changed for the Local Cell Group, the new law shall be reported by the Node B in the *Dedicated Channels Capacity Consumption Law* IE.

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 message 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 message 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 contents to the system information segments broadcast on the BCCH.

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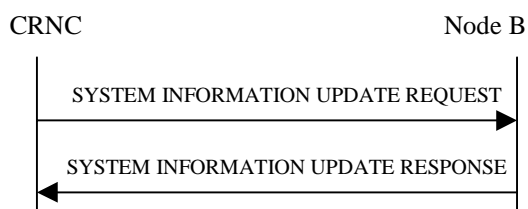
Figure 22: System Information Update procedure, Successful Operation

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

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 contents updates) indicated in the SYSTEM INFORMATION UPDATE REQUEST message shall be applied by the 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

CRNC   Node B

SYSTEM INFORMATION UPDATE REQUEST

SYSTEM INFORMATION UPDATE FAILURE
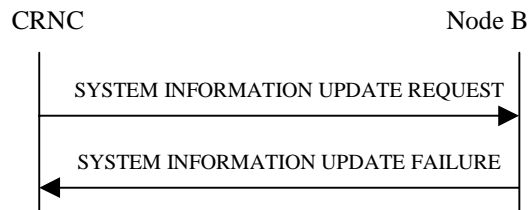
Figure 23: System Information Update procedure, Unsuccessful Operation

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.

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.

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

8.2.16.4   Abnormal Conditions

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

The 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 Radio Link 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 Radio Link Setup procedure is used to establish one radio link including one or more transport channels. The transport channels can be a mix 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
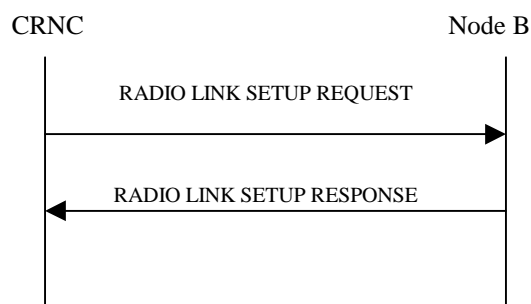
Figure 24: Radio Link Setup procedure, Successful Operation

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

Upon reception of the 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.
>
> If the *DCH Specific Info* IE includes the *Unidirectional DCH Indicator* IE set to "Uplink DCH only", the Node B shall ignore the *Transport Format Set* IE for the downlink for this DCH. As a consequence this DCH is not included as a part of the downlink CCTrCH.
>
> [TDD - If the *DCH Specific Info* IE includes the *Unidirectional DCH Indicator* IE set to "Downlink DCH only", the Node B shall ignore the *Transport Format Set* IE for the uplink for this DCH. As a consequence this DCH is not included as a part of the uplink CCTrCH.]

[FDD - For 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* IE 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 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 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 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", the 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.

- If the *Diversity Control Field* IE is set to "Must not", the Node B shall not combine the RL with any other existing 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.]

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

- [FDD - In case of not combining with a RL previously listed in the RADIO LINK SETUP RESPONSE message or for the first RL in the RADIO LINK SETUP RESPONSE message, the Node B shall include in the *DCH Information Response* IE in the RADIO LINK SETUP RESPONSE message the *Binding ID* IE and *Transport Layer Address* IE for the transport bearer to be established for each DCH of this RL.]

- [FDD - Otherwise in case of combining, the *RL ID* IE indicates (one of) the RL(s) previously listed in this RADIO LINK SETUP RESPONSE message with which the concerned RL is combined.]

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

In the case of a set of co-ordinated DCHs, the *Binding ID* IE and the *Transport Layer Address* IE shall be specified for only one of the DCHs in the set of co-ordinated 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 IEs. The *TFCI2 Bearer Information Response* IE containing the *Binding ID* IE and the *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 *TFCI2 Bearer Information* IE the Node B may use the transport layer address and the binding identifier received from the CRNC when establishing a TFCI2 transport bearer.]

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 *DSCH Information Response* IE in the RADIO LINK SETUP RESPONSE the *Binding ID* IE and the *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 -If the *USCH Information* IE is present, the Node B shall include in the *USCH Information Response* IE in the RADIO LINK SETUP RESPONSE message the *Binding ID* IE and the *Transport Layer Address* IE for the transport bearer to be established for each USCH of this RL.]

HS-DSCH(s):

[FDD - If the *HS-SCCH Power Offset* IE is included in the *HS-DSCH Information* IE, the Node B may use this value to determine the HS-SCCH power. The HS-SCCH Power Offset should be applied for any HS-SCCH transmission to this UE.]

If the RADIO LINK SETUP REQUEST message includes a *HS-DSCH Information* IE and if the *HS-PDSCH RL ID* IE indicates a radio link in the Node B, then the Node B shall use this information to configure the indicated HS-DSCH channel on this radio link. If the *HS-PDSCH RL ID* IE does not indicate a radio link in the Node B , the Node B shall store the configuration of the HS-DSCH according to the received *HS-DSCH Information* IE. The Node B shall store the latest HS-DSCH configuration until the Node B Communication Context is deleted.

If the *HS-PDSCH RL ID* IE indicates a radio link in the Node B Communication Context, then the Node B shall include in the RADIO LINK SETUP RESPONSE message 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 RADIO LINK SETUP REQUEST message includes the *Transport Layer Address* IE and *Binding ID* IE in the *HS-DSCH Information* IE for an HS-DSCH MAC-d flow, the Node B may use the transport layer address and the binding identifier received from the CRNC when establishing a transport bearer for the concerned HS-DSCH MAC-d flow.

If the *HS-DSCH-RNTI* IE is present and the *HS-PDSCH RL ID* IE refers to a radio link in the Node B Communication Context, then the Node B shall use the HS-DSCH RNTI value for HS-DSCH processing for the respective Node B Communication Context.

The Node B shall include the *HS-DSCH Initial Capacity Allocation* IE in the RADIO LINK SETUP RESPONSE message for each MAC-d flow, if the Node B allows the CRNC to start transmission of the MAC-d PDUs before the Node B has allocated capacity on user plane as described in [24].

[FDD - If the RADIO LINK SETUP REQUEST message includes *Measurement Power Offset* IE in the *HS-DSCH Information* IE, then the Node B shall use the measurement power offset as described in ref [10], subclause 6A.2.]

If the RADIO LINK SETUP REQUEST message includes the *MAC-hs Guaranteed Bit Rate* IE in the *HS-DSCH Information* IE, the Node B shall use this information to optimise MAC-hs scheduling decisions.

If the RADIO LINK SETUP REQUEST message includes the *Discard Timer* IE in the *HS-DSCH Information* IE, then the Node B shall use this information to discard the out-of-dated MAC-hs SDUs.

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 the 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 concerned Transmission Gap Pattern Sequence as activated at that CFN.]

- [FDD - If any received *TGCFN* IE does not have the same value as the received *CM Configuration Change CFN* IE but the first CFN after the CM Configuration Change CFN with a value equal to the *TGCFN* IE has already passed, the Node B shall consider the concerned Transmission Gap Pattern Sequence as activated at that CFN.]

- [FDD - For all other Transmission Gap Pattern Sequences included in the *Active Pattern Sequence Information* IE, the 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 is assigned per RL, the segmented physical channel shall be mapped on to DL DPDCHs according to [8]. When *p* number of DL DPDCHs are assigned to each RL, the first pair of DL Scrambling Code and FDD DL Channelisation Code Number corresponds to "*PhCH number 1*", the second to "*PhCH number 2*", and so on until the *p*th to "*PhCH number p*".]

[TDD - PDSCH RL ID]:

[TDD - If the *PDSCH RL ID* IE is included in RADIO LINK SETUP REQUEST message, the Node B shall use the PDSCH RL ID as an identifier for the PDSCH and/or PUSCH in this radio link.]

[FDD – Phase Reference Handling]:

[FDD – If the RADIO LINK SETUP REQUEST message includes the *Primary CPICH Usage For Channel Estimation* IE and has the value "Primary CPICH shall not be used", the Node B shall assume that the UE is not using the Primary CPICH for channel estimation. If the RADIO LINK SETUP REQUEST message does not include the *Primary CPICH Usage For Channel Estimation* IE or includes the *Primary CPICH Usage For Channel Estimation* IE and has the value "Primary CPICH may be used", the Node B shall assume that the UE may use the Primary CPICH for channel estimation.]

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 REQUEST 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 REQUEST 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.]

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

Radio Link Handling:

[FDD - Transmit Diversity]:

[FDD - When the *Diversity Mode* IE is set to "*STTD*", "*Closedloop mode1*" or "*Closedloop mode2*", the Node B shall activate/deactivate the Transmit Diversity for each Radio Link in accordance with the *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 interface 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 δP_{curr}, as described in ref.[10] subclause 5.2.1.3, shall be added to the maximum DL power for the associated compressed frame.]

[FDD - If the *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]).]

[3.84 Mcps TDD - The Node B shall determine the initial CCTrCH DL power for each DCH type 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 DCH type 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 interface is achieved for the 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.[21], subclause 4.2.3.4), but shall always be kept within the maximum and minimum limit specified in the RADIO LINK SETUP REQUEST message.]

[3.84 Mcps TDD - The Node B shall determine the maximum DL power for each DCH type CCTrCH by the following rule: If the *CCTrCH Maximum DL Transmission Power* IE is included for that CCTrCH, then the Node B shall use that power for the maximum DL power, otherwise the maximum DL power is the *Maximum DL Power* IE included in the *RL Information* IE.]

[3.84 Mcps TDD - The Node B shall determine the minimum DL power for each DCH type CCTrCH by the following rule: If the *CCTrCH Minimum DL Transmission Power* IE is included for that CCTrCH, then the Node B shall use that power for the minimum DL power, otherwise the minimum DL power is the *Minimum DL Power* IE included in the *RL Information* IE.]

[3.84Mcps TDD - The initial power, maximum power, and minimum power for DSCH type CCTrCH shall be determined as follows:

- If the DSCH type CCTrCH is paired with an uplink CCTrCH(s) for inner loop power control, the minimum, maximum and initial power for each PDSCH is determined in the same way as described above for DCH type CCTrCHs.

- If the DSCH type CCTrCH is not paired with an uplink CCTrCH(s) for inner loop power control, the PDSCH transmission power is DSCH Data Frame Protocol signalled [24], with the maximum value determined in the same way as described above for DCH type CCTrCHs. The minimum and initial powers, however, are subject to control by the CRNC via the frame protocol].

[1.28 Mcps TDD - The Node B shall determine the initial DL power for each timeslot within the DCH type CCTrCH by the following rule: If the *Initial DL Transmission Power* IE is included in the *DL Timeslot Information LCR* IE, then the Node B shall use that power for the Initial DL Power and ignore the *DL Time Slot ISCP info LCR* IE, otherwise the initial DL Power is the *Initial DL Transmission Power* IE included in the *RL Information* IE and if *DL Time Slot ISCP info 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], 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. The Node B shall start any DL transmission on each timeslot within each DCH type CCTrCH using the initial DL power, as determined above, on each DL DPCH and on each timeslot of the CCTrCH until the UL synchronisation on the Uu interface is achieved for the 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.[21], subclause 5.1.2.4), but shall always be kept within the maximum and minimum limit specified in the RADIO LINK SETUP REQUEST message.]

[1.28 Mcps TDD - The Node B shall determine the maximum DL power for each timeslot within the DCH type CCTrCH by the following rule: If the *Maximum DL Power* IE is included in the *DL Timeslot Information LCR* IE, then the Node B shall use that power for the maximum DL power, otherwise the maximum DL power is the *Maximum DL Power* IE included in the *RL Information* IE.]

[1.28 Mcps TDD - The Node B shall determine the minimum DL power for each timeslot within the DCH type CCTrCH by the following rule: If the *Minimum DL Power* IE is included in the *DL Timeslot Information LCR* IE, then the Node B shall use that power for the minimum DL power, otherwise the minimum DL power is the *Minimum DL Power* IE included in the *RL Information* IE.]

[1.28Mcps TDD – The Node B shall determine the initial power for each timeslot within the DSCH type CCTrCH by the following rule: If both the *CCTrCH Initial DL Transmission Power* IE, included in the *DL CCTrCH Information* IE, and the *DL Time Slot ISCP Info LCR* IE, included in the *RL Information* IE, are included then the Node B shall use that power for the PDSCH and ignore the *Initial DL Transmission Power* IE included in the *RL Information* IE, otherwise the initial DL Power is the *Initial DL Transmission Power* IE included in the *RL Information* IE and if *DL Time Slot ISCP info 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], 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. The Node B shall start any DL transmission on each timeslot within each DSCH type CCTrCH using the initial DL power, as determined above, on each DL PDSCH and on each timeslot of the CCTrCH until the UL synchronisation on the Uu interface is achieved for the 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.[21], subclause 5.1.2.4), but shall always be kept within the maximum and minimum limit specified in the RADIO LINK SETUP REQUEST message.]

[1.28 Mcps TDD - The Node B shall determine the maximum DL power for each timeslot within the DSCH type CCTrCH by the following rule: If the *CCTrCH Maximum DL Transmission Power* IE, included in the *DL CCTrCH Information* IE, is included then the Node B shall use that power for the maximum DL power, otherwise the maximum DL power is the *Maximum DL Power* IE included in the *RL Information* IE.]

[1.28 Mcps TDD - The Node B shall determine the minimum DL power for each timeslot within the DSCH type CCTrCH by the following rule: If the *CCTrCH Minimum DL Transmission Power* IE, included in the *DL CCTrCH Information* IE, is included then the Node B shall use that power for the minimum DL power, otherwise the minimum DL power is the *Minimum DL Power* IE included in the *RL Information* IE.]

[3.84Mcps TDD - If the *DL Time Slot ISCP Info* 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, 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, i.e. P_{init} shall be set to the power level indicated by the *Initial DL Transmission Power* IE.]

[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.]

[1.28Mcps TDD - Uplink Synchronisation Parameters LCR]:

[1.28Mcps TDD - If the RADIO LINK SETUP REQUEST message contains the *Uplink Synchronisation Parameters LCR* IE, the Node B shall use the indicated values of *Uplink Synchronisation Stepsize* IE and *Uplink Synchronisation Frequency* IE when evaluating the timing of the UL synchronisation.]

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* IE, the Node B shall activate SSDT, if supported, using the *SSDT Cell Identity* IE and *SSDT Cell Identity Length* IE.]

[FDD - If the RADIO LINK SETUP REQUEST message includes the *Qth Parameter* IE in addition to the *SSDT Cell Identity* IE, the Node B shall use the *Qth Parameter* IE, if Qth signalling is supported, when SSDT is activated.]

[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.]

The Node B shall start reception on the new RL(s) after the RLs are successfully established.

[FDD - Radio Link Set Handling]:

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

[FDD - For each RL not having a common generation of the TPC commands in the DL with another RL, the 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 that are configured in the cells supporting the radio links of the RL Set. The UL in-sync algorithm defined in [10] shall, for each of the established RL Set(s), use the minimum value of the parameters N_INSYNC_IND, that are configured in the cells supporting the radio links of the RL Set.]

Response Message:

If the RLs are successfully established, the Node B shall and respond with a RADIO LINK SETUP RESPONSE message.

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

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

- [FDD - start transmission on the DL DPDCH(s) of the new RL 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 concerned RL on the Uu interface;

- if the *Delayed Activation* IE indicates "CFN":

  - [FDD - start transmission on the DL DPDCH(s) of the new RL as specified in [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
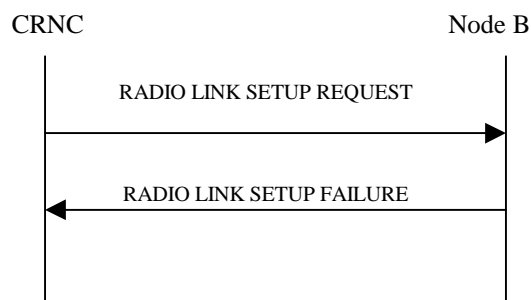
Figure 25: Radio Link Setup procedure, Unsuccessful Operation

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. In this case, the Node B shall include the *Communication Control Port Id* IE in the RADIO LINK SETUP FAILURE 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 "1", "2", "5", "8", "9" or "10", then the Node B shall reject the procedure using the RADIO LINK SETUP 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
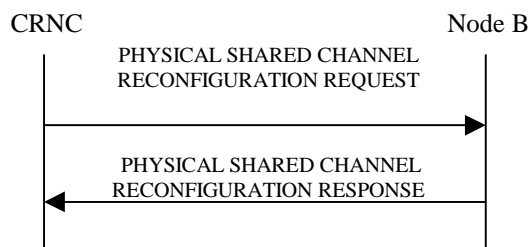
Figure 26: Physical Shared Channel Reconfiguration, Successful Operation

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

If the PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST message includes an *SFN* IE, the Node B shall activate the new configuration on that specified SFN. If no *SFN* IE is included Node B shall activate the new configuration immediately.

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 and HS-SCCH 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-PDSCH and HS-SCCH Total Power* IE for a particular timeslot, the Node B shall not exceed this maximum transmission power on all HS-PDSCH and HS-SCCH codes in that timeslot. If a value has never been set for that timeslot or if the value of the *HS-PDSCH and HS-SCCH Total Power* IE for that timeslot is equal to or greater than the maximum transmission power of the cell the Node B may use all unused power in that timeslot for HS-PDSCH and HS-SCCH codes.]

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

- If the *HS-PDSCH TDD Information* IE contains no [3.84 Mcps TDD - *DL Timeslot and Code Information* IE] [1.28 Mcps TDD - *DL Timeslot and Code Information LCR* IE], delete any existing HS-PDSCH resources from the cell.

- If the *HS-PDSCH TDD Information* IE contains [3.84 Mcps TDD - *DL Timeslot and Code Information* IE] [1.28 Mcps TDD - *DL Timeslot and Code Information LCR* IE] and HS-PDSCH resources are not currently configured in the cell, use this IE as the list of timeslots / codes for HS-PDSCH channels.

- If the *HS-PDSCH TDD Information* IE contains [3.84 Mcps TDD - *DL Timeslot and Code Information* IE] [1.28 Mcps TDD - *DL Timeslot and Code Information LCR* IE] and HS-PDSCH resources are currently configured in the cell, replace the current list of timeslots / codes with this new list of timeslots / 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 - *First TDD Channelisation Code* IE, *Second TDD Channelisation Code* 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 *Modify HS-SCCH Resource Pool* IEs and includes the*HS-SCCH Maximum Power* IE, the Node B shall apply this value for the specified HS-SCCH code otherwise the old value is 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 - *DL/UL Code Information* IE, *Midamble Shift And Burst Type* IE, *Time Slot* IE], [1.28Mcps TDD - *DL/UL Code Information 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 sets from its PDSCH/PUSCH configuration.]

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

[1.28Mcps TDD - If the PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST message contains the *Uplink Synchronisation Parameters LCR* IE, the Node B shall use the indicated values of *Uplink Synchronisation Stepsize* IE and *Uplink Synchronisation Frequency* IE when evaluating the timing of the UL synchronisation.]

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 message.

[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 message, and shall make these available to all the current and future DSCH and USCH transport channels. The Node B shall respond with the PHYSICAL SHARED CHANNEL RECONFIGURATION RESPONSE message.]

8.2.18.3   Unsuccessful Operation
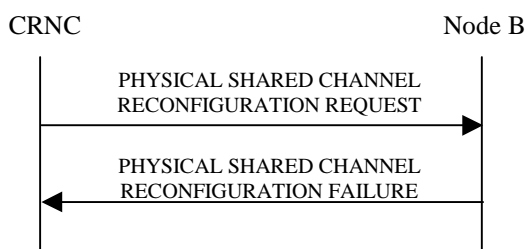
Figure 27: Physical Shared Channel Reconfiguration procedure: Unsuccessful Opreration

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* IE shall be set to an appropriate value either a single general cause value or PDSCH and PUSCH set specific cause values for each set that caused a failure within the *Unsuccessful Shared DL Channel Set* IE for PDSCH sets or *Unsuccessful Shared UL Channel Set* IE for PUSCH sets.

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

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8.2.19 Reset

8.2.19.1 General

The purpose of the Reset procedure is to align the resources in the CRNC and the Node B in the event of an abnormal failure. The CRNC or the 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
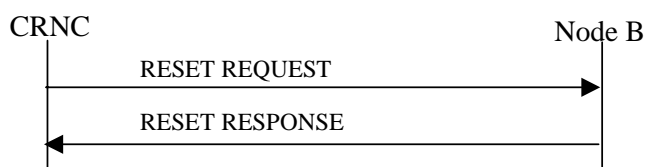
Figure 27A Reset procedure (CRNC to Node B), Successful Operation

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

If the *Reset Indicator* IE is set to "Communication Context", 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 "Communication Control Port", 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
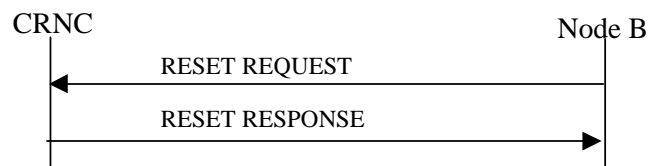
Figure 27B Reset procedure (Node B to CRNC), Successful Operation

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

If the *Reset Indicator* IE is set to "Communication Context", 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 "Communication Control Port", 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

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8.2.19.4 Abnormal Conditions

If the RESET REQUEST 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 synchronisation 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

CRNC Node B

CELL SYNCHRONISATION INITIATION
REQUEST

CELL SYNCHRONISATION
INITIATION RESPONSE
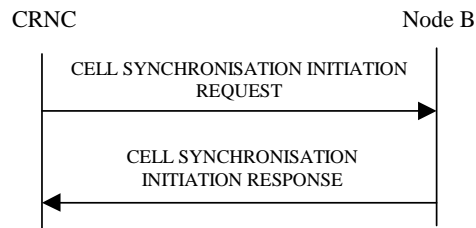
Figure 27C Cell Synchronisation Initiation procedure, Successful Operation

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 synchronisation 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 synchronisation 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 synchronisation 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 synchronisation bursts. Transmission of the indicated cell synchronisation 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.

If 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.

[3.84Mcps TDD - If the *Cell Sync Burst Arrival Time* IE is included in the *Cell Sync Burst Information* IE of the *Synchronisation Report Characteristics* IE, it indicates to the Node B the reference time at which the reception of the cell synchronisation burst of a neighbouring cell is expected.]

[3.84Mcps TDD - If the *Cell Sync Burst Timing Threshold* IE is included in the *Cell Sync Burst Information* IE of the *Synchronisation Report Characteristics* IE, the Node B shall use this threshold as a trigger for the CELL SYNCHRONISATION REPORT message.]

[1.28Mcps TDD - If the *SYNC_DL Code ID Arrival Time* IE is included in the *SYNC_DL Code Information LCR* IE of the *Synchronisation Report Characteristics* IE, it indicates to the Node B the reference time at which the reception of the SYNC_DL Code of a neighbouring cell is expected.]

[1.28Mcps TDD - If the *SYNC_DL Code ID Timing Threshold* IE is included in *the SYNC_DL Code Information LCR* IE of the *Synchronisation Report Characteristics* IE, the Node B shall use this threshold as a trigger for the CELL SYNCHRONISATION REPORT message.]

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
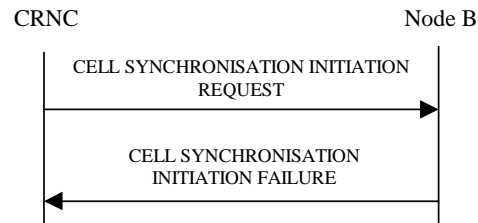
Figure 27D Cell Synchronisation Initiation procedure, Unsuccessful Operation

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

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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

CRNC   Node B
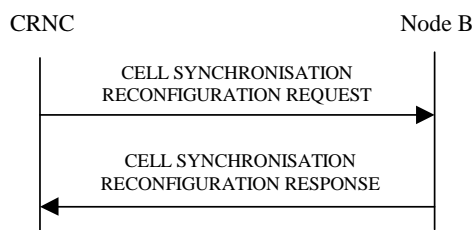
Figure 27E Cell Synchronisation Reconfiguration procedure, Successful Operation

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 synchronisation 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 *Number Of Cycles Per SFN Period* IE

Repetition period: Cycle length / value of *Number Of Repetitions Per Cycle Period* IE

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

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

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

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 subcycles per cycle period", and "Number of repetitions per cycles period", along the following equations:

Cycle length: 4096 / value of *Number Of Cycles Per SFN Period* IE

Subcycle length: Cycle length / value of *Number Of Subcycles Per Cycle Period* IE

Repetition period: Subcycle length / value of *Number Of Repetitions Per Cycle Period* IE

> 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] message, 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 subcycle 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 synchronisation 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 synchronisation 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 synchronisation 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 synchronisation 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 synchronisation burst] [1.28Mcps TDD - SYNC_DL Code] measurement when the [3.84Mcps TDD - cell synchronisation 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].

[3.84Mcps TDD - If the *Cell Sync Burst Arrival Time* IE is included in the *Cell Sync Burst Information* IE of the *Synchronisation Report Characteristics* IE, it indicates to the Node B the reference time at which the reception of the cell synchronisation burst of a neighbouring cell is expected.]

[3.84Mcps TDD - If the *Cell Sync Burst Timing Threshold* IE is included in the *Cell Sync Burst Information* IE of the *Synchronisation Report Characteristics* IE, the Node B shall use this new threshold as a trigger for the CELL SYNCHRONISATION REPORT message.]

[1.28Mcps TDD - If the *SYNC_DL Code ID Arrival Time* IE is included in *the SYNC_DL Code Information LCR* IE of the *Synchronisation Report Characteristics* IE, it indicates to the Node B the reference time at which the reception of the SYNC_DL Code of a neighbouring cell is expected.]

[1.28Mcps TDD - If the *SYNC_DL Code ID Timing Threshold* IE is included in *the SYNC_DL Code Information LCR* IE of the *Synchronisation Report Characteristics* IE, the Node B shall use this threshold as a trigger for the CELL SYNCHRONISATION REPORT message.]

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

CRNC   Node B

CELL SYNCHRONISATION
RECONFIGURATION REQUEST

CELL SYNCHRONISATION
RECONFIGURATION FAILURE
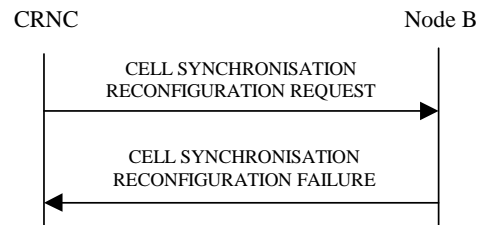
Figure 27F Cell Synchronisation Reconfiguration procedure, Unsuccessful Operation

If the Node B cannot reconfigure the requested transmission or measurement on [3.84Mcps TDD - cell synchronisation 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

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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 synchronisation 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
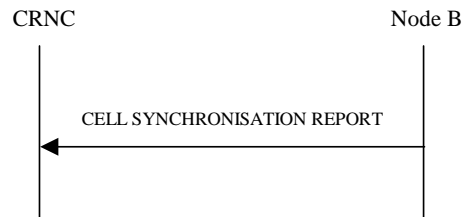
Figure 27G Cell Synchronisation Reporting procedure, Successful Operation

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 synchronisation 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 CRNC 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 CRNC, 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 synchronisation 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 synchronisation bursts or reporting of cell synchronisation 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
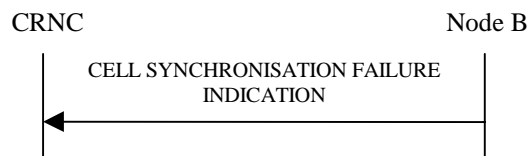
CRNC   Node B

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 synchronisation bursts] [1.28Mcps TDD – SYNC_DL Codes] can no longer be supported.

If the transmission of a cell synchronisation burst has failed, then the Node B shall include the *CSB Transmission Id* IE in the CELL SYNCHRONISATION FAILURE INDICATION message to uniquely identify the concerned cell synchronisation Burst Transmission.

If the measurement of a cell synchronisation burst has failed, then the Node B shall include the *CSB Measurement Id* IE in the CELL SYNCHRONISATION FAILURE INDICATION message to uniquely identify the concerned cell synchronisation Burst Measurement.

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
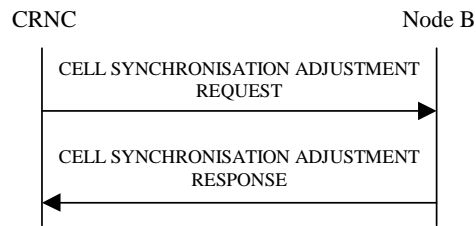
Figure 27J Cell Synchronisation Adjustment, Successful Operation

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 synchronisation 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

CRNC   Node B
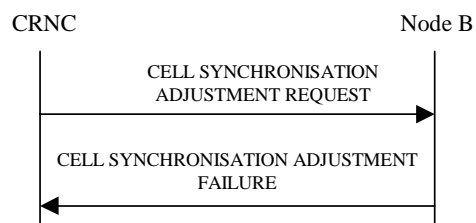
Figure 27K Cell Synchronisation Adjustment, Unsuccessful Operation

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
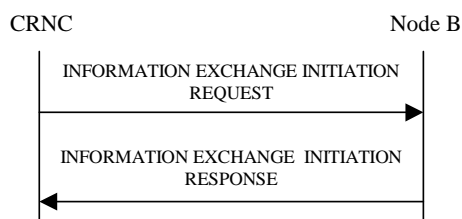
Figure 27L: Information Exchange Initiation procedure, Successful Operation

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 immediately report the requested information and then 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 if available. If the requested information is not available at the moment of receiving the INFORMATION EXCHANGE INITIATION REQUEST message, but expected to become available after some acquisition time, the Node B shall initiate the Information Reporting procedure when the requested information becomes available. The Node B shall then 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} or WN_t 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 a change in the t_{oa} or WN_a parameter 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.

7) If any of the above *Information Type* IEs becomes temporarily unavailable, the Node B shall initiate the Information Reporting procedure for this specific Information Item by indicating "Information Not Available" in the *Requested Data Value Information* IE. If the Information becomes available again, the Node B shall initiate the Information Reporting procedure for this specific Information.

Response message
If the Node B is 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 INITIATION REQUEST message. When the *Report Characteristics* IE is set to "On Modification" or "Periodic", the INFORMATION EXCHANGE INITIATION RESPONSE message shall contain the requested data if the data are available at the moment of receiving the INFORMATION EXCHANGE INITIATION REQUEST. When the *Report Characteristics* IE is set to "On Demand", the INFORMATION EXCHANGE INITIATION RESPONSE message shall contain the *Requested Data Value* IE.

8.2.26.3   Unsuccessful Operation
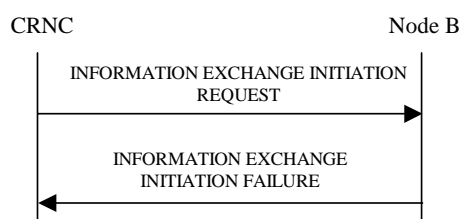
Figure 27M: Information Exchange Initiation procedure, Unsuccessful Operation

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.

8.2.26.4   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
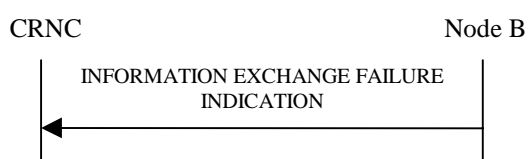
Figure 27P: Information Exchange Failure procedure, Successful Operation

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

CRNC   Node B

RADIO LINK ADDITION REQUEST

RADIO LINK ADDITION RESPONSE
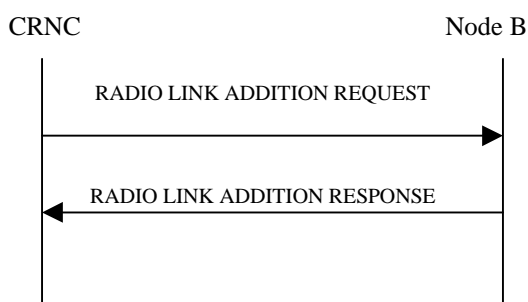
Figure: 28 Radio Link Addition procedure, Successful Operation

The procedure is initiated with a RADIO LINK ADDITION REQUEST message sent from the CRNC to the Node B using the Communication Control Port assigned to the concerned Node B Communication Context.

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 message 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 message 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.]

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

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

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

[FDD – Phase Reference Handling]:

[FDD – If the RADIO LINK ADDITION REQUEST message includes the *Primary CPICH Usage For Channel Estimation* IE and has the value "Primary CPICH shall not be used", the Node B shall assume that the UE is not using the Primary CPICH for channel estimation. If the RADIO LINK ADDITION REQUEST message does not include the *Primary CPICH Usage For Channel Estimation* IE or includes the *Primary CPICH Usage For Channel Estimation* IE and has the value "Primary CPICH may be used", the Node B shall assume that the UE may use the Primary CPICH for channel estimation.]

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", the 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.

- If the *Diversity Control Field* IE is set to "Must not", the Node B shall not combine the RL with any other existing RL.

When a new RL is to be combined, the Node B shall choose which RL(s) to combine it with.

In the case of not combining a RL with a RL established with a previous Radio Link Setup or Radio Link Addition Procedure or a RL previously listed in the RADIO LINK ADDITION RESPONSE message, the Node B shall indicate with the Diversity Indication in the *RL Information Response* IE in the RADIO LINK ADDITION RESPONSE message that no combining is done. In this case, the Node B shall include in the *DCH Information Response* IE both the *Transport Layer Address* IE and the *Binding ID* IE for the transport bearer to be established for each DCH of the RL in the RADIO LINK ADDITION RESPONSE message.

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

In the case of a set of co-ordinated DCHs, the *Binding ID* IE and the *Transport Layer Address* IE shall be included for only one of the DCHs in a set of 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 – If the *Transmit Diversity Indicator* IE is included in the RADIO LINK ADDITION REQUEST message, the Node B shall activate/deactivate the Transmit Diversity for 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 interface 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 RLs for this Node B Communication Context. 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 subclause 8.3.7).]

[3.84 Mcps TDD – If the RADIO LINK ADDITION REQUEST message includes the *Initial DL Transmission Power* IE, the Node B shall determine the initial CCTrCH DL power for each DCH type 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 CCTrCH when starting transmission until the UL synchronisation on the Uu interface is achieved for the CCTrCH. 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 CCTrCHs for this Node B Communication Context. 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.[21], subclause 4.2.3.4).]

[1.28 Mcps TDD - If the RADIO LINK ADDITION REQUEST message includes the *Initial DL Transmission Power* IE, the Node B shall determine the initial DL power for each timeslot within a DCH type CCTrCH by the following rule: If the *Initial DL Transmission Power* IE is included in the *DL Timeslot Information LCR* IE, then the Node B shall use that power for the initial DL power and ignore the *DL Time Slot ISCP info LCR*, otherwise the initial DL power is the *Initial DL Transmission Power* IE included in the *RL Information* IE and if *DL Time Slot ISCP info LCR* IE is present, the Node B shall use the indicated value

when deciding the initial DL TX Power for each timeslot as specifiedin [21], 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. The Node B shall apply the given power to the transmission on each DL DPCH and on each Time Slot of the CCTrCH when starting transmission until the UL synchronisation on the Uu interface is achieved for the CCTrCH. If no *Initial DL Transmission Power* IE is included, the Node B shall use any transmission power level currently used on already existing RL/timeslots for this Node B Communication Context. 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.[21], subclause 5.1.2.4).]

[FDD - 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 Node B Communication Contextshall be applied. During compressed mode, the δP_{curr}, as described in ref.[10] subclause 5.2.1.3, shall be added to the maximum DL power for the associated compressed frame.]

[FDD - If the 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 Node B Communication Context shall be applied.]

[3.84 Mcps TDD - If the RADIO LINK ADDITION REQUEST message includes the *Maximum DL Power* IE, the Node B shall determine the maximum CCTrCH DL power for each DCH type CCTrCH by the following rule: If the *CCTrCH Maximum DL Transmission Power* IE is included for that CCTrCH, then the Node B shall use that power for the maximum CCTrCH DL power, otherwise the maximum CCTrCH DL power is the *Maximum DL Power* IE included in the *RL Information* IE. If no *Maximum DL Power* IE is included (even if *CCTrCH Maximum DL Transmission Power* IEs are included), any maximum DL power stored for already existing DCH type CCTrCHs for this Node B Communication Context shall be applied.]

[3.84 Mcps TDD - If the RADIO LINK ADDITION REQUEST message includes the *Minimum DL Power* IE, the Node B shall determine the minimum CCTrCH DL power for each DCH type CCTrCH by the following rule: If the *CCTrCH Minimum DL Transmission Power* IE is included for that CCTrCH, then the Node B shall use that power for the minimum CCTrCH DL power, otherwise the minimum CCTrCH DL power is the *Minimum DL Power* IE included in the *RL Information* IE. If no *Minimum DL Power* IE is included (even if *CCTrCH Minimum DL Transmission Power* IEs are included), any minimum DL power stored for already existing DCH type CCTrCHs for this Node B Communication Context shall be applied.]

[1.28 Mcps TDD - If the RADIO LINK ADDITION REQUEST message includes the *Maximum DL Power* IE, the Node B shall determine the maximum DL power for each timeslot within a DCH type CCTrCH by the following rule: If the *Maximum DL Power* IE is included in the *DL Timeslot Information LCR* IE for that timeslot, then the Node B shall use that power for the maximum DL power, otherwise the maximum DL power is the *Maximum DL Power* IE included in the *RL Information* IE. The Node B shall store this value and not transmit with a higher power on any applicable DL DPCH. If no *Maximum DL Power* IE is included, any maximum DL power stored for already existing RL/timeslots for this Node B Communication Context shall be applied.]

[1.28 Mcps TDD - If the RADIO LINK ADDITION REQUEST message includes the *Minimum DL Power* IE, the Node B shall determine the minimum DL power for each timeslot within a DCH type CCTrCH by the following rule: If the *Minimum DL Power* IE is included in the *DL Timeslot Information LCR* IE for that timeslot, then the Node B shall use that power for the minimum DL power, otherwise the minimum DL power is the *Minimum DL Power* IE included in the *RL Information* IE. The Node B shall store this value and not transmit with a lower power on any applicable DL DPCH. If no *Minimum DL Power* IE is included, any minimum DL power stored for already existing RL/timeslots for this Node B Communication Context shall be applied.]

[3.84Mcps TDD - The initial power, maximum power, and minimum power for DSCH type CCTrCH shall be determined as follows:

- If the DSCH type CCTrCH is paired with an uplink CCTrCH(s) for inner loop power control, the minimum, maximum and initial power for each PDSCH is determined in the same way as described above for DCH type CCTrCHs.

- If the DSCH type CCTrCH is not paired with an uplink CCTrCH(s) for inner loop power control, the PDSCH transmission power is DSCH Data Frame Protocol signalled [24], with the maximum value

determined in the same way as described above for DCH type CCTrCHs. The minimum and initial powers, however, are subject to control by the CRNC via the frame protocol].

[1.28 Mcps TDD – If the RADIO LINK ADDITION REQUEST message includes the *Initial DL Transmission Power* IE, the Node B shall determine the initial DL power for each timeslot within a DSCH type CCTrCH by the following rule: If both the *CCTrCH Initial DL Transmission Power* IE, included in the *DL CCTrCH Information* IE, and the *DL Time Slot ISCP Info LCR* IE, included in the *RL Information* IE, are included then the Node B shall use that power for the PDSCH and ignore the *Initial DL Transmission Power* IE included in the *RL Information* IE, otherwise the initial DL Power is the *Initial DL Transmission Power* IE included in the *RL Information* IE and if *DL Time Slot ISCP info 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], 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. The Node B shall apply the given power to the transmission on each DL PDSCH and on each Time Slot of the CCTrCH when starting transmission until the UL synchronisation on the Uu interface is achieved for the CCTrCH. If no *Initial DL Transmission Power* IE is included, the Node B shall use any transmission power level currently used on already existing RL/timeslots for this Node B Communication Context. 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.[21], subclause 5.1.2.4).]

[1.28 Mcps TDD - If the RADIO LINK ADDITION REQUEST message includes the *Maximum DL Power* IE, the Node B shall determine the maximum DL power for each timeslot within a DSCH type CCTrCH by the following rule: If the *CCTrCH Maximum DL Transmission Power* IE, included in the *DL CCTrCH Information* IE, is included then the Node B shall use that power for the maximum DL power, otherwise the maximum DL power is the *Maximum DL Power* IE included in the *RL Information* IE. The Node B shall store this value and not transmit with a higher power on any applicable PDSCH. If no *Maximum DL Power* IE is included, any maximum DL power stored for already existing RL/timeslots for this Node B Communication Context shall be applied.]

[1.28 Mcps TDD - If the RADIO LINK ADDITION REQUEST message includes the *Minimum DL Power* IE, the Node B shall determine the minimum DL power for each timeslot within a DSCH type CCTrCH by the following rule: If the *CCTrCH Minimum DL Transmission Power* IE, included in the *DL CCTrCH Information* IE, is included then the Node B shall use that power for the minimum DL power, otherwise the minimum DL power is the *Minimum DL Power* IE included in the *RL Information* IE. The Node B shall store this value and not transmit with a lower power on any applicable PDSCH. If no *Minimum DL Power* IE is included, any minimum DL power stored for already existing RL/timeslots for this Node B Communication Context shall be applied.]

[3.84Mcps 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. 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, i.e. P_{init} shall be set to the power level indicated by the *Initial DL Transmission Power* IE (if received) or the decided DL TX power level on each DL channelisation code of a RL based on power level of existing RLs.]

[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.]

[1.28Mcps TDD – Uplink Synchronisation Parameters LCR]:

[1.28Mcps TDD - If the RADIO LINK ADDITION REQUEST message contains the *Uplink Synchronisation Parameters LCR* IE, the Node B shall use the indicated values of *Uplink Synchronisation Stepsize* IE and *Uplink Synchronisation Frequency* IE when evaluating the timing of the UL synchronisation.]

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 – If the RADIO LINK ADDITION REQUEST message includes the *Qth Parameter* IE in addition to the *SSDT Cell Identity* IE, the Node B shall use the *Qth Parameter* IE, if Qth signalling is supported, when SSDT is activated in the concerned new RL.]

The Node B shall start reception on the new RL(s) after the RLs are successfully established.

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

Response Message:

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

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

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

- [FDD - start transmission on the DL DPDCH(s) of the new RL 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 concerned RL on the Uu interface;

- if the *Delayed Activation* IE indicates "CFN":

  - [FDD – start transmission on the DL DPDCH(s) of the new RL as specified in [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
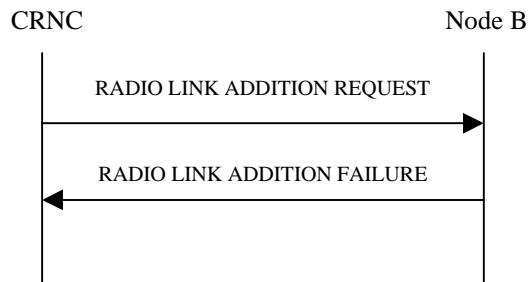
Figure 29: Radio Link Addition procedure: Unsuccessful Operation

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

[FDD - 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 message 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 Node B Communication Context.

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

8.3.2.2 Successful Operation

CRNC   Node B

RADIO LINK RECONFIGURATION PREPARE

RADIO LINK RECONFIGURATION READY
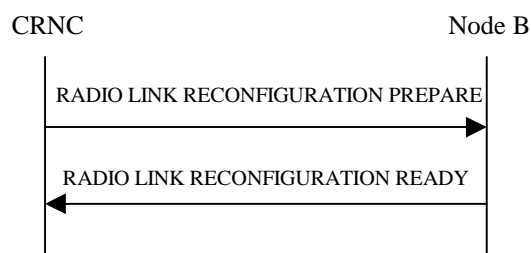
Figure 30: Synchronised Radio Link Reconfiguration Preparation procedure, Successful Operation

The Synchronised Radio Link Reconfiguration Preparation procedure is initiated by the CRNC by sending the RADIO LINK RECONFIGURATION PREPARE message 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* IE 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 the *Allocation/Retention Priority* IE for a DCH, the Node B shall apply the new Allocation/Retention Priority to this DCH in the new configuration according to Annex A.

- If the *DCHs to Modify* IE includes multiple *DCH Specific Info* IEs, 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, 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* IE 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 the *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 Uu 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* IE, the Node B shall not include the referenced DCHs in the new configuration.

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

Physical Channel Modification:

[FDD – If the RADIO LINK RECONFIGURATION PREPARE message includes an *UL DPCH Information* IE, 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, 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 DPCH Slot Format* IE, the Node B shall set the new Downlink DPCH 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 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 includes the *Limited Power Increase* IE 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* IE, then the Node B shall treat them each as follows:]

- [TDD – If the IE includes any of the *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* IE or *DL DPCH To Add* IE, the Node B shall include this DPCH in the new configuration.]

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

- [TDD – If the IE includes any *UL DPCH To Modify* IE or *DL DPCH To Modify* IE and includes any of the *Repetition Period* IE, *Repetition Length* IE or *TDD DPCH Offset* IE, or the message includes UL/DL Timeslot Information and includes any of the [3.84Mcps TDD - *Midamble Shift And Burst Type* IE], [1.28Mcps TDD - *Midamble Shift 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] , [1.28Mcps TDD - *TDD UL DPCH Time Slot Format LCR* IE or *TDD DL DPCH Time Slot Format 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.]

- [1.28Mcps TDD - If the *UL CCTrCH to Modify* IE includes the *TDD TPC UL Step Size* IE, the Node B shall apply this value to the uplink TPC step size in the new configuration.]

- [TDD - If the *DL CCTrCH to Modify* IE includes the *TDD TPC DL Step Size* IE, the Node B shall apply this value to the downlink TPC step size in the new configuration.]

[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 *TDD TPC DL Step Size* IE within a *DL CCTrCH To Add* IE, the Node B shall set the downlink TPC step size of that CCTrCH to that value, otherwise 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 - If the *UL CCTrCH To Add* IE includes the *TDD TPC UL Step Size* IE, the Node B shall apply the uplink TPC step size in the new 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, 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 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 for each affected RL in the RADIO LINK RECONFIGURATION READY message.]

DSCH Addition/Modification/Deletion:

If the RADIO LINK RECONFIGURATION PREPARE message includes any *DSCH To Add*, *DSCH To Modify* or *DSCH To Delete* IE, 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 for this Node B Communication Context. 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 includes the *Transport Layer Address* IE and *Binding ID* IE in the *TFCI2 Bearer Information* IE the Node B may use the transport layer address and the binding identifier received from the CRNC when establishing a TFCI2 transport bearer. 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 *Qth Parameter* IE and the *SSDT Indication* IE set to "SSDT Active in the UE", the Node B shall use the *Qth Parameter* IE, if Qth signalling is supported, when SSDT is activated 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.]

- [FDD - 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. During compressed mode, the δP_{curr}, as described in ref.[10] subclause 5.2.1.3, shall be added to the maximum DL power for the associated compressed frame.]

- [3.84 Mcps TDD - If the *DL CCTrCH To Add* IE is included, the Node B shall determine the maximum CCTrCH DL power for the DCH type CCTrCH by the following rule: If the *CCTrCH Maximum DL Transmission Power* IE is included for that CCTrCH, then the Node B shall use that power for the maximum CCTrCH DL power, otherwise the maximum CCTrCH DL power is the *Maximum Downlink Power* IE included in the *RL Information* IE. If no *Maximum Downlink Power* IE is included (even if *CCTrCH Maximum DL Transmission Power* IEs are included), any maximum DL power stored for already existing DCH type CCTrCHs for this Node B Communication Context shall be applied.]

- [3.84 Mcps TDD - If the *DL CCTrCH To Add* IE is included, the Node B shall determine the minimum CCTrCH DL power for the DCH type CCTrCH by the following rule: If the *CCTrCH Minimum DL Transmission Power* IE is included for that CCTrCH, then the Node B shall use that power for the minimum CCTrCH DL power, otherwise the minimum CCTrCH DL power is the *Minimum Downlink Power* IE included in the *RL Information* IE. If no *Minimum Downlink Power* IE is included (even if *CCTrCH Minimum DL Transmission Power* IEs are included), any minimum DL power stored for already existing DCH type CCTrCHs for this Node B Communication Context shall be applied.]

- [3.84 Mcps TDD - If the *DL CCTrCH To Modify* IE is included and *Maximum CCTrCH DL Power to Modify* IE and/or *Minimum CCTrCH DL Power to Modify* IE are included, the Node B shall apply the values in the new configuration for this DCH type CCTrCH. If the *RL Information* IE includes *Maximum Downlink Power* and/or the *Minimum Downlink Power* IEs, the Node B shall apply the values for all other DCH type CCTrCHs of the radio link.]

- [1.28 Mcps TDD - If the *DL CCTrCH To Add* IE is included, the Node B shall determine the maximum DL power for each timeslot within a DCH type CCTrCH by the following rule: If the *Maximum DL Power* IE is included in the *DL Timeslot Information LCR* IE for that timeslot, then the Node B shall use that power for the maximum DL power, otherwise the maximum DL power is the *Maximum Downlink Power* IE included in the *RL Information* IE. The Node B shall store this value and not transmit with a higher power on any applicable DL DPCH. If no *Maximum Downlink Power* IE is included, any maximum DL power stored for already existing timeslots for this Node B Communication Context shall be applied.]

- [1.28 Mcps TDD - If the *DL CCTrCH To Add* IE is included, the Node B shall determine the minimum DL power for each timeslot within a DCH type CCTrCH by the following rule: If the *Minimum DL Power* IE is included in the *DL Timeslot Information LCR* IE for that timeslot, then the Node B shall use that power for the minimum DL power, otherwise the minimum DL power is the *Minimum Downlink Power* IE included in the *RL Information* IE. The Node B shall store this value and not transmit with a lower power on any applicable DL DPCH. If no *Minimum Downlink Power* IE is included, any minimum DL power stored for already existing timeslots for this Node B Communication Context shall be applied.]

- [1.28 Mcps TDD - If the *DL CCTrCH To Modify* IE is included and *Maximum DL Power to Modify LCR* IE and/or *Minimum DL Power to Modify LCR* IE are included, the Node B shall apply the values in the new configuration for this timeslot, if the *RL Information* IE includes *Maximum Downlink Power* and/or the *Minimum Downlink Power* IEs, the Node B shall apply the values in the new configuration for all other timeslots.]

- [3.84Mcps 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 DCH type 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 interface 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 CCTrCHs 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.[21], subclause 4.2.3.4).]

- [3.84Mcps TDD - The initial power, maximum power, and minimum power for a DSCH type CCTrCH to be added or modified, shall be determined as follows:

- If the DSCH type CCTrCH is paired with an uplink CCTrCH(s) for inner loop power control, the minimum, maximum and initial power for each PDSCH is determined in the same way as described above for DCH type CCTrCHs.

- If the DSCH type CCTrCH is not paired with an uplink CCTrCH(s) for inner loop power control, the PDSCH transmission power is DSCH Data Frame Protocol signalled [24], with the maximum value determined in the same way as described above for DCH type CCTrCHs. The minimum and initial powers, however, are subject to control by the CRNC via the frame protocol].

- [1.28 Mcps TDD – If the *RL Information* IE includes the *Initial DL Transmission Power* IE, the Node B shall determine the initial DL power for each timeslot in a DCH type CCTrCH by the following rule: If the *Initial DL Transmission Power* IE is included in the *DL Timeslot Information LCR* IE, then the Node B shall use that power for the initial DL power, otherwise the initial 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 CCTrCH when starting transmission until the UL synchronisation on the Uu interface is achieved for the CCTrCH. If no *Initial DL Transmission Power* IE is included, the Node B shall use any transmission power level currently used on already existing timeslots for this Node B Communication Context. 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.[21], subclause 5.1.2.4).]

- [1.28Mcps TDD - If the *RL Information* IE includes the *Initial DL Transmission Power* IE, the Node B shall determine the initial DL power for each timeslot within the DSCH type CCTrCH by the following rule: If both the *CCTrCH Initial DL Transmission Power* IE and the *DL Time Slot ISCP Info LCR* IE are included then the Node B shall use that power for the PDSCH power, otherwise the PDSCH power is the *Initial DL Transmission Power* IE included in the *RL Information* IE. If *DL Time Slot ISCP info 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], 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. The Node B shall apply the given power to the transmission on each PDSCH and on each timeslot of the CCTrCH when starting transmission on a new CCTrCH until the UL synchronisation on the Uu interface 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 RL/timeslots 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.[21], subclause 5.1.2.4).]

- [1.28 Mcps TDD - If the *DL CCTrCH To Add* IE is included, the Node B shall determine the maximum DL power for each timeslot within a DSCH type CCTrCH by the following rule: If the *CCTrCH Maximum DL Transmission Power* IE is included then the Node B shall use that power for the maximum DL power, otherwise the maximum DL power is the *Maximum Downlink Power* IE included in the *RL Information* IE. The Node B shall store this value and not transmit with a higher power on any applicable DL PDSCH. If no *Maximum Downlink Power* IE is included, any maximum DL power stored for already existing timeslots for this Node B Communication Context shall be applied.]

- [1.28 Mcps TDD - If the *DL CCTrCH To Add* IE is included, the Node B shall determine the minimum DL power for each timeslot within a DSCH type CCTrCH by the following rule: If the *CCTrCH Minimum DL Transmission Power* IE is included then the Node B shall use that power for the minimum DL power, otherwise the minimum DL power is the *Minimum Downlink Power* IE included in the *RL Information* IE. The Node B shall store this value and not transmit with a lower power on any applicable DL PDSCH. If no *Minimum Downlink Power* IE is included, any minimum DL power stored for already existing timeslots for this Node B Communication Context shall be applied.]

- [1.28 Mcps TDD - If the *DL CCTrCH To Modify* IE is included and the *Maximum CCTrCH DL Power to Modify* IE and/or the *Minimum CCTrCH DL Power to Modify* IE are included, the Node B shall apply the values in the new configuration for this DSCH type CCTrCH, if the *RL Information* IE includes *Maximum Downlink Power* and/or the *Minimum Downlink Power* IEs, the Node B shall apply the values in the new configuration for all other timeslots.]

- [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.]

- [1.28Mcps TDD – If the *RL Information* IE message contains the *Uplink Synchronisation Parameters LCR* IE, the Node B shall use the indicated values of *Uplink Synchronisation Stepsize* IE and *Uplink Synchronisation Frequency* IE when evaluating the timing of the UL synchronisation.]

[TDD - PDSCH RL ID]:

- [TDD – If the RADIO LINK RECONFIGURATION PREPARE message includes the *PDSCH RL ID* IE then in the new configuration the Node B shall use the PDSCH and/or PUSCH in this radio link.]

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 Modify* IE or *HS-DSCH Information To Delete* IE and if the *HS-PDSCH RL ID* IE indicates a radio link in the Node B, then the Node B shall use this information to add/modify/delete the indicated HS-DSCH channel to/from this radio link. If the *HS-PDSCH RL ID* IE does not indicate a radio link in the Node B, the Node B shall update the configuration of the HS-DSCH according to the received *HS-DSCH Information To Modify*, *HS-DSCH Information To Add* or *HS-DSCH Information to Delete* IEs. Node B shall store the latest HS-DSCH configuration until the Node B Communication Context is deleted.

[FDD - If the *HS-DSCH To Modify* IE includes the *HS-SCCH Code Change Grant* IE, then the Node B may modify the HS-SCCH codes corresponding to the HS-DSCH. The Node B shall then report the codes which are used in the new configuration specified in *HS-SCCH Specific Information Response* IE in the RADIO LINK RECONFIGURATION READY message.]

[TDD - If the *HS-DSCH To Modify* IE includes the *HS-SCCH Code Change Grant* IE, then the Node B may modify the HS-SCCH parameters codes corresponding to the HS-DSCH. The Node B shall then report the values for the parameters which are used in the new configuration specified in the [3.84Mcps TDD - *HS-SCCH Specific Information Response*] [1.28Mcps TDD - *HS-SCCH Specific Information Response LCR*] IEs in the RADIO LINK RECONFIGURATION READY message.]

[FDD – If the *HS-SCCH Power Offset* IE is included in the *HS-DSCH Information To Add* IE or *HS-DSCH Information To Modify* IE, the Node B may use this value to determine the HS-SCCH power. The HS-SCCH Power Offset should be applied for any HS-SCCH transmission to this UE.]

[FDD – If the RADIO LINK RECONFIGURATION PREPARE message includes the *CQI Feedback Cycle k* IE, the *CQI Repetition Factor* IE , the *ACK-NACK Repetition Factor* IE, *the ACK Power Offset* IE, the *NACK Power Offset* IE or the *CQI Power Offset* IE in the *HS-DSCH Information To Modify* IE, then the DRNS shall use the indicated CQI Feedback Cycle k value, the CQI Repetition Factor or the ACK-NACK Repetition Factor, ACK Power Offset, the NACK Power Offset or the CQI Power Offset in the new configuration.]

[TDD – If the RADIO LINK RECONFIGURATION PREPARE message includes the *TDD ACK NACK Power Offset* IE in the *HS-DSCH To Modify* IE, the DRNS shall use the indicated power offset in the new configuration.]

If the RADIO LINK RECONFIGURATION PREPARE message includes a *HS-PDSCH RL ID* IE and if the *HS-PDSCH RL ID* IE refers to a radio link in the Node B Communication Context, then the Node B shall configure the HS-PDSCH in the radio link indicated by this IE. Any existing HS-PDSCH resources from radio links associated with the Node B Communication Context and not referenced by *HS-PDSCH RL ID* IE shall be removed.

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

If the new configuration does not include a HS-DSCH, the HS-DSCH-RNTI, if existing in the Node B Communication Context, shall be deleted from the Node B Communication Context.

If the RADIO LINK RECONFIGURATION PREPARE message includes an *HS-DSCH Information To Delete* 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.

The Node B shall include the *HS-DSCH Initial Capacity Allocation* IE in the RADIO LINK RECONFIGURATION READY message for each MAC-d flow, if the Node B allows the CRNC to start transmission of MAC-d PDUs before the Node B has allocated capacity on user plane as described in [24].

If the RADIO LINK RECONFIGURATION PREPARE message includes the *MAC-hs Window Size* IE in the *HS-DSCH Information To Modify* IE, then the Node B shall use the indicated MAC-hs window size value in the new configuration.

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes *Measurement Power Offset* IE in the *HS-DSCH Information To Add* IE or the *HS-DSCH Information To Modify* IE, then the Node B shall use the measurement power offset as described in [10] subclause 6A.2.]

If the RADIO LINK RECONFIGURATION PREPARE message includes the *MAC-hs Guaranteed Bit Rate* IE in the *HS-DSCH Information To Add* IE or *HS-DSCH Information To Modify* IE, the Node B shall use this information to optimise MAC-hs scheduling decisions.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *T1* IE in the *HS-DSCH Information To Modify* IE, then the Node B shall use the indicated T1 value in the new configuration.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *Discard Timer* IE in the *HS-DSCH Information To Modify* IE or the *HS-DSCH Information To Add* IE, then the Node B shall use the indicated Discard Timer value in the new configuration.

[FDD - Phase Reference Handling]:

[FDD – If the RADIO LINK RECONFIGURATION PREPARE message includes the *Primary CPICH Usage For Channel Estimation* IE, the Node B shall assume that Primary CPICH usage for channel estimation information has been reconfigured.]

[FDD – If the RADIO LINK RECONFIGURATION PREPARE message includes the *Secondary CPICH Information Change* IE, the Node B shall assume that Secondary CPICH usage for channel estimation information has been reconfigured.]

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*], *HS-DSCH Information To Modify*, *HS-DSCH Information 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 or HS-DSCH MAC-d flow being added, or any Transport Channel or HS-DSCH MAC-d flow being modified for which a new transport bearer was requested with the *Transport Bearer Request Indicator* IE.

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 exists a Prepared Reconfiguration, as defined in subclause 3.1.

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

In the case of a set of co-ordinated DCHs requiring a new transport bearer on the Iub interface, 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 co-ordinated DCHs.

In the case of a Radio Link being combined with another Radio Link within the Node B, 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
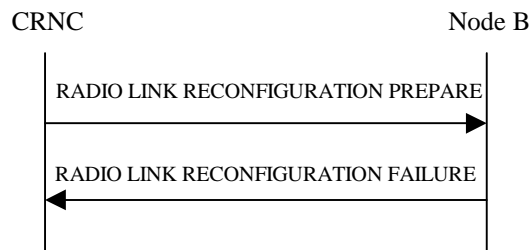
Figure 31: Synchronised Radio Link Reconfiguration Preparation procedure, Unsuccessful Operation

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 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 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 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 "1", "2", "5", "8", "9" or "10", 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 or HS-DSCH MAC-d flow being added, or any Transport Channel or HS-DSCH MAC-d flow being modified for which a new transport bearer was requested with the *Transport Bearer Request Indicator* IE, and not both are present for a transport bearer intended to be established, the Node B shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.

[FDD – If the RADIO LINK RECONFIGURATION PREPARE message is to modify UE channel estimation information for an existing RL and the modification is not allowed according to [10] subclause 4.3.2.1, 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], subclause 5.10.1 and in [24], subclause 5.8.2.

In the case of a 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 concerned 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
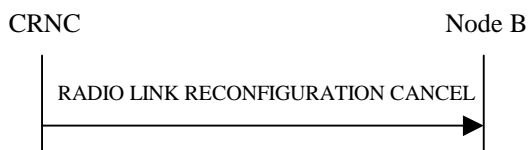
Figure 33:Synchronised Radio Link Reconfiguration Cancellation procedure, Successful Operation

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

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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
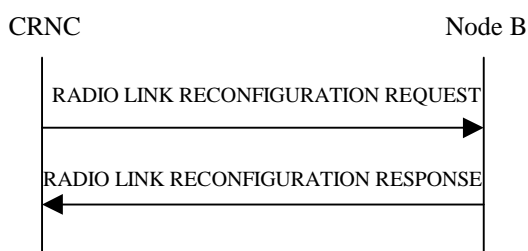
Figure 34: Unsynchronised Radio Link Reconfiguration Procedure, Successful Operation

The Unsynchronised Radio Link Reconfiguration procedure is initiated by the CRNC by sending the RADIO LINK RECONFIGURATION REQUEST message 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* IE 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 Uu 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 the *Allocation/Retention Priority* IE for a DCH, the Node B shall apply the new Allocation/Retention Priority to this DCH in the new configuration according to Annex A.

- 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* IE, 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* IE 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 the *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 Uu 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 added, 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 added, 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 co-ordinated DCHs in the new configuration.

[FDD - Physical Channel Modification]:

[FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes an *UL DPCH Information* IE, then the 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 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 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 includes the *Limited Power Increase* IE 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.]

[1.28Mcps TDD - If the *UL CCTrCH To Modify* IE includes *UL SIR Target* IE, the Node B shall apply this value as the new configuration and use it for the UL inner loop power control according [19] and [21].]

[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 for each affected RL 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:

- [FDD - 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. During compressed mode, the δP_{curr}, as described in ref.[10] subclause 5.2.1.3, shall be added to the maximum DL power for the associated compressed frame.]

- [FDD - If the *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.]

- [3.84 Mcps TDD - If the *CCTrCH Maximum DL Transmission Power* IE and/or the *CCTrCH Minimum DL Transmission Power* IE are included, the Node B shall apply the values in the new configuration for this DCH type CCTrCH, if the *RL Information* IE includes *Maximum Downlink Power* and/or the *Minimum Downlink Power* IEs, the Node B shall apply the values in the new configuration for all other DCH type CCTrCHs.]

- [3.84 Mcps TDD – The maximum power and minimum power for a DSCH type CCTrCH to be modified, shall be determined as follows:

  - If the DSCH type CCTrCH is paired with an uplink CCTrCH(s) for inner loop power control, the minimum and maximum power for each PDSCH is determined in the same way as described above for DCH type CCTrCHs.

  - If the DSCH type CCTrCH is not paired with an uplink CCTrCH(s) for inner loop power control, the PDSCH transmission power is DSCH Data Frame Protocol signalled [24], with the maximum value determined in the same way as described above for DCH type CCTrCHs. The minimum power, however, is subject to control by the CRNC via the frame protocol].

- [1.28 Mcps TDD - If *Maximum DL Power* IE and/or *Minimum DL Power* IE are included within *DL Timeslot Information LCR* IE, the the Node B shall apply the values in the new configuration for this timeslot within a DCH type CCTrCH, if the *RL Information* IE includes *Maximum Downlink Power* and/or the *Minimum Downlink Power* IEs, the Node B shall apply the values in the new configuration for all other timeslots.]

- [1.28 Mcps TDD - If the *CCTrCH Maximum DL Transmission Power* IE and/or the *CCTrCH Minimum DL Transmission Power* IE are included, the Node B shall apply the values in the new configuration for this DSCH type CCTrCH, if the *RL Information* IE includes the *Maximum Downlink Power* and/or the *Minimum Downlink Power* IEs, the Node B shall apply the values in the new configuration for other timeslots.]

- [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.]

- [1.28Mcps TDD – If the *RL Information* IE contains the *Uplink Synchronisation Parameters LCR* IE, the Node B shall use the indicated values of *Uplink Synchronisation Stepsize* IE and *Uplink Synchronisation Frequency* IE when evaluating the timing of the UL synchronisation.]

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.

The Node B shall include in the RADIO LINK RECONFIGURATION RESPONSE message the *Transport Layer Address* IE and the *Binding ID* 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], subclause 5.10.1.

In the case of a set of co-ordinated DCHs requiring a new transport bearer on the Iub interface, 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 the case of a Radio Link being combined with another Radio Link within the Node B, 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 a 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
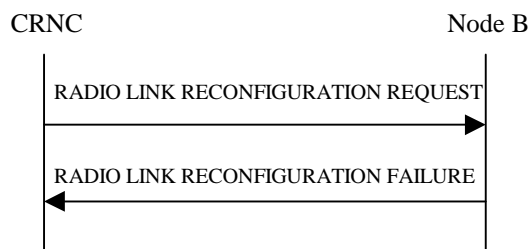
Figure 35: Unsynchronised Radio Link Reconfiguration procedure, Unsuccessful Operation

If the Node B cannot allocate the necessary resources for all the new DCHs of one set of co-ordinated 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".]

[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 "1", "2", "5", "8", "9" or "10", then the Node B shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.]

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

CRNC   Node B

RADIO LINK DELETION REQUEST

RADIO LINK DELETION RESPONSE
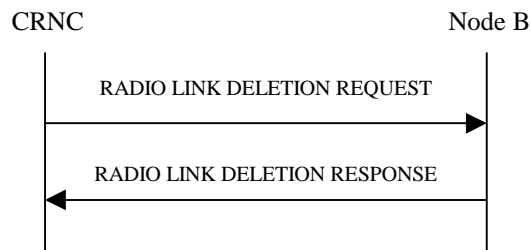
Figure 36: Radio Link Deletion procedure, Successful Operation

The procedure is initiated with a RADIO LINK DELETION REQUEST message sent from the CRNC to the Node B using the Communication Control Port assigned to the concerned Node B Communication Context.

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 – Resources associated with the TFCI2 bearer shall be released only if all the RLs in the Node B Communication Context are deleted].

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

8.3.6.3 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 exist, the Node B shall respond 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 using the Communication Control Port assigned to the concerned Node B Communication Context.

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 Node B Communication 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, *Pref* is the value of the *DL Reference Power* IE, $P_{P-CPICH}$ is the power used on the primary CPICH, P_{init} is the code power of the last slot of the previous adjustment period and r is given by the *Adjustment Ratio* IE. If the last slot of the previous adjustment period is within a transmission gap due to compressed mode, P_{init} shall be set to the same value as the code power of the slot just before the transmission gap.

The adjustment within one adjustment period shall in any case be performed with the constraints given by the *Max Adjustment Step* IE and the DL TX power range set by the 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

CRNC   Node B

```
          ┌────────────────────────────────────────┐
          │  DEDICATED MEASUREMENT INITIATION        │
          │              REQUEST                      │──────────►│
          │                                          │
          │  DEDICATED MEASUREMENT INITIATION        │
          │              RESPONSE                     │
          │◄─────────────────────────────────────────│
```
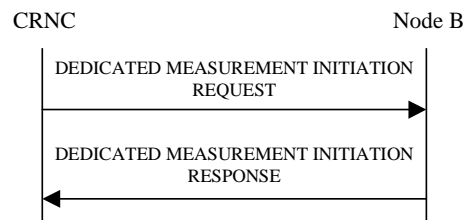
Figure 38: Dedicated Measurement Initiation procedure, Successful Operation

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 DEDICATED MEASUREMENT INITIATION REQUEST message. 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 is indicated as being "RL" in the DEDICATED MEASUREMENT INITIATION REQUEST message, measurement results shall be reported for all indicated Radio Links.

[FDD – If the Dedicated Measurement Object Type is indicated as being "RLS" in the DEDICATED MEASUREMENT INITIATION REQUEST message, measurement results shall be reported for all indicated Radio Link Sets.]

[FDD - If the Dedicated Measurement Object Type is indicated as being "ALL RL" in the DEDICATED MEASUREMENT INITIATION REQUEST message, measurement results shall be reported for all current and future Radio Links within the Node B Communication Context.]

[TDD - If the Dedicated Measurement Object Type is indicated as being "ALL RL" in the DEDICATED MEASUREMENT INITIATION REQUEST message, measurement results shall be reported for one existing DPCH per CCTrCH in each used time slot of current and future Radio Links within the Node B Communication Context, provided the measurement type is applicable to the respective DPCH.]

[FDD – If the Dedicated Measurement Object Type is indicated as being "ALL RLS" in the DEDICATED MEASUREMENT INITIATION REQUEST message, measurement results shall be reported for all 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, *HS-SICH 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.]

[TDD – If the *HS-SICH Information* IE is provided within the RL Information, the measurement request shall apply for the requested physical channel individually.]

[TDD - If the *Dedicated Measurement Type* IE is set to "HS-SICH reception quality ", the Node B shall initiate measurements of the failed, missed and total HS-SICH transmissions on all of the HS-SICH assigned to this Node B Communication Context. If either the failed or missed HS-SICH transmission satisfies the requested report characteristics, the Node B shall report the result of both failed and missed transmission measurements along with the total number of transmissions.]

If the *CFN Reporting Indicator* IE is set to "FN Reporting Required", the *CFN* IE shall be included in the DEDICATED MEASUREMENT REPORT message or in the DEDICATED MEASUREMENT RESPONSE message, 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].

[FDD – If the *Number Of Reported Cell Portion* IE is included in the DEDICATED MEASUREMENT INITIATION REQUEST message, the value shall be used to determine how many *Cell Portion ID* IEs and *SIR Value* IEs shall be included in *Best Cell Portions* IE in the DEDICATED MEASUREMENT REPORT message or in the DEDICATED MEASUREMENT RESPONSE message.]

Report characteristics

The *Report Characteristics* IE indicates how the reporting of the measurement shall be performed. See also Annex B.

If the *Report Characteristics* IE is set to "On Demand" and if the *CFN* IE is not provided, the Node B shall return the result of the measurement immediately. If the *CFN* IE is provided, it indicates the frame for which the measurement value shall be provided. The provided measurement value shall be the one reported by the layer 3 filter, referred to as point C in the measurement model [25].

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 *CFN* IE is provided, it indicates the frame for which the first measurement value of a periodic reporting 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].

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 the *Measurement Hysteresis Time* IE is not included, 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 the *Measurement Hysteresis Time* IE is not included, 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 time specified by the *Measurement Change Time* IE 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 falling time specified by the *Measurement Change Time* IE 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 the *Measurement Threshold 2* IE is not present, the Node B shall use the value of the *Measurement Threshold 1* IE instead. If the *Measurement Hysteresis Time* IE is not included, 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 the *Measurement Threshold 2* IE is not present, the Node B shall

use the value of the *Measurement Threshold 1* IE instead. If the *Measurement Hysteresis Time* IE is not included, 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 for which a measurement is defined exists anymore, 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 where the *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. [TDD – In the case that the measurement was performed on a particular HS-SICH, the Node B shall include the *HS-SICH ID* IE that indicates which HS-SICH was measured.]

In the case where 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

CRNC   Node B
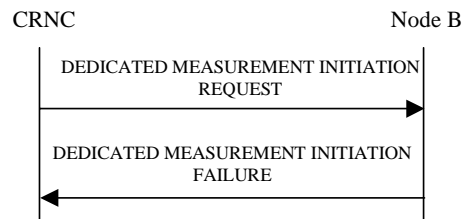
Figure 39: Dedicated Measurement Initiation procedure: Unsuccessful Operation

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 where 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	
Round Trip Time	X	X	X	X	X	X	X	X	
Rx Timing Deviation LCR	X	X	X	X			X	X	
HS-SICH reception quality	X	X	X	X			X	X	
Best Cell Portions	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 INITIATION REQUEST message, the Node B shall regard the Dedicated Measurement Initiation procedure as failed.

If the *CFN* IE is included in the DEDICATED MEASUREMENT INITIATION REQUEST message and the *Report Characteristics* IE is other than "Periodic" or "On Demand", the 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

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

[TDD – In the case that the measurement was performed on a particular HS-SICH, the Node B shall include the *HS-SICH ID* IE that indicates which HS-SICH was measured.]

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

8.3.9.3 Abnormal Conditions

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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
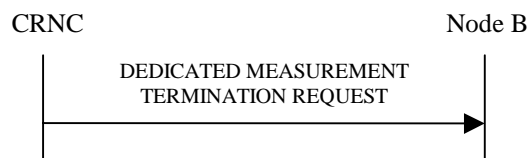
Figure 41: Dedicated Measurement Termination procedure, Successful Operation

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 dedicated measurements corresponding to the received *Measurement ID* IE.

8.3.10.3 Abnormal Conditions

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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

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8.3.12 Radio Link Failure

8.3.12.1 General

This procedure is used by the 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
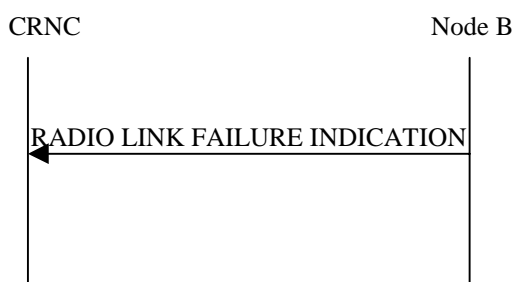
Figure 43: Radio Link Failure procedure, Successful Operation

When the Node B detects that one or more Radio Link(s) [FDD - or Radio Link Set(s)] [TDD – or CCTrCHs within a Radio Link] are no longer available, it sends the RADIO LINK FAILURE INDICATION message to the CRNC indicating the failed Radio Link(s) or Radio Link Set(s) or CCTrCHs with the most appropriate cause values in the *Cause* IE. The message shall use the Communication Control Port assigned to the concerned Node B Communication Context.

If the failure concerns one or more individual Radio Link(s), 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 CCTrCHs within a radio link, the Node B shall indicate the affected CCTrCHs 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 interface, the RADIO LINK FAILURE INDICATION message shall be sent, with the *Cause* IE set to "Synchronisation Failure", when indicated by the UL out-of-sync algorithm defined in [10] and [21]. [FDD – The algorithms 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 Link(s) / Radio Link Set(s) due to the occurrence of an UL or DL frame with more than one transmission gap caused by one or more compressed mode pattern sequences, the DL transmission shall be stopped and the RADIO LINK FAILURE INDICATION message shall be sent with the cause value "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 Node B Communication Context or the Node B Communication Context itself.]

In the other cases, the Radio Link Failure procedure is used to indicate that one or more Radio Link(s)/Radio Link Set(s) are permanently unavailable and cannot be restored. After sending the RADIO LINK FAILURE INDICATION message to notify the permanent failure, the Node B shall not remove the Radio Link/Radio Link Set from the Node B Communication Context or the Node B Communication Context itself. When applicable, the retention priorities associated with the transport channels shall be used by the Node B to prioritise which Radio Link(s)/Radio Link Set(s) 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

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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 interface.

The Node B may initiate the Radio Link Restoration procedure at any time after establishing a Radio Link.

8.3.13.2   Successful Operation
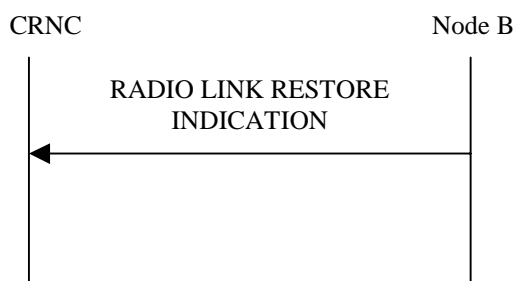
Figure 44: Radio Link Restoration procedure, Successful Operation

The Node B shall send the RADIO LINK RESTORE INDICATION message to the CRNC when indicated by the UL synchronisation 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.] The message shall use the Communication Control Port assigned to the concerned Node B Communication Context.

[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 synchronisation 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 Set(s), the Node B shall indicate the affected Radio Link Set(s) using the *RL Set Information* IE.]

8.3.13.3   Abnormal Condition

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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 Node B Communication Context.

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 procedure is initiated by the CRNC sending a COMPRESSED MODE COMMAND message to the Node B using the Communication Control Port assigned to the concerned Node B Communication Context.

The Node B shall deactivate all the ongoing Transmission Gap Pattern Sequences at the *CM Configuration Change CFN* IE requested by the CRNC when receiving the 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 concerned Transmission Gap Pattern Sequence shall be started immediately at the CFN with a value equal to the value received in the *CM Configuration Change CFN* IE.

8.3.14.3   Abnormal Conditions

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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 using the Communication Control Port assigned to the concerned Node B Communication Context.

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

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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

```
        CRNC                                    Node B
          │                                        │
          │                                   ┌──────────┐
          │                                   │ RL to be pre-
          │                                   │  empted   │
          │  RADIO LINK PREEMPSION REQUIRED   └──────────┘
          │  INDICATION                            │
          │◀───────────────────────────────────────│
          │                                        │
```
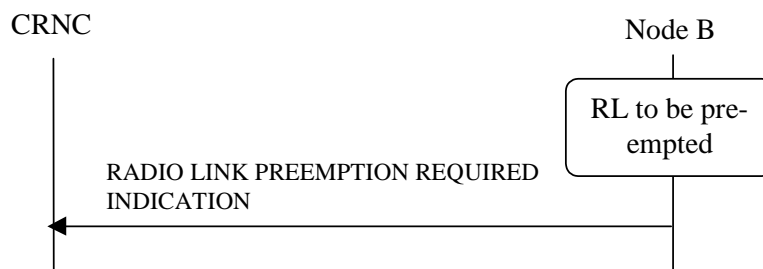
Figure 47B: Radio Link Pre-emption procedure, Successful Operation

When the 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 using the Communication Control Port assigned to the concerned Node B Communication Context.

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

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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
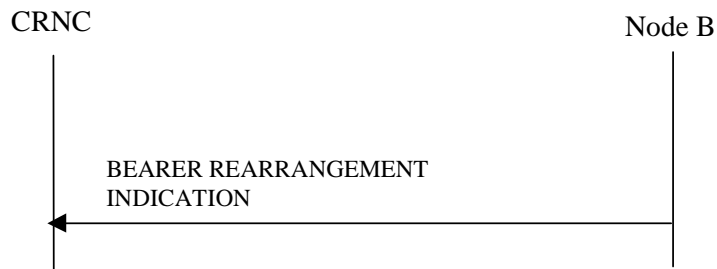
Figure 47C: Bearer Re-arrangement Indication, Successful Operation

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

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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 concerned RL:

- if the *Delayed Activation Update* IE indicates "Activate":

  - if the *Activation Type* IE equals "Unsynchronised":

    - [FDD - start transmission on the new RL after synchronisation is achieved in the DL user plane as specified in [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. During this period no inner loop power control shall be performed and, unless activated by the DL POWER CONTROL REQUEST message, no power balancing shall be performed. The DL power shall then vary according to the inner loop power control (see ref.[10], subclause 5.2.1.2) and downlink power balancing adjustments (see subclause 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 concerned 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 concerned RL and all RLs which are part of the same RLS, as described in [10], section 5.1.2.2.1.2.]

  - if the *Delayed Activation Update* IE indicates "Deactivate":

    - stop DL transmission immediately, if the *Deactivation Type* IE equals "Unsynchronised", or at the CFN indicated by the *Deactivation CFN* IE, if the *Deactivation Type* IE equals "Synchronised".

8.3.18.3   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.]

8.3.19   Radio Link Parameter Update

8.3.19.1   General

The Radio Link Parameter Update procedure is excuted by the Node B when the update of HS-DSCH related radio link parameter values are needed on the Node B side. With this procedure, Node B can suggest some HS-DSCH related Radio Link Parameter values to RNC.

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

8.3.19.2 Successful Operation

CRNC   Node B

Figure 48: Radio Link Parameter Update Indication, Successful Operartion

The Node B initiates the Radio Link Parameter Update procedure by sending the RADIO LINK PARAMETER UPDATE INDICATION message to the CRNC. The message contains suggested value(s) of the HS-DSCH related parameter(s) that should be reconfigured on the radio link.

If the Node B needs to update HS-DSCH related parameters, the Node B shall initiate RADIO LINK PARAMETER UPDATE INDICATION message including [FDD - *HS-DSCH FDD Update Information* IE] [TDD - *HS-DSCH TDD Update Information* IE].

If the Node B needs to allocate new HS-SCCH Codes, the Node B shall initiate RADIO LINK PARAMETER UPDATE INDICATION message including *HS-SCCH Code Change Indicator* IE.

[FDD - If the Node B needs to update the CQI Feedback Cycle k, CQI Repetition Factor, ACK-NACK Repetition Factor, CQI Power Offset, ACK Power Offset and/or NACK Power Offset, the Node B shall initiate RADIO LINK PARAMETER UPDATE INDICATION message including *CQI Feedback Cycle k* IE, *CQI Repetition Factor* IE, *ACK-NACK Repetition Factor* IE, *CQI Power Offset* IE, *ACK Power Offset* IE and/or *NACK Power Offset* IE.]

[TDD - If the Node B needs to update the TDD ACK-NACK Power Offset the Node B shall initiate RADIO LINK PARAMETER UPDATE INDICATION message including *TDD ACK-NACK Power Offset* IE.]

8.3.19.3 Abnormal Conditions

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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 order to 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.

In case the Error Indication procedure was triggered by a dedicated procedure, the following applies:

- 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 the corresponding Node B Communication Context,

addressed by the *Node B Communication Context ID* IE which was received in the message triggering the Error Indication procedure, exists;

- 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 the corresponding CRNC Communication Context, addressed by the *CRNC Communication Context ID* IE which was received in the message triggering the Error Indication procedure, exists;

- When the message triggering the Error Indication procedure is received in the Node B and there is no Node B Communication Context as indicated by the *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 the message triggering the Error Indication procedure is received in the CRNC and there is no CRNC Communication Context as indicated by the *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
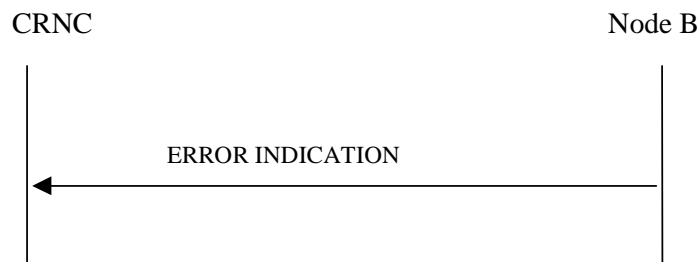
Figure 49: Error Indication procedure (Node B to CRNC): Successful Operation
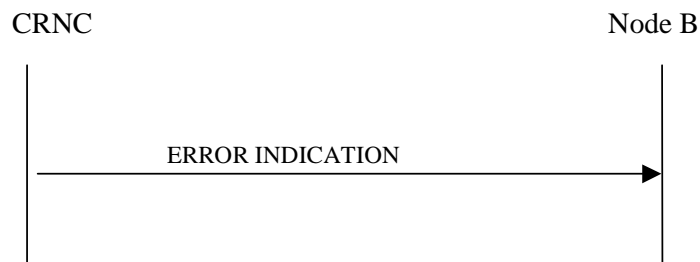
Figure 50: Error Indication procedure (CRNC to Node B), Successful Operation

8.4.1.3 Abnormal Conditions

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9 Elements for NBAP communication

9.1 Message Functional Definition and Contents

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.

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..<maxno ofFACHs>*			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 ALCAP.	YES	ignore
>>>>Transport Layer Address	O		9.2.1.63	Shall be ignored if	YES	ignore

				bearer establishment with ALCAP.		
>>>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 establishment with ALCAP.	YES	ignore
>>>>Transport Layer Address	O		9.2.1.63	Shall be ignored if bearer establishment 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..<maxno ofSlotForm atsPRACH >*			–	
>>>>RACH Slot Format	M		9.2.2.37		–	
>>>RACH Sub Channel Numbers	M		9.2.2.38		–	
>>>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 establishment with ALCAP.	YES	ignore
>>>>Transport Layer Address	O		9.2.1.63	Shall be ignored if bearer establishment 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		–	
>PCPCHs					–	
>>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	O		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		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..<maxno ofPCPCHs >*			–	
>>>>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..<maxA PSigNum>*			–	
>>>>>>AP Preamble Signature	M		9.2.2.1A		–	
>>>>>>AP Sub Channel Number	O		9.2.2.1B		–	
>>>VCAM Mapping Information	C-CA	*1..<maxno ofLen>*		Refer to TS [18]	–	
>>>>Min UL Channelisation Code Length	M		9.2.2.22		–	
>>>>NF_max	M		9.2.2.23B		–	
>>>>Max Number of PCPCHs	M		9.2.2.20A		–	
>>>>SF Request Parameters		*1..<maxA PSigNum>*			–	
>>>>>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. Not Applicable to 1.28Mcps TDD.	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 Parameters		*0..<maxnoofFACHs>*			GLOBAL	reject
>>>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	Applicable to 1.28Mcps TDD only	YES	reject

>>>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
>>PCH Parameters		*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. Not Applicable to 1.28Mcps TDD.	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	Applicable to 1.28Mcps TDD only	YES	reject
>>>PICH Parameters LCR		*0..1*		Mandatory for 1.28Mcps TDD. Not Applicable to 3.84Mcps TDD.	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		–	
>>>>Second TDD Channelisation Code LCR	M		TDD Channelisation Code LCR 9.2.3.19a		YES	reject
>>>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
>>Secondary CCPCH LCR		*0..<maxno ofSCCPC HsLCR>*		Mandatory for 1.28Mcps TDD. Not Applicable to 3.84Mcps TDD.	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		–	
>>> SCCPCH Time Slot Format LCR	M		TDD DL DPCH Time Slot Format LCR 9.2.3.19D		–	
>PRACH					–	
>>PRACH	M	*0..1*		Mandatory for 3.84Mcps TDD. Not Applicable to 1.28Mcps TDD.	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..<maxno ofPRACHL CRs>*		Mandatory for 1.28Mcps TDD. Not Applicable to 3.84Mcps TDD.	GLOBAL	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		–	
>>>Midamble Shift LCR	M		9.2.3.7A		–	
>>>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
>>FPACH		*0..1*		Mandatory for 1.28Mcps TDD. Not Applicable to 3.84Mcps TDD.	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		–	
>>>Max FPACH Power	M		9.2.3.5E		–	

Range Bound	Explanation
maxnoofSCCPCHs	Maximum number of Secondary CCPCHs per CCTrCH for 3.84Mcps TDD
maxnoofSCCPCHsLCR	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 PRACHs 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..<maxnoofFACHs>*		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..<maxPRACHCell>*			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	M		9.2.1.13		–	

Channel ID						
>>>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 AICHs 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..<maxnoofSCCPCHs>*			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..<maxnoofFACHs>*			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	Applicable to 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	Applicable to 1.28Mcps TDD only	YES	reject
FPACH Parameters		*0..1*		Mandatory for 1.28Mcps TDD. Not Applicable to 3.84Mcps TDD.	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 SCCPCHs 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..<maxCellinNodeB>*			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..<maxSCPICHCell>*			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		*0..<maxS*			EACH	ignore

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Information		*CCPCHCell>*				
>>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>		Applicable to 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	Applicable to 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..<maxLocalCellinNodeB>*			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..<maxLocalCellinNodeB>*			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 Cells 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 CPCHs that can be defined in a Cell
maxLocalCellinNodeB	Maximum number of Local Cells that can exist in the Node B
maxPCPCHCell	Maximum number of PCPCHs that can be defined in a Cell
maxSCPICHCell	Maximum number of Secondary CPICHs that can be defined in a Cell.
maxSCCPCHCell	Maximum number of Secondary CCPCHs that can be defined in a Cell.
maxFACHCell	Maximum number of FACHs that can be defined in a Cell
maxPRACHCell	Maximum number of PRACHs that can be defined in a Cell
maxRACHCell	Maximum number of RACHs that can be defined in a Cell
maxFPACHCell	Maximum number of FPACHs 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

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
CHOICE *Common Measurement Object Type*	M				YES	reject
>*Cell*					–	
>>C-ID	M		9.2.1.9		–	
>>Time Slot	O		9.2.3.23	Applicable to 3.84Mcps TDD only	–	
>>Time Slot LCR	O		9.2.3.24A	Applicable to 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*				Applicable to 3.84Mcps TDD only	–	–
>>>>> Neighbouring TDD Cell Measurement Information	M		9.2.1.47D		–	–
>>>>*Neighbouring TDD Cell Measurement Information LCR*				Applicable to 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 Channelisat ion 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*					–	
>>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..<maxSCPICHCell>			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		–	

Range Bound	Explanation
maxSCPICHCell	Maximum number of Secondary CPICHs 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 9.2.3.4A	This IE shall be ignored by the Node B.	YES	reject
PUSCH Constant Value	M		Constant Value 9.2.3.4A	This IE shall be ignored by the Node B.	YES	reject
PRACH Constant Value	M		Constant Value 9.2.3.4A	This IE shall be ignored by the Node B.	YES	reject
Timing Advance Applied	M		9.2.3.22A		YES	reject
SCH Information		0..1		Mandatory for 3.84Mcps TDD. Not Applicable to 1.28Mcps TDD.	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. Not Applicable to 1.28Mcps TDD.	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. Not Applicable to 1.28Mcps	GLOBAL	reject

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				TDD.		
>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. Not Applicable to 3.84Mcps TDD.	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. Not Applicable to 3.84Mcps TDD.	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. Not Applicable to 3.84Mcps TDD.	YES	reject
>Common Physical Channel ID	M		9.2.1.13		–	
>TSTD Indicator	M		9.2.1.64		–	
>DwPCH Power	M		9.2.3.5B		–	
Reference SFN Offset	O		9.2.3.14B		YES	ignore
IPDL Parameter Information		*0..1*		Applicable to 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*		Applicable to 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..<maxSCPICHCell>*			EACH	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		9.2.2.21A		–	

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	Applicable to 3.84Mcps TDD only	YES	reject
SCH Information		0..1		Applicable to 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 9.2.3.4A	This IE shall be ignored by the Node B.	YES	reject
PUSCH Constant Value	O		Constant Value 9.2.3.4A	This IE shall be ignored by the Node B.	YES	reject
PRACH Constant Value	O		Constant Value 9.2.3.4A	This IE shall be ignored by the Node B.	YES	reject
Time Slot Configuration		0..15		Mandatory for 3.84Mcps TDD. Not Applicable to 1.28Mcps TDD.	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. Not Applicable to 3.84Mcps TDD.	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		Applicable to 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		Applicable to 3.84Mcps TDD only	YES	reject
>IPDL TDD Parameters	O		9.2.3.5D		–	

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>IPDL Indicator	M		9.2.1.36F		–	
IPDL Parameter Information LCR		*0..1*		Applicable to 1.28Mcps TDD only	YES	reject
>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		–	
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		–	
>>>Local Cell Group ID	O		9.2.1.37A		–	
>>>Reference Clock Availability	C-add		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..<maxLo calCellinN odeB>*			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..<maxLo calCellinN odeB>*			EACH	ignore
>>>Power Local Cell Group ID	M		9.2.1.49B		–	
>>>Maximum DL Power Capability	M		9.2.1.39		–	
>*Service Impacting*					–	
>>Local Cell Information		*0..<maxLo calCellinN odeB>*			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..<maxLocalCellinNodeB>*			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..<maxLocalCellinNodeB>*			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..<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		–	
>>Cell Information		*0..<maxCellinNodeB>*			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	FDD only	YES	ignore

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			Status Information 9.2.1.13A			
>>>Primary CPICH Information	O		Common Physical Channel Status Information 9.2.1.13A	FDD only	YES	ignore
>>>Secondary CPICH Information		*0..<maxS CPICHCell >*		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..<maxS CCPCHCe ll>*			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..<maxFA CHCell>*			EACH	ignore
>>>>FACH Individual Information	M		Common Transport Channel Status Information 9.2.1.14B		–	
>>>PRACH Information		*0..<maxP RACHCell >*			EACH	ignore
>>>>PRACH Individual Information	M		Common Physical Channel Status Information 9.2.1.13A		–	

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>>>RACH Information		*0..<maxP RACHCell >*			EACH	ignore
>>>>RACH Individual Information	M		Common Transport Channel Status Information 9.2.1.14B		–	
>>>AICH Information		*0..<maxP RACHCell >*		FDD only	EACH	ignore
>>>>AICH Individual Information	M		Common Physical Channel Status Information 9.2.1.13A		–	
>>>PCPCH Information		*0..<maxP CPCHCell >*		FDD only	EACH	ignore
>>>>PCPCH Individual Information	M		Common Physical Channel Status Information 9.2.1.13A		–	
>>>CPCH Information		*0..<maxC PCHCell>*		FDD only	EACH	ignore
>>>>CPCH Individual Information	M		Common Transport Channel Status Information 9.2.1.14B		–	
>>>AP-AICH Information		*0..<maxC PCHCell>*		FDD only	EACH	ignore
>>>>AP-AICH Individual Information	M		Common Physical Channel Status Information 9.2.1.13A		–	
>>>CD/CA-ICH Information		*0..<maxC PCHCell>*		FDD only	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	Applicable to 3.84Mcps TDD only	YES	ignore
>>>FPACH Information		*0..<maxFP ACHCell>*		Applicable to 1.28Mcps TDD only	EACH	ignore
>>>>FPACH Individual Information	M		Common Physical Channel Status Information 9.2.1.13A		–	
>>>DwPCH Information	O		Common	Applicable to	YES	ignore

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			Physical Channel Status Information 9.2.1.13A	1.28Mcps TDD only		
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-IDs that can be configured in the Node B
maxCPCHCell	Maximum number of CPCHs that can be defined in a Cell
maxSCPICHCell	Maximum number of Secondary CPICHs that can be defined in a Cell.
maxSCCPCHCell	Maximum number of Secondary CCPCHs that can be defined in a Cell.
maxFACHCell	Maximum number of FACHs that can be defined in a Cell
maxPCPCHCell	Maximum number of PCPCHs that can be defined in a Cell
maxPRACHCell	Maximum number of PRACHs and AICHs 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 FPACHs 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 Deletion Indicator*	M				–	
>>*No Deletion*					–	
>>>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
maxIB	Maximum number of information Blocks supported in one message
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	The 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
Transaction ID	M		9.2.1.62		–	
CRNC Communication Context ID	M		9.2.1.18	The reserved value "All CRNCCC" shall not be used.	YES	reject
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		–	

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>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
RL Information		1..<*maxno ofRLs*>			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		9.2.1.53G		YES	ignore
>Delayed Activation	O		9.2.1.24C		YES	reject
>Qth Parameter	O		9.2.2.36A		YES	ignore
>Primary CPICH Usage For Channel Estimation	O		9.2.2.33A		YES	ignore
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	C-InfoHSDSCH		9.2.1.31J		YES	reject
HS-PDSCH RL ID	C-InfoHSDS		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 Information* IE is present.

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
Transaction ID	M		9.2.1.62		–	
CRNC Communication Context ID	M		9.2.1.18	The reserved value "All CRNCCC" shall not be used.	YES	reject
UL CCTrCH Information		0..<maxnoCCTrCH>			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 DPCH Information		0..1		Applicable to 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		Applicable to 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		–	
>UL SIR Target	O		UL SIR 9.2.1.67A	Mandatory for 1.28Mcps TDD. Not Applicable to 3.84Mcps TDD.	YES	reject
>TDD TPC UL Step Size	O		9.2.3.21a	Mandatory for 1.28Mcps TDD. Not Applicable to 3.84Mcps TDD.	YES	reject
DL CCTrCH Information		0..<maxnoCCTrCH>			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..<maxnoCCTrCH>		List of uplink CCTrCH which provide TPC	–	
>>TPC CCTrCH ID	M		CCTrCH ID 9.2.3.3		–	
>DL DPCH information		0..1		Applicable to 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		Applicable to 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		YES	ignore
>CCTrCH Maximum DL Transmission Power	O		DL Power 9.2.1.21		YES	ignore
>CCTrCH Minimum DL Transmission Power	O		DL Power 9.2.1.21		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		–	
>Maximum DL Power	M		DL Power 9.2.1.21		–	
>Minimum DL Power	M		DL Power 9.2.1.21		–	
>DL Time Slot ISCP Info	O		9.2.3.4F	Applicable to 3.84Mcps TDD only	–	
>DL Time Slot ISCP Info LCR	O		9.2.3.4P	Applicable to 1.28Mcps TDD only	YES	reject
>RL Specific DCH Information	O		9.2.1.53G		YES	ignore
>Delayed Activation	O		9.2.1.24C		YES	reject
>UL Synchronisation Parameters LCR		0..1		Mandatory for 1.28Mcps TDD. Not Applicable to 3.84Mcps TDD.	YES	ignore
>>Uplink Synchronisation Step Size	M		9.2.3.26H		–	
>>Uplink Synchronisation Frequency	M		9.2.3.26G		–	
HS-DSCH Information	O		HS-DSCH TDD Information 9.2.3.5F		YES	reject
HS-DSCH-RNTI	C-InfoHSDSCH		9.2.1.31J		YES	reject
HS-PDSCH RL ID	C-InfoHSDSCH		RL ID 9.2.1.53		YES	reject

PDSCH-RL-ID	O		RL ID 9.2.1.53		YES	ignore

Range Bound	Explanation
maxnoCCTrCH	Number of CCTrCHs for one UE

Condition	Explanation
InfoHSDSCH	The IE shall be present if *HS-DSCH Information* IE is present.

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
Transaction ID	M		9.2.1.62		–	
CRNC Communication Context ID	M		9.2.1.18	The reserved value "All CRNCCC" shall not be used.	YES	ignore
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..<maxno ofRLs>*			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		–	
>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

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
Transaction ID	M		9.2.1.62		–	
CRNC Communication Context ID	M		9.2.1.18	The reserved value "All CRNCCC" shall not be used.	YES	ignore
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. Not Applicable to 1.28Mcps TDD.	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. Not Applicable to 3.84Mcps TDD.	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
Transaction ID	M		9.2.1.62		–	
CRNC Communication Context ID	M		9.2.1.18	The reserved value "All CRNCCC" shall not be used.	YES	ignore
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..<maxno ofRLs>*			EACH	ignore
>>>RL ID	M		9.2.1.53		–	
>>>Cause	M		9.2.1.6		–	
>>Successful RL Information Response		*0..<maxno ofRLs>*		Note: There will never be maxnoofRLs repetitions of this sequence.	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		–	
>>>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	There shall be only one TFCI2 bearer per Node B Communication Context.	–	
>>>SSDT Support Indicator	M		9.2.2.46		–	
>>>DL Power Balancing Activation Indicator	O		9.2.2.12C		YES	ignore
>>>HS-DSCH	O		HS-DSCH		YES	ignore

Information Response			FDD Information Response 9.2.2.18E			
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.

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
Transaction ID	M		9.2.1.62		–	
CRNC Communication Context ID	M		9.2.1.18	The reserved value "All CRNCCC" shall not be used.	YES	ignore
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
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	reject
Compressed Mode Deactivation Flag	O		9.2.2.3A		YES	reject
RL Information		*1..<maxno ofRLs-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		9.2.1.53G		YES	ignore
>Delayed Activation	O		9.2.1.24C		YES	reject
>Qth Parameter	O		9.2.2.36A		YES	ignore
>Primary CPICH Usage For Channel Estimation	O		9.2.2.33A		YES	ignore

Range Bound	Explanation
maxnoofRLs	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
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	reject
UL CCTrCH Information		0..<*maxno CCTrCH*>			GLOBAL	reject
>CCTrCH ID	M		9.2.3.3		–	
>UL DPCH Information		*0..1*		Applicable to 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*		Applicable to 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		–	
>TDD TPC UL Step Size	O		9.2.3.21a	Applicable to 1.28Mcps TDD only	YES	reject
DL CCTrCH Information		0..<*maxno CCTrCH*>			GLOBAL	reject
>CCTrCH ID	M		9.2.3.3		–	
>DL DPCH information		*0..1*		Applicable to 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*		Applicable to 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		YES	ignore
>TDD TPC DL Step Size	O		9.2.3.21		YES	reject
>CCTrCH Maximum DL Transmission Power	O		DL Power 9.2.1.21		YES	ignore
>CCTrCH Minimum DL Transmission Power	O		DL Power 9.2.1.21		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 9.2.1.21		–	
>Maximum DL Power	O		DL Power 9.2.1.21		–	
>Minimum DL Power	O		DL Power 9.2.1.21		–	
>DL Time Slot ISCP Info	O		9.2.3.4F	Applicable to 3.84Mcps TDD only	–	
>DL Time Slot ISCP Info LCR	O		9.2.3.4P	Applicable to 1.28Mcps TDD only	YES	reject
>RL Specific DCH Information	O		9.2.1.53G		YES	ignore
>Delayed Activation	O		9.2.1.24C		YES	reject
>UL Synchronisation Parameters LCR		*0..1*		Mandatory for 1.28Mcps TDD. Not Applicable to 3.84Mcps TDD.	YES	ignore
>>Uplink Synchronisation Step Size	M		9.2.3.26H		–	
>>Uplink Synchronisation Frequency	M		9.2.3.26G		–	

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
Transaction ID	M		9.2.1.62		–	
CRNC Communication Context ID	M		9.2.1.18	The reserved value "All CRNCCC" shall not be used.	YES	ignore
RL Information Response		1..<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		–	
>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
maxnoofRLs	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
Transaction ID	M		9.2.1.62		–	
CRNC Communication Context ID	M		9.2.1.18	The reserved value "All CRNCCC" shall not be used.	YES	ignore
RL Information Response		0..1		Mandatory for 3.84Mcps TDD. Not Applicable to 1.28Mcps TDD.	YES	ignore
>RL ID	M		9.2.1.53		–	
>UL Time Slot ISCP Info	M		9.2.3.26D		–	
>UL PhysCH SF Variation	M		9.2.3.26B		–	
>DCH Information		0..1			–	
>>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. Not Applicable to 3.84Mcps TDD.	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			–	
>>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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
>USCH Information Response	O		9.2.3.29		YES	ignore

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
Transaction ID	M		9.2.1.62		–	
CRNC Communication Context ID	M		9.2.1.18	The reserved value "All CRNCCC" shall not be used.	YES	ignore
CHOICE *Cause Level*	M				YES	ignore
>*General*					–	
>>Cause	M		9.2.1.6		–	
>*RL Specific*					–	
>>Unsuccessful RL Information Response		*1..<maxnoofRLs-1>*			EACH	ignore
>>>RL ID	M		9.2.1.53		–	
>>>Cause	M		9.2.1.6		–	
>>Successful RL Information Response		*0..<maxnoofRLs-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		–	
>>>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
maxnoofRLs	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
Transaction ID	M		9.2.1.62		–	
CRNC Communication Context ID	M		9.2.1.18	The reserved value "All CRNCCC" shall not be used.	YES	ignore
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

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9.1.42 RADIO LINK RECONFIGURATION PREPARE

9.1.42.1 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		–	
Node B Communication Context ID	M		9.2.1.48	The reserved value "All NBCC" shall not be used.	YES	reject
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-SlotFormat		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..<maxnoofDCHs>*			GLOBAL	reject
>DCH ID	M		9.2.1.20		–	
DSCH To Modify		*0..<maxnoofDSCHs>*			EACH	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 establishment with ALCAP.	YES	ignore
>Transport Layer Address	O		9.2.1.63	Shall be ignored if bearer establishment with ALCAP.	YES	ignore
DSCH To Add	O		DSCH FDD Information 9.2.2.13B		YES	reject
DSCH To Delete		_0..<maxno ofDSCHs>_			EACH	reject
>DSCH ID	M		9.2.1.27		–	
TFCI2 Bearer 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
>>>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
>>Delete			NULL		–	
RL Information		_0..<maxno ofRLs>_			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	CDiversity 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		9.2.1.53G		YES	ignore
>DL DPCH Timing Adjustment	O		9.2.2.10A	Required RL Timing Adjustment	YES	reject

>Qth Parameter	O		9.2.2.36A		YES	ignore
>Primary CPICH Usage For Channel Estimation	O		9.2.2.33A		YES	ignore
>Secondary CPICH Information Change	O		9.2.2.43A		YES	ignore
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		9.2.1.31H		YES	reject
HS-DSCH Information To Add	O		HS-DSCH FDD Information 9.2.2.18D		YES	reject
HS-DSCH Information To Delete		*0..<maxnoofMACdFlows>*			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 the *Diversity Mode* IE is present in the *UL DPCH Information* IEand is not set to "none".
EDSCHPC	The IE shall be present if the *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	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		–	
Node B Communication Context ID	M		9.2.1.48	The reserved value "All NBCC" shall not be used.	YES	reject
UL CCTrCH To Add		*0..<maxno ofCCTrCH s>*			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 DPCH Information		*0..1*		Applicable to 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*		Applicable to 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 SIR Target	O		UL SIR 9.2.1.67A	Mandatory for 1.28Mcps TDD. Not Applicable to 3.84Mcps TDD	YES	reject
>TDD TPC UL Step Size	O		9.2.3.21a	Mandatory for 1.28Mcps TDD. Not Applicable to 3.84Mcps TDD.	YES	reject
UL CCTrCH To Modify		*0..<maxno ofCCTrCH s>*			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	Applicable to 1.28Mcps TDD only	YES	reject
>UL DPCH To Add		*0..1*		Applicable to 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	M		9.2.3.26C		–	

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Information						
>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..<maxnoofULts>*		Applicable to 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..<maxnoofDPCHs>*			–	
>>>>DPCH ID	M		9.2.3.5		–	
>>>>TDD Channelisation Code	O		9.2.3.19		–	
>>UL Timeslot Information LCR		*0..<maxnoofULtsLCR>*		Applicable to 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..<maxnoOfDPCHLCR>*			–	
>>>>DPCH ID	M		9.2.3.5		–	
>>>>TDD Channelisation Code LCR	O		9.2.3.19a		–	
>>>> TDD UL DPCH Time Slot Format LCR	O		9.2.3.21C		YES	reject
>UL DPCH To Delete		*0..<maxnoofDPCHs>*			GLOBAL	reject
>>DPCH ID	M		9.2.3.5		–	
>UL DPCH To Add LCR		*0..1*		Applicable to 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		–	
>TDD TPC UL Step Size	O		9.2.3.21a	Applicable to 1.28Mcps TDD only	YES	reject
UL CCTrCH To Delete		*0..<maxnoofCCTrCHs>*			GLOBAL	reject
>CCTrCH ID	M		9.2.3.3		–	
DL CCTrCH To Add		*0..<maxnoofCCTrCHs>*			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		–	
>TPC CCTrCH List		*0..<maxnoofCCTrCHs>*		List of uplink CCTrCH which provide TPC	–	
>>TPC CCTrCH ID	M		CCTrCH ID		–	

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			9.2.3.3			
>DL DPCH Information		*0..1*		Applicable to 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*		Applicable to 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		YES	ignore
>TDD TPC DL Step Size	O		9.2.3.21		YES	reject

>CCTrCH Maximum DL Transmission Power	O		DL Power 9.2.1.21		YES	ignore
>CCTrCH Minimum DL Transmission Power	O		DL Power 9.2.1.21		YES	ignore
DL CCTrCH To Modify		*0..<maxno ofCCTrCH s>*			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		–	
>TPC CCTrCH List		*0..<maxno ofCCTrCH s>*		List of uplink CCTrCH which provide TPC	**–**	
>>TPC CCTrCH ID	M		CCTrCH ID 9.2.3.3		–	
>DL DPCH To Add		*0..1*		Applicable to 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 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..<maxno ofDLts>*		Applicable to 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		–	
>>>DL Code Information		*0..<maxno ofDPCHs>*			–	
>>>>DPCH ID	M		9.2.3.5		–	
>>>>TDD Channelisation Code	O		9.2.3.19		–	
>>DL Timeslot Information LCR		*0..<maxno ofDLtsLCR >*		Applicable to 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		–	
>>>DL Code Information LCR		*0..<maxno ofDPCHsL CR>*			–	
>>>>DPCH ID	M		9.2.3.5		–	
>>>>TDD Channelisation Code LCR	O		9.2.3.19a		–	
>>>>TDD DL DPCH Time Slot Format LCR	O		9.2.3.19D		YES	reject
>>>Maximum DL Power to Modify LCR	O		DL Power 9.2.1.21	Maximum allowed power on DPCH	YES	ignore
>>>Minimum DL Power to Modify LCR	O		DL Power 9.2.1.21	Minimum allowed power on DPCH	YES	ignore

>DL DPCH To Delete		*0..<maxno ofDPCHs>*			GLOBAL	reject
>>DPCH ID	M		9.2.3.5		–	
>DL DPCH To Add LCR		*0..1*		Applicable to 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		–	
>TDD TPC DL Step Size	O		9.2.3.21		YES	reject
>Maximum CCTrCH DL Power to Modify	O		DL Power 9.2.1.21		YES	ignore
>Minimum CCTrCH DL Power to Modify	O		DL Power 9.2.1.21		YES	ignore
DL CCTrCH To Delete		*0..<maxno ofCCTrCH s>*			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..<maxno ofDCHs>*			GLOBAL	reject
>DCH ID	M		9.2.1.20		–	
DSCH To Modify		*0..<maxno ofDSCHs>*			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 establishment with ALCAP.	YES	ignore
>Transport Layer Address	O		9.2.1.63	Shall be ignored if bearer establishment with ALCAP.	YES	ignore
DSCH To Add	O		DSCH TDD Information 9.2.3.5A		YES	reject
DSCH To Delete		*0..<maxno ofDSCHs>*			GLOBAL	reject
>DSCH ID	M		9.2.1.27		–	
USCH To Modify		*0..<maxno ofUSCHs>*			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 To Add	O		USCH Information 9.2.3.28		YES	reject
USCH To Delete		*0..<maxno ofUSCHs>*			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		–	
>Minimum Downlink Power	O		DL Power 9.2.1.21		–	
>Initial DL Transmission Power	O		DL Power 9.2.1.21		YES	ignore
>RL Specific DCH Information	O		9.2.1.53G		YES	ignore
>UL Synchronisation Parameters LCR		*0..1*		Mandatory for 1.28Mcps TDD. Not Applicable to 3.84Mcps TDD.	YES	ignore
>>Uplink Synchronisation Step Size	M		9.2.3.26H		–	
>>Uplink Synchronisation Frequency	M		9.2.3.26G		–	
>DL Time Slot ISCP Info LCR	O		9.2.3.4P	Applicable to 1.28Mcps TDD only	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 TDD Information 9.2.3.5F		YES	reject
HS-DSCH Information To Delete		*0..<maxno ofMACdFl ows>*			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
PDSCH-RL-ID	O		RL ID		YES	ignore

			9.2.1.53			

Range Bound	Explanation
maxnoofDCHs	Maximum number of DCHs for a UE
maxnoofCCTrCHs	Maximum number of CCTrCHs for a UE
maxnoofDPCHs	Maximum number of DPCHs in one CCTrCH for 3.84Mcps TDD
maxnoofDPCHsLCR	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	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		–	
CRNC Communication Context ID	M		9.2.1.18	The reserved value "All CRNCCC" shall not be used.	YES	ignore
RL Information Response		*0..<maxnoofRLs>*			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. There shall be only one TFCI2 bearer per Node B Communication Context.	–	
>DL Power Balancing Updated Indicator	O		9.2.2.12D		YES	ignore
>HS-DSCH FDD Information Response	O		9.2.2.18E	FDD only	YES	ignore
>HS-DSCH TDD Information Response	O		9.2.3.5G	TDD only	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	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		–	
CRNC Communication Context ID	M		9.2.1.18	The reserved value "All CRNCCC" shall not be used.	YES	ignore
CHOICE *Cause Level*	M				YES	ignore
>*General*					–	
>>Cause	M		9.2.1.6		YES	ignore
>*RL Specific*					–	
>>RLs Causing Reconfiguration Failure		*0..<maxnoofRLs>*			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	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		–	
Node B Communication Context ID	M		9.2.1.48	The reserved value "All NBCC" shall not be used.	YES	ignore
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	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		–	
Node B Communication Context ID	M		9.2.1.48	The reserved value "All NBCC" shall not be used.	YES	ignore

9.1.47 RADIO LINK RECONFIGURATION REQUEST

9.1.47.1 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		–	
Node B Communication Context ID	M		9.2.1.48	The reserved value "All NBCC" shall not be used.	YES	reject
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		9.2.1.53G		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	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		–	
Node B Communication Context ID	M		9.2.1.48	The reserved value "All NBCC" shall not be used.	YES	reject
UL CCTrCH To Modify		*0..<maxno ofCCTrCH s>*			EACH	notify
>CCTrCH ID	M		9.2.3.3		–	
>TFCS	O		9.2.1.58		–	
>Puncture Limit	O		9.2.1.50		–	
>UL SIR Target	O		UL SIR 9.2.1.67A	Applicable to 1.28Mcps TDD only	YES	reject
UL CCTrCH To Delete		*0..<maxno ofCCTrCH s>*			EACH	notify
>CCTrCH ID	M		9.2.3.3		–	
DL CCTrCH To Modify		*0..<maxno ofCCTrCH s>*			EACH	notify
>CCTrCH ID	M		9.2.3.3		–	
>TFCS	O		9.2.1.58		–	
>Puncture Limit	O		9.2.1.50		–	
>DL DPCH To Modify LCR		*0..1*		Applicable to 1.28Mcps TDD only	YES	ignore
>>DL Timeslot Information LCR		*0..<maxno ofDLtsLCR >*			–	
>>>Time Slot LCR	M		9.2.3.24A		–	
>>>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	–	
>CCTrCH Maximum DL Transmission Power	O		DL Power 9.2.1.21		YES	ignore
>CCTrCH Minimum DL Transmission Power	O		DL Power 9.2.1.21		YES	ignore
DL CCTrCH To Delete		*0..<maxno ofCCTrCH s>*			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..<maxno ofDSCHs>*			GLOBAL	reject
>DCH ID	M		9.2.1.20		–	
RL Information		*0..1*			YES	reject
>RL ID	M		9.2.1.53		–	

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>Maximum Downlink Power	O		DL Power 9.2.1.21		–	
>Minimum Downlink Power	O		DL Power 9.2.1.21		–	
>RL Specific DCH Information	O		9.2.1.53G		YES	ignore
>UL Synchronisation Parameters LCR		*0..1*		Mandatory for 1.28Mcps TDD. Not Applicable to 3.84Mcps TDD.	YES	ignore
>>Uplink Synchronisation Step Size	M		9.2.3.26H		–	
>>Uplink Synchronisation Frequency	M		9.2.3.26G		–	
Signalling Bearer Request Indicator	O		9.2.1.55A		YES	reject

Range Bound	Explanation
maxnoofCCTrCHs	Maximum number of CCTrCHs for a UE
maxnoofDLtsLCR	Maximum number of Downlink time slots per Radio Link for 1.28Mcps TDD

9.1.48   RADIO LINK 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		–	
CRNC Communication Context ID	M		9.2.1.18	The reserved value "All CRNCCC" shall not be used.	YES	ignore
RL Information Response		*0..<maxnoofRLs>*			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
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	reject
CRNC Communication Context ID	M		9.2.1.18		YES	reject
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
Transaction ID	M		9.2.1.62		–	
CRNC Communication Context ID	M		9.2.1.18	The reserved value "All CRNCCC" shall not be used.	YES	ignore
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
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
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..<maxnoofRLs>*			EACH	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
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 when the Report characteristics type is set to "On Demand".	YES	reject
Measurement ID	M		9.2.1.42		YES	reject
CHOICE *Dedicated Measurement Object Type*	M				YES	reject
>*RL*					–	
>>RL Information		*1..<maxno ofRLs>*			EACH	reject
>>>RL ID	M		9.2.1.53		–	
>>>DPCH ID	O		9.2.3.5	TDD only	–	
>>>PUSCH Information		*0..<maxno ofPUSCHs>*		TDD only	GLOBAL	reject
>>>>PUSCH ID	M		9.2.3.12		–	
>>>HS-SICH Information		*0..<maxno ofHSSICHs>*		TDD only	GLOBAL	reject
>>>>HS-SICH ID	M		9.2.3.5Gb		–	
>*RLS*				FDD only	–	
>>RL Set Information		*1..<maxno ofRLSets>*			–	
>>>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
Number Of Reported Cell Portion	C-BestCellPortionsMeas		9.2.2.23D	FDD only	YES	reject

Condition	Explanation
BestCellPortionsMeas	The IE shall be present if the *Dedicated Measurement Type* IE is set to "Best Cell Portions".

Range Bound	Explanation
maxnoofRLs	Maximum number of individual RLs a measurement can be started on
maxnoofPUSCHs	Maximum number of PUSCHs per RL a measurement can be started on
maxnoofRLSets	Maximum number of individual RL Sets a measurement can be started on
maxnoofHSSICHs	Maximum number of HSSICHs per RL 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
Transaction ID	M		9.2.1.62		–	
CRNC Communication Context ID	M		9.2.1.18		YES	ignore
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	–	
>>>Dedicated Measurement Value	M		9.2.1.24		–	
>>>CFN	O		9.2.1.7	Dedicated Measurement Time Reference	_	
>>>PUSCH Information		0..<*maxnoofPUSCHs*>		TDD only	GLOBAL	reject
>>>>PUSCH ID	M		9.2.3.12		–	
>>>HS-SICH ID	O		9.2.3.5Gb	TDD only	YES	reject
>*RLS or ALL RLS*				FDD only	–	
>>RL Set Information		1..<*maxnoofRLSets*>			EACH	ignore
>>>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 Bound	Explanation
maxnoofRLs	Maximum number of individual RLs the measurement can be started on
maxnoofPUSCHs	Maximum number of PUSCHs 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
Transaction ID	M		9.2.1.62		–	
CRNC Communication Context ID	M		9.2.1.18		YES	ignore
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
Transaction ID	M		9.2.1.62		–	
CRNC Communication Context ID	M		9.2.1.18	The reserved value "All CRNCCC" shall not be used.	YES	ignore
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	–	
>>>Dedicated Measurement Value Information	M		9.2.1.24A		–	
>>>PUSCH Information		*0..<maxnoofPUSCHs>*		TDD only	GLOBAL	reject
>>>>PUSCH ID	M		9.2.3.12		–	
>>>HS-SICH ID	O		9.2.3.5Gb	TDD only	YES	reject
>*RLS or ALL RLS*				FDD only	–	
>>RL Set Information		*1..<maxnoofRLSets>*			EACH	ignore
>>>RL Set ID	M		9.2.2.39		–	
>>>Dedicated Measurement Value Information	M		9.2.1.24A		–	

Range Bound	Explanation
maxnoofRLs	Maximum number of individual RLs the measurement can be started on
maxnoofPUSCHs	Maximum number of PUSCHs 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
Transaction ID	M		9.2.1.62		–	
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
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
Transaction ID	M		9.2.1.62		–	
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
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
Transaction ID	M		9.2.1.62		–	
CRNC Communication Context ID	M		9.2.1.18	The reserved value "All CRNCCC" shall not be used.	YES	ignore
CHOICE *Reporting Object*	M			Object for which the Failure shall be reported.	YES	ignore
>*RL*					–	
>>RL Information		1..<*maxno ofRLs*>			EACH	ignore
>>>RL ID	M		9.2.1.53		–	
>>>Cause	M		9.2.1.6		–	
>*RL Set*				FDD only	–	
>>RL Set Information		1..<*maxno ofRLSets*>			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..<*maxno ofCCTrCH s*>			EACH	ignore
>>>CCTrCH ID	M		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
Transaction ID	M		9.2.1.62		–	
CRNC Communication Context ID	M		9.2.1.18	The reserved value "All CRNCCC" shall not be used.	YES	ignore
CHOICE *Reporting Object*	M			Object for which the Restoration shall be reported.	YES	ignore
>*RL*				TDD only	–	
>>**Radio Link Information**		1..<maxnoofRLs>			EACH	ignore
>>>RL ID	M		9.2.1.53		–	
>*RL Set*				FDD only	–	
>>**RL Set Information**		1..<maxnoofRLSets>			EACH	ignore
>>>RL Set ID	M		9.2.2.39		–	
>*CCTrCH*				TDD only	–	
>>RL ID	M		9.2.1.53		–	
>>**CCTrCH List**		1..<maxnoofCCTrCHs>			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
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
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
Transaction ID	M		9.2.1.62		–	
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
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	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
SFN	O		9.2.1.53A		YES	reject
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	9.2.2.18G		YES	reject

9.1.62.2 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
SFN	O		9.2.1.53A		YES	reject
PDSCH Sets To Add		*0..<maxno ofPDSCH Sets>*			GLOBAL	reject
>PDSCH Set ID	M		9.2.3.11		–	
>PDSCH To Add Information		*0..1*		Mandatory for 3.84Mcps TDD. Not Applicable to 1.28Mcps 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..<maxno ofDLts>*			–	
>>>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..<maxno ofPDSCHs >*			–	
>>>>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. Not Applicable to 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 LCR		*1..<maxno ofDLtsLCR >*			–	
>>>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..<maxno ofPDSCHs >*			–	
>>>>PDSCH ID	M		9.2.3.10		–	
>>>>TDD Channelisation Code LCR	M		9.2.3.19a		–	
PDSCH Sets To Modify		*0..<maxno of PDSCHSe ts>*			GLOBAL	reject
>PDSCH Set ID	M		9.2.3.11		–	
>PDSCH To Modify Information		*0..1*		Mandatory for 3.84Mcps TDD. Not Applicable to 1.28Mcps 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..<maxno ofDLts>*			–	
>>>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..<maxno ofPDSCHs >*			–	
>>>>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. Not Applicable to 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 LCR		*0..<maxno ofDLtsLCR >*			–	
>>>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..<maxno ofPDSCHs >*			–	
>>>>PDSCH ID	M		9.2.3.10		–	
>>>>TDD Channelisation Code LCR	M		9.2.3.19a		–	
PDSCH Sets To Delete		*0..<maxno of PDSCHSe ts>*			GLOBAL	reject
>PDSCH Set ID	M		9.2.3.11		–	
PUSCH Sets To Add		*0..<maxno of PUSCHSe ts>*			GLOBAL	reject
>PUSCH Set ID	M		9.2.3.13		–	
>PUSCH To Add Information		*0..1*		Mandatory for 3.84Mcps TDD. Not Applicable to 1.28Mcps 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..<maxno ofULts>*			–	
>>>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..<maxnoofPUSCHs>*			–	
>>>>PUSCH ID	M		9.2.3.12		–	
>>>>TDD Channelisation Code	M		9.2.3.19		–	
>PUSCH To Add Information LCR		*0..1*		Mandatory for 1.28Mcps TDD. Not Applicable to 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 LCR		*1..<maxnoofULtsLCR>*			–	
>>>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..<maxnoofPUSCHsLCR>*			–	
>>>>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*		Applicable to 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..<maxnoofULts>*			–	
>>>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..<maxnoofPUSCHs>*			–	
>>>>PUSCH ID	M		9.2.3.12		–	
>>>>TDD Channelisation Code	M		9.2.3.19		–	
>PUSCH To Modify Information LCR		*0..1*		Applicable to 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..<maxno ofULtsLCR >*		Applicable to 1.28Mcps TDD only	–	
>>>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..<maxno ofPUSCHs LCR>*			–	
>>>>PUSCH ID	M		9.2.3.12		–	
>>>>TDD Channelisation Code LCR	M		9.2.3.19a		–	
PUSCH Sets To Delete		*0..<maxno ofPUSCH Sets>*			GLOBAL	reject
>PUSCH Set ID	M		9.2.3.13		–	
HS-PDSCH TDD Information		*0..1*			GLOBAL	reject
>DL Timeslot and Code Information		*0..<maxno ofDLts>*		Mandatory for 3.84Mcps TDD. Not Applicable to 1.28Mcps TDD.	–	
>>Time Slot	M		9.2.3.23		–	
>>Midamble Shift And Burst Type	M		9.2.3.7		–	
>>Codes		*1..<maxno ofHSPDS CHs>*			–	
>>>TDD Channelisation Code	M		9.2.3.19		–	
>>HS-PDSCH and HS-SCCH Total Power	O		Maximum Transmissio n Power 9.2.1.40	Maximum transmission power to be allowed for HS-PDSCH and HS-SCCH codes in the timeslot	YES	reject
>DL Timeslot and Code Information LCR		*0..<maxno ofDLtsLCR >*		Mandatory for 1.28Mcps TDD. Not Applicable to 3.84Mcps TDD.	–	
>>Time Slot LCR	M		9.2.3.24a		–	
>>Midamble Shift LCR	M		9.2.3.7A		–	
>>Codes LCR		*1..<maxno ofHSPDS CHs>*			–	
>>>TDD Channelisation Code	M		9.2.3.19		–	
>>HS-PDSCH and HS-SCCH Total Power	O		Maximum Transmissio n Power 9.2.1.40	Maximum transmission power to be allowed for HS-PDSCH and HS-SCCH codes in the timeslot	YES	reject

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Add to HS-SCCH Resource Pool		*0..1*			GLOBAL	reject
>HS-SCCH Information		*0..<maxno ofHSSCC Hs>*		Applicable to 3.84Mcps TDD only	–	
>>HS-SCCH ID	M		9.2.3.5Ga		–	
>>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*			–	
>>>HS-SICH ID	M		9.2.3.5Gb		–	
>>>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..<maxno ofHSSCC Hs>*		Applicable to 1.28Mcps TDD only	GLOBAL	reject
>>HS-SCCH ID	M		9.2.3.5Ga		–	
>>Time Slot LCR	M		9.2.3.24a		–	
>>Midamble Shift LCR	M		9.2.3.7A		–	
>>First TDD Channelisation Code	M		TDD Channelisation Code 9.2.3.19		–	
>>Second TDD Channelisation Code	M		TDD Channelisation Code 9.2.3.19		–	
>>Maximum HS-SCCH Power	M		DL Power 9.2.1.21		–	
>>HS-SICH Information LCR		*1*			–	
>>>HS-SICH ID	M		9.2.3.5Gb		–	
>>>Time Slot LCR	M		9.2.3.24a		–	
>>>Midamble Shift LCR	M		9.2.3.7A		–	
>>>TDD Channelisation Code	M		9.2.3.19		–	
Modify HS-SCCH Resource Pool		*0..1*			GLOBAL	reject
>HS-SCCH Information		*0..<maxno ofHSSCC Hs>*		Applicable to 3.84Mcps TDD only	–	
>>HS-SCCH ID	M		9.2.3.5Ga		–	
>>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*			–	
>>>HS-SICH ID	M		9.2.3.5Gb		–	
>>>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..<maxno ofHSSCC Hs>*		Applicable to 1.28Mcps TDD only	GLOBAL	reject
>>HS-SCCH ID	M		9.2.3.5Ga		–	
>>Time Slot LCR	O		9.2.3.24a		–	
>>Midamble Shift LCR	O		9.2.3.7A		–	
>>First TDD Channelisation Code	O		TDD Channelisat ion Code 9.2.3.19		–	
>>Second TDD Channelisation Code	O		TDD Channelisat ion Code 9.2.3.19		–	
>>Maximum HS-SCCH Power	O		DL Power 9.2.1.21		–	
>>HS-SICH Information LCR		*0..1*			–	
>>>HS-SICH ID	M		9.2.3.5Gb		–	
>>>Time Slot LCR	O		9.2.3.24a		–	
>>Midamble Shift LCR	O		9.2.3.7A		–	
>>>TDD Channelisation Code	O		9.2.3.19		–	
Delete from HS-SCCH Resource Pool		*0..<maxno of HSSCCHs >*			GLOBAL	reject
>HS-SCCH ID	M		9.2.3.5Ga		–	

Range Bound	Explanation
maxnoofPDSCHSets	Maximum number of PDSCH Sets in a cell.
maxnoofPDSCHs	Maximum number of PDSCH in a cell.
maxnoofPUSCHSets	Maximum number of PUSCH Sets in a cell.
maxnoofPUSCHs	Maximum number of PUSCH in a cell.
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
maxnoofHSPDSCHs	Maximum number of HS-PDSCHs in one time slot of a Cell

9.1.63 PHYSICAL SHARED 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

9.1.64 PHYSICAL SHARED 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		–	
CHOICE *Cause Level*	M				YES	ignore
>*General*					–	
>>Cause	M		9.2.1.6		–	
>*Set Specific*				TDD Only	–	
>>Unsuccessful DL Shared Channel Set		*0..<maxnoofPDSCH Sets>*			EACH	ignore
>>>PDSCH Set ID	M		9.2.3.13		–	
>>>Cause	M		9.2.1.6		–	
>>Unsuccessful UL Shared Channel Set		*0..<maxnoofPUSCH Sets>*			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
maxnoofPDSCHSets	Maximum number of PDSCH Sets in a cell
maxnoofPUSCHSets	Maximum number of PUSCH Sets in a cell

9.1.65 RESET 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		–	

CHOICE *Reset Indicator*	M				YES	ignore
>*Communication Context*					–	
>>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		–	
>*Communication Control 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
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
DL Time Slot ISCP Info	O		9.2.3.4F	Mandatory for 3.84Mcps TDD. Not Applicable to 1.28Mcps TDD.	YES	ignore
DL Time Slot ISCP Info LCR	O		9.2.3.4P	Mandatory for 1.28Mcps TDD. Not Applicable to 3.84Mcps TDD.	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 Discriminator	M		9.2.1.45		–	
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
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. Not Applicable to 1.28Mcps TDD.	GLOBAL	reject
>Time Slot	M		9.2.3.23		–	
Cell Sync Burst Transmission Initiation Information		0..1		Applicable to 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		Applicable to 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		Applicable to 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		Applicable to 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	Applicable to 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..<maxno ofCellSync Bursts>*		Applicable to 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*		Applicable to 3.84Mcps TDD only	YES	reject
>Cell Sync Burst Measurement Information		*1..<maxno ofCellSync Bursts>*			GLOBAL	reject
>>Sync Frame Number To Receive	M		Sync Frame Number 9.2.3.18C		–	
>>Cell Sync Burst Information		*1..<maxno ofreceptio nsperSync Frame>*			–	
>>>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	O		9.2.3.18E		YES	reject
>Synchronisation Report Characteristics	O		9.2.3.18D		YES	reject
Number Of Subcycles Per Cycle Period	O		9.2.3.7D	Applicable to 1.28Mcps TDD only	YES	reject

SYNC_DL Code Transmission Reconfiguration Information LCR		*0..<maxno ofSyncFra mesLCR>*		Applicable to 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*		Applicable to 1.28Mcps TDD only	YES	reject
>SYNC_DL Code Measurement Information LCR		*1..<maxno ofSyncDL CodesLCR >*			GLOBAL	reject
>>Sync Frame Number To Receive	M		Sync Frame Number 9.2.3.18C		–	
>>Sync_DLCode Information LCR		*1..<maxno ofreceptio nsperSync FrameLCR >*			–	
>>>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 synchronisation bursts per cycle for 3.84Mcps TDD
maxnoofreceptionsperSyncFrame	Maximum number of cell synchronisation 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		*1..<maxCellinNodeB>*			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		*0..<maxnoofCellSyncBursts>*		Mandatory for 3.84Mcps TDD. Not Applicable to 1.28Mcps TDD.	–	
>>>>SFN	M		9.2.1.53A		–	
>>>>Cell Sync Burst Information		*1..<maxnoofreceptionsperSyncFrame>*			–	
>>>>>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..<maxnoofSyncFramesLCR>*		Mandatory for 1.28Mcps TDD. Not Applicable to 3.84Mcps TDD.	YES	ignore
>>>>SFN	M		9.2.1.53A		–	
>>>>SYNC_DL Code Information		*1..<maxnoofreceptionsperSyncFrameLCR>*			–	

>>>>>CHOICE *SYNC_DL Code Availability Indicator*	M				–	
>>>>>>*SYNC_DL 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_DL 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 synchronisation bursts per cycle for 3.84Mcps TDD
maxnoofreceptionsperSyncFrame	Maximum number of cell synchronisation burst receptions per Sync Frame for 3.84Mcps TDD
maxnoofSyncFramesLCR	Maximum number of SYNC Frames 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	reject
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	3.84Mcps TDD only	–	
>SFN	O		9.2.1.53A		–	
>DwPCH Power	O		9.2.3.5B	Applicable to 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	reject
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	reject
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..<maxCellinNodeB>*			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	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		–	
CRNC Communication Context ID	M		9.2.1.18	The reserved value "All CRNCCC" shall not be used.	YES	ignore
Signalling Bearer Request Indicator	O		9.2.1.55A		YES	ignore
DCHs To Re-arrange		*0..<maxnoofDCHs>*			GLOBAL	ignore
>DCH ID	M		9.2.1.20		–	
DSCHs To Re-arrange		*0..<maxnoofDSCHs>*			GLOBAL	ignore
>DSCH ID	M		9.2.1.27		–	
USCHs to Re-arrange		*0..<maxnoofUSCHs>*		TDD only	GLOBAL	ignore
>USCH ID	M		9.2.3.27		–	
HS-DSCHs MAC-d Flow To Re-arrange		*0..<maxnoofMACdFlows>*			GLOBAL	ignore
>HS-DSCH MAC-d Flow ID	M		9.2.1.31I		–	
TFCI2 Bearer Request Indicator	O		9.2.1.56C	FDD only	YES	ignore

Range bound	Explanation
maxnoofDCHs	Maximum number of DCHs for a UE
maxnoofDSCHs	Maximum number of DSCHs for a UE
maxnoofUSCHs	Maximum number of USCHs for a UE
maxnoofMACdFlows	Maximum number of HS-DSCH MAC-d flows

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
Transaction ID	M		9.2.1.62		–	
Node B Communication Context ID	M		9.2.1.48		YES	reject
Delayed Activation Information		*1..<maxnoofRLs>*			EACH	reject
>RL ID	M		9.2.1.53		–	
>Delayed Activation Update	M		9.2.1.24D		–	

Range Bound	Explanation
maxnoofRLs	Maximum number of RLs for one UE

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
Transaction ID	M		9.2.1.62		–	
Node B Communication Context ID	M		9.2.1.48		YES	reject
Delayed Activation Information		*1..<maxnoofRLs>*			EACH	reject
>RL ID	M		9.2.1.53		–	
>Delayed Activation Update	M		9.2.1.24D		–	

Range Bound	Explanation
maxnoofRLs	Maximum number of RLs for one UE

9.1.89 RADIO LINK PARAMETER UPDATE INDICATION

9.1.89.1 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
CRNC Communication Context ID	M		9.2.1.18	The reserved value "All CRNCCC" shall not be used.	YES	reject
Transaction ID	M		9.2.1.62		–	
HS-DSCH FDD Update Information	O		9.2.2.18Ea		YES	reject

9.1.89.2 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
CRNC Communication Context ID	M		9.2.1.18	The reserved value "All CRNCCC" shall not be used.	YES	reject
Transaction ID	M		9.2.1.62		–	
HS-DSCH TDD Update Information	O		9.2.3.5GA		YES	reject

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 a contradiction between the tabular format in Subclause 9.2 and the ASN.1 definition, the

ASN.1 shall take precedence, except for the definition of conditions for the presence of conditional elements, 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 CRNC 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			ENUMERATED (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 (0..15)	This IE indicates the priority of the request. **Usage:** Value "0" means "Spare"; It shall be treated as a logical error if received. Values between "1" and "14" are ordered in decreasing order of priority, "1" being the highest and "14" the lowest. Value "15" means "No Priority".
Pre-emption Capability	M		ENUMERATED (shall not trigger pre-emption, may trigger pre-emption)	
Pre-emption Vulnerability	M		ENUMERATED (not pre-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 IE is "empty", 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			ENUMERATED (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 the 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			OCTET STRING (1..4,…)	If the Binding ID includes an UDP port, the UDP port is included in octets 1 and 2. The first octet of the UDP port field shall be included in the first octet of the Binding ID.

9.2.1.4A BLER

Void.

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 Description
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,	

ETSI

			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 concerned capability is missing. On the other hand, "not available" cause values indicate that the concerned capability is present, but insufficient resources were available to perform the requested action.

Radio Network Layer cause	Meaning
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 cannot perform the requested Radio Link Reconfiguration without bearer re-arrangement.

Cell not Available	The concerned cell or local cell is not available.
Cell Synchronisation not supported	The concernedcell(s) do not support Cell Synchronisation.
Combining not supported	The Node B does not support RL combining for the concernedcells.
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 concerned cell(s) do not support Compressed Mode.
Common Transport Channel Type not supported	The concerned cell(s) do not support the RACH and/or FACH and/or CPCH Common Transport Channel Type.
Dedicated Transport Channel Type not supported	The concerned cell(s) do not support the Dedicated Transport Channel Type.
Delayed Activation not Supported	The concerned cell(s) do not support delayed activation of RLs.
DL Radio Resources not Available	The Node B does not have sufficient DL radio resources available.
DL SF not supported	The concerned cell(s) do not support the requested DL SF.
DL Shared Channel Type not supported	The concerned cell(s) do not support the Downlink Shared Channel Type.
DPC Mode Change not Supported	The concerned cells do not support DPC mode changes.
Frequency Acquisition not supported	The concerned 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 concerned cell(s) consider the requested Compressed Mode settings invalid.
IPDL already activated	The concerned cell(s) have already active IPDL ongoing.
IPDL not supported	The concerned cell(s) do not support the IPDL.
IPDL parameters not available	The concerned cell(s) do not have IPDL parameters defining IPDL to be applied.
Measurement not Supported For The Object	At least one of the concerned cell(s) does not support the requested measurement on the concerned object type.
Measurement 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 concerned cell(s) do not support the requested number of DL codes.
Number of UL codes not supported	The concerned cell(s) do not support the requested number of UL codes.
Power Level not Supported	A DL power level was requested which the concerned cell(s) do not support.
Power Balancing status not compatible	The power balancing status in the SRNC is not compatible with that of the 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 concerned cell(s) do not support adjustments of the RL timing.
Reconfiguration CFN not elapsed	The requested action cannot be performed due to that a RADIO LINK RECONFIGURATION COMMIT message was received previously, but the concerned CFN has not yet elapsed.
Requested Configuration not Supported	The concerned 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-arrangement.
Requested Tx Diversity mode not supported	The concerned 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 concerned 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 concerned 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 supported	The concerned cell(s) do not support Cell Synchronisation Adjustment.

Tx diversity no longer supported	Tx diversity can no longer be supported in the concerned cell.
UL Radio Resources not Available	The Node B does not have sufficient UL radio resources available.
UL SF not supported	The concerned cell(s) do not support the requested minimum UL SF.
UL Shared Channel Type not supported	The concerned cell(s) do not support the Uplink Shared Channel Type.
Unknown C-ID	The 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 concerned criticality indicated "reject" (see subclause 10.3).
Abstract Syntax Error (Ignore and Notify)	The received message included an abstract syntax error and the concerned criticality indicated "ignore and notify" (see subclause 10.3).
Abstract syntax error (falsely constructed message)	The received message contained IEs 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 to 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		1..<maxno ofSFs>		[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
maxnoofSFs	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

Void.

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 UE Positioning, SFN-SFN Observed Time Difference, Transmitted carrier power of all codes not used for HS-PDSCH or HS-SCCH transmission, HS-DSCH Required Power, HS-DSCH Provided Bit Rate)	"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	Criticality	Assigned Criticality
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]	–	
>*Additional Common Measurement Values*					–	
>>*UTRAN GPS Timing of Cell Frames for UE Positioning*					–	
>>>$T_{\text{UTRAN-GPS}}$ Measurement Value Information	M		9.2.1.64A		YES	ignore
>>*SFN-SFN Observed Time Difference*					–	
>>>SFN-SFN Measurement Value Information	M		9.2.1.53E		YES	ignore
>>*Transmitted carrier power of all codes not used for HS-PDSCH or HS-SCCH transmission*					–	
>>>Transmitted carrier power of all codes not used for HS-PDSCH or HS-SCCH transmission Value	M		INTEGER (0..100)	According to mapping in [22] and [23]	YES	ignore
>>*HS-DSCH Required Power*					–	
>>>HS-DSCH Required Power Value Information	M		9.2.1.31Ic		YES	ignore
>>*HS-DSCH Provided Bit Rate*					–	

>>>HS-DSCH Provided Bit Rate	M		9.2.1.31lb		YES	ignore

9.2.1.12A   Common Measurement Value Information

The *Common Measurement Value Information* IE provides information both on whether the Common Measurement Value is provided in the message or not and if provided also the Common Measurement Value itself.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
CHOICE *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 CRNC and the Node B for the control of Node B Communication Contexts. The 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	Criticality	Assigned Criticality
Procedure ID		*0..1*		Procedure ID is to be used if Criticality Diagnostics is part of Error Indication procedure, and not within the response message of the same procedure that caused the error	–	
>Procedure Code	M		INTEGER (0..255)		–	
>Ddmode	M		ENUMERATED (TDD, FDD, Common, …)	"Common" = common to FDD and TDD.	–	
Triggering Message	O		ENUMERATED (initiating message, successful outcome, unsuccessful outcome, outcome)	The Triggering Message is used only if the Criticality Diagnostics is part of Error Indication.	–	
Procedure Criticality	O		ENUMERATED (reject, ignore, notify)	This Procedure Criticality is used for reporting the Criticality of the Triggering message (Procedure).	–	
Transaction ID	O		9.2.1.62		–	
Information Element Criticality Diagnostics		*0..<max nooferrors>*			–	
>IE Criticality	M		ENUMERATED (reject, ignore, notify)	The IE Criticality is used for reporting the criticality of the triggering IE. The value "ignore" shall never be used.	–	
>IE ID	M		INTEGER (0..65535)	The IE ID of the not understood or missing IE	–	
>Repetition Number	O		INTEGER (0..255)	The *Repetition Number* IE gives: • for a not understood IE: The number of occurrences of the reported IE up to and including the not understood occurrence • for a missing IE: The number of occurrences up to but not including the missing occurrence. Note: All the counted occurrences of the reported IE must have the same topdown hierachical message structure of IEs with assigned criticality above them.	–	

ETSI

>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 level of the message.	YES	ignore
>Type Of Error	M		ENUMERATED (not understood, missing, …)		YES	ignore

Range Bound	Explanation
maxnooferrors	Maximum number 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 a reserved value indicating all the CRNC Communication Contexts that can be reached by the Communication Control Port (All CRNCCC).

9.2.1.18A   CTFC

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.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
CHOICE *CTFC Format*				
>*2 bits long*				
>>CTFC value	M		INTEGER (0..3)	
>*4 bits long*				
>>CTFC value	M		INTEGER (0..15)	
>*6 bits long*				
>>CTFC value	M		INTEGER (0..63)	
>*8 bits long*				
>>CTFC value	M		INTEGER (0..255)	
>*12 bits long*				
>>CTFC value	M		INTEGER (0..4095)	
>*16 bits long*				
>>CTFC value	M		INTEGER (0..65535)	
>*max nb bits long*				
>>CTFC value	M		INTEGER (0..maxCTFC)	

Range Bound	Explanation
MaxCTFC	Maximum number of the CTFC value is calculated according to the following: $$\sum_{i=1}^{I}(L_i - 1)P_i$$ with the notation according to ref. [18]

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 to 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 where 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 the 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 the 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..<maxnoofSFs>*		[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
maxnoofSFs	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 Description
DCH Information Response		1..<*maxno ofDCHs*>		Only one DCH per set of coordinated DCHs 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. If Transmit Diversity is applied to a downlink physical channel, the *DL Power* IE indicates the power offset between the linear sum of the power for this downlink physical channel on all branches and the [FDD - primary CPICH power] [TDD - PCCPCH power] configured in a cell.

[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].

[TDD - If referred to a DPCH or PDSCH, it indicates the power of a spreading factor 16 code, the power for a spreading factor 1 code would be 12 dB higher. If referred to a SCCPCH, the *DL Power* IE specifies the maximum power of the SCCPCH.]

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
DL Power			INTEGER (-350..150)	Value = DL Power /10 Unit: dB Range: -35.0 .. +15.0 dB Step: 0.1dB

9.2.1.22   Dedicated Measurement Object Type

Void.

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, HS-SICH reception quality, Best Cell Portions)	"RSCP" and "HS-SICH reception quality " are used by TDD only. "Rx Timing Deviation" is used by 3.84Mcps TDD only. "Rx Timing Deviation LCR", "Angle Of Arrival LCR" are used by 1.28Mcps TDD only. "Round Trip Time", "SIR Error" are used by FDD only. "Best Cell Portions" is used by FDD 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	Criticality	Assigned Criticality
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*				Applicable to 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]	–	
>*Additional Dedicated Measurement Values*					–	
>>*Rx Timing Deviation Value LCR*				Applicable to 1.28Mcps TDD only	–	
>>>Rx Timing Deviation LCR	M		INTEGER (0..511)	According to mapping in [23]	YES	reject
>>*Angle Of Arrival Value LCR*				Applicable to 1.28Mcps TDD only	–	
>>>AOA Value LCR		1			YES	reject
>>>>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]	–	
>>*HS-SICH reception quality*				Applicable to TDD only	–	
>>>HS-SICH reception quality Value		1			YES	reject
>>>>Failed HS-SICH	M		INTEGER (0..20)	According to mapping in [23]	–	
>>>>Missed HS-SICH	M		INTEGER (0..20)	According to mapping in [23]	–	
>>>>Total HS-SICH	M		INTEGER (0..20)	According to mapping in [23]	–	
>>*Best Cell Portions*				FDD only	YES	reject
>>>Best Cell Portions	M		9.2.2.1Ba		–	

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
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 $\leq$ 1.0m, 1.0m < UDRE $\leq$ 4.0m, 4.0m < UDRE $\leq$ 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 Unit: m (meters) Step: 0.32 meters
>Range Correction Rate	M		INTEGER (-127..127)	Unit: m/s Step: 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	

9.2.1.24E   Discard Timer

The *Discard Timer* IE defines the time to live for a MAC-hs SDU starting from the instant of its arrival into an HSDPA Priority Queue. The Node B shall use this information to discard out-of-data MAC-hs SDUs from the HSDPA Priority Queues.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Discard Timer			ENUMERATED (20, 40, 60, 80, 100, 120, 140, 160, 180, 200, 250, 300, 400, 500, 750, 1000, 1250, 1500, 1750, 2000, 2500, 3000, 3500, 4000, 4500, 5000, 7500, …)	Unit: ms

9.2.1.25   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

Void.

9.2.1.26A   DL DPCH Timing Adjustment

Void.

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 Description
DSCH Information Response		*1..<maxno ofDSCHs>*		
>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

The 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" = lowest priority, … "15" = highest priority

9.2.1.31 Frame Offset

The 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 the 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..<maxNo Sat>		
>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)	
>Δn	M		BIT STRING (16)	
>M_0	M		BIT STRING (32)	
>C_{uc}	M		BIT STRING (16)	
>e	M		BIT STRING (32)	
>C_{us}	M		BIT STRING (16)	
>$(A)^{1/2}$	M		BIT STRING (32)	
>t_{oe}	M		BIT STRING (16)	
>Fit Interval Flag	M		BIT STRING (1)	
>AODO	M		BIT STRING (5)	
>C_{ic}	M		BIT STRING (16)	
>$OMEGA_0$	M		BIT STRING (32)	
>C_{is}	M		BIT STRING (16)	
>i_0	M		BIT STRING (32)	
>C_{rc}	M		BIT STRING (16)	
>ω	M		BIT STRING (32)	
>OMEGAdot	M		BIT STRING (24)	
>Idot	M		BIT STRING (14)	
>Spare/zero fill	M		BIT STRING (20)	

Range Bound	Explanation
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
α_0	M		BIT STRING (8)	
α_1	M		BIT STRING (8)	
α_2	M		BIT STRING (8)	
α_3	M		BIT STRING (8)	
β_0	M		BIT STRING (8)	
β_1	M		BIT STRING (8)	
β_2	M		BIT STRING (8)	
β_3	M		BIT STRING (8)	

9.2.1.31D   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)	
Δt_{LS}	M		BIT STRING (8)	
WN_t	M		BIT STRING (8)	
WN_{LSF}	M		BIT STRING (8)	
DN	M		BIT STRING (8)	
Δt_{LSF}	M		BIT STRING (8)	

9.2.1.31E   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)	
>δi	M		BIT STRING (16)	
>OMEGADOT	M		BIT STRING (16)	
>SV Health	M		BIT STRING (8)	
>$A^{1/2}$	M		BIT STRING (24)	
>$OMEGA_0$	M		BIT STRING (24)	
>M_0	M		BIT STRING (24)	
>ω	M		BIT STRING (24)	
>af_0	M		BIT STRING (11)	
>af_1	M		BIT STRING (11)	
SV Global Health	O		BIT STRING (364)	

Range Bound	Explanation
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..<maxnoofMACdFlows>*			–	
>HS-DSCH MAC-d Flow ID	M		9.2.1.31I		–	
>Allocation/Retention Priority	O		9.2.1.1A		–	
>Transport Bearer Request Indicator	M		9.2.1.62A		–	
>Binding ID	O		9.2.1.4	Shall be ignored if bearer establishment with ALCAP.	–	
>Transport Layer Address	O		9.2.1.63	Shall be ignored if bearer establishment with ALCAP.	–	
Priority Queue Information		*0..<maxnoofPrioQueues>*			–	
>CHOICE *Priority Queue*	M				–	
>>*Add Priority Queue*					–	
>>>Priority Queue ID	M		9.2.1.49C		–	
>>>Associated HS-DSCH MAC-d Flow	M		HS-DSCH MAC-d Flow ID 9.2.1.31I		–	
>>>Scheduling Priority Indicator	M		9.2.1.53H		–	
>>>T1	M		9.2.1.56a		–	
>>>Discard Timer	O		9.2.1.24E		–	
>>>MAC-hs Window Size	M		9.2.1.38B		–	
>>>MAC-hs Guaranteed Bit Rate	O		9.2.1.38Aa		–	
>>>MAC-d PDU Size Index		*1..<maxnoofMACdPDUindexes>*			–	
>>>>SID	M		9.2.1.53I		–	
>>>>MAC-d PDU Size	M		9.2.1.38A		–	
>>*Modify Priority Queue*					–	
>>>Priority Queue ID	M		9.2.1.49C		–	
>>>Associated HS-DSCH MAC-d Flow	O		HS-DSCH MAC-d Flow ID 9.2.1.31I		–	
>>>Scheduling Priority Indicator	O		9.2.1.53H		–	
>>>T1	O		9.2.1.56a		–	
>>>Discard Timer	O		9.2.1.24E		–	
>>>MAC-hs Window Size	O		9.2.1.38B		–	
>>>MAC-hs Guaranteed Bit Rate	O		9.2.1.38Aa		–	
>>>MAC-d PDU Size Index		*0..<maxnoofMACdPDUindexes>*			–	
>>>>SID	M		9.2.1.53I		–	
>>>>MAC-d PDU Size	O		9.2.1.38A		–	
>>*Delete Priority Queue*					–	
>>>Priority Queue ID	M		9.2.1.49C		–	
MAC-hs Reordering Buffer Size	O		9.2.1.38Ab		–	
CQI Feedback Cycle k	O		9.2.2.21B	For FDD only	–	

ETSI

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
CQI Repetition Factor	O		9.2.2.4Cb	For FDD only	–	
ACK-NACK Repetition Factor	O		9.2.2.a	For FDD only	–	
CQI Power Offset	O		9.2.2.4Ca	For FDD only	–	
ACK Power Offset	O		9.2.2.b	For FDD only	–	
NACK Power Offset	O		9.2.2.23a	For FDD only	–	
HS-SCCH Power Offset	O		9.2.2.18l	For FDD only	–	
Measurement Power Offset	O		9.2.2.21C	For FDD only	–	
HS-SCCH Code Change Grant	O		9.2.1.31L		–	
TDD ACK NACK Power Offset	O		9.2.3.18F	For TDD only	–	

9.2.1.31Ha   HS-DSCH Initial Capacity Allocation

The *HS-DSCH Initial Capacity Allocation* IE provides flow control information for each scheduling priority class for the HS-DSCH FP over Iub.

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
HS-DSCH Initial Capacity Allocation		*1..16*			–	
>Scheduling Priority Indicator	M		9.2.1.53H		–	
>Maximum MAC-d PDU Size	M		MAC-d PDU Size 9.2.1.38A		–	
>HS-DSCH Initial Window Size	M		9.2.1.31Hb		–	

9.2.1.31Hb   HS-DSCH Initial Window Size

Indicates the initial number of MAC-d PDUs that may be transmitted before new credits are received from the Node B.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
HS-DSCH Initial Window Size			INTEGER (1..2047)	Number of MAC-d PDUs: 2047 = Unlimited number of MAC-d PDUs.

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)	

9.2.1.31Ia   HS-DSCH Physical Layer Category

The *HS-DSCH Physical Layer Category* IE defines a set of UE radio access capabilities related to HSDPA, as defined in [33].

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
HS-DSCH Physical Layer Category			INTEGER (1..64,…)	

9.2.1.31Ib   HS-DSCH Provided Bit Rate Value Information

The *HS-DSCH Provided Bit Rate Value Information* IE reports the total number of MAC-d PDU bits per priority class transmitted over the radio interface during the measurement period, divided by the duration of the measurement period. Only bits from acknowledged MAC-hs PDUs are taken into account.

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
HS-DSCH Provided Bit Rate Value Information		*1..16*			–	
>Scheduling Priority Indicator	M		9.2.1.51A		–	
>HS-DSCH Provided Bit Rate Value	M		INTEGER (0..2^24-1, …)	Expressed in bit/s. See [32] for the definiton of the measurement.	–	

9.2.1.31Ic   HS-DSCH Required Power Value Information

The *HS-DSCH Required Power Value Information* IE reports the minimum necessary power per priority class to meet the Guaranteed Bit Rate for all the established HS-DSCH connections belonging to this priority class. For each priority class, a list of UEs requiring a particularly high amount of power to meet the Guaranteed Bit Rate for their established HS-DSCH connections may be included.

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
HS-DSCH Required Power Value Information		*1..16*			–	
>Scheduling Priority Indicator	M		9.2.1.51A		–	
>HS-DSCH Required Power Value	M		INTEGER (0..1000)	Expressed in thousandths of the max transmission power	–	
> **HS-DSCH Required Power per UE information**		*0..<maxNrOfContextsonUeList>*		List of UEs with Guaranteed Bit Rate indicating their required power consumptionrelative to the HS-DSCH Required Power Value.	–	
>> CRNC Communication Context ID	M		9.2.1.18	The reserved value "All CRNCCC" shall not be used.	–	
>> HS-DSCH Required Power per UE Weight	O		INTEGER (0..100)	Expressed in percentage of the value provided in the *HS-DSCH Required Power Value* IE	–	

Range Bound	Explanation
maxNrOfContextsonUeList	Maximum number of Communication Contexts to include in the list of UEs

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)	

9.2.1.31K   HS-SCCH Code Change Indicator

The HS-SCCH Code Change Indicator indicates whether the HS-SCCH Code change is needed or not.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
HS-SCCH Code Change Indicator			ENUMERATED (HS-SCCH Code Change needed)	

9.2.1.31L   HS-SCCH Code Change Grant

The *HS-SCCH Code Change Grant* IE indicates that modification of HS-SCCH Codes is granted.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
HS-SCCH Code Change Grant			ENUMERATED(Change Granted)	

9.2.1.32   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 are 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, SIB15.5)	

9.2.1.36 Indication Type

Void.

9.2.1.36A Information Exchange Object Type

Void.

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*				
>*On Demand*			NULL	
>*Periodic*				
>>CHOICE *Information Report Periodicity Scale*	M			The frequency with which the Node B shall send information reports.
>>>*minute*				
>>>>Report Periodicity Value	M		INTEGER (1..60,…)	Unit: min
>>>*hour*				
>>>>Report Periodicity Value	M		INTEGER (1..24,…)	Unit: h
>*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 have 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 the 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,…)	

9.2.1.38Aa MAC-hs Guaranteed Bit Rate

The *MAC-hs Guaranteed Bit Rate* IE indicates the guaranteed number of bits per second that Node B should deliver over the air interface under normal operating conditions (provided there is data to deliver).

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

9.2.1.38Ab MAC-hs Reordering Buffer Size

The *MAC-hs Reordering Buffer Size* IE indicates the total buffer size defined in UE capability minus the RLC AM buffer in kBytes.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
MAC-hs Reordering Buffer Size			INTEGER (1..300,…)	

9.2.1.38B MAC-hs Window Size

The *MAC-hs Window SIze* IE is used for MAC-hs PDU retransmission as defined in [32].

IE/Group Name	Presence	Range	IE type and reference	Semantics description
MAC-hs Window Size			ENUMERATED (4, 6, 8, 12, 16, 24, 32,…)	

9.2.1.39 Maximum DL Power Capability

This parameter indicates the maximum DL power capability for a local cell or a Power Local Cell Group within the Node B. The reference point is the antenna connector. If Transmit Diversity can be used in the local cell, the parameter indicates the maximum for the linear sum of the power that can be used on all branches.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Maximum DL Power Capability			INTEGER (0..500)	Unit: dBm Range: 0..50 dBm Step: 0.1 dB

9.2.1.40 Maximum Transmission Power

The Maximum Transmission Power is the maximum value for the linear sum of the power of all downlink physical channels, that is allowed to be used in a cell. If Transmit Diversity is applied to one downlink physical channel, the power to be considered for this downlink physical channel is the linear sum of the power used for this downlink physical channel on all branches. The reference point is the antenna connector.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Maximum Transmission Power			INTEGER (0..500)	Unit: dBm Range: 0..50 Step: 0.1 dB

9.2.1.40A   Measurement Availability Indicator

Void.

9.2.1.40B   Measurement Change Time

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
CHOICE *Time Scale*				
>*millisecond*				
>>Measurement Change Time Value	M		INTEGER (1..6000,…)	Unit: ms Range: 10..60000 ms Step: 10 ms

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,...)	

9.2.1.41A   Measurement Hysteresis Time

The Measurement Hysteresis Time provides the duration during which a reporting criterion has to be fulfilled for the Measurement Reporting procedure to be triggered.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
CHOICE *Time Scale*				
>*millisecond*				
>>Measurement Hysteresis Time Value	M		INTEGER (1..6000,…)	Unit: ms Range: 10..60000 ms Step: 10 ms

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.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
CHOICE *Measurement Increase/Decrease Threshold*					–	
>*Received Total Wide Band Power*					–	
>>Received Total Wide Band Power	M		INTEGER (0..620)	Unit: dB Range: 0..62 dB Step: 0.1 dB	–	
>*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)	Unit: dB Range: 0..63 dB Step: 0.5 dB	–	
>*SIR*					–	
>>SIR	M		INTEGER (0..62)	Unit: dB Range: 0..31 dB Step: 0.5 dB	–	
>*SIR Error*				FDD only	–	
>>SIR Error	M		INTEGER (0..124)	Unit: dB Range: 0..62 dB Step: 0.5 dB	–	
>*Transmitted Code Power*					–	
>>Transmitted Code Power	M		INTEGER (0..112,…)	Unit: dB Range: 0..56 dB Step: 0.5 dB	–	
>*RSCP*				TDD only	–	
>>RSCP	M		INTEGER (0..126)	Unit: dB Range: 0..63 dB Step: 0.5 dB	–	
>*Round Trip Time*				FDD only	–	
>>Round Trip Time	M		INTEGER (0..32766)	Unit: chips Range: 0 .. 2047.875 chips Step: 0.625 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]	–	
>*Additional Measurement Thresholds*					–	
>> *Transmitted carrier power of all codes not*					–	

used for HS-PDSCH or HS-SCCH transmission						
>>>Transmitted carrier power of all codes not used for HS-PDSCH or HS-SCCH transmission	M		INTEGER (0..100)	According to mapping in [22] and [23]	YES	reject

9.2.1.44   Measurement Threshold

The Measurement Threshold defines which threshold that shall trigger Event A, B, E, F or On Modification.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
CHOICE *Measurement Threshold*					–	
>*Received Total Wide Band Power*					–	
>>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*				Applicable to 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]	–	
>*Additional Measurement Thresholds*					–	
>>*UTRAN GPS Timing of Cell Frames for UE Positioning*					–	
>>>$T_{UTRAN-GPS}$ Measurement Threshold Information	M		9.2.1.64B		YES	reject
>>*SFN-SFN Observed Time Difference*					–	
>>>SFN-SFN Measurement Threshold	M		9.2.1.53C		YES	reject

Information						
>>Rx Timing Deviation LCR				Applicable to 1.28Mcps TDD Only	–	
>>>Rx Timing Deviation LCR	M		INTEGER (0..255)	According to mapping in [23]	YES	reject
>>Transmitted carrier power of all codes not used for HS-PDSCH or HS-SCCH transmission					–	
>>>Transmitted carrier power of all codes not used for HS-PDSCH or HS-SCCH transmission	M		INTEGER (0..100)	According to mapping in [22] and [23]	YES	reject
>>HS-SICH reception quality				Applicable to TDD Only	–	
>>>HS-SICH reception quality	M		INTEGER (0..20)	According to mapping in [23]	YES	reject
>>HS-DSCH Required Power					–	
>>>HS-DSCH Required Power Value Information	M		9.2.1.31Ic		YES	reject
>>HS-DSCH Provided Bit Rate					–	
>>>HS-DSCH Provided Bit Rate Value Information	M		9.2.1.31Ib		YES	reject

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
Message Structure		1..*<maxno oflevels>*		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 occurred error of the message.
>IE ID	M		INTEGER (0..65535)	The IE ID of this level's IE containing the not understood or missing IE.
>Repetition Number	O		INTEGER (1..256)	The *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. 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 number 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		INTEGER (0..255)	"0" = Audit "1" = Audit Required "2" = Block Resource "3" = Cell Deletion "4" = Cell Reconfiguration "5" = Cell Setup "6" = Common Measurement Failure "7" = Common Measurement Initiation "8" = Common Measurement Report "9" = Common Measurement Termination "10" = Common Transport Channel Delete "11" = Common Transport Channel Reconfigure "12" = Common Transport Channel Setup "13" = Reset "14" = Compressed Mode Command "16" = Dedicated Measurement Failure "17" = Dedicated Measurement Initiation "18" = Dedicated Measurement Report "19" = Dedicated Measurement Termination "20" = Downlink Power Control "21" = Error Indication (For Dedicated Procedures) "23" = Radio Link Addition "24" = Radio Link Deletion "25" = Radio Link Failure "26" = Radio Link Restoration "27" = Radio Link Setup "28" = Resource Status Indication "29" = Synchronised Radio Link Reconfiguration Cancellation "30" = Synchronised Radio Link Reconfiguration Commit "31" = Synchronised Radio Link Reconfiguration Preparation "32" = System Information Update "33" = Unblock Resource "34" = Unsynchronised Radio Link Reconfiguration "35" = Error Indication (For Common Procedures) "37" = Physical Shared Channel Reconfiguration "38" = Downlink Power Timeslot Control "39" = Radio Link Preemption "40" = Information Exchange Failure "41" = Information Exchange Initiation "42" = Information Exchange Termination "43" = Information Reporting "44" = Cell Synchronisation Adjustment "45" = Cell Synchronisation Initiation "46" = Cell Synchronisation Reconfiguration "47" = Cell Synchronisation Reporting "48" = Cell Synchronisation Termination "49" = Cell Synchronisation Failure "50" = Bearer Rearrangement "51" = Radio Link Activation "52" = Radio Link Parameter Update
>Ddmode	M		ENUMERATED (TDD, FDD, Common, ...)	Common = common to FDD and TDD.
Type of Message	M		ENUMERATED (Initiating	

ETSI

			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 the Node B. The reference point is the antenna connector. If Transmit Diversity can be used in the local cell, the parameter indicates the minimum for the linear sum of the power that can be used on all branches.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Minimum DL Power Capability			INTEGER (0..800)	Unit: dBm Range: -30 .. +50 dBm Step: 0.1 dB

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)	[TDD – Mapping scheme for the minimum spreading factor 1 and 2: "256" means 1 "512" means 2]

9.2.1.47A   N_INSYNC_IND

This parameter is used by the Node B for achievement/re-achievement of UL synchronisation on the Uu interface as defined in ref. [10] and [21].

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
N_INSYNC_IND			INTEGER (1..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]).

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
N_OUTSYNC_IND			INTEGER (1..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. Since the measurement can be performed on every time slot and midamble shift, the *Time Slot* IE and *Midamble Shift And Burst Type* IE shall be included if available.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
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 a reserved value indicating 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. If Transmit Diversity is applied to the PICH, the *PICH Power* IE indicates the power offset between the linear sum of the power for the PICH on all branches and 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			INTEGER (-10..+5)	Unit: dB Range: -10 .. +5 dB 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)	

9.2.1.49D Process Memory Size

The *Process Memory Size* IE is the size of an HARQ process in the Node B expressed in bits.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Process Memory Size			ENUMERATED (800, 1600, 2400, 3200, 4000, 4800, 5600, 6400, 7200, 8000, 8800, 9600, 10400, 11200, 12000, 12800, 13600, 14400, 15200, 16000, 17600, 19200, 20800, 22400, 24000, 25600, 27200, 28800, 30400, 32000, 36000, 40000, 44000, 48000, 52000, 56000, 60000, 64000, 68000, 72000, 76000, 80000, 88000, 96000, 104000, 112000, 120000, 128000, 136000, 144000, 152000, 160000, 176000, 192000, 208000, 224000, 240000, 256000, 272000, 288000, 304000,…)	

9.2.1.50 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)	Unit: % Range: 40..100 % Step: 4 % 100% means 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 define how the reporting shall be performed.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
CHOICE *Report Characteristics*					–	
>*On Demand*			NULL		–	
>*Periodic*					–	
>>Report Periodicity	M		9.2.1.51a	The frequency with which the Node B shall send measurement reports.	–	
>*Event A*					–	
>>Measurement Threshold	M		9.2.1.44	The threshold for which the Node B shall trigger a measurement report.	–	
>>Measurement Hysteresis Time	O		9.2.1.41A		–	
>*Event B*					–	
>>Measurement Threshold	M		9.2.1.44	The threshold for which the Node B shall trigger a measurement report.	–	
>>Measurement Hysteresis Time	O		9.2.1.41A		–	
>*Event C*					–	
>>Measurement Increase/Decrease Threshold	M		9.2.1.43		–	
>>Measurement Change Time	M		9.2.1.40B	The time the measurement entity shall rise on (in ms), in order to trigger a measurement report.	–	
>*Event D*					–	
>>Measurement Increase/Decrease Threshold	M		9.2.1.43		–	
>>Measurement Change Time	M		9.2.1.40B	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		9.2.1.41A		–	
>>Report Periodicity	O		9.2.1.51a	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		9.2.1.41A		–	
>>Report Periodicity	O		9.2.1.51a	The frequency with which the Node B shall send	–	

				measurement reports.	–	
>*Additional Report Characteristics*					–	
>>*On Modification*					–	
>>>On Modification		*1*			YES	reject
>>>>Measurement Threshold	M		9.2.1.44		–	

9.2.1.51a   Report Periodicity

The Report Periodicity defines the frequency at which the Node B shall send measurement reports.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
CHOICE *Report Periodicity Scale*				
>*millisecond*				
>>Report Periodicity Value	M		INTEGER (1..6000,…)	Unit: ms Range: 10..60000 ms Step: 10 ms
>*minute*				
>>Report Periodicity Value	M		INTEGER (1..60,…)	Unit: min Range: 1..60 min Step: 1 min

9.2.1.51A   Requested Data Value

The *Requested Data Value* IE contains the relevant data concerning the ongoing information exchange. The *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 on whether or not the Requested Data Value is available in the message and also the Requested Data Value itself if available. In case of "Periodic" and "On Modification" reporting, "Information Not Available" shall be used when at least one part of the requested information was not available at the moment of initiating the Information Reporting procedure.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
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 measurements which shall trigger the Event On Modification.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
SFN-SFN Change Limit	O		INTEGER(1..256)	Change of SFN-SFN value compared to previously reported value, which shall trigger a new report. Unit: chip Step: 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: chip Step: 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..<maxno MeasNCell >*		
>UC-Id	M		9.2.1.65B	
>SFN-SFN Value	M		9.2.1.53F	
>SFN-SFN Quality	O		INTEGER (0..255)	Indicates the standard deviation (std) of the SFN-SFN Observed Time Difference measurements in 1/16 chip. SFN-SFN Quality = $\sqrt{E[(x-\mu)^2]}$ = std of reported SFN-SFN Value, where x is the reported SFN-SFN Value and μ = E[x] is the expectation value of x.
>SFN-SFN Drift Rate	M		INTEGER (-100..+100)	Indicates the SFN-SFN drift rate in 1/256 chip per second. A positive value indicates that the Reference cell clock is running at a greater frequency than the measured neighbouring cell.
>SFN-SFN Drift Rate Quality	O		INTEGER (0..100)	Indicates the standard deviation (std) of the SFN-SFN drift rate measurements in 1/256 chip per second. SFN-SFN Drift Rate Quality = $\sqrt{E[(x-\mu)^2]}$ = std of reported SFN-SFN Drift Rate, where x is the reported SFN-SFN Drift Rate and μ = E[x] is the expectation value of x.
>SFN-SFN Measurement Time Stamp	M		9.2.1.53D	
Unsuccessful Neighbouring Cell SFN-SFN Observed Time Difference Measurement Information		*0..<maxno MeasNCell -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 the 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
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 establishment with ALCAP.
>Transport Layer Address	O		9.2.1.63	Shall be ignored if bearer establishment 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* IE provides the identity of the Size Index.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
SID			INTEGER (0..7)	

9.2.1.54   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

The *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)	Unit: second

9.2.1.56a   T1

The *T1* IE is used as described in ref [32] subclause 11.6.2.3.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
T1			ENUMERATED (10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 120, 140, 160, 200, 300, 400, …)	Unit: ms Node B may use this value to stop the re-transmission of the corresponding MAC-hs PDU.

9.2.1.56A   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			INTEGER (0..255)	Unit: second Range: 0 .. 25.5 s Step: 0.1 s

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. [TDD - If it is present in the timeslot, it will be mapped to the channelisation code defined by [19].]

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 : a) The TFCS refers to the Uplink. OR b) The mode is FDD and none of the Radio Links of the concerned UE are assigned any DSCH transport channels. OR c) The mode is TDD.
>>TFCS		1..<*maxno ofTFCs*>		The first instance of the parameter corresponds to TFCI zero, the second to 1 and so on. [TDD - The first entry (for TFCI 0) should be ignored by the receiver.]
>>>CTFC	M		9.2.1.18A	
>>>CHOICE *Gain Factors*	C-PhysChan			
>>>>*Signalled Gain Factors*				
>>>>>CHOICE *Mode*	M			
>>>>>>*FDD*				
>>>>>>>Gain Factor β_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 β_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 β	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 : a) The TFCS refers to the Downlink. AND b) The mode is FDD and one of the Radio Links of the concerned UE is assigned one or more DSCH transport channels.
>>Transport Format Combination DCH		1..<*maxTF CI_1_Com bs*>		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		9.2.1.18A	
>>CHOICE *Signalling Method*				
>>>*TFCI Range*				
>>>>TFC Mapping On DSCH		1..<*maxNo TFCIGrou*		

		ps>		
>>>>>>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		9.2.1.18A	
>>>*Explicit*				
>>>>Transport Format Combination DSCH		*1..<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		9.2.1.18A	

Condition	Explanation
PhysChan	The IE shall be present if the TFCS concerns a UL DPCH or PRACH channel [FDD – or 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

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.

[TDD - The Transport Format Set for each transport channel within the same CCTrCH shall have the same value for the *2nd Interleaving Mode* IE.]

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Dynamic Transport Format Information		1..<*maxTF count*>		The first instance of the parameter corresponds to TFI zero, the second to 1 and so on.
>Number of Transport Blocks	M		INTEGER (0..512)	
>Transport Block Size	C-Blocks		INTEGER (0..5000)	Unit: Bits
>CHOICE *Mode*	M			
>>*TDD*				
>>>Transmission Time Interval Information	C-TTIdynamic	1..<*maxTTIcount*>		
>>>>Transmission Time Interval	M		ENUMERATED (10, 20, 40, 80,…)	Unit: ms
Semi-Static Transport Format Information		1		
>Transmission Time Interval	M		ENUMERATED (10, 20, 40, 80, dynamic,…,5)	Unit: 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 TTIs 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)	Unit: 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)	Unit: 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
CHOICE *Transaction ID Length*				The Transaction ID shall be interpreted for its integer value, not for the type of encoding ("short" or "long").
>*Short*				
>>Transaction ID Value	M		INTEGER (0..127)	
>*Long*				
>>Transaction ID Value	M		INTEGER (0..32767)	

9.2.1.62A Transport Bearer Request Indicator

Indicates whether a new transport bearer needs to be established for carrying the concerned 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			ENUMERATED (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 Frames for UE Positioning measurements.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
T$_{UTRAN-GPS}$		*1*		Indicates the UTRAN GPS Timing of Cell Frames forUE Positioning. According to mapping in [22]. Significant values range from 0 to 37158911999999.
>MS	M		INTEGER (0..16383)	Most Significant Part
>LS	M		INTEGER (0..4294967295)	Least Significant Part
T$_{UTRAN-GPS}$ Quality	O		INTEGER (0..255)	Indicates the standard deviation (std) of the T$_{UTRAN-GPS}$ measurements in 1/16 chip. T$_{UTRAN-GPS}$ Quality = $\sqrt{E[(x-\mu)^2]}$ = std of reported T$_{UTRAN-GPS}$ Value, where x is the reported T$_{UTRAN-GPS}$ Value and $\mu = E[x]$ is the expectation value of x.
T$_{UTRAN-GPS}$ Drift Rate	M		INTEGER (-50..+50)	Indicates the T$_{UTRAN-GPS}$ drift rate in 1/256 chip per second. A positive value indicates that the UTRAN clock is running at a lower frequency than GPS clock.
T$_{UTRAN-GPS}$ Drift Rate Quality	O		INTEGER (0..50)	Indicates the standard deviation (std) of the T$_{UTRAN-GPS}$ drift rate measurements in 1/256 chip per second. T$_{UTRAN-GPS}$ Drift Rate Quality = $\sqrt{E[(x-\mu)^2]}$ = std of reported T$_{UTRAN-GPS}$ Drift Rate, where x is the reported T$_{UTRAN-GPS}$ Drift Rate and $\mu = E[x]$ is the expectation value of x.

9.2.1.64B T$_{UTRAN-GPS}$ Measurement Threshold Information

The T$_{UTRAN-GPS}$ Measurement Threshold Information defines the related thresholds for UTRAN GPS Timing of Cell Frames for UE Positioning measurements shall trigger the event On Modification.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
T_{UTRAN-GPS} Change Limit	O		INTEGER (1..256)	Change of T$_{UTRAN-GPS}$ value compared to previously reported value, which shall trigger a new report. Unit in 1/16 chip.
Predicted T_{UTRAN-GPS} Deviation Limit	O		INTEGER (1..256)	Deviation of the predicated T$_{UTRAN-GPS}$ 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 Frames for UE Positioning measurement.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
T_{UTRAN-GPS} Accuracy Class			ENUMERATED (Accuracy Class A, Accuracy Class B, Accuracy Class C, …)	More information about T$_{UTRAN-GPS}$ Measurement Accuracy Class is included in [22].

9.2.1.65   UARFCN

Designates the central frequency of the channel number.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
UARFCN			INTEGER (0..16383,…)	Unit: MHz Range: 0 .. 3276.6 MHz Step: 0.2 MHz (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			INTEGER (-82..173)	Value = UL SIR/10 Unit: dB Range: -8.2 .. +17.3 dB Step: 0.1 dB

9.2.1.68   Unidirectional DCH Indicator

The *Unidirectional DCH Indicator* IE indicates that the DCH is unidirectional.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Unidirectional DCH Indicator			ENUMERATED (Downlink DCH only, Uplink DCH only)	"Downlink DCH only" shall only be used by TDD.

9.2.2   FDD specific parameters

9.2.2.a   ACK-NACK Repetition Factor

The *ACK-NACK Repetiton Factor* IE indicates the number of consecutive repetitions of the ACK and NACK.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
ACK-NACK Repetition Factor			INTEGER (1..4,...)	Step: 1

9.2.2.b   ACK Power Offset

The *ACK Power Offset* IE indicates Power offset used in the UL between the HS-DPCCH slot carrying HARQ ACK information and the associated DPCCH.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
ACK Power Offset			INTEGER (0..8,…)	According to mapping in ref. [9] subclause 4.2.1.

9.2.2.A Active Pattern Sequence Information

Defines the parameters for the compressed mode gap pattern sequence activation. For details see ref. [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..<*maxTGPS*>		
>TGPS 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

The *Adjustment Period* IE defines the period to be used for power balancing.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Adjustment Period			INTEGER (1..256)	Unit: Frames

9.2.2.C Adjustment Ratio

The *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)	Unit: None Range: 0..1 Step: 0.01

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. If Transmit Diversity is applied to the AICH, the *AICH Power* IE indicates the power offset between the linear sum of the power for the AICH on all branches and the Primary CPICH power configured in a cell.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
AICH Power			INTEGER (-22..+5)	Unit: dB Range: -22 .. +5 dB Step: 1 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

IE/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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
AP Sub Channel Number			INTEGER (0..11)	Described in ref. [10]

9.2.2.1Ba Best Cell Portions

Best Cell Portions IE indicates the best received cell portions and their SIR values when Cell Portions are defined in the cell.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Best Cell Portions		1..<maxno ofBestCell Portions>		
>Cell Portion ID	M		9.2.2.1Ca	
>SIR Value	M		INTEGER (0..63)	According to mapping in [22] and [23]

Range Bound	Explanation
maxnoofBestCellPortions	Maximum number of reported Best Received Cell Portions

9.2.2.1C CD Sub Channel Numbers

IE/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].

9.2.2.1Ca Cell Portion ID

Cell Portion ID is the unique identifier for a cell portion within a cell. See [4].

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Cell Portion ID			INTEGER (0..63,…)	

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)	Unit: 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.

IE/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: "Offset1" = slot(j+1)mod15 "Offset2" = slot(j+2)mod15

9.2.2.3   Common Channels Capacity Consumption Law

Void.

9.2.2.3A   Compressed Mode Deactivation Flag

The 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 Unit: ksps

9.2.2.4B CPCH Scrambling Code Number

IE/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,…)	

9.2.2.4 Ca CQI Power Offset

The *CQI Power Offset* IE indicates Power offset used in the UL between the HS-DPCCH slots carrying CQI information and the associated DPCCH.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
CQI Power Offset			INTEGER (0..8,…)	According to mapping in ref. [9] subclause 4.2.1.

9.2.2.4Cb CQI Repetition Factor

The *CQI Repetiton Factor* IE indicates the number of consecutive repetitions of the CQI.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
CQI Repetition Factor			INTEGER (1..4,...)	Step: 1

9.2.2.4D 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 Description	Criticality	Assigned Criticality
DCH FDD Information		1..<maxnoofDCHs>			–	
>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..<maxnoofDCHs>			–	
>>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		–	
>>Unidirectional DCH Indicator	O		9.2.1.68		YES	ignore

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 Description
DCHs FDD To Modify		1..<maxnoofDCHs>		
>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	
>>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

9.2.2.5 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 mode 2, …)	

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,…)	

9.2.2.10A   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.

9.2.2.11   DL frame type

Void.

9.2.2.12 DL or Global Capacity Credit

Void.

9.2.2.12A DL_power_averaging_window_size

The *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)	Unit: inner loop power adjustments Range: 1..60 Step: 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
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..<maxnoofRLs>*		
>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 "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 Description	Criticality	Assigned Criticality
DSCH FDD Information		1..<max noofDS CHs>			–	
>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			ENUMERATED (Mode0, Mode1, …)	"Mode0": The Node B shall estimate the UE transmitted TPC command and update the DL power in every slot "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
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, *Enhanced 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 Range: -15 .. 0 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 Description
FDD DL Code Information		*1..<maxno ofCodes>*		
>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)	Unit: chip Range: 0..38144 chips Step: 256 chips See ref. [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,…)	Unit: 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, the 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 Description
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	
IP Offset	M		INTEGER (0..9)	See [10]

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..<max noofMA CdFlow s>*			–	
>HS-DSCH MAC-d Flow ID	M		9.2.1.31I		–	
>Allocation/Retention Priority	M		9.2.1.1A		–	
>Binding ID	O		9.2.1.4	Shall be ignored if bearer establishment with ALCAP.	–	
>Transport Layer Address	O		9.2.1.63	Shall be ignored if bearer establishment with ALCAP.	–	
Priority Queue Information		*1..<max noofPrio Queues >*			–	
>Priority Queue ID	M		9.2.1.49C		–	
>Associated HS-DSCH MAC-d Flow	M		HS-DSCH MAC-d Flow ID 9.2.1.31I		–	
>Scheduling Priority Indicator	M		9.2.1.53H		–	
>T1	M		9.2.1.56a		–	
>Discard Timer	O		9.2.1.24E		–	
>MAC-hs Window Size	M		9.2.1.38B		–	
>MAC-hs Guaranteed Bit Rate	O		9.2.1.38Aa		–	
>MAC-d PDU Size Index		*1..<max noofMA CdPDUi ndexes >*			–	
>>SID	M		9.2.1.53I		–	
>>MAC-d PDU Size	M		9.2.1.38A		–	
UE Capabilities Information		*1*			–	
>HS-DSCH Physical Layer Category	M		9.2.1.31Ia		–	
>MAC-hs Reordering Buffer Size	M		9.2.1.38Ab		–	
CQI Feedback Cycle k	M		9.2.2.21B		–	
CQI Repetition Factor	C-CQICyclek		9.2.2.4Cb		–	
ACK-NACK Repetition Factor	M		9.2.2.a		–	
CQI Power Offset	M		9.2.2.4Ca		–	
ACK Power Offset	M		9.2.2.b		–	
NACK Power Offset	M		9.2.2.23a		–	
HS-SCCH Power Offset	O		9.2.2.18I		–	
Measurement Power Offset	O		9.2.2.21C		–	

Condition	Explanation
CQICyclek	The IE shall be present if the *CQI Feedback Cycle k* IE is set to a value greater than 0.

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 PDU SIDs

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..<max noofMA CdFlow s>*			–	
>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-DSCH Initial Capacity Allocation	O		9.2.1.31Ha		–	
HS-SCCH Specific Information Response		*1..<max noofHS SCCHc odes>*			–	
>Code Number	M		INTEGER (0..127)		–	
CHOICE *HARQ Memory Partitioning*	M				–	
>*Implicit*					–	
>>Number of Processes	M		INTEGER (1..8,...)		–	
>*Explicit*					–	
>>HARQ Memory Partitioning Infomation		*1..<max noofHA RQproc esses>*			–	
>>>Process Memory Size	M		9.2.1.49D	See [18]	–	

Range Bound	Explanation
maxnoofMACdFlows	Maximum number of HS-DSCH MAC-d flows
maxnoofHSSCCHcodes	Maximum number of HS-SCCH codes
MaxnoofHARQprocesses	Maximum number of HARQ processes for one UE

9.2.2.18Ea   HS-DSCH FDD Update Information

The *HS-DSCH FDD Update Information* IE provides information for HS-DSCH to be updated. At least one IE shall be present.

IE/Group Name	Presence	Range	IE Type and Reference	Semantic Description	Criticality	Assigned Criticality
HS-SCCH Code Change Indicator	O		9.2.1.31K		–	
CQI Feedback Cycle k	O		9.2.2.21B		–	
CQI Repetition Factor	O		9.2.2.4Cb		–	
ACK-NACK Repetition Factor	O		9.2.2.a		–	
CQI Power Offset	O		9.2.2.4Ca		–	
ACK Power Offset	O		9.2.2.b		–	
NACK Power Offset	O		9.2.2.23a		–	

9.2.2.18F   HS-PDSCH FDD Code Information

This parameter defines the codes which will be assigned for HS-PDSCHs.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Number Of HS-PDSCH Codes	M		INTEGER (0..maxCodeNumComp-1)	
Start Code Number	C-NumCodes		INTEGER (1..maxCodeNumComp-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.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
CHOICE *replaceremove*				
>*replace*				
>>HS-SCCH Code		*1..<Maxno ofHSSCC Hs>*		
>>>Code Number	M		INTEGER (0..maxCodeNumComp-1)	
>*remove*			NULL	

Range Bound	Explanation
MaxnoofHSSCCHs	Maximum number of HS-SCCHs for one cell.

9.2.2.18H   HS-SCCH ID

Void.

9.2.2.18I HS-SCCH Power Offset

The *HS-SCCH Power Offset* IE indicates the Power offset relative to the pilot bits on the DL DPCCH.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
HS-SCCH Power Offset			INTEGER (0…255)	Step 0.25 dB, range -32-+31.75 dB

9.2.2.19 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)	Unit: Slots

9.2.2.20A Max Number Of PCPCHs

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Max Number Of PCPCHs			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 SF128	O		DL Power 9.2.1.21	

Maximum PDSCH Power SF256	O		DL Power 9.2.1.21	

9.2.2.21B   CQI Feedback Cycle k

The *CQI Feedback Cycle k* IE provides the duration of the CQI feedback cycle.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
CQI Feedback Cycle k			ENUMERATED (0, 2, 4, 8, 10, 20, 40, 80, 160,…)	Unit ms

9.2.2.21C   Measurement Power Offset

The *Measurement Power Offset* IE is used as described in ref [10] subclause 6A.2.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Measurement Power Offset			INTEGER (-12..26)	Unit: dB Range: -6..13dB Step: 0.5dB

9.2.2.22   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   NACK Power Offset

The *NACK Power Offset* IE indicates Power offset used in the UL between the HS-DPCCH slot carrying HARQ NACK information and the associated DPCCH.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
NACK Power Offset			INTEGER (0..8,…)	According to mapping in ref. [9] subclause 4.2.1.

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)	Unit: 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 DPDCHs for a CPCH.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
N_Start_Message			INTEGER (1..8)	

9.2.2.23D   Number Of Reported Cell Portion

Number of Reported Cell Portion indicates the number of Best Cell Portions values which shall be included in the measurement report.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Number Of Reported Cell Portion			INTEGER (1..64,…)	

9.2.2.24   Pattern Duration (PD)

Void.

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			ENUMERATED (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" + "Multi-Code Info" – 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" + "Multi-Code Info" – 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" + "Multi-Code Info" – 1. So if multi-code is not used, the set of PDSCH codes is reduced to one element indicated by the *Code Number* IE.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
DL Scrambling Code	M		9.2.2.13	Scrambling code on which PDSCH is transmitted.
CHOICE *Signalling Method*	M			
>*Code Range*				
>>PDSCH Code Mapping		1..<*maxNoCodeGroups*>		
>>>Spreading Factor	M		ENUMERATED (4, 8, 16, 32, 64, 128, 256,…)	
>>>Multi-Code Info	M		INTEGER (1..16)	
>>>Start Code Number	M		INTEGER (0..maxCodeNumComp-1)	PDSCH code start, Numbering as described in [18]. The maximum value is equal to the Spreading Factor - 1.
>>>Stop Code Number	M		INTEGER (0..maxCodeNumComp-1)	PDSCH code stop, Numbering as described in [18]. The maximum value is equal to the Spreading Factor - 1.
>*TFCI Range*				
>>DSCH Mapping		1..<*maxNoTFCIGroups*>		
>>>Max TFCI(field2) Value	M		INTEGER (1..1023)	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..maxCodeNumComp-1)	Code number of PDSCH code. Numbering as described in [18]. The maximum value is equal to the Spreading Factor - 1.
>*Explicit*				
>>PDSCH Code		1..<*maxTFCI_2_Combs*>		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..maxCodeNumComp-1)	Code number of PDSCH code. Numbering as described in [18]. The maximum value is equal to the Spreading Factor - 1.
>*Replace*				
>>Replaced PDSCH Code		1..<*maxTFCI_2_Combs*>		
>>>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..maxCodeNumComp-1)	Code number of PDSCH code. Numbering as described in [18].

				The maximum value is equal to the Spreading Factor - 1.

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 PIs 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			ENUMERATED (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)	Unit: dB Range: 0..6 dB Step: 0.25 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)	Unit: dB Range: 0..10 dB Step: 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.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Preamble Threshold			INTEGER (0..72)	Unit: dB Range: -36 .. 0 dB Step: 0.5 dB

9.2.2.33   Primary CPICH Power

The 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. If Transmit Diversity is applied to the Primary CPICH, the Primary CPICH power is the linear sum of the power that is used for transmitting the Primary CPICH on all branches.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Primary CPICH Power			INTEGER (-100..500)	Value = Primary CPICH Power/10 Unit: dBm Range: -10.0..+50.0 dBm Step: 0.1 dB

9.2.2.33A   Primary CPICH Usage For Channel Estimation

The *Primary CPICH Usage For Channel Estimation* IE indicates whether the Primary CPICH may be used for channel estimation or not.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Primary CPICH Usage For Channel Estimation			ENUMERATED (Primary CPICH may be used, Primary CPICH shall not be used)	

9.2.2.34 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

The 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)	Unit: chip Range: 0..765 chips Step: 3 chips

9.2.2.36 QE-Selector

Void.

9.2.2.36A Qth Parameter

This parameter indicates the Quality threshold for reliable detection of Primary Cell ID in SSDT [10].

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Qth Parameter			INTEGER (-20..0)	Unit dB Step 1 dB

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 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,…)	

9.2.2.43A Secondary CPICH Information Change

The *Secondary CPICH Information Change* IE indicates modification of information of the Secondary CPICH for channel estimation.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
CHOICE *Secondary CPICH Information Change*				
>*New Secondary CPICH*				
>>Secondary CPICH Information	M		Common Physical Channel ID 9.2.1.13	
>*Secondary CPICH Shall Not Be Used*			NULL	

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)	Unit: chip Range: 0..2304 chips Step: 256 chips See ref. [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 Description
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") "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. "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..<maxT GPS>*		
>TGPS 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). Unit: dB Range: 0..3 dB Step: 0.1 dB

>DeltaSIRafter1	M		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 first transmission gap in the transmission gap pattern. Unit: dB Range: 0..3 dB Step: 0.1 dB
>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). When omitted, DeltaSIR2 = DeltaSIR1. Unit: dB Range: 0..3 dB Step: 0.1 dB
>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. When omitted, DeltaSIRafter2 = DeltaSIRafter1. Unit: dB Range: 0..3 dB Step: 0.1 dB

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 [9].

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Transmission Gap Pattern Sequence Code Information			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, according 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 Range: -10 .. +10 dB Step: 1 dB.

9.2.3.4B DL Timeslot ISCP

The 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 Description	Criticality	Assigned Criticality
DCH TDD Information		*1..<maxno ofDCHs>*			–	
>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		–	
>>Unidirectional DCH Indicator	O		9.2.1.68		YES	ignore

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 Description
DCHs TDD To Modify		1..<maxno ofDCHs>		
>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..<maxno ofDCHs>		
>>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 Description
DL Timeslot Information		1..<maxno ofDLts>		
>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 Description
DL Time Slot ISCP Info		1..<maxno ofDLts>		
>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 synchronisation 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 synchronisation burst transmission/measurement is repeated. This means that if the Time Slot *K* is assigned to the cell synchronisation burst transmission/measurements in the Radio Frame *J*, the cell synchronisation 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 synchronisation 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 synchronisation burst of a neighbouring cell see [5].

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
CHOICE *Phase*				According to mapping in [23]
>*Initial Phase*				
>>Cell Synch Burst Timing Value	M		INTEGER (0..255)	
>*Steady State Phase*				
>>Cell Synch Burst Timing Value	M		INTEGER (0..1048575)	

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)	Unit: chip Range: 0 .. 31.75 chips Step: 0.125 chip

9.2.3.4N CSB Transmission ID

The *Cell Sync Burst Transmisson ID* IE uniquely identifies any cell synchronisation 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 Description	Criticality	Assigned Criticality
DL Timeslot Information LCR		1..<ma xnoofD LtsLCR >			–	
>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		–	
>Initial DL Transmission Power	O		DL Power 9.2.1.21	Initial power on DPCH	YES	ignore
>Maximum DL Power	O		DL Power 9.2.1.21	Maximum allowed power on DPCH	YES	ignore
>Minimum DL Power	O		DL Power 9.2.1.21	Minimum allowed power on DPCH	YES	ignore

Range Bound	Explanation
maxnoofDLtsLCR	Maximum number of Downlink time slots per Radio Link for 1.28Mcps TDD.

9.2.3.4P   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 Description
DL Time Slot ISCP Info LCR		*1..<maxno ofDLtsLCR >*		
>Time Slot LCR	M		9.2.3.24A	
>DL Timeslot ISCP	M		9.2.3.4B	

Range Bound	Explanation
maxnoofDLtsLCR	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 Description	Criticality	Assigned Criticality
DSCH TDD Information		*1..<max noofDS CHs>*			–	
>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. The reference point is the antenna connector. If Transmit Diversity is applied to the DwPCH, the DwPCH power is the linear sum of the power that is used for transmitting the DwPCH on all branches.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
DwPCH Power			INTEGER (-150..+400,…)	Unit: dBm Range: -15 ..+40 dBm Step: 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 3.84Mcps TDD when activated.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
IP SpacingTDD	M		ENUMERATED (30, 40, 50, 70, 100, ...)	See [21]
IP Start	M		INTEGER (0..4095)	See [21]
IP Slot	M		INTEGER (0..14)	See [21]
IP PCCPCH	M		ENUMERATED (Switch 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. The reference point is the antenna connector. If Transmit Diversity is applied to the FPACH, the Max FPACH Power is maximum of the linear sum of the power that is allowed for transmitting the FPACH on all branches.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
FPACH Power			INTEGER (-150..+400,…)	Unit: dBm Range: -15 ..+40 dBm Step: 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		–	
>Allocation/Retention Priority	M		9.2.1.1A		–	
>Binding ID	O		9.2.1.4	Shall be ignored if bearer establishment with ALCAP.	–	
>Transport Layer Address	O		9.2.1.63	Shall be ignored if bearer establishment with ALCAP.	–	
Priority Queue Information	M	*1..<maxno ofPrioQue ues>*			–	
>Priority Queue ID	M		9.2.1.49C		–	
>Associated HS-DSCH MAC-d Flow	M		HS-DSCH MAC-d Flow ID 9.2.1.31I		–	
>Scheduling Priority Indicator	M		9.2.1.53H		–	
>T1	M		9.2.1.56a		–	
>Discard Timer	O		9.2.1.24E		–	
>MAC-hs Window Size	M		9.2.1.38B		–	
>MAC-hs Guaranteed Bit Rate	O		9.2.1.38Aa		–	
>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 Physical Layer Category	M		9.2.1.31Ia		–	
>MAC-hs Reordering Buffer Size	M		9.2.1.38Ab		–	
TDD ACK NACK Power Offset	M		9.2.3.18F		–	

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 PDU SIDs

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..<max noofMA CdFlow s>*			–	
>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-DSCH Initial Capacity Allocation	O		9.2.1.31Ha		–	
HS-SCCH Specific Information Response		*0..<max NoOfHS SCCHc odes>*		Mandatory for 3.84 Mcps TDD, not applicable to 1.28 Mcps TDD	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*			–	
>>HS SICH ID	M		9.2.3.5Gb		–	
>>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..<max NoOfHS SCCHc odes>*		Mandatory for 1.28 Mcps TDD, not applicable to 3.84 Mcps TDD	GLOBAL	reject
>Time Slot LCR	M		9.2.3.24A		–	
>Midamble Shift LCR	M		9.2.3.7A		–	
>First TDD Channelisation Code	M		TDD Channelisatio n Code 9.2.3.19		–	
>Second TDD Channelisation Code	M		TDD Channelisatio n Code 9.2.3.19		-	
>HS-SICH Information LCR		*1*			–	
>>HS SICH ID	M		9.2.3.5Gb			
>>Time Slot LCR	M		9.2.3.24A		–	
>>Midamble Shift LCR	M		9.2.3.7A		–	
>>TDD Channelisation Code	M		9.2.3.19		–	
CHOICE *HARQ Memory Partitioning*	M				–	
>Implicit					–	
>>Number of Processes	M		INTEGER (1..8,...)		–	
>Explicit					–	
>>HARQ Memory Partitioning Infomation		*1..<max noofHA RQproc esses>*			–	
>>>Process Memory Size	M		9.2.1.49D	See [18]	–	

Range Bound	Explanation
maxnoofMACdFlows	Maximum number of HS-DSCH MAC-d flows.
maxnoofHSSCCHcodes	Maximum number of HS-SCCH codes

9.2.3.5GA   HS-DSCH TDD Update Information

The *HS-DSCH TDD Update Information* IE provides information for HS-DSCH to be updated. At least one IE shall be present.

IE/Group Name	Presence	Range	IE Type and Reference	Semantic Description	Criticality	Assigned Criticality
HS-SCCH Code Change Indicator	O		9.2.1.31K		–	
TDD ACK NACK Power Offset	O		9.2.3.18F		–	

9.2.3.5Ga   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)	

9.2.3.5Gb   HS-SICH ID

The HS-SICH ID identifies unambiguously a HS-SICH.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
HS SICH ID			INTEGER (0..31)	

9.2.3.5H   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 Description
IP SpacingTDD	M		ENUMERATED (30, 40, 50, 70, 100, ...)	See [21]
IP Start	M		INTEGER (0..4095)	See [21]
IP_Sub	M		ENUMERATED (First, Second, 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 Shift			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 is allocated by layer 1 depending on the associated channelisation code (DL and UL)

Common midamble: the midamble is allocated by layer 1 depending on the number of channelisation codes (possible in DL only)

UE specific midamble: a UE specific midamble is explicitly assigned (DL and UL)

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
CHOICE *Burst Type*				
>*Type1*				
>>Midamble Configuration Burst Type 1 And 3	M		INTEGER (4, 8, 16)	As defined in [19]
>>CHOICE *Midamble Allocation Mode*	M			
>>>*Default Midamble*			NULL	
>>>*Common Midamble*			NULL	
>>>*UE Specific Midamble*				
>>Midamble Shift Long	M		INTEGER (0..15)	
>*Type2*				
>>Midamble Configuration Burst Type 2	M		INTEGER (3,6)	As defined in [19]
>>CHOICE *Midamble Allocation Mode*	M			
>>>*Default Midamble*			NULL	
>>>*Common Midamble*			NULL	
>>>*UE Specific Midamble*				
>>Midamble Shift Short	M		INTEGER (0..5)	
>*Type3*				UL only
>>Midamble Configuration Burst Type 1 And 3	M		INTEGER (4, 8, 16)	As defined in [19]
>>CHOICE *Midamble Allocation Mode*	M			
>>>*Default Midamble*			NULL	
>>>*UE Specific Midamble*				
>>Midamble Shift Long	M		INTEGER (0..15)	

9.2.3.7A Midamble Shift LCR

This information element indicates midamble allocation in 1.28Mcps TDD.

Three different midamble allocation schemes exist:

Default midamble: the midamble is allocated by layer 1 depending on the associated channelisation code (DL and UL)

Common midamble: the midamble is allocated by layer 1 depending on the number of channelisation codes (possible in DL only)

UE specific midamble: a UE specific midamble is explicitly assigned (DL and UL)

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Midamble Allocation Mode	M		ENUMERATED (Default midamble, Common midamble, UE specific midamble, …)	
Midamble Shift Long	C-UE		INTEGER (0..15)	
Midamble Configuration LCR	M		ENUMERATED (2, 4, 6, 8, 10, 12, 14, 16, ...)	As defined in [19]

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 synchronisation bursts] [1.28Mcps TDD – Sync_DL Codes] shall be transmitted or the cell synchronisation 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

The 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. If Transmit Diversity is applied to the Primary CCPCH, the Primary CCPCH power is the linear sum of the power that is used for transmitting the Primary CCPCH on all branches.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
PCCPCH Power			INTEGER (-15..+40,…)	Unit: dBm Range: -15 ..+40 dBm Step: 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..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 synchronisation bursts shall be transmitted or the cell synchronisation 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 synchronisation bursts] [1.28Mcps TDD – Sync_DL Codes] shall be performed

Different methods shall apply for the measured [3.84Mcps TDD - cell synchronisation 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..<maxno ofCellSync Bursts>		Mandatory for 3.84Mcps TDD. Not Applicable to 1.28Mcps TDD.
>>Sync Frame Number To Receive	M		Sync Frame Number 9.2.3.18C	
>>Cell Sync Burst Information		1..<maxno ofreceptio nsperSync Frame>		
>>>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..<maxno ofSyncFra mesLCR>		Mandatory for 1.28Mcps TDD. Not Applicable to 3.84Mcps TDD.
>>Sync Frame Number To Receive	M		Sync Frame Number 9.2.3.18C	
>>SYNC_DL Code Information LCR		1..<maxno ofreceptio nsperSync FrameLCR >		
>>>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 synchronisation burst per cycle for 3.84Mcps TDD
maxnoofreceptionsperSyncFrame	Maximum number of cell synchronisation 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			ENUMERATED (Initial Phase, Steady-State Phase, Late-Entrant Cell, Frequency Acquisition, ...)	

9.2.3.18F   TDD ACK NACK Power Offset

The *TDD ACK NACK Power Offset* IE indicates Power offset used in the UL in the HS-SICH between transmissions carrying positive and negative acknowledgements as per [18].

IE/Group Name	Presence	Range	IE type and reference	Semantics description
TDD ACK NACK Power Offset			INTEGER (-7..8,…)	Unit: dB Range: -7..+8 dB Step: 1 dB

9.2.3.19   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			ENUMERATED ((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			9.2.3.19	
Modulation			ENUMERATED (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
CHOICE *Offset Type*				
>*Initial Offset*				
>>TDD DPCH Offset Value	M		INTEGER (0..255)	
>*No Initial Offset*				
>>TDD DPCH Offset Value	M		INTEGER (0..63)	

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 Description
TDD DL Code Information		1..<*maxno ofDPCHs*>		
>DPCH ID	M		9.2.3.5	
>TDD Channelisation Code	M		9.2.3.19	

Range Bound	Explanation
maxnoofDPCHs	Maximum number of DPCHs 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 Description
TDD DL Code Information LCR		1..<*maxno ofDPCHsL CR*>		
>DPCH ID	M		9.2.3.5	
>TDD Channelisation Code LCR	M		9.2.3.19a	
>TDD DL DPCH Time Slot Format LCR	M		9.2.3.19D	

Range Bound	Explanation
maxnoofDPCHsLCR	Maximum number of DPCH in one CCTrCH for 1.28Mcps TDD

9.2.3.19D   TDD DL DPCH Time Slot Format LCR

TDD DL DPCH Time Slot Format LCR indicates the time slot formats used in DL DPCH for 1.28Mcps TDD (see ref. [19]).

IE/Group Name	Presence	Range	IE type and reference	Semantics description
CHOICE *Modulation*				
> *QPSK*				
>>QPSK TDD DL DPCH Time Slot Format LCR	M		INTEGER (0..24,…)	
> *8PSK*				
>>8PSK TDD DL DPCH Time Slot Format LCR	M		INTEGER (0..24,…)	

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 (see ref. [21]).

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
TDD TPC Downlink Step Size			ENUMERATED (1, 2, 3,…)	Unit: dB

9.2.3.21a   TDD TPC UL Step Size

This parameter indicates step size for the UL power adjustment (see ref. [21]).

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
TDD TPC Uplink Step Size			ENUMERATED (1, 2, 3,…)	Unit: dB

9.2.3.21A   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 Description
TDD UL Code Information		1..<*maxnoofDPCHs*>		
>DPCH ID	M		9.2.3.5	
>TDD Channelisation Code	M		9.2.3.19	

Range Bound	Explanation
maxnoofDPCHs	Maximum number of DPCHs 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 Description
TDD UL Code Information LCR		*1..<maxnoofDPCHsLCR>*		
>DPCH ID	M		9.2.3.5	
>TDD Channelisation Code LCR	M		9.2.3.19a	
>TDD UL DPCH Time Slot Format LCR	M		9.2.3.21C	

Range Bound	Explanation
maxnoofDPCHsLCR	Maximum number of DPCHs in one CCTrCH for 1.28Mcps TDD

9.2.3.21C   TDD UL DPCH Time Slot Format LCR

TDD UL DPCH Time Slot Format LCR indicates the time slot formats used in UL DPCH for 1.28Mcps TDD (see ref. [19]).

IE/Group Name	Presence	Range	IE type and reference	Semantics description
CHOICE *Modulation*				
> *QPSK*				
>>QPSK TDD UL DPCH Time Slot Format LCR	M		INTEGER (0..69,…)	
> *8PSK*				
>>8PSK TDD UL DPCH Time Slot Format LCR	M		INTEGER (0..24,…)	

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
CHOICE *Phase*				According to mapping in [23]
>*Initial Phase*				
>>Timing Adjustment Value	M		INTEGER (0..255)	
>*Steady State Phase*				
>>Timing Adjustment Value	M		INTEGER (0..1048575)	

9.2.3.22A Timing Advance Applied

Defines the need for Rx Timing Deviation measurement results to be reported in a particular cell.

[1.28Mcps TDD - this IE shall be set to "No".]

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Timing Advance Applied			ENUMERATED (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, Not Active, …)	

9.2.3.26 Transmission Diversity Applied

Defines if Transmission Diversity on DCHs is to be applied in a cell (see ref. [19]).

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Transmission Diversity Applied			BOOLEAN	True: Transmission Diversity shall be applied in this Cell. False: Transmission Diversity shall not be applied in this Cell.

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 Description
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 Description
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 Description
UL Timeslot Information LCR		*1..<maxnoofULtsLCR>*		
>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 Description
UL Time Slot ISCP Info LCR		*1..<maxnoofULtsLCR>*		
>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

9.2.3.26G   Uplink Synchronisation Frequency

The *UL Synchronisation Frequency* IE specifies the frequency of the adjustment of the uplink transmission timing.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Uplink Synchronisation Frequency			INTEGER (1..8)	Unit: subframe Step: 1

9.2.3.26H   Uplink Synchronisation Step Size

The *UL Synchronisation Step Size* IE specifies the step size to be used for the adjustment of the uplink transmission timing.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Uplink Synchronisation Step Size			INTEGER (1..8)	Unit: 1/8 chip Step: 1.

9.2.3.27   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 Description	Criticality	Assigned Criticality
USCH Information		*1..<max noofUS CHs>*			–	
>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 USCHs 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 Description
USCH Information Response		*1..<maxno ofUSCHs>*		
>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].

IE/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,
```

```
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,
RadioLinkParameterUpdateIndicationFDD,
RadioLinkParameterUpdateIndicationTDD,
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,
```

ETSI

```
    id-radioLinkAddition,
    id-radioLinkDeletion,
    id-radioLinkFailure,
    id-radioLinkParameterUpdate,
    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,
    ...
}

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                      |
    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                                   |
    radioLinkParameterUpdateFDD                              |
    radioLinkParameterUpdateTDD
}

-- ***************************************************************
--
-- 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
```

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```
    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
}
```

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```
-- *** SynchronisedRadioLinkReconfigurationPreparation (FDD) ***
synchronisedRadioLinkReconfigurationPreparationFDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      RadioLinkReconfigurationPrepareFDD
    SUCCESSFUL OUTCOME      RadioLinkReconfigurationReady
    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) ***
physicalSharedChannelReconfigurationTDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE  PhysicalSharedChannelReconfigurationRequestTDD
    SUCCESSFUL OUTCOME  PhysicalSharedChannelReconfigurationResponse
    UNSUCCESSFUL OUTCOME    PhysicalSharedChannelReconfigurationFailure
    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 }
```

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```
    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
```

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```
    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
}

-- *** RadioLinkParameterUpdate (FDD) ***
radioLinkParameterUpdateFDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE       RadioLinkParameterUpdateIndicationFDD
    MESSAGE DISCRIMINATOR    dedicated
    PROCEDURE ID             { procedureCode id-radioLinkParameterUpdate, ddMode fdd }
    CRITICALITY              ignore
}

-- *** RadioLinkParameterUpdate (TDD) ***
radioLinkParameterUpdateTDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE       RadioLinkParameterUpdateIndicationTDD
    MESSAGE DISCRIMINATOR    dedicated
    PROCEDURE ID             { procedureCode id-radioLinkParameterUpdate, 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,
    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,
```

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```
        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,
        HS-SICH-ID,
        IB-OC-ID,
        IB-SG-DATA,
        IB-SG-POS,
        IB-SG-REP,
        IB-Type,
        InformationExchangeID,
        InformationReportCharacteristics,
        InformationType,
        InnerLoopDLPCStatus,
        IPDL-FDD-Parameters,
        IPDL-TDD-Parameters,
        IPDL-Indicator,
        IPDL-TDD-Parameters-LCR,
        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,
```

ETSI

```
NodeB-CommunicationContextID,
NumberOfReportedCellPortion,
NStartMessage,
NSubCyclesPerCyclePeriod,
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,
Primary-CPICH-Usage-for-Channel-Estimation,
PrimaryScramblingCode,
PropagationDelay,
SCH-TimeSlot,
PunctureLimit,
PUSCHSet-ID,
PUSCH-ID,
QE-Selector,
Qth-Parameter,
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,
Secondary-CPICH-Information-Change,
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,
```

ETSI

```
        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,
        HSDSCH-FDD-Update-Information,
        HSDSCH-TDD-Update-Information,
        UL-Synchronisation-Parameters-LCR,
        TDD-DL-DPCH-TimeSlotFormat-LCR,
        TDD-UL-DPCH-TimeSlotFormat-LCR,
        TDD-TPC-UplinkStepSize-LCR
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,
```

ETSI

```
id-BlockingPriorityIndicator,
id-Cause,
id-CauseLevel-PSCH-ReconfFailure,
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,
```

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        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,
```

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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,
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        id-MeasurementID,
        id-MIB-SB-SIB-InformationList-SystemInfoUpdateRqst,
        id-NCyclesPerSFNperiod,
        id-NeighbouringCellMeasurementInformation,
        id-NodeB-CommunicationContextID,
        id-NRepetitionsPerCyclePeriod,
        id-NumberOfReportedCellPortion,
        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-PDSCH-RL-ID,
        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,
        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-Primary-CPICH-Usage-for-Channel-Estimation,
        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,
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id-PUSCH-Information-ModifyListIE-PSCH-ReconfRqst,
id-PUSCHConstant,
id-PUSCHSets-AddList-PSCH-ReconfRqst,
id-PUSCHSets-DeleteList-PSCH-ReconfRqst,
id-PUSCHSets-ModifyList-PSCH-ReconfRqst,
id-Qth-Parameter,
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,
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,
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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-Secondary-CPICH-Information-Change,
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,
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,
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        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-DwPCH-LCR-Information,
        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,
        id-FPACH-LCR-InformationList-AuditRsp,
        id-FPACH-LCR-InformationList-ResourceStatusInd,
        id-FPACH-LCR-Parameters-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-PRACH-LCR-ParametersList-CTCH-SetupRqstTDD,
       id-RL-InformationResponse-LCR-RL-SetupRspTDD,
        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-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-InformationModify-AddList-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-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,
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-SYNCDlCodeId-TransInitLCR-CellSyncInitiationRqstTDD,
id-SYNCDlCodeId-MeasureInitLCR-CellSyncInitiationRqstTDD,
id-SYNCDlCodeIdTransReconfInfoLCR-CellSyncReconfRqstTDD,
id-SYNCDlCodeIdMeasReconfigurationLCR-CellSyncReconfRqstTDD,
id-SYNCDlCodeIdMeasInfoList-CellSyncReconfRqstTDD,
id-SyncDLCodeIdsMeasInfoList-CellSyncReprtTDD,
id-NSubCyclesPerCyclePeriod-CellSyncReconfRqstTDD,
id-DwPCH-Power,
id-AccumulatedClockupdate-CellSyncReprtTDD,
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-RearrangeList-Bearer-RearrangeInd,
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-HSSICH-Info-DM-Rprt,
```

```
    id-HSSICH-Info-DM-Rqst,
    id-HSSICH-Info-DM-Rsp,
    id-PrimCCPCH-RSCP-DL-PC-RqstTDD,
    id-HSDSCH-FDD-Update-Information,
    id-HSDSCH-TDD-Update-Information,
    id-UL-Synchronisation-Parameters-LCR,
    id-DL-DPCH-TimeSlotFormat-LCR-ModifyItem-RL-ReconfPrepTDD,
    id-UL-DPCH-TimeSlotFormat-LCR-ModifyItem-RL-ReconfPrepTDD,
    id-CCTrCH-Maximum-DL-Power-RL-SetupRqstTDD,
    id-CCTrCH-Minimum-DL-Power-RL-SetupRqstTDD,
    id-CCTrCH-Maximum-DL-Power-RL-AdditionRqstTDD,
    id-CCTrCH-Minimum-DL-Power-RL-AdditionRqstTDD,
    id-CCTrCH-Maximum-DL-Power-InformationAdd-RL-ReconfPrepTDD,
    id-CCTrCH-Minimum-DL-Power-InformationAdd-RL-ReconfPrepTDD,
    id-CCTrCH-Maximum-DL-Power-InformationModify-RL-ReconfPrepTDD,
    id-CCTrCH-Minimum-DL-Power-InformationModify-RL-ReconfPrepTDD,
    id-Maximum-DL-Power-Modify-LCR-InformationModify-RL-ReconfPrepTDD,
    id-Minimum-DL-Power-Modify-LCR-InformationModify-RL-ReconfPrepTDD,
    id-DL-DPCH-LCR-InformationModify-ModifyList-RL-ReconfRqstTDD,
    id-CCTrCH-Maximum-DL-Power-InformationModify-RL-ReconfRqstTDD,
    id-CCTrCH-Minimum-DL-Power-InformationModify-RL-ReconfRqstTDD,
    id-TDD-TPC-UplinkStepSize-LCR-RL-SetupRqstTDD,
    id-TDD-TPC-UplinkStepSize-LCR-RL-AdditionRqstTDD,
    id-TDD-TPC-DownlinkStepSize-RL-AdditionRqstTDD,
    id-TDD-TPC-UplinkStepSize-InformationAdd-LCR-RL-ReconfPrepTDD,
    id-TDD-TPC-UplinkStepSize-InformationModify-LCR-RL-ReconfPrepTDD,
    id-TDD-TPC-DownlinkStepSize-InformationModify-RL-ReconfPrepTDD,
    id-TDD-TPC-DownlinkStepSize-InformationAdd-RL-ReconfPrepTDD,
    id-TimeslotISCP-LCR-InfoList-RL-ReconfPrepTDD,


    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,
        maxIB,
        maxIBSEG,
        maxNrOfHSSCCHs,
        maxNrOfHSSICHs,
        maxNrOfHSPDSCHs,
        maxNrOfSyncFramesLCR,
        maxNrOfReceptionsperSyncFrameLCR,
        maxNrOfSyncDLCodesLCR,
        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,
    ...
```

```
}

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 ::= {
    ...
}
```

ETSI

```
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   },  -- Mandatory for 1.28Mcps TDD, Not Applicable to 3.84Mcps TDD
    ...
}

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, Not Applicable to 1.28Mcps TDD
}

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,
    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 }|
    -- Applicable to 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 }|
    -- Applicable to 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, Not Applicable to 3.84Mcps TDD
    { 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, Not Applicable to 1.28Mcps TDD


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 ::= 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,
    second-TDD-ChannelisationCodeLCR        TDD-ChannelisationCodeLCR,
    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 ::= 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,
    s-CCPCH-TimeSlotFormat-LCR                  TDD-DL-DPCH-TimeSlotFormat-LCR,
    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, Not Applicable to 3.84Mcps TDD
    { ID    id-FPACH-LCR-Parameters-CTCH-SetupRqstTDD              CRITICALITY reject      EXTENSION                    FPACH-LCR-Parameters-CTCH-
SetupRqstTDD        PRESENCE    optional    }, -- Mandatory for 1.28Mcps TDD, Not Applicable to 3.84Mcps TDD
    ...
}

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, Not Applicable to 1.28Mcps TDD


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 ::= 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,
    midambleShiftLCR                            MidambleShiftLCR,
    rACH                                        RACH-Parameter-CTCH-SetupRqstTDD,
    iE-Extensions                               ProtocolExtensionContainer  { { PRACH-LCR-ParametersItem-CTCH-SetupRqstTDD-ExtIEs} }   OPTIONAL,
    ...
}

PRACH-LCR-ParametersItem-CTCH-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

FPACH-LCR-Parameters-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 ::= {
    ...
}

-- ****************************************************************
```

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

-- *************************************************************
```

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```
--
-- 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 }}

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 1.28Mcps TDD, Not Applicable to 3.84Mcps TDD
    ...
}
```

```
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 },
    --  Applicable to 1.28Mcps 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 },
    ... -- Applicable to 1.28Mcps 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 ::= {
    ...
}

-- **************************************************************
--
-- 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
--
-- **************************************************************
```

ETSI

```
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
```

ETSI

```
--
-- **************************************************************

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,
    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 }|
    -- Applicable to 1.28Mcps TDD only
    { ID id-DwPCH-LCR-InformationList-AuditRsp      CRITICALITY ignore  EXTENSION   Common-PhysicalChannel-Status-Information       PRESENCE
optional    },
    -- Applicable to 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 }
}

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 }
}

Local-Cell-InformationList-AuditRsp  ::=SEQUENCE (SIZE (1..maxLocalCellinNodeB)) OF ProtocolIE-Single-Container {{ Local-Cell-InformationItemIE-
AuditRsp }}

Local-Cell-InformationItemIE-AuditRsp NBAP-PROTOCOL-IES ::= {
    { 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,
    commonChannelsCapacityConsumptionLaw      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,
    commonChannelsCapacityConsumptionLaw        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   }|
    { 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,   -- Applicable to 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      }|
    -- Applicable to 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 ::= {
    ...
}

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 ::= {
    ...
```

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```
}


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 ::= {
    ...
}

-- **************************************************************
--
-- 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,
    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 ::= {
    ...
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```
}

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 ::= {
    ...
}

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    }|  -- This IE shall be ignored by the Node B.
    { ID    id-PUSCHConstant                                       CRITICALITY    reject    TYPE              ConstantValue
            PRESENCE    mandatory    }|  -- This IE shall be ignored by the Node B.
    { ID    id-PRACHConstant                                       CRITICALITY    reject    TYPE              ConstantValue
            PRESENCE    mandatory    }|  -- This IE shall be ignored by the Node B.
    { 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, Not Applicable to 1.28Mcps TDD
    { ID    id-PCCPCH-Information-Cell-SetupRqstTDD                 CRITICALITY    reject    TYPE              PCCPCH-Information-Cell-
SetupRqstTDD            PRESENCE    optional    }|  -- Mandatory for 3.84Mcps TDD, Not Applicable to 1.28Mcps TDD
    { ID    id-TimeSlotConfigurationList-Cell-SetupRqstTDD         CRITICALITY    reject    TYPE              TimeSlotConfigurationList-Cell-
SetupRqstTDD         PRESENCE    optional    },  -- Mandatory for 3.84Mcps TDD, Not Applicable to 1.28Mcps TDD
    ...
}

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, Not Applicable to 3.84Mcps TDD
    { ID    id-PCCPCH-LCR-Information-Cell-SetupRqstTDD            CRITICALITY    reject    EXTENSION     PCCPCH-LCR-Information-Cell-
SetupRqstTDD            PRESENCE    optional    }|  -- Mandatory for 1.28Mcps TDD, Not Applicable to 3.84Mcps TDD
    { ID    id-DwPCH-LCR-Information-Cell-SetupRqstTDD             CRITICALITY    reject    EXTENSION     DwPCH-LCR-Information-Cell-
SetupRqstTDD            PRESENCE    optional    }|  -- Mandatory for 1.28Mcps TDD, Not Applicable to 3.84Mcps TDD
    { ID    id-ReferenceSFNoffset    CRITICALITY    ignore       EXTENSION ReferenceSFNoffset                 PRESENCE optional }|
    { ID    id-IPDLParameter-Information-Cell-SetupRqstTDD         CRITICALITY    reject    EXTENSION     IPDLParameter-Information-
Cell-SetupRqstTDD    PRESENCE    optional }|  -- Applicable to 3.84Mcps TDD only
    { ID    id-IPDLParameter-Information-LCR-Cell-SetupRqstTDD     CRITICALITY    reject                   EXTENSION    IPDLParameter-
Information-LCR-Cell-SetupRqstTDD    PRESENCE    optional },  -- Applicable to 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,
    ...
}

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
```

ETSI

```
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,
    dwPCH-Power                         DwPCH-Power,
    iE-Extensions                       ProtocolExtensionContainer { { DwPCH-LCR-Information-Cell-SetupRqstTDD-ExtIEs} }     OPTIONAL,
    ...
}

DwPCH-LCR-Information-Cell-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

ETSI

```
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 ::= {
    ...
}

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    }| -- Applicable to 3.84Mcps TDD only
    { ID   id-SCH-Information-Cell-ReconfRqstTDD         CRITICALITY    reject    TYPE                    SCH-Information-Cell-
ReconfRqstTDD            PRESENCE    optional    }| -- Applicable to 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    }|  -- This IE shall be ignored by the Node B.
    { ID   id-PUSCHConstant                             CRITICALITY    reject    TYPE                    ConstantValue
            PRESENCE        optional    }|  -- This IE shall be ignored by the Node B.
    { ID   id-PRACHConstant                             CRITICALITY    reject    TYPE                    ConstantValue
            PRESENCE    optional    }|  -- This IE shall be ignored by the Node B.
    { ID   id-TimeSlotConfigurationList-Cell-ReconfRqstTDD   CRITICALITY    reject    TYPE              TimeSlotConfigurationList-Cell-
ReconfRqstTDD        PRESENCE    optional    },  -- Applicable to 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, Not Applicable to 3.84Mcps TDD
    { ID   id-DwPCH-LCR-Information-Cell-ReconfRqstTDD    CRITICALITY    reject    EXTENSION            DwPCH-LCR-Information-Cell-
ReconfRqstTDD        PRESENCE optional}| -- Mandatory for 1.28Mcps TDD, Not Applicable to 3.84Mcps TDD
    { ID   id-IPDLParameter-Information-Cell-ReconfRqstTDD    CRITICALITY    reject    EXTENSION        IPDLParameter-Information-
Cell-ReconfRqstTDD PRESENCE    optional }| -- Applicable to 3.84Mcps TDD only
    { ID   id-IPDLParameter-Information-LCR-Cell-ReconfRqstTDD    CRITICALITY    reject                EXTENSION    IPDLParameter-
Information-LCR-Cell-ReconfRqstTDD PRESENCE    optional },      -- Applicable to 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                        PCCPCH-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 {
    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   }|
    { 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 {
```

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```
    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,
    commonChannelsCapacityConsumptionLaw    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-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,
    commonChannelsCapacityConsumptionLaw    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,
    commonChannelsCapacityConsumptionLaw        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 {
    local-Cell-Group-ID                   Local-Cell-ID,
    dl-or-global-capacityCredit           DL-or-Global-CapacityCredit    OPTIONAL,
    ul-capacityCredit                     UL-CapacityCredit              OPTIONAL,
    commonChannelsCapacityConsumptionLaw       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 ::= {
    ...
}

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, -- Applicable to 3.84Mcps TDD only
    iE-Extensions                       ProtocolExtensionContainer { { Cell-InformationItem-ResourceStatusInd-ExtIEs} } OPTIONAL,
    ...
}

Cell-InformationItem-ResourceStatusInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-FPACH-LCR-InformationList-ResourceStatusInd     CRITICALITY ignore     EXTENSION    FPACH-LCR-InformationList-ResourceStatusInd
    PRESENCE optional   }| -- Applicable to 1.28Mcps TDD only
    { ID id-DwPCH-LCR-Information-ResourceStatusInd         CRITICALITY ignore     EXTENSION    DwPCH-LCR-Information-ResourceStatusInd
    PRESENCE optional   }, -- Applicable to 1.28Mcps TDD only
    ...
}

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 }
}

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 ::= {
```

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```
    { 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 (1..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 ::= {
    ...
}

-- *************************************************************
--
-- 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 conditional }|
    -- The IE shall be present if HS-DSCH Information IE is present
    { ID id-HSPDSCH-RL-ID                        CRITICALITY reject  EXTENSION RL-ID                              PRESENCE conditional },
    -- The IE shall be present if HS-DSCH Information IE is present
    ...
}


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 ::= {
    { ID id-bindingID                       CRITICALITY ignore      EXTENSION   BindingID                       PRESENCE    optional }|
    { ID id-transportlayeraddress           CRITICALITY ignore      EXTENSION   TransportLayerAddress           PRESENCE    optional },
    ...
}

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 }|
    { ID id-Qth-Parameter    CRITICALITY ignore      EXTENSION   Qth-Parameter      PRESENCE optional }|
    { ID id-Primary-CPICH-Usage-for-Channel-Estimation     CRITICALITY ignore  EXTENSION   Primary-CPICH-Usage-for-Channel-Estimation     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 conditional }|
    -- The IE shall be present if HS-DSCH Information IE is present
    { ID id-HSPDSCH-RL-ID                 CRITICALITY reject     EXTENSION RL-ID                         PRESENCE conditional }|
    -- The IE shall be present if HS-DSCH Information IE is present
    { ID id-PDSCH-RL-ID                   CRITICALITY ignore     EXTENSION RL-ID                         PRESENCE optional },
    ...
}

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,   -- Applicable to 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
    }| -- Applicable to 1.28Mcps TDD only
    { ID id-UL-SIRTarget          CRITICALITY reject      EXTENSION        UL-SIR      PRESENCE optional                }|
    -- Mandatory for 1.28Mcps TDD, Not Applicable to 3.84Mcps TDD.
    { ID id-TDD-TPC-UplinkStepSize-LCR-RL-SetupRqstTDD CRITICALITY reject  EXTENSION   TDD-TPC-UplinkStepSize-LCR PRESENCE optional },
    -- Mandatory for 1.28Mcps TDD, Not Applicable to 3.84Mcps TDD.
    ...
}

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 ::= 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,   -- Applicable to 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
    }| -- Applicable to 1.28Mcps TDD only
    { ID id-CCTrCH-Initial-DL-Power-RL-SetupRqstTDD     CRITICALITY ignore     EXTENSION DL-Power                       PRESENCE optional }|
    { ID id-CCTrCH-Maximum-DL-Power-RL-SetupRqstTDD     CRITICALITY ignore     EXTENSION DL-Power                       PRESENCE optional }|
    { ID id-CCTrCH-Minimum-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 ::= 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,   -- Applicable to 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   DL-TimeslotISCPInfoLCR    PRESENCE optional }|
    -- Applicable to 1.28Mcps TDD only
```

```
    { ID id-RL-Specific-DCH-Info    CRITICALITY ignore    EXTENSION    RL-Specific-DCH-Info    PRESENCE            optional }|
    { ID id-DelayedActivation CRITICALITY reject EXTENSION DelayedActivation PRESENCE optional }|
    { ID id-UL-Synchronisation-Parameters-LCR           CRITICALITY ignore     EXTENSION    UL-Synchronisation-Parameters-LCR     PRESENCE
    optional    },  -- Mandatory for 1.28Mcps TDD, Not Applicable to 3.84Mcps TDD
    ...
}


-- *************************************************************
--
-- 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,
    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 ::= {
    { 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, Not Applicable to 1.28Mcps TDD
    { 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, Not Applicable to 3.84Mcps TDD
    ...
}

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 }
```

ETSI

```
}

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,
    dSCH-InformationResponseList                    DSCH-InformationRespList-RL-SetupFailureFDD     OPTIONAL,
    tFCI2-BearerInformationResponse                 TFCI2-BearerInformationResponse     OPTIONAL,
    -- There shall be only one TFCI2 bearer per Node B Communication Context.
    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 }|
    { ID id-Qth-Parameter           CRITICALITY ignore  EXTENSION Qth-Parameter       PRESENCE optional }|
    { ID id-Primary-CPICH-Usage-for-Channel-Estimation      CRITICALITY ignore  EXTENSION Primary-CPICH-Usage-for-Channel-Estimation     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, -- Applicable to 3.84cps TDD only
```

```
    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 }| -- Applicable to 1.28cps TDD only
    { ID    id-TDD-TPC-UplinkStepSize-LCR-RL-AdditionRqstTDD   CRITICALITY reject  EXTENSION   TDD-TPC-UplinkStepSize-LCR  PRESENCE optional },
     -- Applicable to 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 }| -- Applicable to 1.28Mcps TDD only
    { ID id-CCTrCH-Initial-DL-Power-RL-AdditionRqstTDD     CRITICALITY ignore     EXTENSION DL-Power                  PRESENCE optional }|
    { ID id-TDD-TPC-DownlinkStepSize-RL-AdditionRqstTDD    CRITICALITY reject     EXTENSION TDD-TPC-DownlinkStepSize   PRESENCE optional }|
    { ID id-CCTrCH-Maximum-DL-Power-RL-AdditionRqstTDD     CRITICALITY ignore     EXTENSION DL-Power                  PRESENCE optional }|
    { ID id-CCTrCH-Minimum-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} -- Applicable to 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,   -- Applicable to 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     reject                        EXTENSION   DL-
TimeslotISCPInfoLCR         PRESENCE    optional }| -- Applicable to 1.28Mcps TDD only
    { ID id-RL-Specific-DCH-Info         CRITICALITY ignore      EXTENSION  RL-Specific-DCH-Info                     PRESENCE    optional }|
    { ID id-DelayedActivation CRITICALITY reject EXTENSION DelayedActivation PRESENCE optional }|
    { ID id-UL-Synchronisation-Parameters-LCR          CRITICALITY ignore      EXTENSION   UL-Synchronisation-Parameters-LCR     PRESENCE
    optional    },  -- Mandatory for 1.28Mcps TDD, Not Applicable to 3.84Mcps TDD
    ...
}

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 ::= {
    ...
}


-- *************************************************************
--
-- 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,
    sSDT-SupportIndicator                    SSDT-SupportIndicator,
```

```
    iE-Extensions                                  ProtocolExtensionContainer { { RL-InformationResponseItem-RL-AdditionRspFDD-ExtIEs} }
    OPTIONAL,
    ...
}

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, Not Applicable to 1.28Mcps TDD
```

```
    { 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, Not Applicable to 3.84Mcps TDD
    ...
}

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

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

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 {
    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
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-- ************************************************************

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,
    ...
}
```

```
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,
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    ...
}

AddOrModify-TFCI2-RL-ReconfPrepFDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-TFCI2BearerRequestIndicator     CRITICALITY     reject        EXTENSION   TFCI2BearerRequestIndicator     PRESENCE optional }|
    { ID id-bindingID                       CRITICALITY     ignore        EXTENSION   BindingID                       PRESENCE    optional }|
    { ID id-transportlayeraddress           CRITICALITY     ignore        EXTENSION   TransportLayerAddress           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 }|
    { ID id-Qth-Parameter               CRITICALITY ignore  EXTENSION  Qth-Parameter           PRESENCE optional }|
    { ID id-Primary-CPICH-Usage-for-Channel-Estimation     CRITICALITY ignore  EXTENSION   Primary-CPICH-Usage-for-Channel-Estimation     PRESENCE
optional }|
    { ID id-Secondary-CPICH-Information-Change       CRITICALITY ignore  EXTENSION   Secondary-CPICH-Information-Change     PRESENCE optional },
    ...
}

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 ::= {
    ...
```

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}

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--
-- RADIO LINK RECONFIGURATION PREPARE TDD
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-- *************************************************************

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 }|
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    { 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 }|
    { ID    id-PDSCH-RL-ID                           CRITICALITY ignore      EXTENSION RL-ID                                PRESENCE optional },
    ...
}

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-LCR-InformationAddListIE-RL-ReconfPrepTDD   CRITICALITY reject      EXTENSION UL-DPCH-LCR-InformationAddList-RL-ReconfPrepTDD
        PRESENCE optional }|    -- Applicable to 1.28Mcps TDD only
    { ID id-UL-SIRTarget        CRITICALITY reject      EXTENSION    UL-SIR    PRESENCE optional                }|
    -- Mandatory for 1.28Mcps TDD, Not Applicable to 3.84Mcps TDD.
    { ID id-TDD-TPC-UplinkStepSize-InformationAdd-LCR-RL-ReconfPrepTDD CRITICALITY reject  EXTENSION  TDD-TPC-UplinkStepSize-LCR    PRESENCE
optional    },
    -- Mandatory for 1.28Mcps TDD, Not Applicable to 3.84Mcps TDD.
    ...
}

UL-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 ::= 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 }|    -- Applicable to 1.28Mcps TDD only
    { ID id-UL-SIRTarget       CRITICALITY reject      EXTENSION        UL-SIR      PRESENCE optional                 }|
    -- Applicable to 1.28Mcps TDD only.
    { ID id-TDD-TPC-UplinkStepSize-InformationModify-LCR-RL-ReconfPrepTDD          CRITICALITY reject     EXTENSION   TDD-TPC-UplinkStepSize-LCR
    PRESENCE optional    },
    -- Applicable to 1.28Mcps TDD only
    ...
}


UL-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 ::= 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 },    -- Applicable to 1.28Mcps TDD only
    ...
}

UL-Timeslot-InformationModify-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfULTSs)) OF UL-Timeslot-InformationModify-ModifyItem-RL-
ReconfPrepTDD   -- Applicable to 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 -- Applicable to 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 ::= {
    { ID id-UL-DPCH-TimeSlotFormat-LCR-ModifyItem-RL-ReconfPrepTDD CRITICALITY reject   EXTENSION TDD-UL-DPCH-TimeSlotFormat-LCR   PRESENCE
optional},
```

```
    ...
}

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 }|    -- Applicable to 1.28Mcps TDD only
    { ID id-CCTrCH-Initial-DL-Power-RL-ReconfPrepTDD                 CRITICALITY ignore  EXTENSION DL-Power              PRESENCE optional }|
    { ID id-TDD-TPC-DownlinkStepSize-InformationAdd-RL-ReconfPrepTDD    CRITICALITY reject  EXTENSION TDD-TPC-DownlinkStepSize PRESENCE optional}|
    { ID id-CCTrCH-Maximum-DL-Power-InformationAdd-RL-ReconfPrepTDD CRITICALITY ignore  EXTENSION DL-Power              PRESENCE optional }|
    { ID id-CCTrCH-Minimum-DL-Power-InformationAdd-RL-ReconfPrepTDD CRITICALITY ignore  EXTENSION DL-Power              PRESENCE optional },
    ...
}

CCTrCH-TPCAddList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF CCTrCH-TPCAddItem-RL-ReconfPrepTDD        -- Applicable to 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 ::= 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 ::= {
    ...
}
```

```
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 }| -- Applicable to 1.28Mcps TDD only
    { ID id-TDD-TPC-DownlinkStepSize-InformationModify-RL-ReconfPrepTDD CRITICALITY reject  EXTENSION TDD-TPC-DownlinkStepSize PRESENCE optional}|
    { ID id-CCTrCH-Maximum-DL-Power-InformationModify-RL-ReconfPrepTDD    CRITICALITY ignore  EXTENSION DL-Power    PRESENCE optional }|
    { ID id-CCTrCH-Minimum-DL-Power-InformationModify-RL-ReconfPrepTDD    CRITICALITY ignore  EXTENSION DL-Power    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 }}
-- Applicable to 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 }
}

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 ::= 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 ::= {
    { ID id-Maximum-DL-Power-Modify-LCR-InformationModify-RL-ReconfPrepTDD   CRITICALITY ignore EXTENSION DL-Power      PRESENCE optional }|
    -- Applicable to 1.28Mcps TDD only
    { ID id-Minimum-DL-Power-Modify-LCR-InformationModify-RL-ReconfPrepTDD   CRITICALITY ignore  EXTENSION DL-Power      PRESENCE optional },
    -- Applicable to 1.28Mcps TDD only
    ...
}
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 (1..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 ::= {
```

```
    { ID id-DL-DPCH-TimeSlotFormat-LCR-ModifyItem-RL-ReconfPrepTDD    CRITICALITY    reject    EXTENSION TDD-DL-DPCH-TimeSlotFormat-LCR    PRESENCE
optional},
    ...
}

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 }|
    { ID id-UL-Synchronisation-Parameters-LCR           CRITICALITY ignore      EXTENSION   UL-Synchronisation-Parameters-LCR     PRESENCE
    optional    }|  -- Mandatory for 1.28Mcps TDD, Not Applicable to 3.84Mcps TDD
    { ID id-TimeslotISCP-LCR-InfoList-RL-ReconfPrepTDD  CRITICALITY ignore  EXTENSION DL-TimeslotISCPInfoLCR       PRESENCE optional },
    -- Applicable to 1.28Mcps TDD only
    ...
}

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    },
    ...
}

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, -- TDD only
    tFCI2-BearerInformationResponse                   TFCI2-BearerInformationResponse     OPTIONAL,
    -- FDD only. There shall be only one TFCI2 bearer per Node B Communication Context.
    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 }|
    -- FDD only
    { ID id-HSDSCH-TDD-Information-Response      CRITICALITY ignore      EXTENSION HSDSCH-TDD-Information-Response     PRESENCE optional },
    -- TDD only
    ...
}

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 },
    ...
```

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```
}

-- *****************************************************************
--
-- 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   reject      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 ::= {
    { ID id-UL-SIRTarget      CRITICALITY reject      EXTENSION      UL-SIR      PRESENCE    optional   },
    -- Applicable to 1.28Mcps TDD only
    ...
}

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 ::= {
    { ID id-DL-DPCH-LCR-InformationModify-ModifyList-RL-ReconfRqstTDD   CRITICALITY ignore  EXTENSION  DL-DPCH-LCR-InformationModify-ModifyList-RL-
ReconfRqstTDD        PRESENCE optional }|    -- Applicable to 1.28Mcps TDD only
    { ID id-CCTrCH-Maximum-DL-Power-InformationModify-RL-ReconfRqstTDD  CRITICALITY ignore  EXTENSION DL-Power        PRESENCE optional }|
    { ID id-CCTrCH-Minimum-DL-Power-InformationModify-RL-ReconfRqstTDD  CRITICALITY ignore  EXTENSION DL-Power        PRESENCE optional },
    ...
}
```

```
DL-DPCH-LCR-InformationModify-ModifyList-RL-ReconfRqstTDD ::= SEQUENCE {
    dL-Timeslot-LCR-InformationModify-ModifyList-RL-ReconfRqstTDD     DL-Timeslot-LCR-InformationModify-ModifyList-RL-ReconfRqstTDD   OPTIONAL,
    iE-Extensions                            ProtocolExtensionContainer { { DL-DPCH-LCR-InformationModify-ModifyList-RL-ReconfRqstTDD-ExtIEs} }
    OPTIONAL,
    ...
}

DL-DPCH-LCR-InformationModify-ModifyList-RL-ReconfRqstTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-Timeslot-LCR-InformationModify-ModifyList-RL-ReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfDLTSLCRs)) OF DL-Timeslot-LCR-InformationModify-
ModifyItem-RL-ReconfRqstTDD

DL-Timeslot-LCR-InformationModify-ModifyItem-RL-ReconfRqstTDD   ::= SEQUENCE {
    timeSlotLCR                              TimeSlotLCR,
    maxPowerLCR                              DL-Power   OPTIONAL,
    minPowerLCR                              DL-Power   OPTIONAL,
    iE-Extensions                           ProtocolExtensionContainer { { DL-Timeslot-LCR-InformationModify-ModifyItem-RL-ReconfRqstTDD-ExtIEs} }
        OPTIONAL,
    ...
}

DL-Timeslot-LCR-InformationModify-ModifyItem-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,
    ...
}
```

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```
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 }|
    { ID id-UL-Synchronisation-Parameters-LCR          CRITICALITY ignore     EXTENSION   UL-Synchronisation-Parameters-LCR    PRESENCE
    optional   },  -- Mandatory for 1.28Mcps TDD, Not Applicable to 3.84Mcps TDD
    ...
}

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

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, Not Applicable to 1.28Mcps TDD

    ...
}
```

```
DL-PowerTimeslotControlRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-TimeslotISCPInfoList-LCR-DL-PC-RqstTDD     CRITICALITY ignore         EXTENSION   DL-TimeslotISCPInfoLCR   PRESENCE optional }|
    -- Mandatory for 1.28Mcps TDD, Not Applicable to 3.84Mcps TDD
    { ID id-PrimCCPCH-RSCP-DL-PC-RqstTDD               CRITICALITY ignore         EXTENSION PrimaryCCPCH-RSCP       PRESENCE optional },
    ...
}

-- **************************************************************
--
-- 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    } |
    { 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 ::= {
    { ID    id-NumberOfReportedCellPortion  CRITICALITY reject  TYPE NumberOfReportedCellPortion                   PRESENCE optional },
    -- The IE shall be present if the Dedicated Measurement Type IE is set to "Best Cell Portions".
    ...
}

DedicatedMeasurementObjectType-DM-Rqst ::= CHOICE {
    rL                     RL-DM-Rqst,
    rLS                    RL-Set-DM-Rqst,        -- for FDD only
    all-RL                 AllRL-DM-Rqst,
    all-RLS                AllRL-Set-DM-Rqst,     -- for FDD only
    ...
}
```

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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, -- for TDD only
        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
    { ID id-HSSICH-Info-DM-Rqst     CRITICALITY reject              EXTENSION   HSSICH-Info-DM-Rqst             PRESENCE optional},
    -- TDD only
    ...
}

PUSCH-Info-DM-Rqst ::= SEQUENCE (SIZE (1..maxNrOfPUSCHs)) OF PUSCH-ID

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

RL-Set-DM-Rqst ::= SEQUENCE {
    rL-Set-InformationList-DM-Rqst         RL-Set-InformationList-DM-Rqst,
    iE-Extensions                          ProtocolExtensionContainer { { RL-SetItem-DM-Rqst-ExtIEs } }           OPTIONAL,
    ...
}

RL-SetItem-DM-Rqst-ExtIEs  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,  -- for FDD only
    all-RL                  RL-DM-Rsp,
    all-RLS                 RL-Set-DM-Rsp,  -- for FDD only
    ...
}

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,   -- for TDD only
    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
    {ID id-HSSICH-Info-DM-Rsp       CRITICALITY reject             EXTENSION   HS-SICH-ID                    PRESENCE optional},
    -- TDD only
    ...
}

PUSCH-Info-DM-Rsp ::= SEQUENCE (SIZE (1..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 ::= {
    ...
}

-- ****************************************************************
```

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```
--
-- 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,       -- for FDD only
    all-RL                               RL-DM-Rprt,
    all-RLS                              RL-Set-DM-Rprt,       -- for FDD only
    ...
}

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,        -- for TDD only
    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
    {ID id-HSSICH-Info-DM-Rprt        CRITICALITY reject                EXTENSION    HS-SICH-ID                           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 ::= {
    ...
}
```

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```
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, --TDD only
    rL-Set                RL-Set-RL-RestoreInd, --FDD only
    ...,
    cCTrCH                CCTrCH-RL-RestoreInd --TDD only
}

RL-RL-RestoreInd ::= SEQUENCE {
    rL-InformationList-RL-RestoreInd      RL-InformationList-RL-RestoreInd,
    iE-Extensions                         ProtocolExtensionContainer { { RLItem-RL-RestoreInd-ExtIEs } }          OPTIONAL,
    ...
 }

RLItem-RL-RestoreInd-ExtIEs 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}},
```

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```
    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,
    ...
}

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 ::= {
    { 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   },
    ...
}
```

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```
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-AddItem-PSCH-ReconfRqst
    PRESENCE   optional}, -- Mandatory for 1.28Mcps TDD
    ...
}

PDSCH-Information-AddList-PSCH-ReconfRqst ::= ProtocolIE-Single-Container {{ PDSCH-Information-AddListIEs-PSCH-ReconfRqst }}
-- Mandatory for 3.84Mcps TDD, Not Applicable to 1.28Mcps TDD

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,
    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..maxNrOfPDSCHs)) 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-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..maxNrOfPDSCHs)) 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 ::= {
    ...
}
```

ETSI

```
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-ModifyItem-PSCH-ReconfRqst
        PRESENCE   optional},  -- Mandatory for 1.28Mcps TDD, Not Applicable to 3.84Mcps TDD
    ...
}

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, Not Applicable to 1.28Mcps TDD
}

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-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,
    -- Mandatory for 3.84Mcps TDD, Not Applicable to 1.28Mcps TDD
    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-AddItem-PSCH-ReconfRqst
    PRESENCE   optional},  -- Mandatory for 1.28Mcps TDD, Not Applicable to 3.84Mcps TDD
    ...
}

PUSCH-Information-AddList-PSCH-ReconfRqst ::=  ProtocolIE-Single-Container {{ PUSCH-Information-AddListIEs-PSCH-ReconfRqst }}

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..maxNrOfPUSCHs)) 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-AddItem-PSCH-ReconfRqst ::= SEQUENCE {
    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.. maxNrOfULTSLCRs)) 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..maxNrOfPUSCHs)) 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,
    -- Applicable to 3.84Mcps TDD only
    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-ModifyItem-PSCH-ReconfRqst
         PRESENCE   optional},  -- Applicable to 1.28Mcps TDD only
    ...
}

PUSCH-Information-ModifyList-PSCH-ReconfRqst ::= ProtocolIE-Single-Container {{ PUSCH-Information-ModifyListIEs-PSCH-ReconfRqst }}

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-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..maxNrOfPUSCHs)) 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,
    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,
    dl-HS-PDSCH-Codelist-PSCH-ReconfRqst    DL-HS-PDSCH-Codelist-PSCH-ReconfRqst,
    maxHSDSCH-HSSCCH-Power               MaximumTransmissionPower   OPTIONAL,
    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-Codelist-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfHSPDSCHs)) OF TDD-ChannelisationCode
```

```
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,
    dl-HS-PDSCH-Codelist-LCR-PSCH-ReconfRqst    DL-HS-PDSCH-Codelist-LCR-PSCH-ReconfRqst,
    maxHSDSCH-HSSCCH-Power                   MaximumTransmissionPower    OPTIONAL,
    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 ::= {
    ...
}

DL-HS-PDSCH-Codelist-LCR-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfHSPDSCHs)) OF TDD-ChannelisationCode

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 {
    hsSICH-ID                               HS-SICH-ID,
    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,
    first-TDD-ChannelisationCode            TDD-ChannelisationCode,
    second-TDD-ChannelisationCode           TDD-ChannelisationCode,
    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 {
    hsSICH-ID                               HS-SICH-ID,
    timeSlotLCR                             TimeSlotLCR,
    midambleShiftLCR                        MidambleShiftLCR,
    tdd-ChannelisationCode              TDD-ChannelisationCode,
    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,
```

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```
    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 {
    hsSICH-ID                              HS-SICH-ID,
    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,
    first-TDD-ChannelisationCode           TDD-ChannelisationCode  OPTIONAL,
    second-TDD-ChannelisationCode          TDD-ChannelisationCode  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 {
    hsSICH-ID                              HS-SICH-ID,
    timeSlotLCR                            TimeSlotLCR     OPTIONAL,
    midambleShiftLCR                       MidambleShiftLCR    OPTIONAL,
    tdd-ChannelisationCode               TDD-ChannelisationCode  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
--
-- *************************************************************

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

PhysicalSharedChannelReconfigurationResponse-IEs NBAP-PROTOCOL-IES ::= {
    { ID   id-CriticalityDiagnostics        CRITICALITY    ignore    TYPE     CriticalityDiagnostics         PRESENCE optional },
    ...
}

PhysicalSharedChannelReconfigurationResponse-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}


-- *************************************************************
--
-- PHYSICAL SHARED CHANNEL RECONFIGURATION FAILURE
--
-- *************************************************************

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

PhysicalSharedChannelReconfigurationFailure-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-CauseLevel-PSCH-ReconfFailure       CRITICALITY ignore  TYPE CauseLevel-PSCH-ReconfFailure          PRESENCE mandatory }|
    { ID    id-CriticalityDiagnostics      CRITICALITY ignore    TYPE    CriticalityDiagnostics             PRESENCE optional },
    ...
```

```
}

PhysicalSharedChannelReconfigurationFailure-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CauseLevel-PSCH-ReconfFailure ::= CHOICE {
    generalCause            GeneralCauseList-PSCH-ReconfFailure,
    setSpecificCause        SetSpecificCauseList-PSCH-ReconfFailureTDD,
    ...
}

GeneralCauseList-PSCH-ReconfFailure ::= SEQUENCE {
    cause                   Cause,
    iE-Extensions           ProtocolExtensionContainer { { GeneralCauseItem-PSCH-ReconfFailure-ExtIEs} }        OPTIONAL,
    ...
}

GeneralCauseItem-PSCH-ReconfFailure-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,
    ...
```

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```
}

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    }|
    { 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,
    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 NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

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```
SYNCDlCodeIdMeasReconfigurationLCR-CellSyncReconfRqstTDD ::= ProtocolIE-Single-Container {{ SYNCDlCodeIdMeasInfoLCR-CellSyncReconfRqstTDD }}

SYNCDlCodeIdMeasInfoLCR-CellSyncReconfRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID id-SYNCDlCodeIdMeasInfoList-CellSyncReconfRqstTDD  CRITICALITY reject  TYPE SYNCDlCodeIdMeasInfoList-CellSyncReconfRqstTDD  PRESENCE
    mandatory }|
    { ID id-SynchronisationReportType                       CRITICALITY reject  TYPE SynchronisationReportType                       PRESENCE
    optional }|
    { ID id-SynchronisationReportCharacteristics            CRITICALITY reject  TYPE 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)) OF 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-SyncAdjustmntRqstTDD::= SEQUENCE (SIZE (1..maxCellinNodeB)) OF ProtocolIE-Single-Container {{ CellAdjustmentInfoItemIE-
SyncAdjustmntRqstTDD }}
```

```
CellAdjustmentInfoItemIE-SyncAdjustmntRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID id-CellAdjustmentInfoItem-SyncAdjustmentRqstTDD        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,
    ...
}
```

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```
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..maxNrOfSyncFramesLCR)) OF SyncDLCodeIdsMeasInfoItem-CellSyncReprtTDD
-- Mandatory for 1.28Mcps TDD only

SyncDLCodeIdsMeasInfoItem-CellSyncReprtTDD ::= SEQUENCE {
    sFN                                 SFN,
    syncDLCodeIdInfo-CellSyncReprtTDD   SyncDLCodeIdInfo-CellSyncReprtTDD,
    iE-Extensions                       ProtocolExtensionContainer { { SyncDLCodeIdsMeasInfoItem-CellSyncReprtTDD-ExtIEs } }    OPTIONAL,
    ...
}

SyncDLCodeIdsMeasInfoItem-CellSyncReprtTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

SyncDLCodeIdInfo-CellSyncReprtTDD ::= SEQUENCE (SIZE (1..maxNrOfReceptionsperSyncFrameLCR)) OF SyncDLCodeIdItem-CellSyncReprtTDD

SyncDLCodeIdItem-CellSyncReprtTDD ::= CHOICE {
    syncDLCodeIdAvailable               SyncDLCodeIdAvailable-CellSyncReprtTDD,
    syncDLCodeIDNotAvailable            NULL,
    ...
}

SyncDLCodeIdAvailable-CellSyncReprtTDD ::= SEQUENCE {
    syncDLCodeIdTiming          CellSyncBurstTiming,
    syncDLCodeIdSIR             CellSyncBurstSIR,
    iE-Extensions               ProtocolExtensionContainer { { SyncDLCodeIdAvailable-CellSyncReprtTDD-ExtIEs } }    OPTIONAL,
    ...
}

SyncDLCodeIdAvailable-CellSyncReprtTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- **************************************************************
--
-- BEARER REARRANGEMENT INDICATION
--
-- **************************************************************
```

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```
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       }|
    { ID    id-HSDSCH-RearrangeList-Bearer-RearrangeInd             CRITICALITY    ignore    TYPE       HSDSCH-RearrangeList-Bearer-
RearrangeInd                   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 ::= {
    ...
}

HSDSCH-RearrangeList-Bearer-RearrangeInd ::= SEQUENCE (SIZE (1..maxNrOfMACdFlows)) OF HSDSCH-RearrangeItem-Bearer-RearrangeInd

HSDSCH-RearrangeItem-Bearer-RearrangeInd ::= SEQUENCE {
    hsDSCH-MACdFlow-ID                               HSDSCH-MACdFlow-ID,
    iE-Extensions                                    ProtocolExtensionContainer { { HSDSCH-RearrangeItem-Bearer-RearrangeInd-ExtIEs} }    OPTIONAL,
    ...
}

HSDSCH-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 ::= {
    ...
```

```
}

-- **************************************************************
--
-- RADIO LINK PARAMETER UPDATE INDICATION FDD
--
-- **************************************************************

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

RadioLinkParameterUpdateIndicationFDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-CRNC-CommunicationContextID        CRITICALITY    reject    TYPE    NodeB-CommunicationContextID        PRESENCE mandatory  } |
    { ID id-HSDSCH-FDD-Update-Information       CRITICALITY    reject    TYPE    HSDSCH-FDD-Update-Information        PRESENCE optional },
    ...
}

RadioLinkParameterUpdateIndicationFDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- **************************************************************
--
-- RADIO LINK PARAMETER UPDATE INDICATION TDD
--
-- **************************************************************

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

RadioLinkParameterUpdateIndicationTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-CRNC-CommunicationContextID        CRITICALITY    reject    TYPE    NodeB-CommunicationContextID        PRESENCE mandatory  } |
    { ID id-HSDSCH-TDD-Update-Information       CRITICALITY    reject    TYPE    HSDSCH-TDD-Update-Information        PRESENCE optional },
    ...
}

RadioLinkParameterUpdateIndicationTDD-Extensions 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,
    maxHS-PDSCHCodeNrComp-1,
    maxHS-SCCHCodeNrComp-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,
    maxNrOfCellPortionsPerCell,
    maxNrOfCellPortionsPerCell-1,
    maxNrOfHSSCCHs,
    maxNrOfHSSCCHCodes,
    maxNrOfMACdFlows,
    maxNrOfMACdFlows-1,
    maxNrOfMACdPDUIndexes,
    maxNrOfMACdPDUIndexes-1,
    maxNrOfPriorityQueues,
```

ETSI

```
    maxNrOfPriorityQueues-1,
    maxNrOfHARQProcesses,
    maxNrOfSyncDLCodesLCR,
    maxNrOfSyncFramesLCR,
    maxNrOfContextsOnUeList,

    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,
    id-Angle-Of-Arrival-Value-LCR,
    id-SyncDLCodeIdThreInfoLCR,
    id-neighbouringTDDCellMeasurementInformationLCR,
    id-HS-SICH-Reception-Quality,
    id-HS-SICH-Reception-Quality-Measurement-Value,
    id-Initial-DL-Power-TimeslotLCR-InformationItem,
    id-Maximum-DL-Power-TimeslotLCR-InformationItem,
    id-Minimum-DL-Power-TimeslotLCR-InformationItem,
    id-TransmittedCarrierPowerOfAllCodesNotUsedForHS-PDSCHOrHS-SCCHTransmission,
    id-HS-DSCHRequiredPower,
    id-HS-DSCHProvidedBitRate,
    id-HS-DSCHRequiredPowerValue,
    id-HS-DSCHProvidedBitRateValue,
    id-Best-Cell-Portions-Value,
    id-Unidirectional-DCH-Indicator
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
-- ========================================

AckNack-RepetitionFactor ::= INTEGER (1..4,...)
-- Step: 1

Ack-Power-Offset ::= INTEGER (0..8,...)
-- According to mapping in ref. [9] subclause 4.2.1
```

```
Acknowledged-PCPCH-access-preambles ::= INTEGER (0..15,...)
-- According to mapping in [22].

Acknowledged-PRACH-preambles-Value ::= INTEGER(0..240,...)
-- According to mapping in [22].

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 {
    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

Best-Cell-Portions-Value::= SEQUENCE (SIZE (1..maxNrOfCellPortionsPerCell)) OF Best-Cell-Portions-Item

Best-Cell-Portions-Item ::= SEQUENCE {
```

```
    cellPortionID              CellPortionID,
    sIRValue                   SIR-Value,
    iE-Extensions              ProtocolExtensionContainer { { Best-Cell-Portions-Item-ExtIEs} }          OPTIONAL,
    ...
}

Best-Cell-Portions-Item-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

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 Binding ID.

BetaCD ::= INTEGER (0..15)

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-ActivatedOrAllocated,
    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,
    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-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,...)

CellPortionID   ::= INTEGER (0..maxNrOfCellPortionsPerCell-1,...)

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
}
```

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```
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,
        ...
}

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-UE-Positioning,
    sFN-SFN-Observed-Time-Difference,
    transmittedCarrierPowerOfAllCodesNotUsedForHS-PDSCHOrHS-SCCHTransmission,
    hS-DSCH-Required-Power,
    hS-DSCH-Provided-Bit-Rate
}

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
}
```

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```
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 }|
    { ID id-TransmittedCarrierPowerOfAllCodesNotUsedForHS-PDSCHOrHS-SCCHTransmission    CRITICALITY ignore TYPE
TransmittedCarrierPowerOfAllCodesNotUsedForHS-PDSCHOrHS-SCCHTransmissionValue       PRESENCE mandatory }|
    { ID id-HS-DSCHRequiredPower    CRITICALITY ignore  TYPE HS-DSCHRequiredPower       PRESENCE mandatory }|
    { ID id-HS-DSCHProvidedBitRate  CRITICALITY ignore  TYPE HS-DSCHProvidedBitRate    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)

CommonTransportChannel-InformationResponse ::= SEQUENCE {
    commonTransportChannelID        CommonTransportChannelID,
    bindingID                       BindingID              OPTIONAL,
    transportLayerAddress           TransportLayerAddress  OPTIONAL,
    iE-Extensions                   ProtocolExtensionContainer { { CommonTransportChannel-InformationResponse-ExtIEs} }   OPTIONAL,
    ...
```

```
}

CommonTransportChannel-InformationResponse-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

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
}

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,...)
```

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

CQI-Power-Offset ::= INTEGER (0..8,...)
-- According to mapping in ref. [9] subclause 4.2.1

CQI-RepetitionFactor ::= INTEGER (1..4,...)
-- Step: 1

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    },
    ...
}

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 {
```

ETSI

```
    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 ::= {
    { ID id-Unidirectional-DCH-Indicator   CRITICALITY ignore  EXTENSION Unidirectional-DCH-Indicator          PRESENCE optional },
    ...
}

DCH-InformationResponse ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-InformationResponseItem

DCH-InformationResponseItem ::= SEQUENCE {
    dCH-ID                              DCH-ID,
    bindingID                           BindingID            OPTIONAL,
    transportLayerAddress               TransportLayerAddress   OPTIONAL,
    iE-Extensions                       ProtocolExtensionContainer { { DCH-InformationResponseItem-ExtIEs} }    OPTIONAL,
    ...
}

DCH-InformationResponseItem-ExtIEs 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 ::= {
    { ID id-Unidirectional-DCH-Indicator   CRITICALITY ignore  EXTENSION Unidirectional-DCH-Indicator          PRESENCE optional },
    ...
}

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,
    ...
```

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```
}

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 ::= {
    ...
}
```

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```
DedicatedMeasurementType ::= ENUMERATED {
    sir,
    sir-error,
    transmitted-code-power,
    rscp,
    rx-timing-deviation,
    round-trip-time,
    ...,
    rx-timing-deviation-LCR,
    angle-Of-Arrival-LCR,
    hs-sich-quality,
    best-Cell-Portions

}

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  TYPE Angle-Of-Arrival-Value-LCR PRESENCE mandatory }|
    { ID id-HS-SICH-Reception-Quality   CRITICALITY reject  TYPE HS-SICH-Reception-Quality-Value  PRESENCE mandatory }|
    { ID id-Best-Cell-Portions-Value    CRITICALITY reject  TYPE Best-Cell-Portions-Value    PRESENCE mandatory },
    ...
}


DedicatedMeasurementValueInformation ::= CHOICE {
    measurementAvailable        DedicatedMeasurementAvailable,
    measurementnotAvailable     DedicatedMeasurementnotAvailable
}


DedicatedMeasurementAvailable::= SEQUENCE {
    dedicatedmeasurementValue       DedicatedMeasurementValue,
    cFN                             CFN                             OPTIONAL,
    ie-Extensions                   ProtocolExtensionContainer { { DedicatedMeasurementAvailableItem-ExtIEs} }         OPTIONAL,
    ...
}
```

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```
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,...)
-- According to mapping in [22].


DeltaSIR                 ::= INTEGER (0..30)
-- Unit dB, Step 0.1 dB, Range 0..3 dB.
```

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```
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 ::= {
    ...
}

DiscardTimer ::= ENUMERATED
{v20,v40,v60,v80,v100,v120,v140,v160,v180,v200,v250,v300,v400,v500,v750,v1000,v1250,v1500,v1750,v2000,v2500,v3000,v3500,v4000,v4500,v5000,v7500,
 ...
}

DiversityControlField ::= ENUMERATED {
    may,
    must,
    must-not,
    ...
}

DiversityMode ::= ENUMERATED {
    none,
    sTTD,
    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 ::= {
    { ID id-Initial-DL-Power-TimeslotLCR-InformationItem    CRITICALITY ignore   EXTENSION DL-Power                   PRESENCE optional }|
    -- Applicable to 1.28Mcps TDD only
    { ID id-Maximum-DL-Power-TimeslotLCR-InformationItem    CRITICALITY ignore   EXTENSION DL-Power                   PRESENCE optional }|
    -- Applicable to 1.28Mcps TDD only
    { ID id-Minimum-DL-Power-TimeslotLCR-InformationItem  CRITICALITY ignore    EXTENSION DL-Power                    PRESENCE optional },
    -- Applicable to 1.28Mcps TDD only
    ...
}

DL-FrameType ::= ENUMERATED {
    typeA,
    typeB,
    ...
}

DL-or-Global-CapacityCredit ::= INTEGER (0..65535)

DL-Power ::= INTEGER (-350..150)
-- Value = DL-Power/10
-- 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 ::= {
     ...
}

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 ::= 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


-- ==========================================
--  E
-- ==========================================

End-Of-Audit-Sequence-Indicator ::= ENUMERATED {
```

```
    end-of-audit-sequence,
    not-end-of-audit-sequence
}

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,
    ...
}
```

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```
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 ::= {
    ...
```

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}

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 ::= {

   ...
}

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HARQ-MemoryPartitioning ::= CHOICE {
   implicit        HARQ-MemoryPartitioning-Implicit,
   explicit        HARQ-MemoryPartitioning-Explicit,
   ...
   }

HARQ-MemoryPartitioning-Implicit   ::= SEQUENCE {
   number-of-Processes       INTEGER (1..8,...),
   iE-Extensions             ProtocolExtensionContainer { { HARQ-MemoryPartitioning-Implicit-ExtIEs } }    OPTIONAL,
   ...
}

HARQ-MemoryPartitioning-Implicit-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
   ...
}
```

```
HARQ-MemoryPartitioning-Explicit    ::= SEQUENCE {
    hARQ-MemoryPartitioningList         HARQ-MemoryPartitioningList,
    iE-Extensions                       ProtocolExtensionContainer { { HARQ-MemoryPartitioning-Explicit-ExtIEs } }    OPTIONAL,
    ...
}

HARQ-MemoryPartitioning-Explicit-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

HARQ-MemoryPartitioningList ::= SEQUENCE (SIZE (1..maxNrOfHARQProcesses)) OF HARQ-MemoryPartitioningItem

HARQ-MemoryPartitioningItem ::= SEQUENCE {
    process-Memory-Size                 ENUMERATED {
                                        hms800, hms1600, hms2400, hms3200, hms4000,
                                        hms4800, hms5600, hms6400, hms7200, hms8000,
                                        hms8800, hms9600, hms10400, hms11200, hms12000,
                                        hms12800, hms13600, hms14400, hms15200, hms16000,
                                        hms17600, hms19200, hms20800, hms22400, hms24000,
                                        hms25600, hms27200, hms28800, hms30400, hms32000,
                                        hms36000, hms40000, hms44000, hms48000, hms52000,
                                        hms56000, hms60000, hms64000, hms68000, hms72000,
                                        hms76000, hms80000, hms88000, hms96000, hms104000,
                                        hms112000, hms120000, hms128000, hms136000, hms144000,
                                        hms152000, hms160000, hms176000, hms192000, hms208000,
                                        hms224000, hms240000, hms256000, hms272000, hms288000,
                                        hms304000,...},
    iE-Extensions                       ProtocolExtensionContainer { { HARQ-MemoryPartitioningItem-ExtIEs } }    OPTIONAL,
    ...
}

HARQ-MemoryPartitioningItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

HS-DSCHProvidedBitRate ::= SEQUENCE (SIZE (1..16)) OF HS-DSCHProvidedBitRate-Item

HS-DSCHProvidedBitRate-Item ::= SEQUENCE {
    schedulingPriorityIndicator         SchedulingPriorityIndicator,
    hS-DSCHProvidedBitRateValue         HS-DSCHProvidedBitRateValue,
    iE-Extensions                       ProtocolExtensionContainer { { HS-DSCHProvidedBitRate-Item-ExtIEs} }    OPTIONAL,
    ...
}

HS-DSCHProvidedBitRate-Item-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

HS-DSCHProvidedBitRateValue ::= INTEGER(0..16777215,...)
-- Unit bit/s, Range 0..2^24-1, Step 1 bit


HS-DSCHRequiredPower ::= SEQUENCE (SIZE (1..16)) OF HS-DSCHRequiredPower-Item
```

```
HS-DSCHRequiredPower-Item ::= SEQUENCE {
    schedulingPriorityIndicator          SchedulingPriorityIndicator,
    hS-DSCHRequiredPowerValue            HS-DSCHRequiredPowerValue,
    hS-DSCHRequiredPowerPerUEInformation HS-DSCHRequiredPowerPerUEInformation,
    iE-Extensions                        ProtocolExtensionContainer { { HS-DSCHRequiredPower-Item-ExtIEs} }          OPTIONAL,
    ...
}

HS-DSCHRequiredPower-Item-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

HS-DSCHRequiredPowerValue ::= INTEGER(0..1000)
-- Unit %, Range 0 ..1000, Step 0.1%

HS-DSCHRequiredPowerPerUEInformation ::= SEQUENCE (SIZE (1.. maxNrOfContextsOnUeList)) OF HS-DSCHRequiredPowerPerUEInformation-Item


HS-DSCHRequiredPowerPerUEInformation-Item ::= SEQUENCE {
    cRNC-CommunicationContextID          CRNC-CommunicationContextID,
    hS-DSCHRequiredPowerPerUEWeight      HS-DSCHRequiredPowerPerUEWeight    OPTIONAL,
    iE-Extensions                        ProtocolExtensionContainer { { HS-DSCHRequiredPowerPerUEInformation-Item-ExtIEs} }    OPTIONAL,
    ...
}

HS-DSCHRequiredPowerPerUEInformation-Item-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

HS-DSCHRequiredPowerPerUEWeight ::= INTEGER(0..100)
-- Unit %, Range 0 ..100, Step 1%


HSDSCH-FDD-Information ::= SEQUENCE {
    hsDSCH-MACdFlow-Specific-Info    HSDSCH-MACdFlow-Specific-InfoList,
    priorityQueueInfo                PriorityQueue-InfoList,
    ueCapability-Info                UE-Capability-Information,
    cqiFeedback-CycleK               CQI-Feedback-Cycle,
    cqiRepetitionFactor              CQI-RepetitionFactor             OPTIONAL,
    -- This IE shall be present if the CQI Feedback Cycle k is greater than 0
    ackNackRepetitionFactor          AckNack-RepetitionFactor,
    cqiPowerOffset                   CQI-Power-Offset,
    ackPowerOffset                   Ack-Power-Offset,
    nackPowerOffset                  Nack-Power-Offset,
    hsscch-PowerOffset               HSSCCH-PowerOffset               OPTIONAL,
    measurement-Power-Offset         Measurement-Power-Offset         OPTIONAL,
    iE-Extensions                    ProtocolExtensionContainer { { HSDSCH-FDD-Information-ExtIEs} }             OPTIONAL,
    ...
}

HSDSCH-FDD-Information-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

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HSDSCH-TDD-Information ::= SEQUENCE {
    hsDSCH-MACdFlow-Specific-Info        HSDSCH-MACdFlow-Specific-InfoList,
    priorityQueueInfo                    PriorityQueue-InfoList,
    ueCapability-Info                    UE-Capability-Information,
    tDD-AckNack-Power-Offset             TDD-AckNack-Power-Offset,
    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,
    allocationRetentionPriority          AllocationRetentionPriority,
    bindingID                            BindingID                 OPTIONAL,
    transportLayerAddress                TransportLayerAddress     OPTIONAL,
    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,
    priorityQueueInfotoModify                       PriorityQueue-InfoList-to-Modify    OPTIONAL,
    mAChs-Reordering-Buffer-Size                    MAChsReorderingBufferSize     OPTIONAL,
    cqiFeedback-CycleK                              CQI-Feedback-Cycle            OPTIONAL,   -- For FDD only
    cqiRepetitionFactor                             CQI-RepetitionFactor          OPTIONAL,   -- For FDD only
    ackNackRepetitionFactor                         AckNack-RepetitionFactor      OPTIONAL,   -- For FDD only
    cqiPowerOffset                                  CQI-Power-Offset              OPTIONAL,   -- For FDD only
    ackPowerOffset                                  Ack-Power-Offset              OPTIONAL,   -- For FDD only
    nackPowerOffset                                 Nack-Power-Offset             OPTIONAL,   -- For FDD only
    hsscch-PowerOffset                              HSSCCH-PowerOffset            OPTIONAL,   -- only for FDD
    measurement-Power-Offset                        Measurement-Power-Offset      OPTIONAL,   -- For FDD only
    hSSCCHCodeChangeGrant                           HSSCCH-Code-Change-Grant      OPTIONAL,
    tDDAckNackPowerOffset                           TDD-AckNack-Power-Offset      OPTIONAL,   -- For TDD only
    iE-Extensions                                   ProtocolExtensionContainer { { HSDSCH-Information-to-Modify-ExtIEs} }   OPTIONAL,
    ...
}

HSDSCH-Information-to-Modify-ExtIEs 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,
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    allocationRetentionPriority          AllocationRetentionPriority                OPTIONAL,
    transportBearerRequestIndicator      TransportBearerRequestIndicator,
    bindingID                            BindingID                                  OPTIONAL,
    transportLayerAddress                TransportLayerAddress                      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,
    hARQ-MemoryPartitioning                        HARQ-MemoryPartitioning,
    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, -- Mandatory for 3.84Mcps TDD, Not
Applicable to 1.28Mcps TDD
    hsSCCH-Specific-Information-ResponseTDDLCR      HSSCCH-Specific-InformationRespListTDDLCR   OPTIONAL, -- Mandatory for 1.28Mcps TDD, Not
Applicable to 3.84Mcps TDD
    hARQ-MemoryPartitioning                        HARQ-MemoryPartitioning,
    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,
    hSDSCH-Initial-Capacity-Allocation   HSDSCH-Initial-Capacity-Allocation OPTIONAL,
    iE-Extensions                        ProtocolExtensionContainer { { HSDSCH-MACdFlow-Specific-InformationRespItem-ExtIEs } }
    OPTIONAL,
    ...
}

HSDSCH-MACdFlow-Specific-InformationRespItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

```
HSSCCH-PowerOffset ::= INTEGER (0..255)
-- PowerOffset = -32 + offset * 0.25
-- Unit dB, Range -32dB .. +31.75dB, Step +0.25dB

HSDSCH-Initial-Capacity-Allocation::= SEQUENCE (SIZE (1..16)) OF HSDSCH-Initial-Capacity-AllocationItem

HSDSCH-Initial-Capacity-AllocationItem ::= SEQUENCE {
    schedulingPriorityIndicator     SchedulingPriorityIndicator,
    maximum-MACdPDU-Size            MACdPDU-Size,
    hSDSCH-InitialWindowSize        HSDSCH-InitialWindowSize,
    iE-Extensions                   ProtocolExtensionContainer { { HSDSCH-Initial-Capacity-AllocationItem-ExtIEs } } OPTIONAL,
    ...
}

HSDSCH-Initial-Capacity-AllocationItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

HSDSCH-InitialWindowSize          ::= INTEGER (1..2047)
-- Number of MAC-d PDUs.
-- 2047 = Unlimited number of MAC-d PDUs

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,
    first-TDD-ChannelisationCode                TDD-ChannelisationCode,
    second-TDD-ChannelisationCode         TDD-ChannelisationCode,
    hSSICH-InfoLCR                           HSSICH-InfoLCR,
    iE-Extensions                            ProtocolExtensionContainer { { HSSCCH-Specific-InformationRespItemTDDLCR-ExtIEs } }
    OPTIONAL,
    ...
}

HSSCCH-Specific-InformationRespItemTDDLCR-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

HSSICH-Info ::= SEQUENCE {
    hsSICH-ID                                HS-SICH-ID,
    timeslot                                 TimeSlot,
    midambleShiftAndBurstType                MidambleShiftAndBurstType,
    tDD-ChannelisationCode                   TDD-ChannelisationCode,
    iE-Extensions                            ProtocolExtensionContainer { { HSSICH-Info-ExtIEs } }        OPTIONAL,
    ...
}

HSSICH-Info-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

HSSICH-InfoLCR ::= SEQUENCE {
    hsSICH-ID                                HS-SICH-ID,
    timeslotLCR                              TimeSlotLCR,
    midambleShiftLCR                         MidambleShiftLCR,
    tDD-ChannelisationCode                   TDD-ChannelisationCode,
    iE-Extensions                            ProtocolExtensionContainer { { HSSICH-Info-LCR-ExtIEs } }       OPTIONAL,
    ...
}

HSSICH-Info-LCR-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

HS-SICH-Reception-Quality-Value ::= SEQUENCE {
    failed-HS-SICH            HS-SICH-failed,
    missed-HS-SICH            HS-SICH-missed,
    total-HS-SICH            HS-SICH-total,
    iE-Extensions            ProtocolExtensionContainer { { HS-SICH-Reception-Quality-Value-ExtIEs} } OPTIONAL,
...
}

HS-SICH-Reception-Quality-Value-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

HS-SICH-failed ::= INTEGER (0..20)
```

```
HS-SICH-missed ::= INTEGER (0..20)


HS-SICH-total ::= INTEGER (0..20)


HS-SICH-Reception-Quality-Measurement-Value ::= INTEGER (0..20)
-- According to mapping in [23]


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..maxHS-PDSCHCodeNrComp-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 (1..maxHS-PDSCHCodeNrComp-1)


HS-SCCH-ID ::= INTEGER (0..31)
HS-SICH-ID ::= INTEGER (0..31)


HS-SCCH-FDD-Code-Information::= CHOICE {
    replace                 HS-SCCH-FDD-Code-List,
    remove                  NULL,
    ...
}


HS-SCCH-FDD-Code-List ::= SEQUENCE (SIZE (1..maxNrOfHSSCCHs)) OF HS-SCCH-FDD-Code-Information-Item


HS-SCCH-FDD-Code-Information-Item ::= INTEGER (0..maxHS-SCCHCodeNrComp-1)


HSSCCH-CodeChangeIndicator  ::= ENUMERATED {
    hsSCCHCodeChangeNeeded
}


HSSCCH-Code-Change-Grant    ::= ENUMERATED {
    changeGranted
}


HSDSCH-FDD-Update-Information ::= SEQUENCE {
    hsSCCHCodeChangeIndicator                       HSSCCH-CodeChangeIndicator              OPTIONAL,
    cqiFeedback-CycleK                              CQI-Feedback-Cycle                      OPTIONAL,
    cqiRepetitionFactor                             CQI-RepetitionFactor                    OPTIONAL,
    ackNackRepetitionFactor                         AckNack-RepetitionFactor                OPTIONAL,
    cqiPowerOffset                                  CQI-Power-Offset                        OPTIONAL,
    ackPowerOffset                                  Ack-Power-Offset                        OPTIONAL,
    nackPowerOffset                                 Nack-Power-Offset                       OPTIONAL,
    iE-Extensions                                   ProtocolExtensionContainer { { HSDSCH-FDD-Update-Information-ExtIEs } }    OPTIONAL,
    ...
}


HSDSCH-FDD-Update-Information-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
```

```
    ...
}

HSDSCH-TDD-Update-Information ::= SEQUENCE {
    hsSCCHCodeChangeIndicator                   HSSCCH-CodeChangeIndicator                  OPTIONAL,
    tDDAckNackPowerOffset                       TDD-AckNack-Power-Offset                    OPTIONAL,
    iE-Extensions                               ProtocolExtensionContainer { { HSDSCH-TDD-Update-Information-ExtIEs } }   OPTIONAL,
    ...
}

HSDSCH-TDD-Update-Information-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}


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IB-OC-ID ::= INTEGER (1..16)


IB-SG-DATA ::= BIT STRING
-- 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,
    sIB15dot5
}

InformationReportCharacteristics ::= CHOICE {
    onDemand                NULL,
    periodic                InformationReportCharacteristicsType-ReportPeriodicity,
    onModification          InformationReportCharacteristicsType-OnModification,
    ...
}

InformationReportCharacteristicsType-ReportPeriodicity ::= CHOICE {
    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,
    -- The IE shall be present if the Information Type Item IE indicates "GPS Information".
    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(0..63),
    burstModeParams              BurstModeParams    OPTIONAL,
    iP-Offset                    INTEGER(0..9),
    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
-- =========================================

-- =========================================
--  K
-- =========================================

-- =========================================
--  L
-- =========================================

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

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
```

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```
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 ::= {
    ...
}

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


MAChsReorderingBufferSize ::= INTEGER (1..300,...)
-- Unit kBytes


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


MaximumDL-PowerCapability ::=  INTEGER(0..500)
-- 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)
```

```
Measurement-Power-Offset ::= INTEGER(-12 .. 26)
-- Actual value = IE value * 0.5

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 ::= {
    ...
}

MidambleConfigurationLCR ::=    ENUMERATED {v2, v4, v6, v8, v10, v12, v14, v16, ...}

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

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```
MidambleShiftLong ::=                 INTEGER (0..15)


MidambleShiftShort ::=                INTEGER (0..5)


MidambleShiftLCR ::= SEQUENCE {
    midambleAllocationMode      MidambleAllocationMode,
    midambleShift               MidambleShiftLong      OPTIONAL,
    -- The IE shall be present if the Midamble Allocation Mode IE is set to "UE specific midamble".
    midambleConfigurationLCR        MidambleConfigurationLCR,
    iE-Extensions               ProtocolExtensionContainer { {MidambleShiftLCR-ExtIEs} }        OPTIONAL,
    ...
    }

MidambleAllocationMode ::= ENUMERATED {
    defaultMidamble,
    commonMidamble,
    uESpecificMidamble,
    ...
    }

MidambleShiftLCR-ExtIEs  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
}
--  TDD Mapping scheme for the minimum spreading factor 1 and 2: "256" means 1, "512" means 2

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

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

MinUL-ChannelisationCodeLength ::= ENUMERATED {
```

```
        v4,
        v8,
        v16,
        v32,
        v64,
        v128,
        v256,
        ...
}

MultiplexingPosition ::= ENUMERATED {
        fixed,
        flexible
}

-- ==========================================
--  N
-- ==========================================

Nack-Power-Offset ::= INTEGER (0..8,...)
-- According to mapping in ref. [9] subclause 4.2.1

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, -- FDD only
                    neighbouringTDDCellMeasurementInformation      NeighbouringTDDCellMeasurementInformation,
                    -- Applicable to 3.84Mcps TDD only
                    ...,
                    extension-neighbouringCellMeasurementInformation    Extension-neighbouringCellMeasurementInformation
              }

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

```
Extension-neighbouringCellMeasurementInformationIE NBAP-PROTOCOL-IES ::= {
    { ID id-neighbouringTDDCellMeasurementInformationLCR    CRITICALITY reject  TYPE NeighbouringTDDCellMeasurementInformationLCR PRESENCE
mandatory },    -- Applicable to 1.28Mcps TDD only
    ...
}

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)

NumberOfReportedCellPortion ::= INTEGER (1..maxNrOfCellPortionsPerCell,...)

NStartMessage ::= INTEGER (1..8)
```

```
NSubCyclesPerCyclePeriod ::= INTEGER (1..16,...)


-- =======================================
--  O
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-- =======================================
--  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)

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 ::= {
      ...
}

PDSCH-CodeMapping-ReplacedPDSCH-CodeInformationList ::= SEQUENCE (SIZE (1..maxNrOfTFCI2Combs)) OF
```

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```
    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

Primary-CPICH-Usage-for-Channel-Estimation ::= ENUMERATED {
    primary-CPICH-may-be-used,
    primary-CPICH-shall-not-be-used
}

PrimaryScramblingCode ::= INTEGER (0..511)

PriorityLevel                ::= INTEGER (0..15)
```

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```
-- 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,
    associatedHSDSCH-MACdFlow       HSDSCH-MACdFlow-ID,
    schedulingPriorityIndicator     SchedulingPriorityIndicator,
    t1                              T1,
    discardTimer                    DiscardTimer               OPTIONAL,
    mAC-hsWindowSize                MAC-hsWindowSize,
    mAChsGuaranteedBitRate          MAChsGuaranteedBitRate                                        OPTIONAL,
    macdPDU-Size-Index              MACdPDU-Size-Indexlist,
    iE-Extensions                   ProtocolExtensionContainer { { PriorityQueue-InfoItem-ExtIEs} }           OPTIONAL,
    ...
}

PriorityQueue-InfoItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PriorityQueue-InfoList-to-Modify ::= SEQUENCE (SIZE (1..maxNrOfPriorityQueues)) OF ModifyPriorityQueue
PriorityQueue-InfoItem-to-Add ::= SEQUENCE {
    priorityQueueId                 PriorityQueue-Id,
    associatedHSDSCH-MACdFlow       HSDSCH-MACdFlow-ID,
    schedulingPriorityIndicator     SchedulingPriorityIndicator,
    t1                              T1,
    discardTimer                    DiscardTimer                                                  OPTIONAL,
    mAC-hsWindowSize                MAC-hsWindowSize,
    mAChsGuaranteedBitRate          MAChsGuaranteedBitRate                                        OPTIONAL,
    macdPDU-Size-Index-to-Modify    MACdPDU-Size-Indexlist-to-Modify,
    iE-Extensions                   ProtocolExtensionContainer { { PriorityQueue-InfoItem-to-Add-ExtIEs} }     OPTIONAL,
    ...
}

PriorityQueue-InfoItem-to-Add-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PriorityQueue-InfoItem-to-Modify ::= SEQUENCE {
    priorityQueueId                 PriorityQueue-Id,
    associatedHSDSCH-MACdFlow       HSDSCH-MACdFlow-ID                                            OPTIONAL,
    schedulingPriorityIndicator     SchedulingPriorityIndicator                                   OPTIONAL,
    t1                              T1                                                            OPTIONAL,
    discardTimer                    DiscardTimer                                                  OPTIONAL,
    mAC-hsWindowSize                MAC-hsWindowSize                                              OPTIONAL,
    mAChsGuaranteedBitRate          MAChsGuaranteedBitRate                                        OPTIONAL,
    macdPDU-Size-Index-to-Modify    MACdPDU-Size-Indexlist-to-Modify                             OPTIONAL,
    iE-Extensions                   ProtocolExtensionContainer { { PriorityQueue-InfoItem-to-Modify-ExtIEs} }     OPTIONAL,
    ...
}
```

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```
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
}

Qth-Parameter ::= INTEGER (-20..0)
-- Unit dB, Step 1dB


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

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,
    acknowledged-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,
    ...,
    extension-ReportCharacteristicsType-MeasurementIncreaseDecreaseThreshold       Extension-ReportCharacteristicsType-
MeasurementIncreaseDecreaseThreshold
}
```

```
Extension-ReportCharacteristicsType-MeasurementIncreaseDecreaseThreshold     ::= ProtocolIE-Single-Container {{ Extension-ReportCharacteristicsType-
MeasurementIncreaseDecreaseThresholdIE }}

Extension-ReportCharacteristicsType-MeasurementIncreaseDecreaseThresholdIE NBAP-PROTOCOL-IES ::= {
{ ID id-TransmittedCarrierPowerOfAllCodesNotUsedForHS-PDSCHOrHS-SCCHTransmission CRITICALITY reject                TYPE
TransmittedCarrierPowerOfAllCodesNotUsedForHS-PDSCHOrHS-SCCHTransmissionValue PRESENCE mandatory}
}

ReportCharacteristicsType-MeasurementThreshold ::= CHOICE {
    received-total-wide-band-power                      Received-total-wide-band-power-Value,
    transmitted-carrier-power        Transmitted-Carrier-Power-Value,
    acknowledged-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 }|
    { ID id-Rx-Timing-Deviation-Value-LCR    CRITICALITY reject  TYPE Rx-Timing-Deviation-Value-LCR                   PRESENCE mandatory}|
    { ID id-HS-SICH-Reception-Quality-Measurement-Value CRITICALITY reject  TYPE HS-SICH-Reception-Quality-Measurement-Value PRESENCE mandatory}|
    { ID id-TransmittedCarrierPowerOfAllCodesNotUsedForHS-PDSCHOrHS-SCCHTransmission CRITICALITY reject                TYPE
TransmittedCarrierPowerOfAllCodesNotUsedForHS-PDSCHOrHS-SCCHTransmissionValue PRESENCE mandatory}|
    { ID id-HS-DSCHRequiredPowerValue CRITICALITY reject    TYPE HS-DSCHRequiredPowerValue PRESENCE mandatory}|
    { ID id-HS-DSCHProvidedBitRateValue CRITICALITY reject  TYPE HS-DSCHProvidedBitRateValue 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

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
}


RL-ID ::= INTEGER (0..31)


RL-Set-ID               ::= INTEGER (0..31)


Round-Trip-Time-IncrDecrThres ::= INTEGER(0..32766)


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)
-- According to mapping in [23]

Rx-Timing-Deviation-Value-LCR ::= INTEGER (0..511)
-- According to mapping in [23]


-- ==========================================
--  S
-- ==========================================

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)),
```

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```
    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)

Secondary-CPICH-Information-Change ::= CHOICE {
    new-secondary-CPICH                CommonPhysicalChannelID,
    secondary-CPICH-shall-not-be-used  NULL,
...
```

```
}

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,
    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     OPTIONAL,
            sFNSFNTimeStampInformation  SFNSFNTimeStampInformation,
            iE-Extensions        ProtocolExtensionContainer { { SuccessfullNeighbouringCellSFNSFNObservedTimeDifferenceMeasurementInformationItem-
ExtIEs} }        OPTIONAL,
            ...
        },
    unsuccessfullNeighbouringCellSFNSFNObservedTimeDifferenceMeasurementInformation     SEQUENCE (SIZE(0..maxNrOfMeasNCell-1)) OF
        SEQUENCE {
            uC-Id                      UC-Id,
            iE-Extensions        ProtocolExtensionContainer { { UnsuccessfullNeighbouringCellSFNSFNObservedTimeDifferenceMeasurementInformationItem-
ExtIEs} }        OPTIONAL,
            ...
        },
    iE-Extensions        ProtocolExtensionContainer { { SFNSFNMeasurementValueInformationItem-ExtIEs} }                OPTIONAL,
    ...
}


SFNSFNMeasurementValueInformationItem-ExtIEs 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)
-- According to mapping in [22]

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 {
    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..maxNrOfSyncFramesLCR)) OF SyncDLCodeIdThreInfoList  --Mandatory for 1.28Mcps TDD only

SyncDLCodeIdThreInfoList ::= SEQUENCE {
```

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```
    syncFrameNoToReceive              SyncFrameNumber,
    syncDLCodeIdInfoLCR               SyncDLCodeInfoListLCR,
    iE-Extensions                     ProtocolExtensionContainer { { SyncDLCodeIdThreInfoList-ExtIEs } }    OPTIONAL,
    ...
}

SyncDLCodeIdThreInfoList-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

SyncDLCodeInfoListLCR ::= SEQUENCE (SIZE (1..maxNrOfSyncDLCodesLCR)) 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,
    ...
}

-- ==========================================
-- T
-- ==========================================

T1 ::= ENUMERATED {v10,v20,v30,v40,v50,v60,v70,v80,v90,v100,v120,v140,v160,v200,v300,v400,...}

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-AckNack-Power-Offset ::= INTEGER (-7..8,...)
-- Unit dB, Range -7dB .. +8dB, Step 1dB

TDD-ChannelisationCode ::= ENUMERATED {
    chCode1div1,
    chCode2div1,
    chCode2div2,
    chCode4div1,
    chCode4div2,
    chCode4div3,
    chCode4div4,
    chCode8div1,
    chCode8div2,
    chCode8div3,
    chCode8div4,
    chCode8div5,
    chCode8div6,
    chCode8div7,
    chCode8div8,
    chCode16div1,
    chCode16div2,
    chCode16div3,
    chCode16div4,
    chCode16div5,
    chCode16div6,
    chCode16div7,
    chCode16div8,
    chCode16div9,
    chCode16div10,
    chCode16div11,
    chCode16div12,
    chCode16div13,
    chCode16div14,
    chCode16div15,
    chCode16div16,
    ...
}

TDD-ChannelisationCodeLCR ::= SEQUENCE {
    tDD-ChannelisationCode          TDD-ChannelisationCode,
    modulation                      Modulation, -- Modulation options for 1.28Mcps TDD in contrast to 3.84Mcps TDD
    iE-Extensions                       ProtocolExtensionContainer { { TDD-ChannelisationCodeLCR-ExtIEs} }        OPTIONAL,
    ...
}
```

```
TDD-ChannelisationCodeLCR-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

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,
    tdd-DL-DPCH-TimeSlotFormat-LCR      TDD-DL-DPCH-TimeSlotFormat-LCR,
    iE-Extensions                       ProtocolExtensionContainer { { TDD-DL-Code-LCR-InformationItem-ExtIEs} }     OPTIONAL,
    ...
}

TDD-DL-Code-LCR-InformationItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TDD-DL-DPCH-TimeSlotFormat-LCR ::= CHOICE {
    qPSK                        QPSK-DL-DPCH-TimeSlotFormatTDD-LCR,
    eightPSK                    EightPSK-DL-DPCH-TimeSlotFormatTDD-LCR,
    ...
}

QPSK-DL-DPCH-TimeSlotFormatTDD-LCR ::= INTEGER(0..24,...)

EightPSK-DL-DPCH-TimeSlotFormatTDD-LCR ::= INTEGER(0..24,...)

TDD-DPCHOffset ::= CHOICE {
    initialOffset       INTEGER (0..255),
    noinitialOffset     INTEGER (0..63)
}

TDD-PhysicalChannelOffset ::= INTEGER (0..63)

TDD-TPC-DownlinkStepSize ::= ENUMERATED {
    step-size1,
    step-size2,
    step-size3,
    ...
}
```

```
TDD-TPC-UplinkStepSize-LCR ::= ENUMERATED {
    step-size1,
    step-size2,
    step-size3,
    ...
}

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,
```

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```
    tdd-UL-DPCH-TimeSlotFormat-LCR          TDD-UL-DPCH-TimeSlotFormat-LCR,
    iE-Extensions                           ProtocolExtensionContainer { { TDD-UL-Code-LCR-InformationItem-ExtIEs} }     OPTIONAL,
    ...
}

TDD-UL-Code-LCR-InformationItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TDD-UL-DPCH-TimeSlotFormat-LCR ::= CHOICE {
    qPSK                      QPSK-UL-DPCH-TimeSlotFormatTDD-LCR,
    eightPSK                  EightPSK-UL-DPCH-TimeSlotFormatTDD-LCR,
    ...
}

QPSK-UL-DPCH-TimeSlotFormatTDD-LCR ::= INTEGER(0..69,...)

EightPSK-UL-DPCH-TimeSlotFormatTDD-LCR ::= INTEGER(0..24,...)

TFCI-Coding ::= ENUMERATED {
    v4,
    v8,
    v16,
    v32,
    ...
}

TFCI-Presence ::= ENUMERATED {
    present,
    not-present
}

TFCI-SignallingMode ::= 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


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
}

TransmittedCarrierPowerOfAllCodesNotUsedForHS-PDSCHOrHS-SCCHTransmissionValue ::= INTEGER(0..100)
-- According to mapping in [22] and [23]

Transmitted-Carrier-Power-Value ::= INTEGER(0..100)
```

```
-- According to mapping in [22]/[23]

Transmitted-Code-Power-Value ::= INTEGER (0..127)
-- According to mapping in [22]/[23]

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,
        -- The IE shall be present if the TFCS concerns a UL DPCH or PRACH channel [FDD - or PCPCH channel].
        iE-Extensions       ProtocolExtensionContainer { { TFCS-TFCSList-ExtIEs} }     OPTIONAL,
        ...
    }
}

TFCS-TFCSList-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

ETSI

```
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,
        ...
}

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"
    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'
    rateMatchingAttribute           TransportFormatSet-RateMatchingAttribute,
    cRC-Size                        TransportFormatSet-CRC-Size,
    mode                            TransportFormatSet-ModeSSP  ,
```

ETSI

```
    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),
    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                OPTIONAL,
        tUTRANGPSDriftRate              TUTRANGPSDriftRate,
        tUTRANGPSDriftRateQuality       TUTRANGPSDriftRateQuality       OPTIONAL,
        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 0MHz .. 3276.6MHz

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-Information ::= SEQUENCE {
    hSDSCH-Physical-Layer-Category        INTEGER (1..64,...),
    mAChs-Reordering-Buffer-Size          MAChsReorderingBufferSize,
```

```
    iE-Extensions                        ProtocolExtensionContainer { { UE-Capability-Information-ExtIEs } }        OPTIONAL,
    ...
}

UE-Capability-Information-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-CapacityCredit ::= INTEGER (0..65535)

UL-DL-mode ::= ENUMERATED {
    ul-only,
    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-Synchronisation-Parameters-LCR ::= SEQUENCE {
    uL-Synchronisation-StepSize       UL-Synchronisation-StepSize,
    uL-Synchronisation-Frequency      UL-Synchronisation-Frequency,
    iE-Extensions                     ProtocolExtensionContainer { { UL-Synchronisation-Parameters-LCR-ExtIEs } }   OPTIONAL,
    ...
}

UL-Synchronisation-Parameters-LCR-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-Synchronisation-StepSize ::= INTEGER (1..8)

UL-Synchronisation-Frequency ::= INTEGER (1..8)

UL-TimeSlot-ISCP-Info ::= SEQUENCE (SIZE (1..maxNrOfULTSs)) OF  UL-TimeSlot-ISCP-InfoItem

UL-TimeSlot-ISCP-InfoItem ::= SEQUENCE {
    timeSlot                    TimeSlot,
```

ETSI

```
    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 ::= {
    ...
}

Unidirectional-DCH-Indicator    ::= ENUMERATED {
    downlink-DCH-only,
    uplink-DCH-only
}

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,
    ...
}
```

ETSI

```
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
id-radioLinkParameterUpdate                                ProcedureCode ::= 52


-- ***************************************************************
--
-- 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
maxNrOfHSPDSCHs          INTEGER ::= 16
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
maxHS-PDSCHCodeNrComp-1         INTEGER ::= 15
maxHS-SCCHCodeNrComp-1          INTEGER ::= 127
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
maxNrOfHSSICHs                  INTEGER ::= 4
maxNrOfSyncFramesLCR            INTEGER ::= 512
maxNrOfReceptionsperSyncFrameLCR    INTEGER ::= 8
maxNrOfSyncDLCodesLCR           INTEGER ::= 32
maxNrOfHSSCCHCodes              INTEGER ::= 4
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
maxNrOfContextsOnUeList         INTEGER ::= 16
maxNrOfCellPortionsPerCell      INTEGER ::= 64
maxNrOfCellPortionsPerCell-1    INTEGER ::= 63


-- ************************************************************
--
-- 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
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
```

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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
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
```

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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
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
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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-ReconfFailure                               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
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
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ETSI

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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
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-DwPCH-LCR-Information                                           ProtocolIE-ID ::= 78
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-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-PRACH-LCR-ParametersList-CTCH-SetupRqstTDD                      ProtocolIE-ID ::= 461
id-RL-InformationResponse-LCR-RL-SetupRspTDD                       ProtocolIE-ID ::= 463
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
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-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-InformationModify-AddList-RL-ReconfPrepTDD          ProtocolIE-ID ::= 477
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-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 ::= 102
id-RL-Specific-DCH-Info                                           ProtocolIE-ID ::= 103
id-transportlayeraddress                                          ProtocolIE-ID ::= 104
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-AccumulatedClockupdate-CellSyncReprtTDD                      ProtocolIE-ID ::= 552
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
id-Qth-Parameter                                               ProtocolIE-ID ::= 64
id-PDSCH-RL-ID                                                 ProtocolIE-ID ::= 66
id-HSDSCH-RearrangeList-Bearer-RearrangeInd                    ProtocolIE-ID ::= 553
id-UL-Synchronisation-Parameters-LCR                           ProtocolIE-ID ::= 554
id-HSDSCH-FDD-Update-Information                               ProtocolIE-ID ::= 555
id-HSDSCH-TDD-Update-Information                               ProtocolIE-ID ::= 556
id-DL-DPCH-TimeSlotFormat-LCR-ModifyItem-RL-ReconfPrepTDD      ProtocolIE-ID ::= 558
id-UL-DPCH-TimeSlotFormat-LCR-ModifyItem-RL-ReconfPrepTDD      ProtocolIE-ID ::= 559
id-TDD-TPC-UplinkStepSize-LCR-RL-SetupRqstTDD                  ProtocolIE-ID ::= 560
id-TDD-TPC-UplinkStepSize-LCR-RL-AdditionRqstTDD               ProtocolIE-ID ::= 561
id-TDD-TPC-DownlinkStepSize-RL-AdditionRqstTDD                 ProtocolIE-ID ::= 562
id-TDD-TPC-UplinkStepSize-InformationAdd-LCR-RL-ReconfPrepTDD  ProtocolIE-ID ::= 563
id-TDD-TPC-UplinkStepSize-InformationModify-LCR-RL-ReconfPrepTDD  ProtocolIE-ID ::= 564
id-TDD-TPC-DownlinkStepSize-InformationModify-RL-ReconfPrepTDD ProtocolIE-ID ::= 565
id-TDD-TPC-DownlinkStepSize-InformationAdd-RL-ReconfPrepTDD    ProtocolIE-ID ::= 566
id-CCTrCH-Maximum-DL-Power-RL-SetupRqstTDD                     ProtocolIE-ID ::= 567
id-CCTrCH-Minimum-DL-Power-RL-SetupRqstTDD                     ProtocolIE-ID ::= 568
id-CCTrCH-Maximum-DL-Power-RL-AdditionRqstTDD                  ProtocolIE-ID ::= 569
id-CCTrCH-Minimum-DL-Power-RL-AdditionRqstTDD                  ProtocolIE-ID ::= 570
id-CCTrCH-Maximum-DL-Power-InformationAdd-RL-ReconfPrepTDD     ProtocolIE-ID ::= 571
id-CCTrCH-Minimum-DL-Power-InformationAdd-RL-ReconfPrepTDD     ProtocolIE-ID ::= 572
id-CCTrCH-Maximum-DL-Power-InformationModify-RL-ReconfPrepTDD  ProtocolIE-ID ::= 573
id-CCTrCH-Minimum-DL-Power-InformationModify-RL-ReconfPrepTDD  ProtocolIE-ID ::= 574
id-Maximum-DL-Power-Modify-LCR-InformationModify-RL-ReconfPrepTDD  ProtocolIE-ID ::= 575
id-Minimum-DL-Power-Modify-LCR-InformationModify-RL-ReconfPrepTDD  ProtocolIE-ID ::= 576
id-DL-DPCH-LCR-InformationModify-ModifyList-RL-ReconfRqstTDD   ProtocolIE-ID ::= 577
id-CCTrCH-Maximum-DL-Power-InformationModify-RL-ReconfRqstTDD  ProtocolIE-ID ::= 578
id-CCTrCH-Minimum-DL-Power-InformationModify-RL-ReconfRqstTDD  ProtocolIE-ID ::= 579
id-Initial-DL-Power-TimeslotLCR-InformationItem               ProtocolIE-ID ::= 580
id-Maximum-DL-Power-TimeslotLCR-InformationItem               ProtocolIE-ID ::= 581
id-Minimum-DL-Power-TimeslotLCR-InformationItem               ProtocolIE-ID ::= 582
id-HS-DSCHProvidedBitRate                                      ProtocolIE-ID ::= 583
```

ETSI

```
id-HS-DSCHProvidedBitRateValue                                         ProtocolIE-ID ::= 584
id-HS-DSCHRequiredPower                                                ProtocolIE-ID ::= 585
id-HS-DSCHRequiredPowerValue                                           ProtocolIE-ID ::= 586
id-TransmittedCarrierPowerOfAllCodesNotUsedForHS-PDSCHOrHS-SCCHTransmission ProtocolIE-ID ::= 587
id-HS-SICH-Reception-Quality                                           ProtocolIE-ID ::= 588
id-HS-SICH-Reception-Quality-Measurement-Value                        ProtocolIE-ID ::= 589
id-HSSICH-Info-DM-Rprt                                                 ProtocolIE-ID ::= 590
id-HSSICH-Info-DM-Rqst                                                 ProtocolIE-ID ::= 591
id-HSSICH-Info-DM-Rsp                                                  ProtocolIE-ID ::= 592
id-Best-Cell-Portions-Value                                           ProtocolIE-ID ::= 593
id-Primary-CPICH-Usage-for-Channel-Estimation                        ProtocolIE-ID ::= 594
id-Secondary-CPICH-Information-Change                                 ProtocolIE-ID ::= 595
id-NumberOfReportedCellPortion                                        ProtocolIE-ID ::= 596
id-TimeslotISCP-LCR-InfoList-RL-ReconfPrepTDD                         ProtocolIE-ID ::= 599
id-Unidirectional-DCH-Indicator                                       ProtocolIE-ID ::= 602

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:
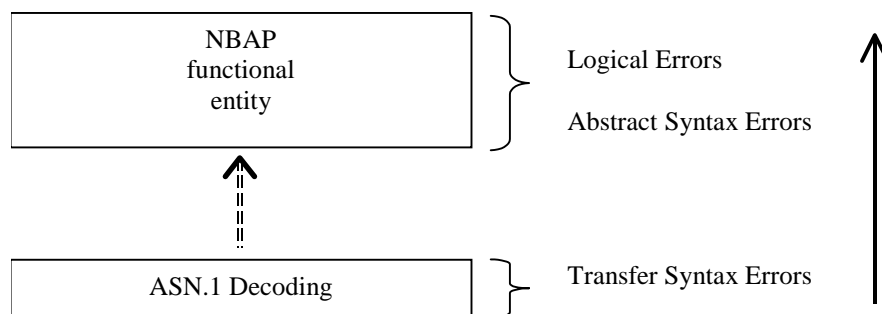
Figure 38: Protocol Errors in NBAP.

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 concerned object, the IEs or IE groups should have been present in the received message;

4. receives IEs or IE groups that are defined to be part of that message in wrong order or with too many occurrences of the same IE or IE group;

5. receives IEs or IE groups but according to the conditional presence of the concerned object and the specified condition, the IEs or IE groups should not have been present in the received message.

Cases 1 and 2 (not comprehended IE/IE group) are handled based on received Criticality information. Case 3 (missing IE/IE group) is handled based on Criticality information and Presence information for the missing IE/IE group specified in the version of the specification used by the receiver. Case 4 (IEs or IE groups in wrong order or with too many occurrences) and Case 5 (erroneously present conditional IEs or IE groups) result in rejecting the procedure.

If an Abstract Syntax Error occurs, the receiver shall read the remaining message and shall then for each detected Abstract Syntax Error that belong to cases 1-3 act according to the Criticality Information and Presence Information for the IE/IE group due to which Abstract Syntax Error occurred in accordance with subclauses 10.3.4 and 10.3.5. The handling of cases 4 and 5 is specified in subclause 10.3.6.

10.3.2 Criticality Information

In the 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).

2. EP: The comprehension of different EPs within a standard version or between different standard versions is not mandated. Any EP that is not supported may be considered not comprehended, even if another EP from that standard version is comprehended, and action based on criticality shall be applied.

10.3.3   Presence Information

For many IEs/IE groups which are optional according to the ASN.1 transfer syntax, 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 concerned 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* IE and *Type of Message* IE according to the following:

Reject IE:

- If a message *initiating* a procedure is received containing one or more IEs/IE groups marked with "*Reject IE*" which the receiving node does not comprehend; none of the functional requests of the message shall be executed. The receiving node shall reject the procedure and report the rejection of one or more IEs/IE groups using the message normally used to report unsuccessful outcome of the procedure. In case the information received in the initiating message was insufficient to determine a value for all IEs that are required to be present in the message used to report the unsuccessful outcome of the procedure, the receiving node shall instead terminate the procedure and initiate the Error Indication procedure.

- If a message *initiating* a procedure that does not have a message to report unsuccessful outcome is received containing one or more IEs/IE groups marked with "*Reject IE*" which the receiving node does not comprehend, the receiving node shall terminate the procedure and initiate the Error Indication procedure.

- If a *response* message is received containing one or more IEs/IE groups marked with "*Reject IE*" that the receiving node does not comprehend, the receiving node shall consider the procedure as unsuccessfully terminated and initiate local error handling.

Ignore IE and Notify Sender:

- If a message *initiating* a procedure is received containing one or more IEs/IE groups marked with "*Ignore IE and Notify Sender*" which the receiving node does not comprehend, the receiving node shall ignore the content of the not comprehended IEs/IE groups, continue with the procedure as if the not comprehended IEs/IE groups were not received (except for the reporting) using the understood IEs/IE groups and report in the response message of the procedure that one or more IEs/IE groups have been ignored. In case the information received in the initiating message was insufficient to determine a value for all IEs that are required to be present in the response message, the receiving node shall instead terminate the procedure and initiate the Error Indication procedure.

- If a message *initiating* a procedure that does not have a message to report the outcome of the procedure is received containing one or more IEs/IE groups marked with "*Ignore IE and Notify Sender*" which the receiving node does not comprehend, the receiving node shall ignore the content of the not comprehended IEs/IE groups, continue with the procedure as if the not comprehended IEs/IE groups were not received (except for the reporting) using the understood IEs/IE groups, and initiate the Error Indication procedure to report that one or more IEs/IE groups have been ignored.

- If a *response* message is received containing one or more IEs/IE groups marked with "*Ignore IE and Notify Sender*" which the receiving node does not comprehend, the receiving node shall ignore the content of the not comprehended IEs/IE groups, continue with the procedure as if the not comprehended IEs/IE groups were not received (except for the reporting) using the understood IEs/IE groups and initiate the Error Indication procedure.

Ignore IE:

- If a message *initiating* a procedure is received containing one or more IEs/IE groups marked with "*Ignore IE*" which the receiving node does not comprehend, the receiving node shall ignore the content of the not comprehended IEs/IE groups and continue with the procedure as if the not comprehended IEs/IE groups were not received using the understood IEs/IE groups.

- If a *response* message is received containing one or more IEs/IE groups marked with "*Ignore IE*" which the receiving node does not comprehend, the receiving node shall ignore the content of the not comprehended

IEs/IE groups and continue with the procedure as if the not comprehended IEs/IE groups were not received using the understood IEs/IE groups.

When reporting not comprehended IEs/IE groups marked with "*Reject IE*" or "*Ignore IE and Notify Sender*" using a response message defined for the procedure, the *Information Element Criticality Diagnostics* IE shall be included in the *Criticality Diagnostics* IE for each reported IE/IE group. In the *Information Element Criticality Diagnostics* IE the *Repetition Number* IE shall be included and in addition, if the not comprehended IE/IE group is not at message hierarchy level 1 (top level; see annex C) also the *Message Structure* IE shall be included.

When reporting not comprehended IEs/IE groups marked with "*Reject IE*" or "*Ignore IE and Notify Sender*" using the Error Indication procedure, the *Procedure ID* IE, the *Triggering Message* IE, *Procedure Criticality* IE, the *Transaction ID* IE, and the *Information Element Criticality Diagnostics* IE shall be included in the *Criticality Diagnostics* IE for each reported IE/IE group. In the *Information Element Criticality Diagnostics* IE the *Repetition Number* IE shall be included and in addition, if the not comprehended IE/IE group is not at message hierarchy level 1 (top level; see annex C) also the *Message Structure* IE shall be included.

10.3.5   Missing IE or IE Group

The receiving node shall treat the missing IE/IE group according to the criticality information for the missing IE/IE group in the received message specified in the version of this specification used by the receiver:

Reject IE:

- If a received message *initiating* a procedure is missing one or more IEs/IE groups with specified criticality "*Reject IE*"; none of the functional requests of the message shall be executed. The receiving node shall reject the procedure and report the missing IEs/IE groups using the message normally used to report unsuccessful outcome of the procedure. In case the information received in the initiating message was insufficient to determine a value for all IEs that are required to be present in the message used to report the unsuccessful outcome of the procedure, the receiving node shall instead terminate the procedure and initiate the Error Indication procedure.

- If a received message *initiating* a procedure that does not have a message to report unsuccessful outcome is missing one or more IEs/IE groups with specified criticality "*Reject IE*", the receiving node shall terminate the procedure and initiate the Error Indication procedure.

- If a received *response* message is missing one or more IEs/IE groups with specified criticality "*Reject IE*", the receiving node shall consider the procedure as unsuccessfully terminated and initiate local error handling.

Ignore IE and Notify Sender:

- If a received message *initiating* a procedure is missing one or more IEs/IE groups with specified criticality "*Ignore IE and Notify Sender*", the receiving node shall ignore that those IEs are missing and continue with the procedure based on the other IEs/IE groups present in the message and report in the response message of the procedure that one or more IEs/IE groups were missing. In case the information received in the initiating message was insufficient to determine a value for all IEs that are required to be present in the response message, the receiving node shall instead terminate the procedure and initiate the Error Indication procedure.

- If a received message *initiating* a procedure that does not have a message to report the outcome of the procedure is missing one or more IEs/IE groups with specified criticality "*Ignore IE and Notify Sender*", the receiving node shall ignore that those IEs are missing and continue with the procedure based on the other IEs/IE groups present in the message and initiate the Error Indication procedure to report that one or more IEs/IE groups were missing.

- If a received *response* message is missing one or more IEs/IE groups with specified criticality "*Ignore IE and Notify Sender*", the receiving node shall ignore that those IEs are missing and continue with the procedure based on the other IEs/IE groups present in the message and initiate the Error Indication procedure to report that one or more IEs/IE groups were missing.

Ignore IE:

- If a received message *initiating* a procedure is missing one or more IEs/IE groups with specified criticality "*Ignore IE*", the receiving node shall ignore that those IEs are missing and continue with the procedure based on the other IEs/IE groups present in the message.

- If a received *response* message is missing one or more IEs/IE groups with specified criticality "*Ignore IE*", the receiving node shall ignore that those IEs/IE groups are missing and continue with the procedure based on the other IEs/IE groups present in the message.

When reporting missing IEs/IE groups with specified criticality "*Reject IE*" or "*Ignore IE and Notify Sender*" using a response message defined for the procedure, the *Information Element Criticality Diagnostics* IE shall be included in the *Criticality Diagnostics* IE for each reported IE/IE group. In the *Information Element Criticality Diagnostics* IE the *Repetition Number* IE shall be included and in addition, if the missing IE/IE group is not at message hierarchy level 1 (top level; see annex C) also the *Message Structure* IE shall be included.

When reporting missing IEs/IE groups with specified criticality "*Reject IE*" or "*Ignore IE and Notify Sender*" using the Error Indication procedure, the *Procedure ID* IE, the *Triggering Message* IE, *Procedure Criticality* IE, the *Transaction ID* IE, and the *Information Element Criticality Diagnostics* IE shall be included in the *Criticality Diagnostics* IE for each reported IE/IE group. In the *Information Element Criticality Diagnostics* IE the *Repetition Number* IE shall be included and in addition, if the missing IE/IE group is not at message hierarchy level 1 (top level; see annex C) also the *Message Structure* IE shall be included.

10.3.6 IEs or IE Groups Received in Wrong Order or With Too Many Occurrences or Erroneously Present

If a message with IEs or IE groups in wrong order or with too many occurrences is received or if IEs or IE groups with a conditional presence are present when the condition is not met (i.e. erroneously present), the receiving node shall behave according to the following:

- If a message *initiating* a procedure is received containing IEs or IE groups in wrong order or with too many occurrences or erroneously present, none of the functional requests of the message shall be executed. The receiving node shall reject the procedure and report the cause value "Abstract Syntax Error (Falsely Constructed Message)" using the message normally used to report unsuccessful outcome of the procedure. In case the information received in the initiating message was insufficient to determine a value for all IEs that are required to be present in the message used to report the unsuccessful outcome of the procedure, the receiving node shall instead terminate the procedure and initiate the Error Indication procedure.

- If a message *initiating* a procedure that does not have a message to report unsuccessful outcome is received containing IEs or IE groups in wrong order or with too many occurrences or erroneously present, the receiving node shall terminate the procedure and initiate the Error Indication procedure, and use cause value "Abstract Syntax Error (Falsely Constructed Message)".

- If a *response* message is received containing IEs or IE groups in wrong order or with too many occurrences or erroneously present, the receiving node 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 message to report this unsuccessful outcome, this message shall be sent with an appropriate cause value.

Typical cause values are:

- Protocol Causes:

    1. Semantic Error

2.   Message not compatible with receiver state

Where the logical error is contained in a request message of a class 1 procedure, and the procedure does not have a message to report this unsuccessful outcome, the procedure shall be terminated and the ERROR INDICATION procedure shall be initiated with an appropriate cause value. The *Procedure ID* IE, the *Triggering Message* IE and the *Transaction ID* IE within the *Criticality Diagnostics* IE shall then be included in order to identify the message containing the logical error.

Where the logical error exists in a response message of a class 1 procedure, the procedure shall be considered as unsuccessfully terminated and local error handling shall be initiated.

Class 2:

Where the logical error occurs in a message of a class 2 procedure, the procedure shall be terminated and the ERROR INDICATION procedure shall be initiated with an appropriate cause value. The *Procedure ID* IE, the *Triggering Message* IE and the *Transaction ID* IE within the *Criticality Diagnostics* IE shall then be included in order to identify the message containing the logical error.

10.5   Exceptions

The error handling for all the cases described hereafter shall take precedence over any other error handling described in the other 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 or ERROR INDICATION message needs to be returned, but the information necessary to determine the receiver of that message is missing, the procedure shall be considered as unsuccessfully terminated and local error handling shall be initiated.

-   If an error that terminates a procedure occurs, the returned cause value shall reflect the error that caused the termination of the procedure even if one or more abstract syntax errors with criticality "ignore and notify" have earlier occurred within the same procedure.

Annex A (normative): Allocation and Pre-emption of Radio Links in the 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.
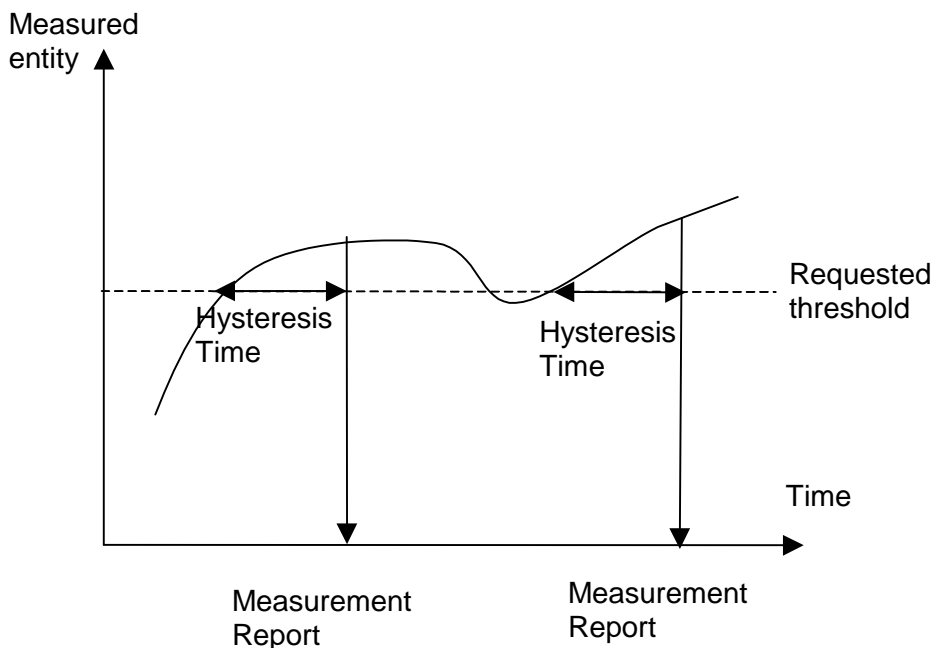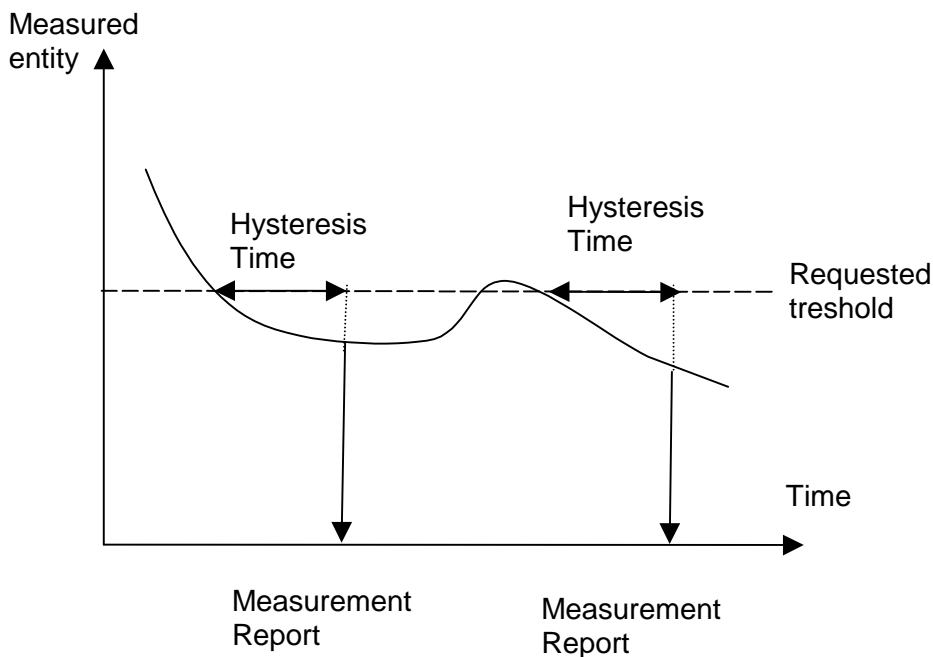
Figure B.2: Event B reporting with Hysteresis Time specified

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.

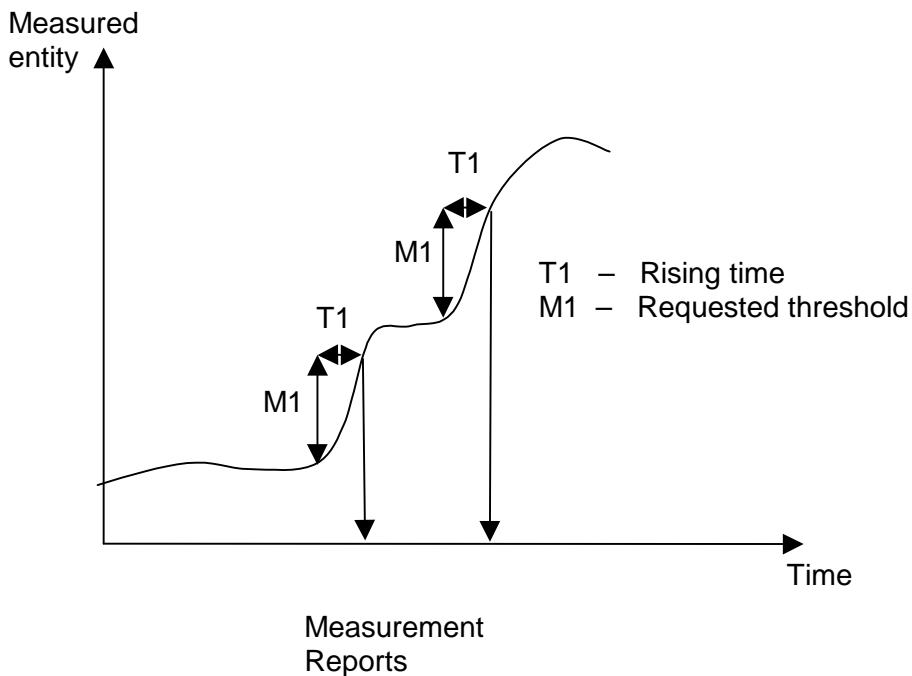**Figure B.4: Event D reporting**

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
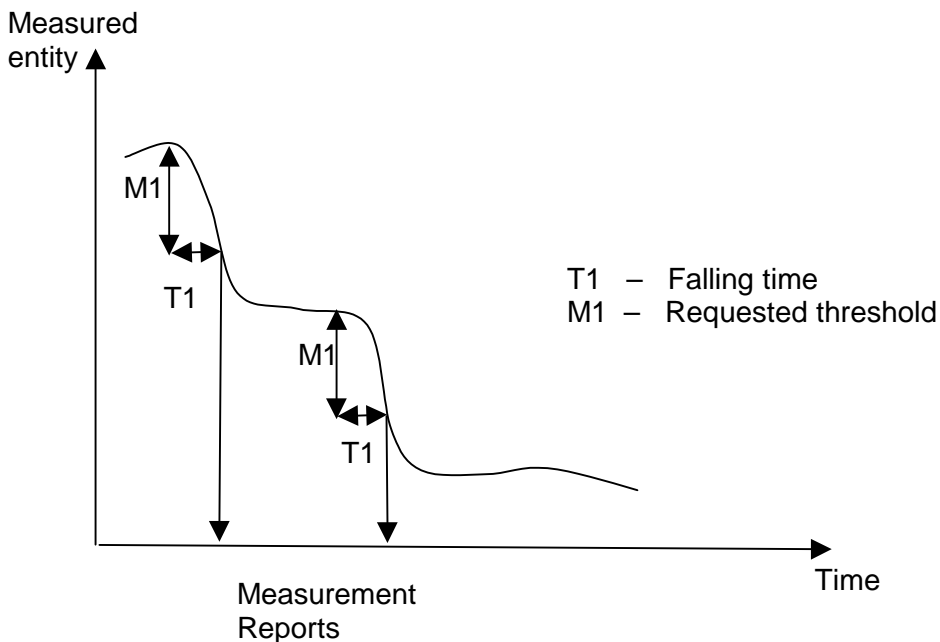
When the *Report Characteristics* IE is set to "Event F" (figure B.6), the Measurement Reporting procedure (Report A) is initiated always when the measured entity falls below the 'Measurement Threshold 1' and stays there for the 'Measurement Hysteresis Time' (T1 in figure B.6). If *Report Periodicity* 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.
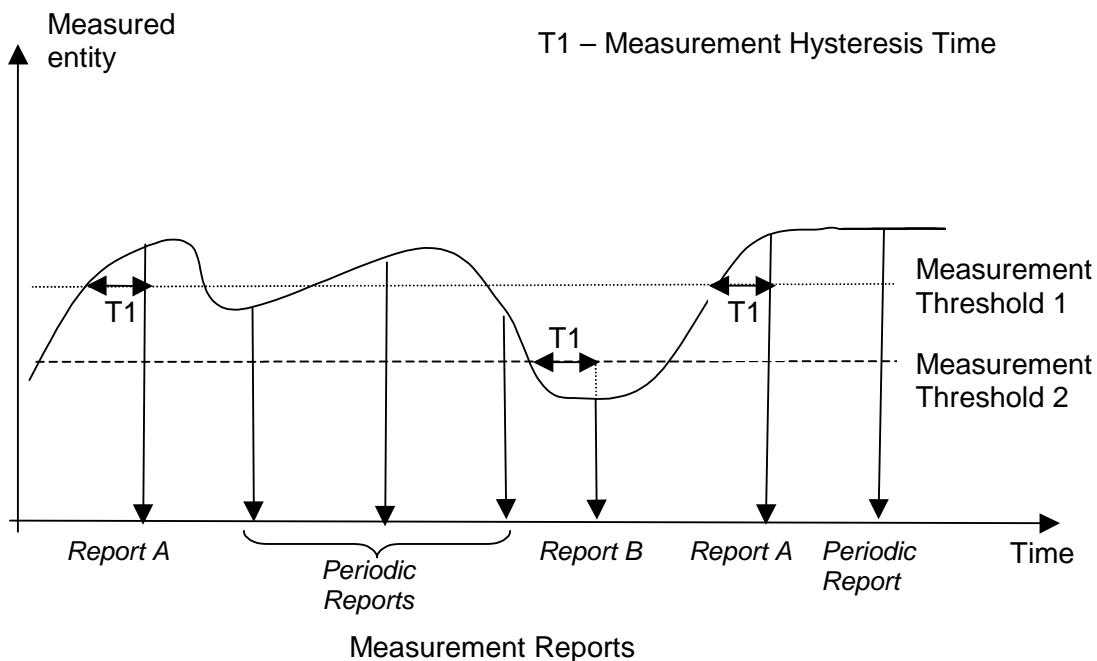

Measurement Reports
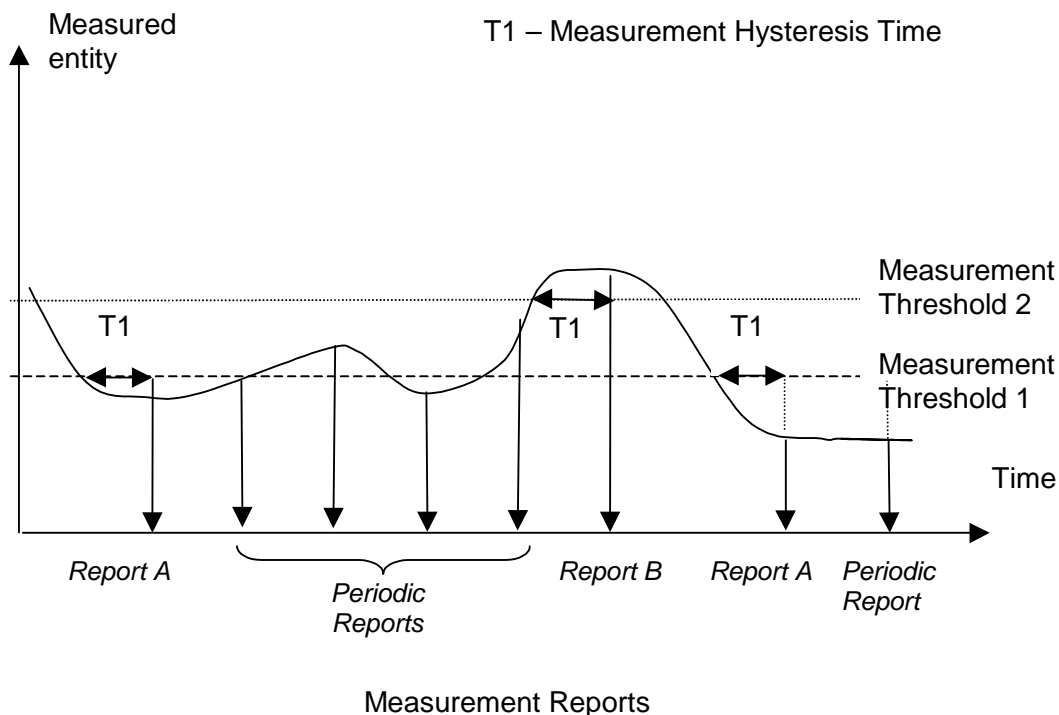
Figure B.6: Event F reporting with Hysteresis Time specified and Periodic Reporting requested

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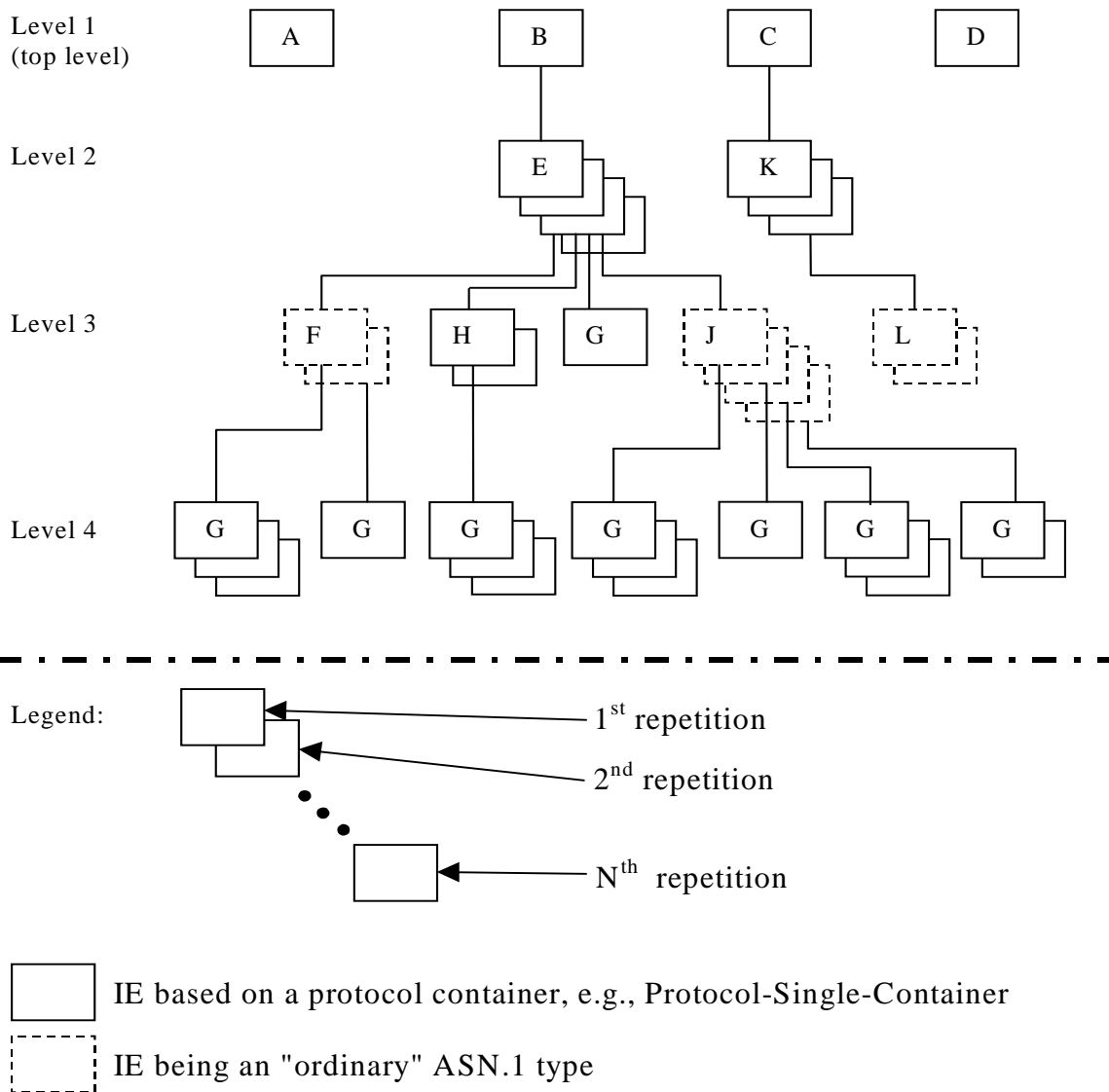
Figure C.1: Example of content of a received NBAP message based on the EXAMPLE MESSAGE

C.3 Content of Criticality Diagnostics

C.3.1 Example 1

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 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 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 *Message Structure* IE.

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
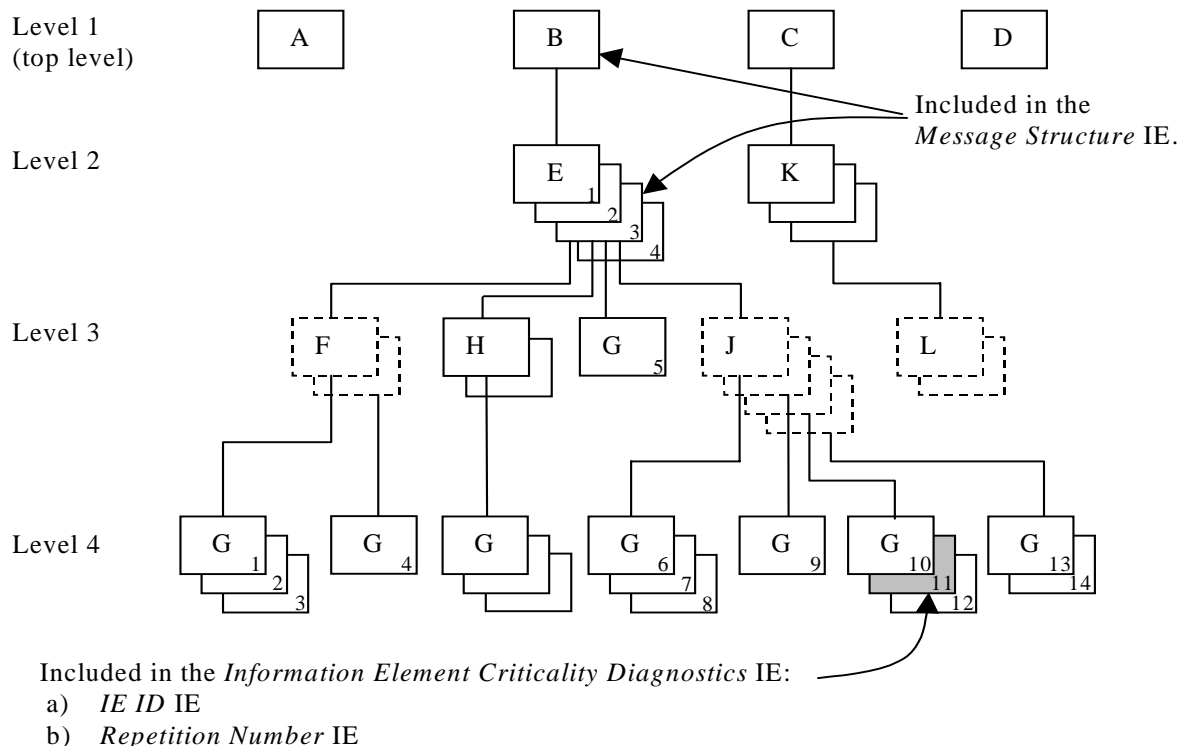b)   *Repetition Number* IE

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	ignore and notify	Criticality for IE on the reported level, i.e. level 4.
IE ID	id-G	IE ID from the reported level, i.e. level 4.
Repetition Number	2	Repetition number on the reported level, i.e. level 4.
Type of Error	not 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 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:
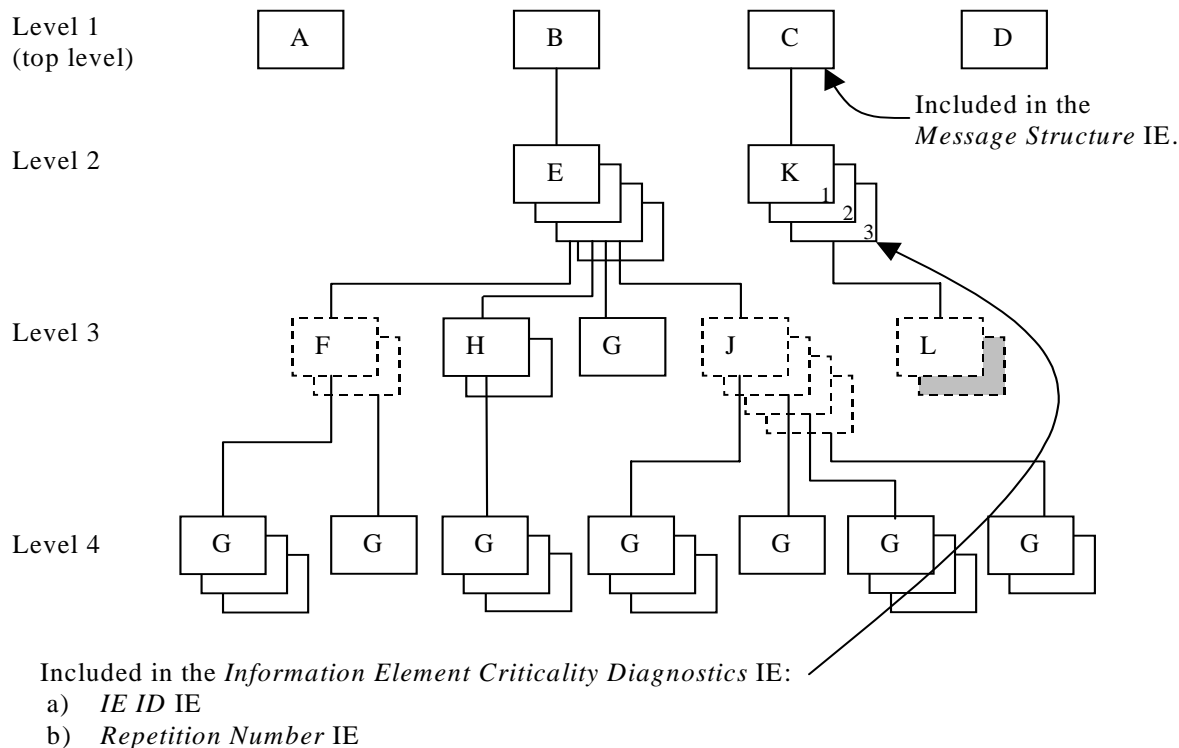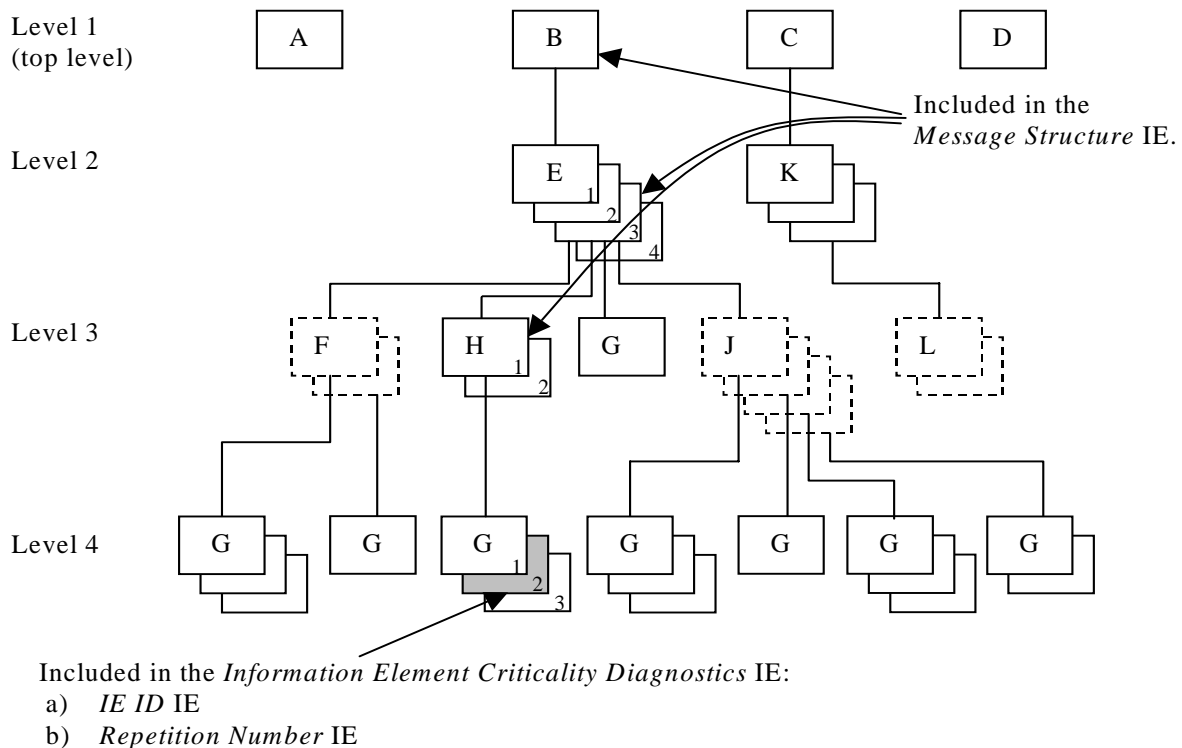a) *IE ID* IE
b) *Repetition Number* IE
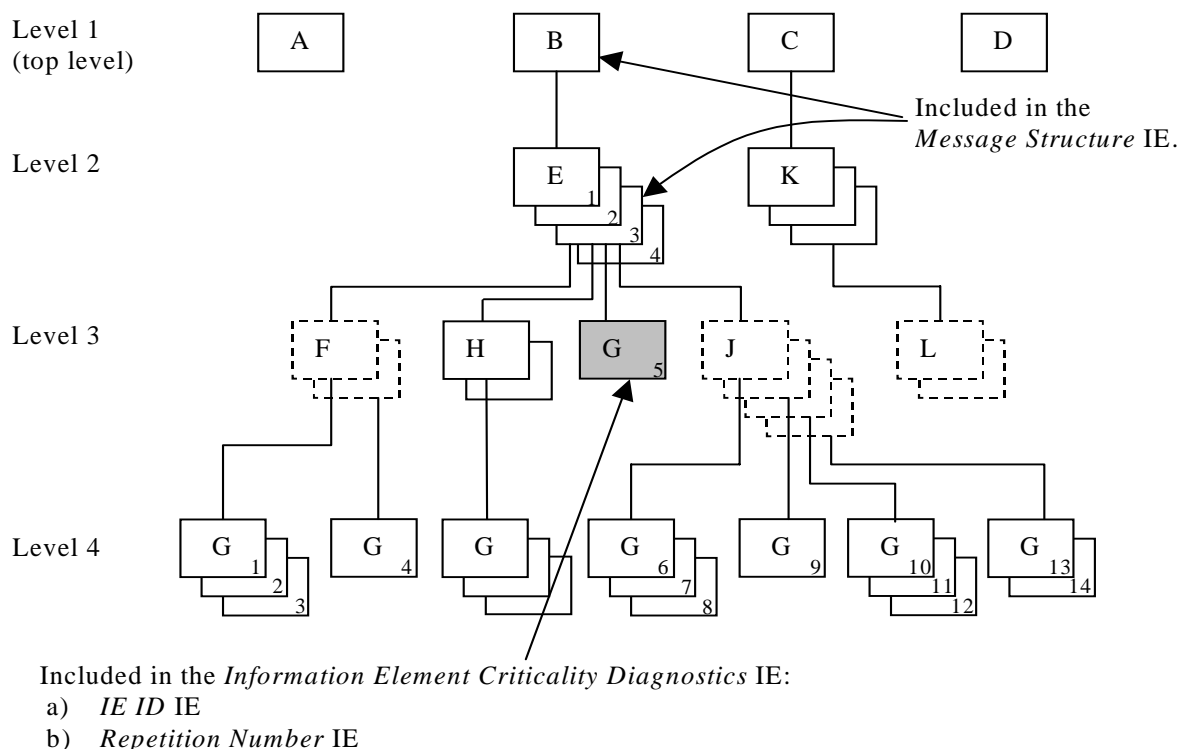
Figure C.5: Example of a received NBAP message containing a not comprehended IE

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 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 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).
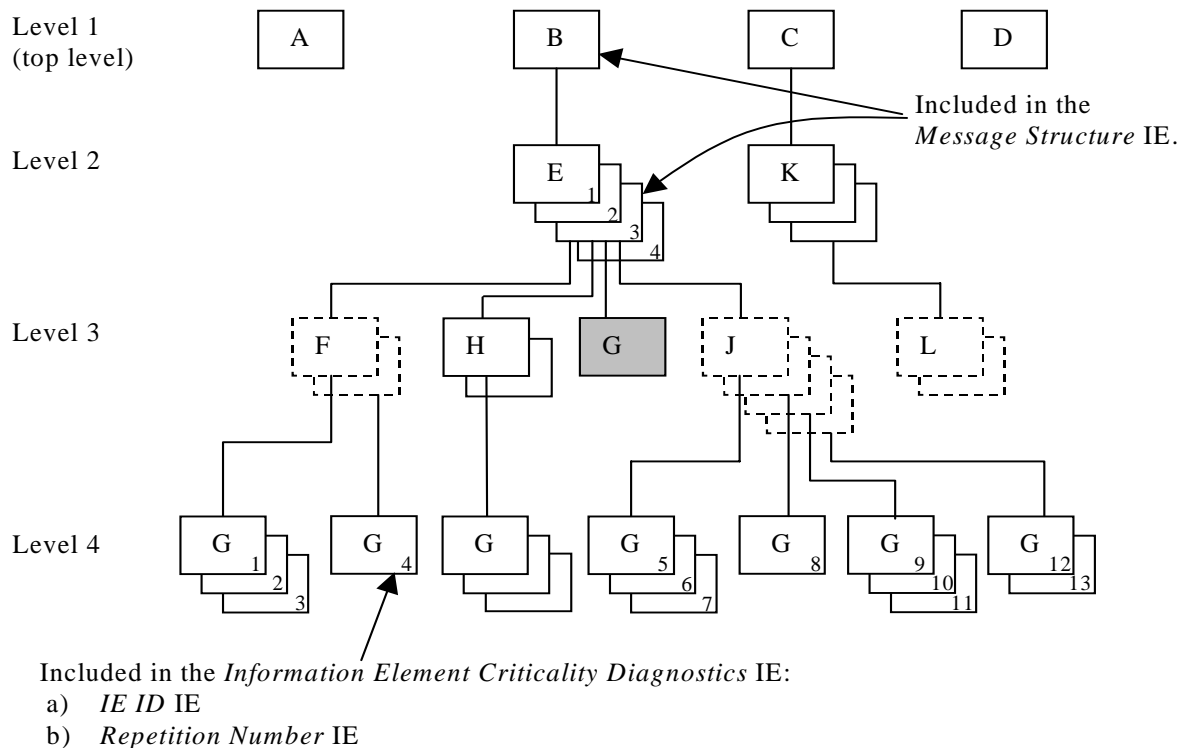
C.4 ASN.1 of EXAMPLE MESSAGE

```
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
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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

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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
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03/2002	15	RP-020199	602	2	Separation of Resource Reservation and Radio Link Activation	4.4.0	5.0.0
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03/2002	15	RP-020193	607	1	Introduction of the Neighbouring TDD Cell Measurement Information LCR	4.4.0	5.0.0
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History

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