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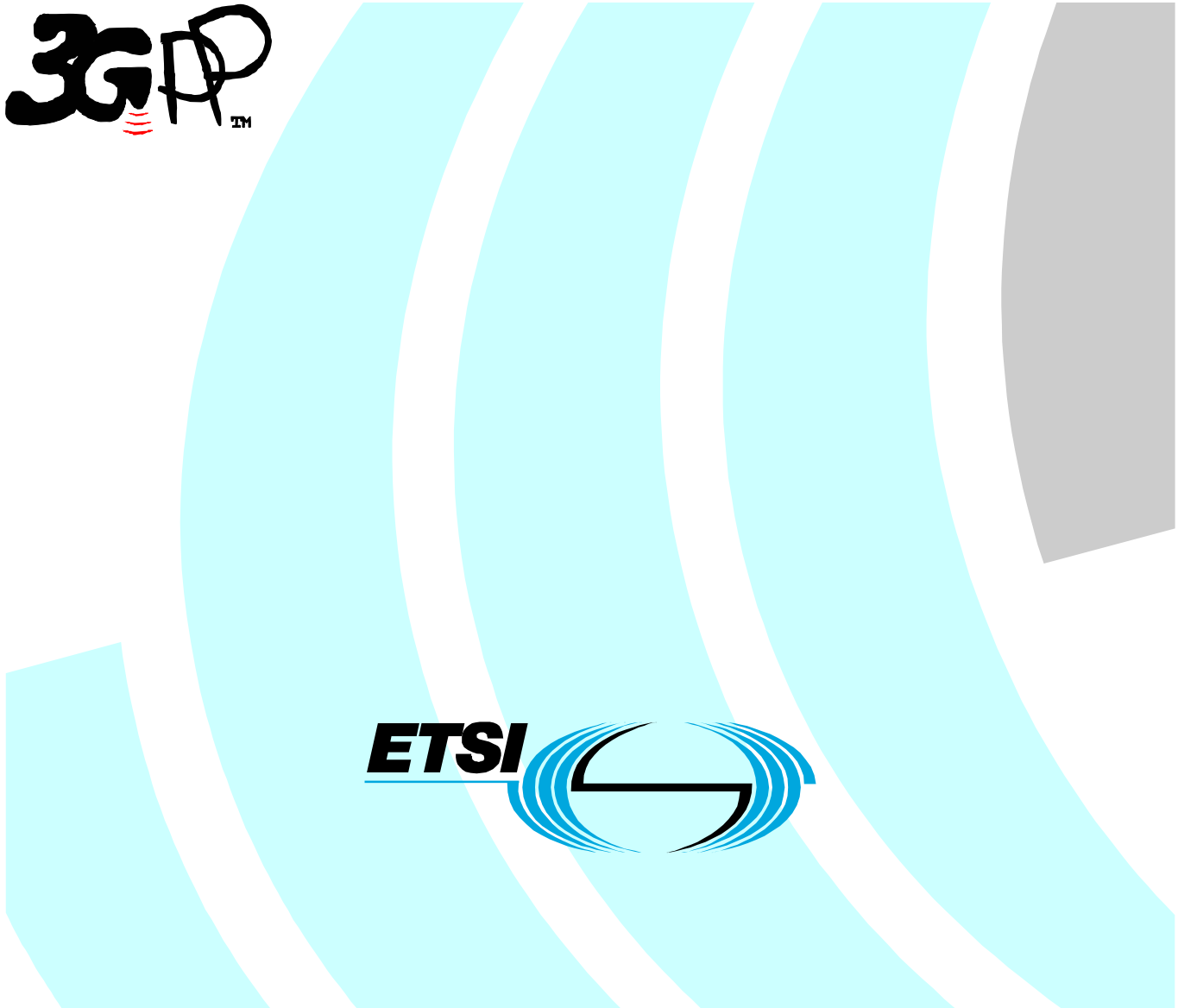
Technical Specification

Universal Mobile Telecommunications System (UMTS);
UTRAN Iub interface NBAP signalling
(3GPP TS 25.433 version 3.14.1 Release 1999)



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Foreword

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Contents

Foreword

This Technical Specification has been produced by the 3GPP.

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

Version x.y.z

where:

- x the first digit:
  - 1 presented to TSG for information;
  - 2 presented to TSG for approval;
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1 Scope

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

2 References

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

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

[1] 3GPP TS 25.401: "UTRAN Overall Description".

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

[23] 3GPP TS 25.123 (V3.5): "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".

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:

AICH	Acquisition Indicator Channel
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
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
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
UE	User Equipment
UL	Uplink
UMTS	Universal Mobile Telecommunications System
USCH	Uplink Shared Channel
UTRA	Universal Terrestrial Radio Access
UTRAN	Universal Terrestrial Radio Access Network

4 General

4.1 Procedure Specification Principles

The principle for specifying the procedure logic is to specify the functional behaviour of the Node B exactly and completely. The CRNC functional behaviour is left unspecified. The Reset procedure is an exception from this principle.

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

- The procedure text discriminates between:

  1) Functionality which "shall" be executed

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

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

  The procedure text indicates that the receiving node "shall, if supported," perform a certain function Y under a certain condition. If the receiving node supports procedure X, but does not support functionality Y, the receiving node shall proceed with the execution of the EP, possibly informing the requesting node about the not supported functionality.

- Any required inclusion of an optional IE in a response message is explicitly indicated in the procedure text. If the procedure text does not explicitly indicate that an optional IE shall be included in a response message, the optional IE shall not be included.

4.2 Forwards and Backwards Compatibility

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

4.3 Specification Notations

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

[FDD]	This tagging of a word indicates that the word preceding the tag "[FDD]" applies only to FDD. This tagging of a heading indicates that the heading preceding the tag "[FDD]" and the section following the heading applies only to FDD.
[TDD]	This tagging of a word indicates that the word preceding the tag "[TDD]" applies only to TDD. This tagging of a heading indicates that the heading preceding the tag "[TDD]" and the section following the heading applies only to 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. Multiple sequential paragraphs applying only to TDD are enclosed separately to enable insertion of FDD specific (or common) paragraphs between the 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 [TDD]. This function allows the CRNC to manage physical resources in the Node B belonging to 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.

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
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 [TDD]	Physical Shared Channel Reconfiguration
DL Power Timeslot Correction [TDD]	Downlink Power Timeslot Control

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	Unsuccessful Outcome
		Response message	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 [TDD]	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	

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

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 and CPCH [FDD].

8.2.1.2 Successful Operation

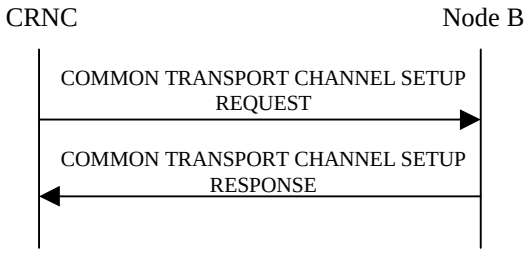

Figure 1: Common Transport Channel Setup procedure, Successful Operation

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 PRACH, one RACH and one AICH (FDD) 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.

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.

[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.

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

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

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

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.

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

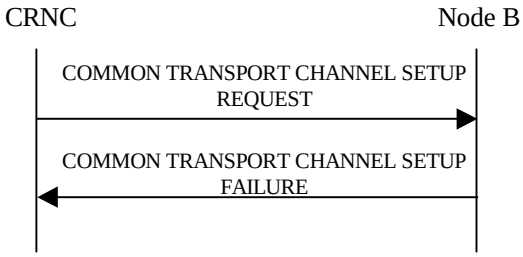

Figure 2: Common Transport Channel Setup procedure, Unsuccessful Operation

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 CCTrCHIid* IE, the Node B shall regard the Common Transport Channel Setup procedure as having failed and the Node B shall send the COMMON TRANSPORT CHANNEL SETUP FAILURE message to the CRNC.]

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

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

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

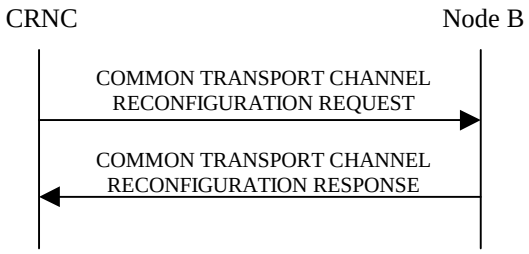

Figure 3: Common Transport Channel Reconfiguration, Successful Operation

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] 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 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.]

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.]

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.

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

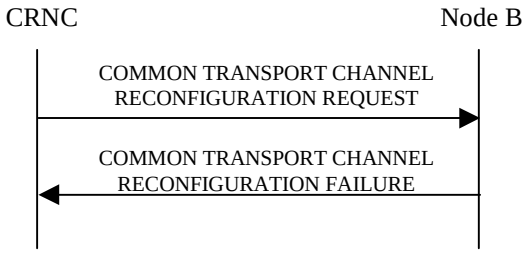

Figure 4: Common Transport Channel Reconfiguration procedure, Unsuccessful Operation

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

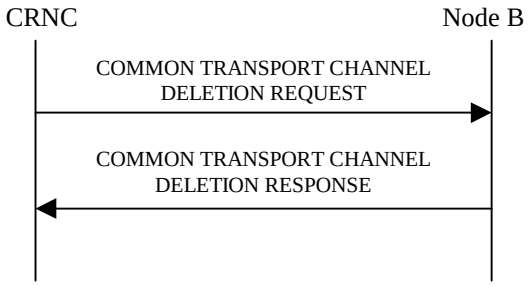

Figure 5: Common Transport Channel Deletion procedure, Successful Operation

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

-

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

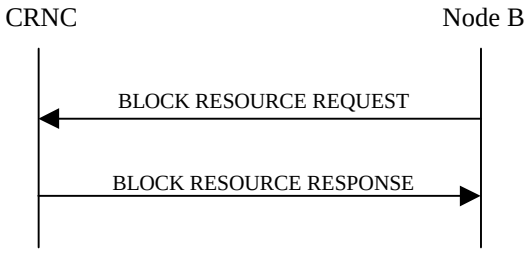

Figure 6: Block Resource procedure, Successful Operation

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 [TDD - SCH], [FDD - the Primary SCH, the Secondary SCH, the Primary CPICH, if present the Secondary CPICH(s)] 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

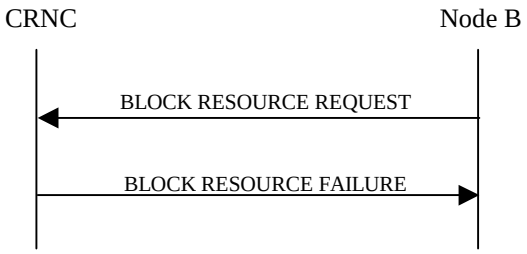

Figure 7: Block Resource procedure, Unsuccessful Operation

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)] 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

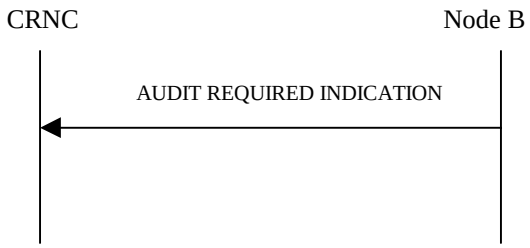

Figure 9: Audit Required procedure, Successful Operation

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

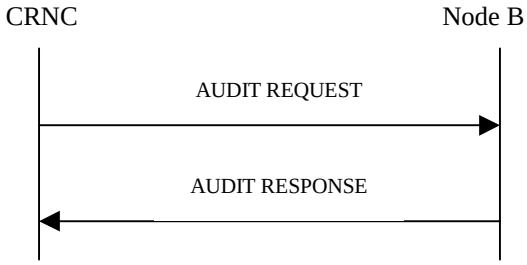

Figure 10: Audit procedure, Successful Operation

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 and the *Minimum DL Power Capability* IE when any of those values are known by the Node B.

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, then the internal resource capabilities of the Node B are modelled as shared resources between Uplink and Downlink.

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

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 cannot be trusted, the Node B shall set this *Configuration Generation ID* IE = "0".

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

8.2.7.3 Unsuccessful Operation

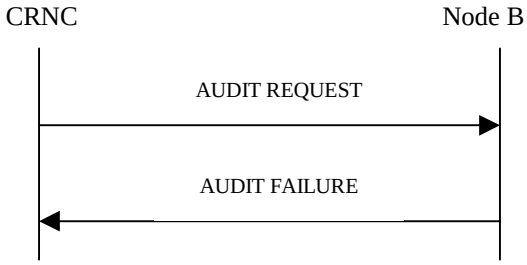

Figure 10A: Audit procedure, Unsuccessful Operation

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

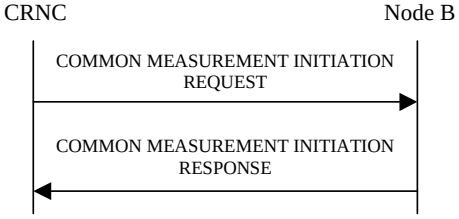

Figure 11: Common Measurement Initiation procedure, Successful Operation

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

Upon reception, the Node B shall initiate the requested measurement according to the parameters given in the request. Unless specified below, the meaning of the parameters are given in other specifications.

[TDD - If the *Time Slot* IE is provided 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 *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].

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 *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 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.

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", the COMMON MEASUREMENT INITIATION RESPONSE message shall contain the measurement result.

8.2.8.3 Unsuccessful Operation

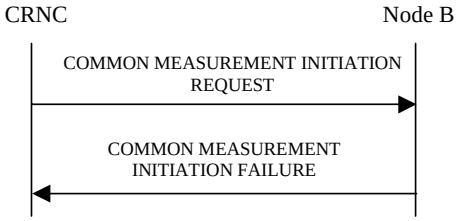

Figure 12: Common Measurement Initiation procedure, Unsuccessful Operation

If the requested measurement cannot be initiated, the Node B shall send a COMMON MEASUREMENT INITIATION FAILURE message over the Node B Control Port. The message shall include the same Measurement ID that was used in the COMMON MEASUREMENT INITIATION REQUEST message and the *Cause* IE set to an appropriate value.

Typical cause values are as follows:

Radio Network Layer Cause

- Measurement not supported for the object.
- Measurement Temporarily not Available

8.2.8.4 Abnormal Conditions

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

[TDD - If the Common Measurement requires the Time Slot Information but the *Time Slot* 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 *SFN* IE is included in the COMMON MEASUREMENT INITIATION REQUEST message and the *Report Characteristics* IE is other than "Periodic" or "On Demand", 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

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 Measurement not available shall be reported.

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

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

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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

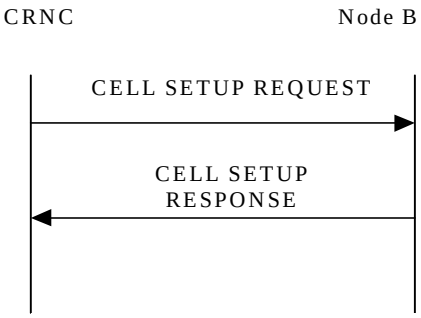

Figure 16: Cell Setup procedure, Successful Operation

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.]

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.][TDD - When the cell is successfully configured, the SCH, Primary CCPCH and BCH exist and the switching-points for the TDD frame structure are defined.] The cell and the channels shall be set to the state Enabled [6].

8.2.12.3 Unsuccessful Operation

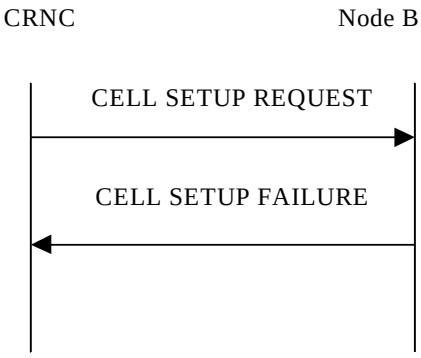

Figure 17: Cell Setup procedure: Unsuccessful Operation

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

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".

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

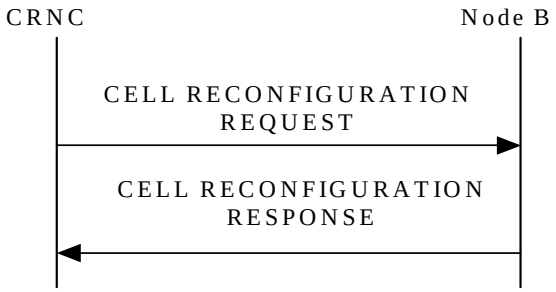

Figure 18: Cell Reconfiguration procedure, Successful Operation

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.]

[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.]

[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 *P-CCPCH 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.

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

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

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.

8.2.13.3 Unsuccessful Operation

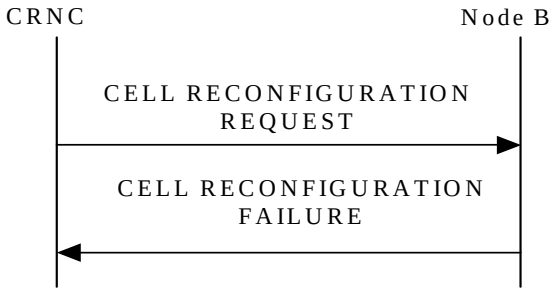

Figure 19: Cell Reconfiguration procedure: Unsuccessful Operation

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

Miscellaneous Cause

- O&M Intervention
- Control processing overload

- HW failure

8.2.13.4 Abnormal Conditions

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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

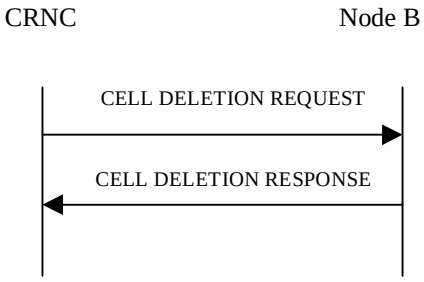

Figure 20: Cell Deletion procedure, Successful Operation

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

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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

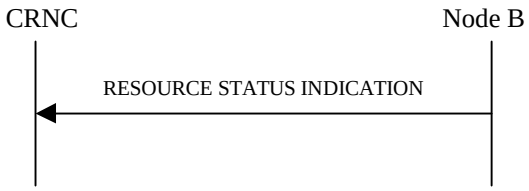

Figure 21: Resource Status Indication procedure, Successful Operation

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.

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.

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.

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 *C-ID* IE, the *Resource Operational State* IE and the *Availability Status* IE. The *Cause* IE in the RESOURCE STATUS INDICATION message shall be set to the appropriate value.

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

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

When the capabilities and/or resource operational state of common physical channels and/or common transport channels have changed, the Node B shall report the new capability and/or resource operational state by sending a RESOURCE STATUS INDICATION message 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.

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

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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

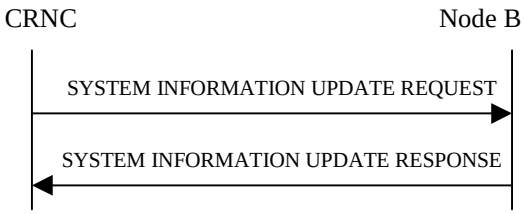

Figure 22: System Information Update procedure, Successful Operation

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

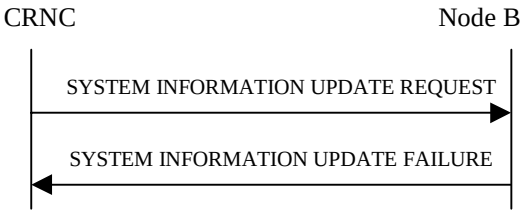

Figure 23: System Information Update procedure: Unsuccessful Operation

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 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, including also combinations where one or more transport channel types are not present.]

8.2.17.2 Successful Operation

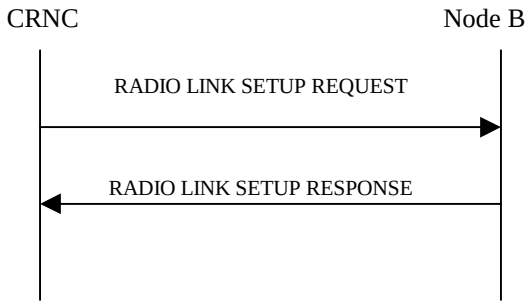

Figure 24: Radio Link Setup procedure, Successful Operation

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.

[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 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 *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.]

The Node B shall include 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 *USCH Information* IE is present, the Node B shall include 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.]

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* IE 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.]

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.]

[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]).]

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 the 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) with DPC MODE=0 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, when the δP_{curr}, as described in ref.[10] subclause 5.2.1.3, shall be added to the maximum DL power for the associated compressed frame.]

[TDD – The Node B shall start the DL transmission using the initial DL power specified in the message on each DL DPCH of the RL 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), but shall always be kept within the maximum and minimum limit specified in the RADIO LINK SETUP REQUEST message.]

[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].]

General:

[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 – 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 shall be activated in the Node B.]

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. [FDD – The Node B shall start transmission on the DL DPDCH(s) of the new RL as specified in [16].] [TDD – The Node B shall start transmission on the new RL immediately as specified in [16].]

8.2.17.3 Unsuccessful Operation

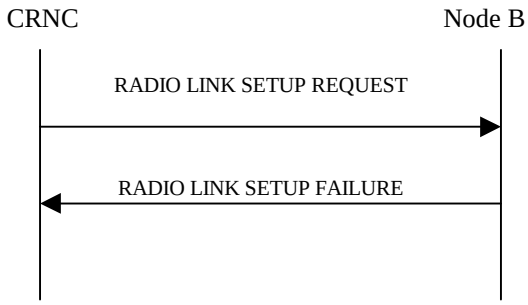

Figure 25: Radio Link Setup procedure: Unsuccessful Operation

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

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.

8.2.18 Physical Shared Channel Reconfiguration [TDD]

8.2.18.1 General

This procedure is 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

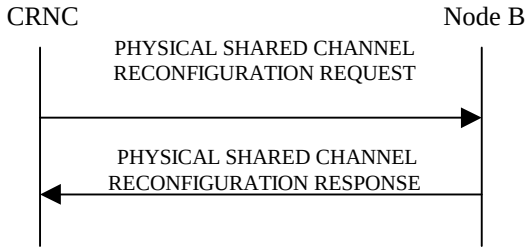

Figure 26: Physical Shared Channel Reconfiguration: Successful Operation

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.

PDSCH/PUSCH Addition

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.

PDSCH/PUSCH Modification

If the PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST message includes any PDSCH sets or PUSCH sets to be modified, and includes any of *TDD Channelisation Code* IE, *Midamble Shift And Burst Type* IE, *Time Slot* 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.

PDSCH/PUSCH Deletion

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.

In the successful case, 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

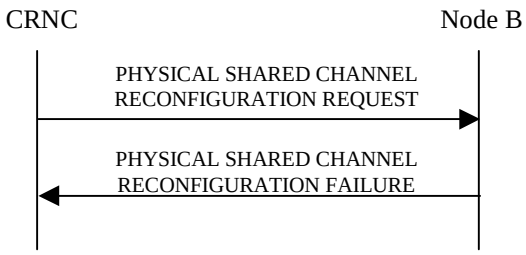

Figure 27: Physical Shared Channel Reconfiguration procedure: Unsuccessful Opreration

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.

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

Typical cause values are as follows:

Radio Network Layer Cause

- Cell not available
- Node B Resources unavailable

Transport Layer Cause

- Transport Resources Unavailable

Miscellaneous Cause

- O&M Intervention
- Control processing overload
- HW failure

8.2.18.4 Abnormal Conditions

-

8.2.19 Reset

8.2.19.1 General

The purpose of the Reset procedure is to align the resources in the CRNC and 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

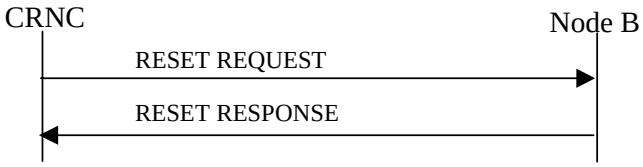

Figure 27A Reset procedure (CRNC to Node B), Successful Operation

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

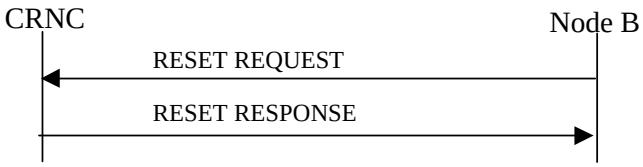

Figure 27B Reset procedure (Node B to CRNC), Successful Operation

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.

8.3 NBAP Dedicated Procedures

8.3.1 Radio Link Addition

8.3.1.1 General

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

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

8.3.1.2 Successful Operation

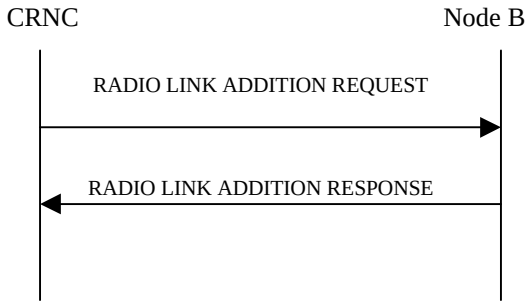

Figure: 28 Radio Link Addition procedure, Successful Operation

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

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

Radio Link Handling:

Diversity Combination Control:

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

- If the *Diversity Control Field* IE is set to "May", 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 – 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.]

[FDD – When the *Transmit Diversity Indicator* IE is present, 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. During compressed mode, when the δP_{curr}, as described in ref.[10] subclause 5.2.1.3, shall be added to the maximum DL power for the associated compressed frame.]

[TDD – 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 and on each Time Slot of the RL when starting transmission until the UL synchronisation on the Uu interface is achieved for the RL. 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 shall be performed during this period. The DL power shall then vary according to the inner loop power control (see ref.[22], subclause 4.2.3.3).]

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

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

[TDD – If the RADIO LINK ADDITION REQUEST message includes the *DL Time Slot ISCP Info* IE, the Node B shall use the indicated value when deciding the DL TX Power for each timeslot as specified in ref. [21], i.e. it shall reduce the DL TX power in those downlink timeslots of the radio link where the interference is low, and increase the DL TX power in those timeslots where the interference is high, while keeping the total downlink power in the radio link unchanged].

General:

[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.]

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. [FDD – The Node B shall start transmission on the DL DPDCH(s) of the new RL as specified in [16].] [TDD – The Node B shall start transmission on the new RL immediately as specified in [16].]

8.3.1.3 Unsuccessful Operation

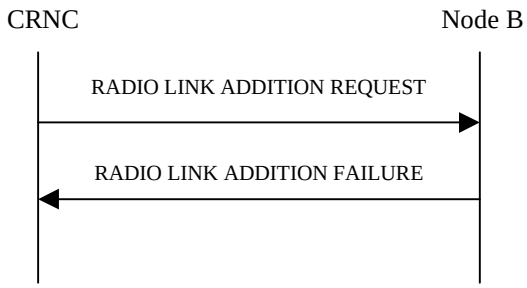

Figure 29: Radio Link Addition procedure: Unsuccessful Operation

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.]

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

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".]

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

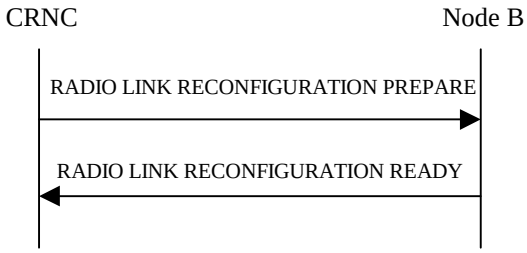

Figure 30: Synchronised Radio Link Reconfiguration Preparation procedure, Successful Operation

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 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* IE, 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 DPCCH Slot Format* IE, the Node B shall set the new Downlink DPCCH Structure to the new configuration.]

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

- [FDD – If the *DL DPCH Information* IE includes the *Limited Power Increase* IE 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 *Midamble Shift And Burst Type* IE, *Time Slot* IE or *TFCI Presence* IE, or the message includes UL/DL Code information and includes *TDD Channelisation Code* 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.]

[TDD – UL/DL CCTrCH Addition]

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

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

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

[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.]

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 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 *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]).]

[TDD – USCH Addition/Modification/Deletion:]

- [TDD – If the RADIO LINK RECONFIGURATION PREPARE message includes USCH information for the USCHs to be added/modified/deleted then the Node B shall use this information to add/modify/delete the indicated USCH channels to/from the radio link, in the same way as the DCH info is used to add/modify/release DCHs.]

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

RL Information:

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

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

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

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

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

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

- If the *RL Information* IE includes the *Maximum DL Power* and/or the *Minimum DL Power* IEs, the Node B shall apply the values in the new configuration. [FDD - During compressed mode, when the δP_{curr}, as described in ref.[10] subclause 5.2.1.3, shall be added to the maximum DL power for the associated compressed frame.]

- [TDD – If the *RL Information* IE includes the *Initial DL Transmission Power* IE, the Node B shall apply the given 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, 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.[22], subclause 4.2.3.3).]

[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.]

General

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 being added or any Transport Channel 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

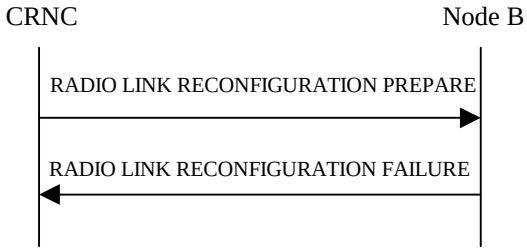

Figure 31: Synchronised Radio Link Reconfiguration Preparation procedure, Unsuccessful Operation

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

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.

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

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.

[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

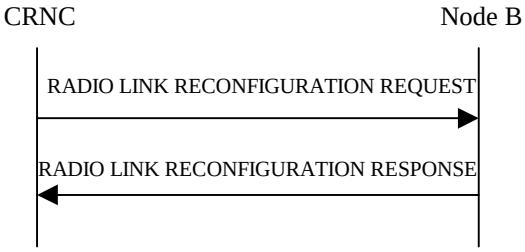

Figure 34: Unsynchronised Radio Link Reconfiguration Procedure, Successful Operation

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 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 *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.]

[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.]

RL Information:

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

- If the *RL Information* IE includes the *Maximum DL Power* IE, the Node B shall apply this value to the new configuration and never transmit with a higher power on any Downlink DPCH of the Radio Link once the new configuration is being used. [FDD - During compressed mode, when the δP_{curr}, as described in ref.[10] subclause 5.2.1.3, shall be added to the maximum DL power for the associated compressed frame.]

- If the *RL Information* IE includes the *Minimum DL Power* IE, the Node B shall apply this value to the new configuration and not transmit with a lower power on any Downlink DPCH of the Radio Link once the new configuration is being used.

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

General

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.

8.3.5.3 Unsuccessful Operation

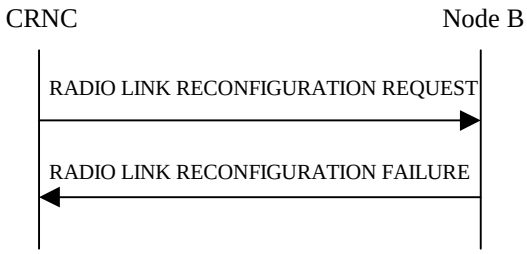

Figure 35: Unsynchronised Radio Link Reconfiguration procedure, Unsuccessful Operation

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.

8.3.6 Radio Link Deletion

8.3.6.1 General

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

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

8.3.6.2 Successful Operation

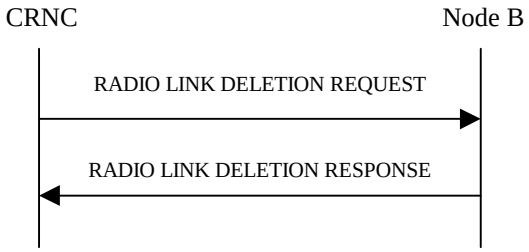

Figure 36: Radio Link Deletion procedure, Successful Operation

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

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

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

The power adjustments shall be started at the first slot of a frame with CFN modulo the value of *Adjustment Period* IE equal to 0 and shall be repeated for every adjustment period and shall be restarted at the first slot of a frame with CFN=0, until a new DL POWER CONTROL REQUEST message is received or the RL is deleted.

8.3.7.3 Abnormal Conditions

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8.3.8 Dedicated Measurement Initiation

8.3.8.1 General

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

The Dedicated Measurement Initiation procedure shall not be initiated if a Prepared Reconfiguration exists, as defined in subclause 3.1.

8.3.8.2 Successful Operation

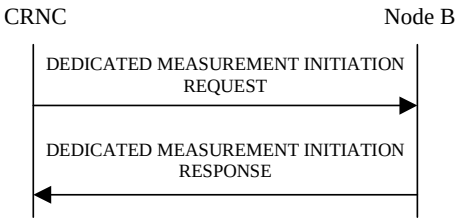

Figure 38: Dedicated Measurement Initiation procedure, Successful Operation

The procedure is initiated with a DEDICATED MEASUREMENT INITIATION REQUEST message sent from the CRNC to the Node B using the Communication Control Port assigned to the Node B Communication Context.

Upon reception, the Node B shall initiate the requested measurement according to the parameters given in the request. Unless specified below the meaning of the parameters are given in other specifications.

If the *Node B Communication Context ID* IE equals the reserved value "All NBCC", this measurement request shall apply for all current and future Node B Communication Contexts controlled via the Communication Control Port on which the DEDICATED MEASUREMENT INITIATION REQUEST message was received. Otherwise, this measurement request shall apply for the requested Node B Communication Context ID only.

If the *Node B Communication Context ID* IE equals the reserved value "All NBCC", the measurement request shall be treated as a single measurement, despite applying to multiple contexts. This means that it may only be terminated or failed on "All NBCC".

If the *Node B Communication Context ID* IE equals the reserved value "All NBCC", the measurement shall be initiated only for those Node B Communication Contexts handling a mode (FDD or 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 is provided within the RL Information, the measurement request shall apply for one existing DPCH per CCTrCH in each used time slot of the Radio Link, provided the measurement type is applicable to this DPCH]

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].

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.

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

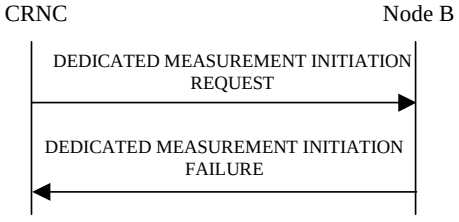

Figure 39: Dedicated Measurement Initiation procedure: Unsuccessful Operation

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

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.

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

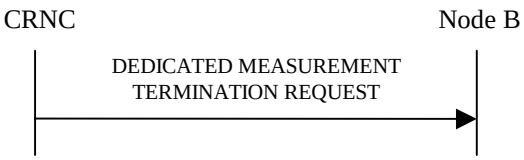

Figure 41: Dedicated Measurement Termination procedure, Successful Operation

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

-

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

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 [FDD - or Radio Link Sets] [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 Links or Radio Link Sets or CCTrCHs with the most appropriate cause value 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 Links, the Node B shall indicate the affected Radio Link(s) using the *RL Information* IE. [FDD - The Node B shall indicate the affected Radio Link Set(s) using the *RL Set Information* IE.] [TDD – If the failure concerns only the failure of one or more 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 Links/Radio Link Sets 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 Links/Radio Link Sets are permanently unavailable and cannot be restored. After sending the RADIO LINK FAILURE INDICATION message to notify the permanent failure, the Node B shall not remove the Radio Link/Radio Link Set from the 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 Links/Radio Link Sets to indicate as unavailable to the CRNC.

Typical cause values are:

Radio Network Layer Causes:

- Synchronisation Failure
- Invalid CM settings

Transport Layer Causes:

- Transport Resources Unavailable

Miscellaneous Causes:

- Control Processing Overload
- HW Failure
- O&M Intervention

8.3.12.3 Abnormal Conditions

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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

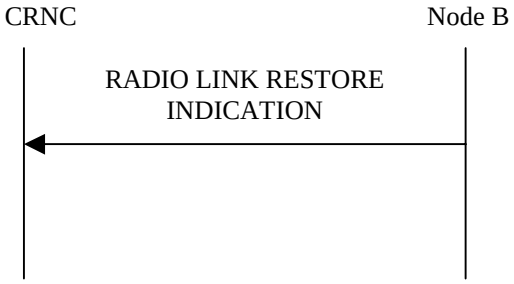

Figure 44: Radio Link Restoration procedure, Successful Operation

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 Sets, 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

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

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.

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

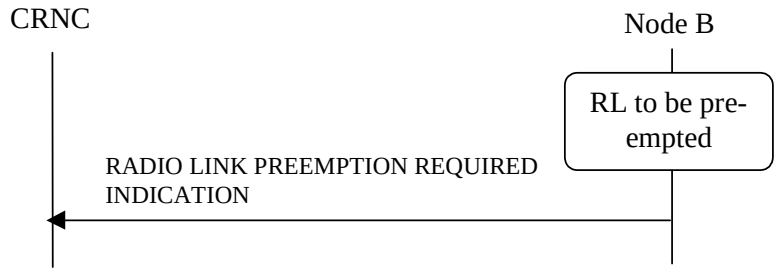

Figure 47B: Radio Link Pre-emption procedure, Successful Operation

When the Node B detects that 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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8.4 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.

When the ERROR INDICATION message is sent from a Node B to its CRNC, the *CRNC Communication Context ID* IE shall be included in the message if available. When the ERROR INDICATION message is sent from a CRNC to a Node B, the *Node B Communication Context ID* IE shall be included in the message if available.

When a message for a dedicated procedure is received in the Node B with an invalid *Node B Communication Context ID* IE, the Node B shall include the unknown *Node B Communication Context ID* IE from the received message in the ERROR INDICATION message, unless another handling is specified in the procedure text for the affected procedure.

When a message for a dedicated procedure is received in the CRNC with an invalid *CRNC Communication Context ID* IE, the CRNC shall include the unknown *CRNC Communication Context ID* IE from the received message in the ERROR INDICATION message, unless another handling is specified in the procedure text for the affected procedure.

The ERROR INDICATION message shall include either the *Cause* IE, or the *Criticality Diagnostics* IE or both the *Cause* IE and the *Criticality Diagnostics* IE.

Typical cause values for the ERROR INDICATION message are:

Protocol Causes:

- Transfer Syntax Error

- Abstract Syntax Error (Reject)
- Abstract Syntax Error (Ignore and Notify)
- Message not Compatible with Receiver State
- Unspecified

Figure 49: Error Indication procedure (Node B to CRNC): Successful Operation

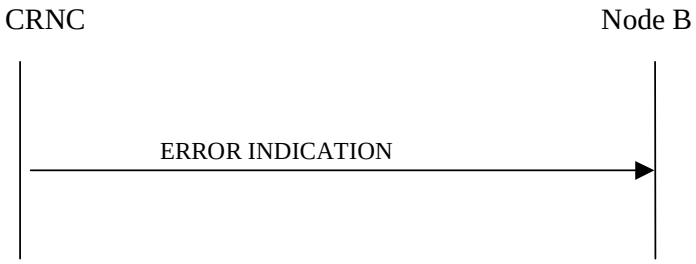

Figure 50: Error Indication procedure (CRNC to Node B), Successful Operation

8.4.1.3 Abnormal Conditions

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9 Elements for NBAP communication

9.1 Message Functional Definition and 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]: $S\text{-}CCPCH,k$	–	
>>>DL Scrambling Code	C-PCH		9.2.2.13		–	
>>>FDD DL Channelisation Code Number	M		9.2.2.14		–	
>>>TFCS	M		9.2.1.58	For the DL.	–	
>>>Secondary CCPCH Slot Format	M		9.2.2.43		–	
>>>TFCI Presence	C-SlotFormat		9.2.1.57	Refer to TS [7]	–	
>>>Multiplexing Position	M		9.2.2.23		–	
>>>Power Offset Information		*1*			–	
>>>>PO1	M		Power Offset 9.2.2.29	Power offset for the TFCI bits	–	
>>>>PO3	M		Power Offset 9.2.2.29	Power offset for the pilot bits	–	
>>>STTD Indicator	M		9.2.2.48		–	
>>>FACH Parameters		*0..<maxnoofFACHs>*			GLOBAL	reject
>>>>Common Transport Channel ID	M		9.2.1.14		–	
>>>>Transport Format Set	M		9.2.1.59	For the DL.	–	
>>>>ToAWS	M		9.2.1.61		–	
>>>>ToAWE	M		9.2.1.60		–	
>>>>Max FACH Power	M		DL Power 9.2.1.21	Maximum allowed power on the FACH.	–	
>>>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		–	
>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..<maxnoofSlotFormatsPRACH>*			–	
>>>>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.	–	
>>>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			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		9.2.2.58		–	
>>>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..<maxnoofPCPCHs>*			–	
>>>>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		*0..<maxAPSigNum>*			–	

Parameters						
>>>>>>AP Preamble Signature	M		9.2.2.1A		–	
>>>>>AP Sub Channel Number	O		9.2.2.1B		–	
>>>VCAM Mapping Information	C-CA	*1..<maxnoofLen>*		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..<maxAPSigNum>*			–	
>>>>>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		–	

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		*1..<maxnoofSCCPCHs>*			GLOBAL	reject
>>>Common Physical Channel ID	M		9.2.1.13		–	
>>>TDD Channelisation Code	M		9.2.3.19		–	
>>>Time Slot	M		9.2.3.23		–	
>>>Midamble Shift And Burst Type	M		9.2.3.7		–	
>>>TDD Physical Channel Offset	M		9.2.3.20		–	
>>>Repetition Period	M		9.2.3.16		–	
>>>Repetition Length	M		9.2.3.15		–	
>>>SCCPCH Power	M		DL Power 9.2.1.21		–	
>>FACH		*0..<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		–	
>>PCH		*0..1*			YES	reject
>>>Common Transport Channel ID	M		9.2.1.14		–	
>>>PCH CCTrCH ID	M		CCTrCH ID 9.2.3.3		–	

>>>Transport Format Set	M		9.2.1.59	For the DL.	–	
>>>ToAWS	M		9.2.1.61		–	
>>>ToAWE	M		9.2.1.60		–	
>>>PICH Parameters		*1*			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		–	
>PRACH					–	
>>PRACH	M	*1*			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	–	

Range Bound	Explanation
maxnoofSCCPCHs	Maximum number of Secondary CCPCHs per CCTrCH
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

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..<maxnoofCPCHs>*			GLOBAL	reject
>>>Common Transport Channel ID	M		9.2.1.14		–	
>>>UL SIR	O		9.2.2.58		–	
>>>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..<maxnoofCPCHs>*			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..<maxnoofCPCHs>*			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			
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		–	

Range Bound	Explanation
maxnoofSCCPCHs	Maximum number of SCCPCHs that can be repeated in a Cell
maxnoofFACH	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

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
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		–	
Local Cell Group Information		*0..<maxLo*			EACH	ignore

		calCellinNodeB>				
>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		–	
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

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	TDD only	–	
>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 Channelisation 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

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

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		–	

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		YES	reject
PUSCH Constant Value	M		Constant Value		YES	reject
PRACH Constant Value	M		Constant Value		YES	reject
Timing Advance Applied	M		9.2.3.22A		YES	reject
SCH Information		*1*			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		*1*			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		*1..15*			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		–	

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	IETtype 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		–	

Range Bound	Explanation
maxSCPICHCell	Maximum number of Secondary CPICHs 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		YES	reject
SCH Information		*0..1*			YES	reject
>Common Physical Channel ID	M		9.2.1.13		–	
>SCH Power	M		DL Power 9.2.1.21		–	
PCCPCH Information		*0..1*			YES	reject
>Common Physical Channel ID	M		9.2.1.13		–	
>PCCPCH Power	M		9.2.3.9		–	
Maximum Transmission Power	O		9.2.1.40		YES	reject
DPCH Constant Value	O		Constant Value		YES	reject
PUSCH Constant Value	O		Constant Value		YES	reject
PRACH Constant Value	O		Constant Value		YES	reject
Time Slot Configuration		*1..15*			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		–	

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 LocalCellinNodeB>*			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		–	
>>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		–	
>Service Impacting					–	
>>Local Cell Information		*0..<maxLocalCellinNodeB>*			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	O		9.2.1.39		–	

Capability						
>>>Minimum Spreading Factor	O		9.2.1.47		–	
>>>Minimum DL Power Capability	O		9.2.1.46A		–	
>>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		–	
>>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 Status Information 9.2.1.13A	FDD only	YES	ignore
>>>Primary CPICH Information	O		Common Physical Channel Status Information 9.2.1.13A	FDD only	YES	ignore
>>>Secondary CPICH Information		*0..<maxSCPICHCell>*		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		YES	ignore

			Information 9.2.1.13A			
>>>BCH Information	O		Common Transport Channel Status Information 9.2.1.14B		YES	ignore
>>>Secondary CCPCH Information		*0..<maxSCCPCHCell>*			EACH	ignore
>>>>Secondary CCPCH Individual Information	M		Common Physical Channel Status Information 9.2.1.13A		–	
>>>PCH Information	O		Common Transport Channel Status Information 9.2.1.14B		YES	ignore
>>>PICH Information	O		Common Physical Channel Status Information 9.2.1.13A		YES	ignore
>>>FACH Information		*0..<maxFACHCell>*			EACH	ignore
>>>>FACH Individual Information	M		Common Transport Channel Status Information 9.2.1.14B		–	
>>>PRACH Information		*0..<maxPRACHCell>*			EACH	ignore
>>>>PRACH Individual Information	M		Common Physical Channel Status Information 9.2.1.13A		–	
>>>RACH Information		*0..<maxPRACHCell>*			EACH	ignore
>>>>RACH Individual Information	M		Common Transport Channel Status Information 9.2.1.14B		–	
>>>AICH Information		*0..<maxPRACHCell>*		FDD only	EACH	ignore
>>>>AICH Individual Information	M		Common Physical Channel Status Information 9.2.1.13A		–	
>>>PCPCH Information		*0..<maxPCPCHCell>*		FDD only	EACH	ignore
>>>>PCPCH	M		Common		–	

Individual Information			Physical Channel Status Information 9.2.1.13A			
>>>CPCH Information		*0..<maxCPCHCell>*		FDD only	EACH	ignore
>>>>CPCH Individual Information	M		Common Transport Channel Status Information 9.2.1.14B		–	
>>>AP-AICH Information		*0..<maxCPCHCell>*		FDD only	EACH	ignore
>>>>AP-AICH Individual Information	M		Common Physical Channel Status Information 9.2.1.13A		–	
>>>CD/CA-ICH Information		*0..<maxCPCHCell>*		FDD only	EACH	ignore
>>>>CD/CA-ICH Individual Information	M		Common Physical Channel Status Information 9.2.1.13A		–	
>>>SCH Information	O		Common Physical Channel Status Information 9.2.1.13A	TDD only	YES	ignore
Cause	O		9.2.1.6		YES	ignore

Condition	Explanation
add	The IE shall be present if the *Add/Delete Indicator* IE is set to 'Add'.

Range Bound	Explanation
maxLocalCellinNodeB	Maximum number of Local Cells that can exist in the Node B
maxCellinNodeB	Maximum number of C-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

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..<maxIB SEG>*			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 9.2.2.58		–	
>Diversity Mode	M		9.2.2.9		–	
>SSDT Cell ID Length	O		9.2.2.45		–	
>S Field Length	O		9.2.2.40		–	
DL DPCH Information		*1*			YES	reject
>TFCS	M		9.2.1.58	For DL	–	
>DL DPCH Slot Format	M		9.2.2.10		–	
>TFCI Signalling Mode	M		9.2.2.50		–	
>TFCI Presence	C-SlotFormat		9.2.1.57		–	
>Multiplexing Position	M		9.2.2.23		–	
>PDSCH RL ID	C-DSCH		RL ID 9.2.1.53		–	
>PDSCH Code Mapping	C-DSCH		9.2.2.25		–	
>Power Offset Information		*1*			–	
>>PO1	M		Power Offset 9.2.2.29	Power offset for the TFCI bits	–	
>>PO2	M		Power Offset 9.2.2.29	Power offset for the TPC bits	–	
>>PO3	M		Power Offset 9.2.2.29	Power offset for the pilot bits	–	
>FDD TPC DL Step Size	M		9.2.2.16		–	
>Limited Power Increase	M		9.2.2.18A		–	
>Inner Loop DL PC Status	M		9.2.2.18B		–	
DCH Information	M		DCH FDD Information 9.2.2.4D		YES	reject
DSCH Information	O		DSCH FDD Information 9.2.2.13B		YES	reject
TFCI2 bearer information		*0..1*			YES	ignore
>ToAWS	M		9.2.1.61		–	
>ToAWE	M		9.2.1.60		–	

RL Information		*1..<maxnoofRLs>*			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		–	
Transmission Gap Pattern Sequence Information	O		9.2.2.53A		YES	reject
Active Pattern Sequence Information	O		9.2.2.A		YES	reject

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	This IE is only present if the DL DPCH slot format is equal to any of the value 12 to 16.
Diversity mode	The IE shall be present if *Diversity Mode* IE in *UL DPCH Information* IE is not set to 'none'.

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*			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		–	
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*			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		–	
DCH Information	O		DCH TDD Information 9.2.3.4C		YES	reject
DSCH Information	O		DSCH TDD Information 9.2.3.5A		YES	reject
USCH Information	O		9.2.3.28		YES	reject
RL Information		*1*			YES	reject
>RL ID	M		9.2.1.53		–	
>C-ID	M		9.2.1.9		–	
>Frame Offset	M		9.2.1.31		–	
>Special Burst Scheduling	M		9.2.3.18A		–	
>Initial DL Transmission Power	M		DL Power 9.2.1.21	Initial power on DPCH	–	
>Maximum DL Power	M		DL Power 9.2.1.21	Maximum allowed power on DPCH	–	
>Minimum DL Power	M		DL Power 9.2.1.21	Minimum allowed power	–	

				on DPCH		
>DL Time Slot ISCP Info	O		9.2.3.4F		–	
PDSCH-RL-ID	O		RL ID 9.2.1.53		YES	ignore

Range Bound	Explanation
maxnoCCTrCH	Number of CCTrCHs for one UE

9.1.37 RADIO LINK SETUP RESPONSE

9.1.37.1 FDD message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
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..<maxnoofRLs>*			EACH	ignore
>RL ID	M		9.2.1.53		–	
>RL Set ID	M		9.2.2.39		–	
>Received Total Wide Band Power	M		9.2.2.39A		–	
>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		–	
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		*1*			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
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..<maxnoofRLs>*			EACH	ignore
>>>RL ID	M		9.2.1.53		–	
>>>Cause	M		9.2.1.6		–	
>>Successful RL Information Response		*0..<maxnoofRLs>*		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		–	
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
Transaction ID	M		9.2.1.62		–	
CHOICE *Cause Level*	M				YES	ignore
>General					–	
>>Cause	M		9.2.1.6		–	
>RL Specific					–	
>>Unsuccessful RL Information Response		*1*			YES	ignore
>>>RL ID	M		9.2.1.53		–	
>>>Cause	M		9.2.1.6		–	
Criticality Diagnostics	O		9.2.1.17		YES	ignore

9.1.39 RADIO LINK ADDITION REQUEST

9.1.39.1 FDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
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..<maxnoofRLs-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		–	

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..<maxnoCCTrCH>*			GLOBAL	reject
>CCTrCH ID	M		9.2.3.3		–	
>UL DPCH Information		*0..1*			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		–	
DL CCTrCH Information		*0..<maxnoCCTrCH>*			GLOBAL	reject
>CCTrCH ID	M		9.2.3.3		–	
>DL DPCH information		*0..1*			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		–	
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	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	–	
>DL Time Slot ISCP Info	O		9.2.3.4F		–	

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		–	
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		*1*			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

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		–	
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

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 9.2.2.58		–	
>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		–	

DSCH To Add	O		DSCH FDD Information 9.2.2.13B		YES	reject
DSCH To Delete		*0..<maxnoofDSCHs>*			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		–	
>>Delete			NULL		–	
RL Information		*0..<maxnoofRLs>*			EACH	reject
>RL ID	M		9.2.1.53		–	
>DL Code Information	O		FDD DL Code Information 9.2.2.14A		–	
>Maximum DL Power	O		DL Power 9.2.1.21	Maximum allowed power on DPCH	–	
>Minimum DL Power	O		DL Power 9.2.1.21	Minimum allowed power on DPCH	–	
>SSDT Indication	O		9.2.2.47		–	
>SSDT Cell Identity	C-SSDTIndON		9.2.2.44		–	
>Transmit Diversity Indicator	C-Diversity mode		9.2.2.53		–	
Transmission Gap Pattern Sequence Information	O		9.2.2.53A		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 *Min UL Channelisation Code Length* IE 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* IE and is not set to 'none'.

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

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..<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		–	
>UL DPCH Information		*0..1*			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 CCTrCH To Modify		*0..<maxnoofCCTrCHs>*			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 DPCH To Add		*0..1*			YES	reject
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>UL Timeslot Information	M		9.2.3.26C		–	
>UL DPCH To Modify		*0..1*			YES	reject
>>Repetition Period	O		9.2.3.16		–	
>>Repetition Length	O		9.2.3.15		–	
>>TDD DPCH Offset	O		9.2.3.19A		–	
>>UL Timeslot Information		*0..<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..<maxnoofDPCHs>*			–	
>>>>DPCH ID	M		9.2.3.5		–	
>>>>TDD Channelisation Code	O		9.2.3.19		–	
>UL DPCH To Delete		*0..<maxnoofDPCHs>*			GLOBAL	reject
>>DPCH ID	M		9.2.3.5		–	
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 9.2.3.3		–	
>DL DPCH Information		*0..1*			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 CCTrCH To Modify		*0..<maxnoofCCTrCHs>*			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..<maxnoofCCTrCHs>*		List of uplink CCTrCH which provide TPC	–	
>>TPC CCTrCH ID	M		CCTrCH ID 9.2.3.3		–	
>DL DPCH to Add		*0..1*			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..<maxnoofDLts>*			–	
>>>Time Slot	M		9.2.3.23		–	
>>>Midamble Shift And Burst Type	O		9.2.3.7		–	
>>>TFCI Presence	O		9.2.1.57		–	
>>>DL Code Information		*0..<maxnoofDPCHs>*			–	
>>>>DPCH ID	M		9.2.3.5		–	
>>>>TDD Channelisation Code	O		9.2.3.19		–	
>DL DPCH To Delete		*0..<maxnoofDPCHs>*			GLOBAL	reject
>>DPCH ID	M		9.2.3.5		–	
DL CCTrCH To Delete		*0..<maxnoofCCTrCHs>*			GLOBAL	reject
>CCTrCH ID	M		9.2.3.3		–	
DCHs To Modify	O		DCHs TDD To Modify		YES	reject

			9.2.3.4D			
DCHs To Add	O		DCH TDD Information 9.2.3.4C		YES	reject
DCHs To Delete		*0..<maxnoofDCHs>*			GLOBAL	reject
>DCH ID	M		9.2.1.20		–	
DSCH To Modify		*0..<maxnoofDSCHs>*			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		–	
DSCH To Add	O		DSCH TDD Information 9.2.3.5A		YES	reject
DSCH To Delete		*0..<maxnoofDSCHs>*			GLOBAL	reject
>DSCH ID	M		9.2.1.27		–	
USCH To Modify		*0..<maxnoofUSCHs>*			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		–	
USCH Information To Add	O		USCH Information 9.2.3.28		YES	reject
USCH To Delete		*0..<maxnoofUSCHs>*			GLOBAL	reject
>USCH ID	M		9.2.3.27		–	
RL Information		*0..1*			YES	reject
>RL ID	M		9.2.1.53		–	
>Maximum Downlink Power	O		DL Power 9.2.1.21	Maximum allowed power on DPCH	–	
>Minimum Downlink Power	O		DL Power 9.2.1.21	Minimum allowed power on DPCH	–	
>Initial DL Transmission Power	O		DL Power 9.2.1.21	Initial power on DPCH	YES	ignore
PDSCH-RL-ID	O		RL ID 9.2.1.53		YES	ignore

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
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
maxnoofULts	Maximum number of Uplink time slots per Radio Link

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.	–	
Criticality Diagnostics	O		9.2.1.17		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		–	
Transmission Gap Pattern Sequence Information	O		9.2.2.53A		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..<maxnoofCCTrCHs>*			EACH	notify
>CCTrCH ID	M		9.2.3.3		–	
>TFCS	O		9.2.1.58		–	
>Puncture Limit	O		9.2.1.50		–	
UL CCTrCH To Delete		*0..<maxnoofCCTrCHs>*			EACH	notify
>CCTrCH ID	M		9.2.3.3		–	
DL CCTrCH To Modify		*0..<maxnoofCCTrCHs>*			EACH	notify
>CCTrCH ID	M		9.2.3.3		–	
>TFCS	O		9.2.1.58		–	
>Puncture Limit	O		9.2.1.50		–	
DL CCTrCH To Delete		*0..<maxnoofCCTrCHs>*			EACH	notify
>CCTrCH ID	M		9.2.3.3		–	
DCHs To Modify	O		DCHs TDD To Modify 9.2.3.4D		YES	reject
DCHs To Add	O		DCH TDD Information 9.2.3.4C		YES	reject
DCHs To Delete		*0..<maxnoofDSCHs>*			GLOBAL	reject
>DCH ID	M		9.2.1.20		–	
RL Information		*0..1*			YES	reject
>RL ID	M		9.2.1.53		–	
>Maximum Downlink Power	O		DL Power 9.2.1.21	Maximum allowed power on DPCH	–	
>Minimum Downlink Power	O		DL Power 9.2.1.21	Minimum allowed power on DPCH	–	

Range Bound	Explanation
maxnoofCCTrCHs	Maximum number of CCTrCHs for a UE

9.1.48 RADIO LINK RECONFIGURATION RESPONSE

IE/Group Name	Presence	Range	IE Type and Reference	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
Criticality Diagnostics	O		9.2.1.17		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..<maxnoofRLs>*			EACH	reject
>>>RL ID	M		9.2.1.53		–	
>>>DPCH ID	O		9.2.3.5	TDD only	–	
>RLS				FDD only	–	
>>RL Set Information		*1..<maxnoofRLSets>*			EACH	ignore
>>>RL Set ID	M		9.2.2.39		–	
>ALL RL			NULL		–	
>ALL RLS			NULL	FDD only	–	
Dedicated Measurement Type	M		9.2.1.23		YES	reject
Measurement Filter Coefficient	O		9.2.1.41		YES	reject
Report Characteristics	M		9.2.1.51		YES	reject
CFN Reporting Indicator	M		FN Reporting Indicator 9.2.1.29B		YES	reject
CFN	O		9.2.1.7		YES	reject

Range Bound	Explanation
maxnoofRLs	Maximum number of individual RLs a measurement can be started on
maxnoofRLSets	Maximum number of individual RL Sets a measurement can be started on

9.1.53 DEDICATED MEASUREMENT INITIATION RESPONSE

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
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	_	
>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
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		–	
>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
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..<maxnoofRLs>*			EACH	ignore
>>>RL ID	M		9.2.1.53		–	
>>>Cause	M		9.2.1.6		–	
>RL Set				FDD only	–	
>>RL Set Information		*1..<maxnoofRLSets>*			EACH	ignore
>>>RL Set ID	M		9.2.2.39		–	
>>>Cause	M		9.2.1.6		–	
>CCTrCH				TDD only	–	
>>RL ID	M		9.2.1.53		–	
>>CCTrCH List		*1..<maxnoofCCTrCHs>*			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		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 [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
SFN	O		9.2.1.53A		YES	reject
PDSCH Sets To Add		*0..<maxnoofPDSCHSets>*			GLOBAL	reject
>PDSCH Set ID	M		9.2.3.11		–	
>PDSCH To Add Information		*1*			YES	reject
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD Physical Channel Offset	M		9.2.3.20		–	
>>DL Timeslot Information		*1..<maxnoofDLts>*			–	
>>>Time Slot	M		9.2.3.23		–	
>>>Midamble Shift And Burst Type	M		9.2.3.7		–	
>>>TFCI Presence	M		9.2.1.57		–	
>>>DL Code Information		*1..<maxnoofPDSCHs>*			–	
>>>>PDSCH ID	M		9.2.3.10		–	
>>>>TDD Channelisation Code	M		9.2.3.19		–	
PDSCH Sets To Modify		*0..<maxnoofPDSCHSets>*			GLOBAL	reject
>PDSCH Set ID	M		9.2.3.11		–	
>PDSCH To Modify Information		*1*			YES	reject
>>Repetition Period	O		9.2.3.16		–	

>>Repetition Length	O		9.2.3.15		–	
>>TDD Physical Channel Offset	O		9.2.3.20		–	
>>DL Timeslot Information		*0..<maxnoofDLts>*			–	
>>>Time Slot	M		9.2.3.23		–	
>>>Midamble Shift And Burst Type	O		9.2.3.7		–	
>>>TFCI Presence	O		9.2.1.57		–	
>>>DL Code Information		*0..<maxnoofPDSCHs>*			–	
>>>>PDSCH ID	M		9.2.3.10		–	
>>>>TDD Channelisation Code	M		9.2.3.19		–	
PDSCH Sets To Delete		*0..<maxnoofPDSCH Sets>*			GLOBAL	reject
>PDSCH Set ID	M		9.2.3.11		–	
PUSCH Sets To Add		*0..<maxnoofPUSCH Sets>*			GLOBAL	reject
>PUSCH Set ID	M		9.2.3.13		–	
>PUSCH To Add Information		*1*			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..<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		*1..<maxnoofPUSCHs>*			–	
>>>>PUSCH ID	M		9.2.3.12		–	
>>>>TDD Channelisation Code	M		9.2.3.19		–	
PUSCH Sets To Modify		*0..<maxnoofPUSCH Sets>*			GLOBAL	reject
>PUSCH Set ID	M		9.2.3.13		–	
>PUSCH To Modify Information		*1*			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 Sets To Delete		*0..<maxnoofPUSCH Sets>*			GLOBAL	reject
>PUSCH Set ID	M		9.2.3.13		–	

Range Bound	Explanation
maxnoofPDSCHSets	Maximum number of PDSCH Sets in a cell
maxnoofPDSCHs	Maximum number of PDSCHs in a cell
maxnoofPUSCHSets	Maximum number of PUSCH Sets in a cell
maxnoofPUSCHs	Maximum number of PUSCHs in a cell
maxnoofDLts	Maximum number of Downlink time slots in a cell
maxnoofULts	Maximum number of Uplink time slots in a cell

9.1.63 PHYSICAL SHARED CHANNEL 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

9.1.64 PHYSICAL SHARED CHANNEL 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		–	
CHOICE *Cause Level*	M				YES	ignore
>General					–	
>>Cause	M		9.2.1.6		–	
>Set specific					–	
>>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	M		9.2.3.4F		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..<maxnoofRLs>*			EACH	ignore
>RL ID	M		9.2.1.53		–	

Range Bound	Explanation
maxnoofRLs	Maximum number of radio links for one UE

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 attribute is an empty set, this implies that none of the status conditions described in ref. [6] are present.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Availability Status			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. It is allocated at the Node B and it is unique for each transport bearer under establishment to/from the Node B.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Binding ID			OCTET STRING (1..4,…)	

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.

9.2.1.6 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)	
>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).
Cell not Available	The concerned cell or local cell is not available.
Combining not supported	The Node B does not support RL combining for the concerned cells.
Combining Resources Not Available	The value of the received *Diversity Control Field* IE was set to "Must", but the Node B cannot perform the requested combining.
CM not supported	The 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.
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.
Invalid CM Settings	The concerned cell(s) consider the requested Compressed Mode settings invalid.
Measurement not Supported For The Object	At least one of the concerned cell(s) does not support the requested measurement on the concerned object type.
Measurement 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.
Priority transport channel established	The CRNC cannot perform the requested blocking since a transport channel with a high priority is present.
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 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.
Synchronisation Failure	Loss of UL Uu synchronisation.
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..<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	M		INTEGER (0..65535)	
>UL cost	M		INTEGER (0..65535)	

Range Bound	Explanation
maxnoofSFs	Maximum number of Spreading Factors

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, …)	"UL Timeslot ISCP" is used by TDD only, "Acknowledged PRACH Preambles", "Acknowledged PCPCH Access Preambles", "Detected PCPCH Access Preambles" are used by FDD only

9.2.1.12 Common Measurement Value

The Common Measurement Value shall be the most recent value for this measurement, for which the reporting criteria were met.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
CHOICE *Common Measurement Value*				
>Transmitted Carrier Power				
>>Transmitted Carrier Power Value	M		INTEGER (0..100)	According to mapping in [22] and [23]
>Received Total Wide Band Power				
>>Received Total Wide Band Power Value	M		INTEGER (0..621)	According to mapping in [22] and [23]
>Acknowledged PRACH Preambles				FDD Only
>>Acknowledged PRACH Preamble Value	M		INTEGER (0..240,…)	According to mapping in [22]
>UL Timeslot ISCP				TDD Only
>>UL Timeslot ISCP	M		INTEGER (0..127)	According to mapping in [23]
>Acknowledged PCPCH Access Preambles				FDD Only
>>Acknowledged PCPCH Access Preambles	M		INTEGER (0..15,…)	According to mapping in [22]
>Detected PCPCH Access Preambles				FDD Only
>>Detected PCPCH Access Preambles	M		INTEGER (0..240,…)	According to mapping in [22]

9.2.1.12A Common Measurement Value Information

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
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
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
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
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..<maxnooferrors>*			–	
>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.	–	

>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
maxnofSFs	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..<maxnoofDCHs>*		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].

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, …)	"RSCP", "Rx Timing Deviation" are used by TDD only. "Round Trip Time", "SIR Error" are 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
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*				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]

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	

9.2.1.25 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.

9.2.1.27 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..<maxnoofDSCHs>*		
>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)	

9.2.1.32 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)	

9.2.1.36 Indication Type

Void.

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)	

9.2.1.39 Maximum DL Power Capability

This parameter indicates the maximum 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 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 dBm 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
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]

9.2.1.44 Measurement Threshold

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
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				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]

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..<maxnooflevels>*		The first repetition of the *Message Structure* IE corresponds to the top level of the message. The last repetition of the *Message Structure* IE corresponds to the level above the reported level for the 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
>Ddmode	M		ENUMERATED (TDD, FDD, Common, …)	Common = common to FDD and TDD.
Type of Message	M		ENUMERATED (Initiating Message, Successful Outcome, Unsuccessful Outcome, Outcome)	

9.2.1.46A Minimum DL Power Capability

This parameter indicates the minimum DL power capability for a local cell within 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)	

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)	

9.2.1.48 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

9.2.1.50 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
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.

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

9.2.1.52 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 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, …)	

9.2.1.54 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, …)	

9.2.1.56 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 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)	

9.2.1.57 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..<maxnoofTFCs>*		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..<maxTFCI_1_Combs>*		The first instance of the parameter *Transport Format Combination DCH* corresponds to TFCI (field 1) = 0, the second to TFCI (field 1) = 1 and so on.
>>>CTFC(field1)	M		9.2.1.18A	
>>CHOICE *Signalling Method*				
>>>*TFCI Range*				
>>>>TFC Mapping On DSCH		*1..<maxNoTFCIGrou*		

		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.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Dynamic Transport Format Information		*1..<maxTFcount>*		The first instance of the parameter corresponds to TFI zero, the second to 1 and so on.
>Number Of Transport Blocks	M		INTEGER (0..512)	
>Transport Block Size	C-Blocks		INTEGER (0..5000)	Unit: Bits
>CHOICE *Mode*	M			
>>*TDD*				
>>>Transmission Time Interval Information	C-TTIdynamic	*1..<maxTTIcount>*		
>>>>Transmission Time Interval	M		ENUMERATED (10, 20, 40, 80,…)	Unit: ms
Semi-Static Transport Format Information		*1*		
>Transmission Time Interval	M		ENUMERATED (10, 20, 40, 80, dynamic,…)	Unit: ms Value 'dynamic' for 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

The Transport Layer Address defines the transport address of the Node B. For details on the Transport Address used see ref. [2].

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)	

9.2.1.65 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)	

9.2.1.66 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.

9.2.2 FDD specific parameters

9.2.2.A Active Pattern Sequence Information

Defines the parameters for the compressed mode gap pattern sequence activation. For details see ref. [18].

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
CM Configuration Change CFN	M		CFN 9.2.1.7	
Transmission Gap Pattern Sequence Status		*0..<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]

9.2.2.1C 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].

9.2.2.1D 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,…)	

9.2.2.4D 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
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	

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,…)	

9.2.2.11 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

9.2.2.13 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
DSCH FDD Information		*1..<maxnoofDSCHs>*		
>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	

Range Bound	Explanation
maxnoofDSCHs	Maximum number of DSCHs for one UE

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..<maxnoofCodes>*		
>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)	

9.2.2.19 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)	

9.2.2.22 Minimum UL Channelisation Code Length

Minimum UL channelisation code length (spreading factor) of a DPDCH which is used during the connection. Needed by rate matching algorithm.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Min UL Channelisation Code Length			ENUMERATED (4, 8, 16, 32, 64, 128, 256,…)	

9.2.2.23 Multiplexing Position

Multiplexing Position specifies whether fixed or flexible positions of transport channels shall be used in the physical channel.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Multiplexing Position			ENUMERATED (Fixed, Flexible)	

9.2.2.23A N_EOT

The N_EOT is defined as number of End of Transmission for release of PCPCH transmission.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
N_EOT			INTEGER (0..8)	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)	

9.2.2.24 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*				
>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

9.2.2.34 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 chip

9.2.2.36 QE-Selector

Void.

9.2.2.37 RACH Slot Format

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
RACH Slot Format			ENUMERATED (0..3,...)	See ref. [7].

9.2.2.38 RACH Sub Channel Numbers

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
RACH Sub Channel Numbers			BIT STRING (12)	Each bit indicates availability for a subchannel, where the subchannels are numbered 'subchannel 0' to 'subchannel 11'. The value 1 of a bit indicates that the corresponding subchannel is available and the value 0 indicates that it is not available.The order of bits is to be interpreted according to subclause 9.3.4.

9.2.2.39 RL Set ID

The RL Set ID uniquely identifies one RL Set within a Node B Communication Context.

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

9.2.2.39A Received Total Wide Band Power

The Received total wide band power indicates the UL interference at a certain cell under CRNC, see ref. [4].

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Received Total Wide Band Power			INTEGER (0..621)	According to mapping in [22].

9.2.2.40 S-Field Length

The UE uses the S Field of the UL DPCCH slot to send the SSDT Cell ID to the network.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
S Field Length			ENUMERATED (1, 2,…)	

9.2.2.41 Scrambling Code Change

Void.

9.2.2.42 Scrambling Code Number

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Scrambling Code Number			INTEGER (0..15)	Identification of scrambling code see ref. [9].

9.2.2.43 Secondary CCPCH Slot Format

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Secondary CCPCH Slot Format			INTEGER (0..17,…)	

9.2.2.44 SSDT Cell Identity

The SSDT Cell ID is a temporary ID for SSDT assigned to a cell.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
SSDT Cell Identity			ENUMERATED (a, b,.., h)	

9.2.2.45 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 each 5 bits long and each field is 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	C-SplitType		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'.
SplitType	The IE shall be present if the *Split Type* IE is set to 'Logical'.

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..<maxTGPS>*		
>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

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

9.2.2.59 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 Code Groups, Scrambling Codes, Midambles and Toffset (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
DCH TDD 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	
>>CCTrCH ID	M		9.2.3.3	UL CCTrCH in which the DCH is mapped
>>CCTrCH ID	M		9.2.3.3	DL CCTrCH in which the DCH is mapped
>>Transport Format Set	M		9.2.1.59	For UL
>>Transport Format Set	M		9.2.1.59	For DL
>>Allocation/Retention Priority	M		9.2.1.1A	
>>Frame Handling Priority	M		9.2.1.30	
>>QE-Selector	C-CoorDCH		9.2.1.50A	

Condition	Explanation
CoorDCH	The IE shall be present if this DCH is part of a set of coordinated DCHs (number of instances of the *DCH Specific Info* IE is greater than 1).

Range Bound	Explanation
maxnoofDCHs	Maximum number of DCHs for one UE

9.2.3.4D DCHs TDD To Modify

The *DCHs TDD To Modify* IE provides information for DCHs to be modified.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
DCHs TDD 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	
>>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..<maxnoofDLts>*		
>Time Slot	M		9.2.3.23	
>Midamble Shift And Burst Type	M		9.2.3.7	
>TFCI Presence	M		9.2.1.57	
>DL Code Information	M		TDD DL Code Information 9.2.3.19B	

Range Bound	Explanation
maxnoofDLts	Maximum number of Downlink time slots per Radio Link

9.2.3.4F DL Time Slot ISCP Info

The *DL Time Slot ISCP Info* IE provides information for DL Interference level for each time slot within the Radio Link.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
DL Time Slot ISCP Info		*1..<maxnoofDLts>*		
>Time Slot	M		9.2.3.23	
>DL Timeslot ISCP	M		9.2.3.4B	

Range Bound	Explanation
maxnoofDLts	Maximum number of Downlink time slots per Radio Link

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
DSCH TDD Information		*1..<maxnoofDSCHs>*		
>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	

Range Bound	Explanation
maxnoofDSCHs	Maximum number of DSCH for one UE

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 shift is selected by layer 1 depending on the associated channelisation code (DL and UL)

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

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
CHOICE *Burst Type*				
>Type1				
>>Midamble 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)	

9.2.3.8 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 PCCPCH in a cell. The PCCPCH 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]

9.2.3.12 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, …)	

9.2.3.15 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

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

9.2.3.19 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 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..<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

9.2.3.20 TDD Physical Channel Offset

The Offset represents the phase information for the allocation of a physical channel. (SFN mod Repetition Period = Offset) see ref. [18].

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
TDD Physical Channel Offset			INTEGER (0..63)	

9.2.3.21 TDD TPC DL Step Size

This parameter indicates step size for the DL power adjustment.

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

9.2.3.21A TDD UL Code Information

The *TDD UL Code Information* IE provides information for UL Code to be established.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics 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

9.2.3.22 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 Advance Applied

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

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, …)	

9.2.3.25 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

9.2.3.27 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
USCH Information		*1..<maxnoofUSCHs>*		
>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	

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..<maxnoofUSCHs>*		
>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.

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,
    ResourceStatusIndication,
    SystemInformationUpdateRequest,
    SystemInformationUpdateResponse,
    SystemInformationUpdateFailure,
    ResetRequest,
    ResetResponse,
    RadioLinkPreemptionRequiredIndication,
    RadioLinkSetupRequestFDD,
    RadioLinkSetupRequestTDD,
    RadioLinkSetupResponseFDD,
    RadioLinkSetupResponseTDD,
    RadioLinkSetupFailureFDD,
    RadioLinkSetupFailureTDD,
    RadioLinkAdditionRequestFDD,
    RadioLinkAdditionRequestTDD,
    RadioLinkAdditionResponseFDD,
    RadioLinkAdditionResponseTDD,
    RadioLinkAdditionFailureFDD,
    RadioLinkAdditionFailureTDD,
    RadioLinkReconfigurationPrepareFDD,
    RadioLinkReconfigurationPrepareTDD,
    RadioLinkReconfigurationReady,
    RadioLinkReconfigurationFailure,
    RadioLinkReconfigurationCommit,
    RadioLinkReconfigurationCancel,
    RadioLinkReconfigurationRequestFDD,
    RadioLinkReconfigurationRequestTDD,
    RadioLinkReconfigurationResponse,
    RadioLinkDeletionRequest,
    RadioLinkDeletionResponse,
    DL-PowerControlRequest,
    DL-PowerTimeslotControlRequest,
    DedicatedMeasurementInitiationRequest,
    DedicatedMeasurementInitiationResponse,
    DedicatedMeasurementInitiationFailure,
    DedicatedMeasurementReport,
    DedicatedMeasurementTerminationRequest,
    DedicatedMeasurementFailureIndication,
    RadioLinkFailureIndication,
    RadioLinkRestoreIndication,
    CompressedModeCommand,
    ErrorIndication,
    PrivateMessage,
    PhysicalSharedChannelReconfigurationRequestTDD,
    PhysicalSharedChannelReconfigurationResponseTDD,
    PhysicalSharedChannelReconfigurationFailureTDD
FROM NBAP-PDU-Contents

    id-audit,
    id-auditRequired,
    id-blockResource,
    id-cellDeletion,
    id-cellReconfiguration,
```

```
    id-cellSetup,
    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-physicalSharedChannelReconfiguration,
    id-privateMessageForDedicated,
    id-privateMessageForCommon,
    id-radioLinkAddition,
    id-radioLinkDeletion,
    id-radioLinkFailure,
    id-radioLinkPreemption,
    id-radioLinkRestoration,
    id-radioLinkSetup,
    id-reset,
    id-resourceStatusIndication,
    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                      |
    physicalSharedChannelReconfiguration                ,
    ...
}

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                         ,
    ...
}

-- **************************************************************
--
-- Interface Elementary Procedures
--
-- **************************************************************

-- Class 1

-- *** CellSetup (FDD) ***
cellSetupFDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      CellSetupRequestFDD
    SUCCESSFUL OUTCOME      CellSetupResponse
    UNSUCCESSFUL OUTCOME    CellSetupFailure
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID            { procedureCode id-cellSetup, ddMode fdd }
    CRITICALITY             reject
}

-- *** CellSetup (TDD) ***
cellSetupTDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      CellSetupRequestTDD
    SUCCESSFUL OUTCOME      CellSetupResponse
    UNSUCCESSFUL OUTCOME    CellSetupFailure
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID            { procedureCode id-cellSetup, ddMode tdd }
    CRITICALITY             reject
}

-- *** CellReconfiguration(FDD) ***
cellReconfigurationFDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      CellReconfigurationRequestFDD
    SUCCESSFUL OUTCOME      CellReconfigurationResponse
    UNSUCCESSFUL OUTCOME    CellReconfigurationFailure
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID            { procedureCode id-cellReconfiguration, ddMode fdd }
    CRITICALITY             reject
}

-- *** CellReconfiguration(TDD) ***
cellReconfigurationTDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      CellReconfigurationRequestTDD
```

```
    SUCCESSFUL OUTCOME      CellReconfigurationResponse
    UNSUCCESSFUL OUTCOME    CellReconfigurationFailure
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID            { procedureCode id-cellReconfiguration, ddMode tdd }
    CRITICALITY             reject
}

-- *** CellDeletion ***
cellDeletion NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      CellDeletionRequest
    SUCCESSFUL OUTCOME      CellDeletionResponse
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID            { procedureCode id-cellDeletion, ddMode common }
    CRITICALITY             reject
}

-- *** CommonTransportChannelSetup (FDD) ***
commonTransportChannelSetupFDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      CommonTransportChannelSetupRequestFDD
    SUCCESSFUL OUTCOME      CommonTransportChannelSetupResponse
    UNSUCCESSFUL OUTCOME    CommonTransportChannelSetupFailure
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID            { procedureCode id-commonTransportChannelSetup, ddMode fdd }
    CRITICALITY             reject
}

-- *** CommonTransportChannelSetup (TDD) ***
commonTransportChannelSetupTDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      CommonTransportChannelSetupRequestTDD
    SUCCESSFUL OUTCOME      CommonTransportChannelSetupResponse
    UNSUCCESSFUL OUTCOME    CommonTransportChannelSetupFailure
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID            { procedureCode id-commonTransportChannelSetup, ddMode tdd }
    CRITICALITY             reject
}

-- *** CommonTransportChannelReconfigure (FDD) ***
commonTransportChannelReconfigureFDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      CommonTransportChannelReconfigurationRequestFDD
    SUCCESSFUL OUTCOME      CommonTransportChannelReconfigurationResponse
    UNSUCCESSFUL OUTCOME    CommonTransportChannelReconfigurationFailure
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID            { procedureCode id-commonTransportChannelReconfigure, ddMode fdd }
    CRITICALITY             reject
}

-- *** CommonTransportChannelReconfigure (TDD) ***
commonTransportChannelReconfigureTDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      CommonTransportChannelReconfigurationRequestTDD
    SUCCESSFUL OUTCOME      CommonTransportChannelReconfigurationResponse
    UNSUCCESSFUL OUTCOME    CommonTransportChannelReconfigurationFailure
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID            { procedureCode id-commonTransportChannelReconfigure, ddMode tdd }
    CRITICALITY             reject
```

```
}

-- *** CommonTransportChannelDelete ***
commonTransportChannelDelete NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      CommonTransportChannelDeletionRequest
    SUCCESSFUL OUTCOME      CommonTransportChannelDeletionResponse
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID            { procedureCode id-commonTransportChannelDelete, ddMode common }
    CRITICALITY             reject
}

-- *** Audit ***
audit NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      AuditRequest
    SUCCESSFUL OUTCOME      AuditResponse
    UNSUCCESSFUL OUTCOME    AuditFailure
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID            { procedureCode id-audit, ddMode common }
    CRITICALITY             reject
}

-- *** BlockResourceRequest ***
blockResource NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      BlockResourceRequest
    SUCCESSFUL OUTCOME      BlockResourceResponse
    UNSUCCESSFUL OUTCOME    BlockResourceFailure
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID            { procedureCode id-blockResource, ddMode common }
    CRITICALITY             reject
}

-- *** RadioLinkSetup (FDD) ***
radioLinkSetupFDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      RadioLinkSetupRequestFDD
    SUCCESSFUL OUTCOME      RadioLinkSetupResponseFDD
    UNSUCCESSFUL OUTCOME    RadioLinkSetupFailureFDD
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID            { procedureCode id-radioLinkSetup, ddMode fdd }
    CRITICALITY             reject
}

-- *** RadioLinkSetup (TDD) ***
radioLinkSetupTDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      RadioLinkSetupRequestTDD
    SUCCESSFUL OUTCOME      RadioLinkSetupResponseTDD
    UNSUCCESSFUL OUTCOME    RadioLinkSetupFailureTDD
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID            { procedureCode id-radioLinkSetup, ddMode tdd }
    CRITICALITY             reject
}

-- *** SystemInformationUpdate ***
systemInformationUpdate NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      SystemInformationUpdateRequest
```

```
    SUCCESSFUL OUTCOME      SystemInformationUpdateResponse
    UNSUCCESSFUL OUTCOME    SystemInformationUpdateFailure
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID            { procedureCode id-systemInformationUpdate, ddMode common }
    CRITICALITY             reject
}

-- *** Reset ***
reset NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      ResetRequest
    SUCCESSFUL OUTCOME      ResetResponse
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID            { procedureCode id-reset, ddMode common }
    CRITICALITY             reject
}

-- *** CommonMeasurementInitiation ***
commonMeasurementInitiation NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      CommonMeasurementInitiationRequest
    SUCCESSFUL OUTCOME      CommonMeasurementInitiationResponse
    UNSUCCESSFUL OUTCOME    CommonMeasurementInitiationFailure
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID            { procedureCode id-commonMeasurementInitiation, ddMode common }
    CRITICALITY             reject
}

-- *** RadioLinkAddition (FDD) ***
radioLinkAdditionFDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      RadioLinkAdditionRequestFDD
    SUCCESSFUL OUTCOME      RadioLinkAdditionResponseFDD
    UNSUCCESSFUL OUTCOME    RadioLinkAdditionFailureFDD
    MESSAGE DISCRIMINATOR   dedicated
    PROCEDURE ID            { procedureCode id-radioLinkAddition, ddMode fdd }
    CRITICALITY             reject
}

-- *** RadioLinkAddition (TDD) ***
radioLinkAdditionTDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      RadioLinkAdditionRequestTDD
    SUCCESSFUL OUTCOME      RadioLinkAdditionResponseTDD
    UNSUCCESSFUL OUTCOME    RadioLinkAdditionFailureTDD
    MESSAGE DISCRIMINATOR   dedicated
    PROCEDURE ID            { procedureCode id-radioLinkAddition, ddMode tdd }
    CRITICALITY             reject
}

-- *** RadioLinkDeletion    ***
radioLinkDeletion NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      RadioLinkDeletionRequest
    SUCCESSFUL OUTCOME      RadioLinkDeletionResponse
    MESSAGE DISCRIMINATOR   dedicated
    PROCEDURE ID            { procedureCode id-radioLinkDeletion, ddMode common }
```

```
    CRITICALITY             reject
}

-- *** SynchronisedRadioLinkReconfigurationPreparation (FDD) ***
synchronisedRadioLinkReconfigurationPreparationFDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      RadioLinkReconfigurationPrepareFDD
    SUCCESSFUL OUTCOME      RadioLinkReconfigurationReady
    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 (TDD only) ***
```

```
physicalSharedChannelReconfiguration NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE  PhysicalSharedChannelReconfigurationRequestTDD
    SUCCESSFUL OUTCOME  PhysicalSharedChannelReconfigurationResponseTDD
    UNSUCCESSFUL OUTCOME    PhysicalSharedChannelReconfigurationFailureTDD
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID        { procedureCode id-physicalSharedChannelReconfiguration, ddMode tdd }
    CRITICALITY         reject
}

-- 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
}
```

```
-- *** 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
}

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,
    CFN,
    Channel-Assignment-Indication,
    ChipOffset,
    C-ID,
    Closedlooptimingadjustmentmode,
    CommonChannelsCapacityConsumptionLaw,
    Compressed-Mode-Deactivation-Flag,
    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,
    DCH-FDD-Information,
    DCH-InformationResponse,
    DCH-ID,
    FDD-DCHs-to-Modify,
    TDD-DCHs-to-Modify,
    DCH-TDD-Information,
    DedicatedChannelsCapacityConsumptionLaw,
    DedicatedMeasurementType,
    DedicatedMeasurementValue,
    DedicatedMeasurementValueInformation,
    DiversityControlField,
    DiversityMode,
    DL-DPCH-SlotFormat,
    DL-or-Global-CapacityCredit,
    DL-Power,
    DLPowerAveragingWindowSize,
    DL-ScramblingCode,
    DL-TimeslotISCP,
    DL-Timeslot-Information,
    DL-TimeslotISCPInfo,
    DL-TPC-Pattern01Count,
    DPCH-ID,
    DSCH-ID,
    DSCH-FDD-Information,
    DSCH-InformationResponse,
```

```
    DSCH-TDD-Information,
    End-Of-Audit-Sequence-Indicator,
    FDD-DL-ChannelisationCodeNumber,
    FDD-DL-CodeInformation,
    FDD-S-CCPCH-Offset,
    FDD-TPC-DownlinkStepSize,
    FirstRLS-Indicator,
    FNReportingIndicator,
    FrameHandlingPriority,
    FrameOffset,
    IB-OC-ID,
    IB-SG-DATA,
    IB-SG-POS,
    IB-SG-REP,
    IB-Type,
    InnerLoopDLPCStatus,
    LimitedPowerIncrease,
    Local-Cell-ID,
    MaximumDL-PowerCapability,
    MaximumTransmissionPower,
    Max-Number-of-PCPCHes,
    MaxNrOfUL-DPDCHs,
    MaxPRACH-MidambleShifts,
    MeasurementFilterCoefficient,
    MeasurementID,
    MidambleShiftAndBurstType,
    MinimumDL-PowerCapability,
    MinSpreadingFactor,
    MinUL-ChannelisationCodeLength,
    MultiplexingPosition,
    NEOT,
    NFmax,
    N-INSYNC-IND,
    N-OUTSYNC-IND,
    NodeB-CommunicationContextID,
    NStartMessage,
    PagingIndicatorLength,
    PayloadCRC-PresenceIndicator,
    PCCPCH-Power,
    PCP-Length,
    PDSCH-CodeMapping,
    PDSCHSet-ID,
    PDSCH-ID,
    PICH-Mode,
    PICH-Power,
    PowerAdjustmentType,
    PowerOffset,
    PowerRaiseLimit,
    PRACH-Midamble,
    PreambleSignatures,
    PreambleThreshold,
    PrimaryCPICH-Power,
    PrimaryScramblingCode,
    PropagationDelay,
```

```
    SCH-TimeSlot,
    PunctureLimit,
    PUSCHSet-ID,
    PUSCH-ID,
    QE-Selector,
    RACH-SlotFormat,
    RACH-SubChannelNumbers,
    RepetitionLength,
    RepetitionPeriod,
    ReportCharacteristics,
    ResourceOperationalState,
    RL-Set-ID,
    RL-ID,
    Received-total-wide-band-power-Value,
    AdjustmentPeriod,
    ScaledAdjustmentRatio,
    MaxAdjustmentStep,
    ScramblingCodeNumber,
    SecondaryCCPCH-SlotFormat,
    Segment-Type,
    S-FieldLength,
    SFN,
    ShutdownTimer,
    SIB-Originator,
    SpecialBurstScheduling,
    SSDT-Cell-Identity,
    SSDT-CellID-Length,
    SSDT-Indication,
    Start-Of-Audit-Sequence-Indicator,
    STTD-Indicator,
    SSDT-SupportIndicator,
    SyncCase,
    T-Cell,
    T-RLFAILURE,
    TDD-ChannelisationCode,
    TDD-DPCHOffset,
    TDD-TPC-DownlinkStepSize,
    TDD-PhysicalChannelOffset,
    TFCI2-BearerInformationResponse,
    TFCI-Coding,
    TFCI-Presence,
    TFCI-SignallingMode,
    TFCS,
    TimeSlot,
    TimeSlotDirection,
    TimeSlotStatus,
    TimingAdvanceApplied,
    ToAWE,
    ToAWS,
    TransmissionDiversityApplied,
    TransmitDiversityIndicator,
    TransmissionGapPatternSequenceCodeInformation,
    Transmission-Gap-Pattern-Sequence-Information,
    TransportBearerRequestIndicator,
```

```
    TransportFormatSet,
    TransportLayerAddress,
    TSTD-Indicator,
    UARFCN,
    USCH-Information,
    USCH-InformationResponse,
    UL-CapacityCredit,
    UL-DPCCH-SlotFormat,
    UL-SIR,
    UL-FP-Mode,
    UL-PhysCH-SF-Variation,
    UL-ScramblingCode,
    UL-Timeslot-Information,
    UL-TimeSlot-ISCP-Info,
    UL-TimeslotISCP-Value,
    UL-TimeslotISCP-Value-IncrDecrThres,
    USCH-ID
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-BlockingPriorityIndicator,
    id-Cause,
    id-CauseLevel-PSCH-ReconfFailureTDD,
    id-CauseLevel-RL-AdditionFailureFDD,
    id-CauseLevel-RL-AdditionFailureTDD,
    id-CauseLevel-RL-ReconfFailure,
    id-CauseLevel-RL-SetupFailureFDD,
    id-CauseLevel-RL-SetupFailureTDD,
    id-CCP-InformationItem-AuditRsp,
    id-CCP-InformationList-AuditRsp,
    id-CCP-InformationItem-ResourceStatusInd,
    id-CCTrCH-InformationItem-RL-FailureInd,
    id-CCTrCH-InformationItem-RL-RestoreInd,
    id-CDCA-ICH-Information,
    id-CDCA-ICH-ParametersListIE-CTCH-ReconfRqstFDD,
    id-Cell-InformationItem-AuditRsp,
    id-Cell-InformationItem-ResourceStatusInd,
```

```
    id-Cell-InformationList-AuditRsp,
    id-CellParameterID,
    id-CFN,
    id-CFNReportingIndicator,
    id-C-ID,
    id-Closed-Loop-Timing-Adjustment-Mode,
    id-CommonMeasurementObjectType-CM-Rprt,
    id-CommonMeasurementObjectType-CM-Rqst,
    id-CommonMeasurementObjectType-CM-Rsp,
    id-CommonMeasurementType,
    id-CommonPhysicalChannelID,
    id-CommonPhysicalChannelType-CTCH-ReconfRqstFDD,
    id-CommonPhysicalChannelType-CTCH-SetupRqstFDD,
    id-CommonPhysicalChannelType-CTCH-SetupRqstTDD,
    id-CommunicationContextInfoItem-Reset,
    id-CommunicationControlPortID,
    id-CommunicationControlPortInfoItem-Reset,
    id-Compressed-Mode-Deactivation-Flag,
    id-ConfigurationGenerationID,
    id-CPCH-Information,
    id-CPCH-Parameters-CTCH-SetupRsp,
    id-CPCH-ParametersListIE-CTCH-ReconfRqstFDD,
    id-CRNC-CommunicationContextID,
    id-CriticalityDiagnostics,
    id-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-FDD-DCHs-to-Modify,
    id-TDD-DCHs-to-Modify,
    id-DedicatedMeasurementObjectType-DM-Rprt,
    id-DedicatedMeasurementObjectType-DM-Rqst,
    id-DedicatedMeasurementObjectType-DM-Rsp,
    id-DedicatedMeasurementType,
    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-ReferencePowerInformationItem-DL-PC-Rqst,
    id-DLReferencePower,
    id-DLReferencePowerList-DL-PC-Rqst,
    id-DL-TPC-Pattern01Count,
    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-TDD-Information,
    id-DSCH-ModifyItem-RL-ReconfPrepFDD,
    id-DSCH-ModifyList-RL-ReconfPrepFDD,
    id-End-Of-Audit-Sequence-Indicator,
    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-InitDL-Power,
    id-InnerLoopDLPCStatus,
    id-Limited-power-increase-information-Cell-SetupRqstFDD,
    id-Local-Cell-ID,
    id-Local-Cell-Group-InformationItem-AuditRsp,
    id-Local-Cell-Group-InformationItem-ResourceStatusInd,
    id-Local-Cell-Group-InformationItem2-ResourceStatusInd,
    id-Local-Cell-Group-InformationList-AuditRsp,
    id-Local-Cell-InformationItem-AuditRsp,
    id-Local-Cell-InformationItem-ResourceStatusInd,
    id-Local-Cell-InformationItem2-ResourceStatusInd,
    id-Local-Cell-InformationList-AuditRsp,
    id-AdjustmentPeriod,
    id-MaxAdjustmentStep,
    id-MaximumTransmissionPower,
    id-MeasurementFilterCoefficient,
    id-MeasurementID,
    id-MIB-SB-SIB-InformationList-SystemInfoUpdateRqst,
    id-NodeB-CommunicationContextID,
    id-P-CCPCH-Information,
    id-P-CPICH-Information,
    id-P-SCH-Information,
    id-PCCPCH-Information-Cell-ReconfRqstTDD,
    id-PCCPCH-Information-Cell-SetupRqstTDD,
```

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    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-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-PRACH-Information,
    id-PRACHConstant,
    id-PRACH-ParametersItem-CTCH-SetupRqstTDD,
    id-PRACH-ParametersListIE-CTCH-ReconfRqstFDD,
    id-PrimaryCCPCH-Information-Cell-ReconfRqstFDD,
    id-PrimaryCCPCH-Information-Cell-SetupRqstFDD,
    id-PrimaryCPICH-Information-Cell-ReconfRqstFDD,
    id-PrimaryCPICH-Information-Cell-SetupRqstFDD,
    id-PrimarySCH-Information-Cell-ReconfRqstFDD,
    id-PrimarySCH-Information-Cell-SetupRqstFDD,
    id-PrimaryScramblingCode,
    id-SCH-Information-Cell-ReconfRqstTDD,
    id-SCH-Information-Cell-SetupRqstTDD,
    id-PUSCH-Information-AddListIE-PSCH-ReconfRqst,
    id-PUSCH-Information-ModifyListIE-PSCH-ReconfRqst,
    id-PUSCHConstant,
    id-PUSCHSets-AddList-PSCH-ReconfRqst,
    id-PUSCHSets-DeleteList-PSCH-ReconfRqst,
    id-PUSCHSets-ModifyList-PSCH-ReconfRqst,
    id-RACH-Information,
    id-RACH-Parameters-CTCH-SetupRsp,
    id-RACH-ParametersItem-CTCH-SetupRqstFDD,
    id-RACH-ParameterItem-CTCH-SetupRqstTDD,
    id-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,
```

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    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-S-CCPCH-Information,
    id-S-CPICH-Information,
    id-SCH-Information,
    id-S-SCH-Information,
    id-Secondary-CCPCHListIE-CTCH-ReconfRqstTDD,
    id-Secondary-CCPCH-parameterListIE-CTCH-SetupRqstTDD,
    id-Secondary-CCPCH-Parameters-CTCH-ReconfRqstTDD,
    id-SecondaryCPICH-InformationItem-Cell-ReconfRqstFDD,
    id-SecondaryCPICH-InformationItem-Cell-SetupRqstFDD,
    id-SecondaryCPICH-InformationList-Cell-ReconfRqstFDD,
    id-SecondaryCPICH-InformationList-Cell-SetupRqstFDD,
    id-SecondarySCH-Information-Cell-ReconfRqstFDD,
    id-SecondarySCH-Information-Cell-SetupRqstFDD,
    id-SegmentInformationListIE-SystemInfoUpdate,
    id-SFN,
    id-SFNReportingIndicator,
    id-ShutdownTimer,
    id-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-T-Cell,
    id-TFCI2-Bearer-Information-RL-SetupRqstFDD,
    id-TFCI2-BearerInformationResponse,
```

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    id-TFCI2-BearerSpecificInformation-RL-ReconfPrepFDD,
    id-Transmission-Gap-Pattern-Sequence-Information,
    id-TimeSlotConfigurationList-Cell-ReconfRqstTDD,
    id-TimeSlotConfigurationList-Cell-SetupRqstTDD,
    id-TimeslotISCPInfo,
    id-TimingAdvanceApplied,
    id-TransmissionDiversityApplied,
    id-UARFCNforNt,
    id-UARFCNforNd,
    id-UARFCNforNu,
    id-UL-CCTrCH-InformationAddList-RL-ReconfPrepTDD,
    id-UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD,
    id-UL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD,
    id-UL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD,
    id-UL-CCTrCH-InformationItem-RL-SetupRqstTDD,
    id-UL-CCTrCH-InformationList-RL-AdditionRqstTDD,
    id-UL-CCTrCH-InformationList-RL-SetupRqstTDD,
    id-UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD,
    id-UL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD,
    id-UL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD,
    id-UL-DPCH-InformationAddListIE-RL-ReconfPrepTDD,
    id-UL-DPCH-InformationItem-RL-AdditionRqstTDD,
    id-UL-DPCH-InformationList-RL-SetupRqstTDD,
    id-UL-DPCH-InformationModify-AddListIE-RL-ReconfPrepTDD,
    id-UL-DPCH-InformationModify-DeleteListIE-RL-ReconfPrepTDD,
    id-UL-DPCH-InformationModify-ModifyListIE-RL-ReconfPrepTDD,
    id-UL-DPCH-Information-RL-ReconfPrepFDD,
    id-UL-DPCH-Information-RL-ReconfRqstFDD,
    id-UL-DPCH-Information-RL-SetupRqstFDD,
    id-Unsuccessful-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,

    maxNrOfCCTrCHs,
    maxNrOfCodes,
    maxNrOfCPCHs,
    maxNrOfDCHs,
    maxNrOfDLTSs,
    maxNrOfDPCHs,
    maxNrOfDSCHs,
    maxNrOfFACHs,
    maxNrOfRLs,
    maxNrOfRLs-1,
    maxNrOfRLs-2,
    maxNrOfRLSets,
    maxNrOfPCPCHs,
```

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    maxNrOfPDSCHs,
    maxNrOfPUSCHs,
    maxNrOfPDSCHSets,
    maxNrOfPUSCHSets,
    maxNrOfSCCPCHs,
    maxNrOfULTSs,
    maxNrOfUSCHs,
    maxAPSigNum,
    maxCPCHCell,
    maxFACHCell,
    maxNoofLen,
    maxRACHCell,
    maxPCPCHCell,
    maxPRACHCell,
    maxSCCPCHCell,
    maxSCPICHCell,
    maxCellinNodeB,
    maxCCPinNodeB,
    maxCommunicationContext,
    maxLocalCellinNodeB,
    maxNrOfSlotFormatsPRACH,
    maxIB,
    maxIBSEG
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 only if the Secondary CCPCH Slot Format IE 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 ::= {
    ...
}

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 ::= {
    ...
}

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 ::= {
    ...
}

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 IE 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 ::= {
    ...
}

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 IE is set to 'CA Inactive' --
    iE-Extensions                       ProtocolExtensionContainer  { { PCPCHChannelInformationItem-CTCH-SetupRqstFDD-ExtIEs} }   OPTIONAL,
    ...
}
```

```
PCPCHChannelInformationItem-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UCSM-Information-CTCH-SetupRqstFDD ::= SEQUENCE {
    minUL-ChannelisationCodeLength      MinUL-ChannelisationCodeLength,
    nFmax                               NFmax,
    channelRequestParameters            ChannelRequestParametersList-CTCH-SetupRqstFDD      OPTIONAL,
    iE-Extensions                       ProtocolExtensionContainer  { { UCSM-InformationItem-CTCH-SetupRqstFDD-ExtIEs} }    OPTIONAL,
    ...
 }

UCSM-InformationItem-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

ChannelRequestParametersList-CTCH-SetupRqstFDD ::= SEQUENCE (SIZE (1..maxAPSigNum)) OF ChannelRequestParametersItem-CTCH-SetupRqstFDD

ChannelRequestParametersItem-CTCH-SetupRqstFDD ::= SEQUENCE {
    aPPreambleSignature         APPreambleSignature,
    aPSubChannelNumber          APSubChannelNumber      OPTIONAL,
    iE-Extensions               ProtocolExtensionContainer  { { ChannelRequestParametersItem-CTCH-SetupRqstFDD-ExtIEs} }    OPTIONAL,
    ...
}

ChannelRequestParametersItem-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

VCAMMapping-InformationList-CTCH-SetupRqstFDD ::= SEQUENCE (SIZE (1..maxNoofLen)) OF VCAMMapping-InformationItem-CTCH-SetupRqstFDD

VCAMMapping-InformationItem-CTCH-SetupRqstFDD  ::= SEQUENCE {
    minUL-ChannelisationCodeLength      MinUL-ChannelisationCodeLength,
    nFmax                               NFmax,
    max-Number-of-PCPCHes               Max-Number-of-PCPCHes,
    sFRequestParameters                 SFRequestParametersList-CTCH-SetupRqstFDD,
    iE-Extensions                       ProtocolExtensionContainer  { { VCAMMapping-InformationItem-CTCH-SetupRqstFDD-ExtIEs} }   OPTIONAL,
    ...
}

VCAMMapping-InformationItem-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

SFRequestParametersList-CTCH-SetupRqstFDD ::= SEQUENCE (SIZE (1..maxAPSigNum)) OF SFRequestParametersItem-CTCH-SetupRqstFDD

SFRequestParametersItem-CTCH-SetupRqstFDD ::= SEQUENCE {
    aPPreambleSignature         APPreambleSignature,
    aPSubChannelNumber          APSubChannelNumber      OPTIONAL,
    iE-Extensions               ProtocolExtensionContainer  { { SFRequestParametersItem-CTCH-SetupRqstFDD-ExtIEs} }   OPTIONAL,
    ...
}

SFRequestParametersItem-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION::= {
```

```
    ...
}

AP-AICH-Parameters-CTCH-SetupRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID                     CommonPhysicalChannelID,
    fdd-dl-ChannelisationCodeNumber             FDD-DL-ChannelisationCodeNumber,
    aP-AICH-Power                               AICH-Power,
    cSICH-Power                                 AICH-Power,
    sTTD-Indicator                              STTD-Indicator,
    iE-Extensions                               ProtocolExtensionContainer  { { AP-AICH-Parameters-CTCH-SetupRqstFDD-ExtIEs} }    OPTIONAL,
    ...
}

AP-AICH-Parameters-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CDCA-ICH-Parameters-CTCH-SetupRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID                     CommonPhysicalChannelID,
    fdd-dl-ChannelisationCodeNumber             FDD-DL-ChannelisationCodeNumber,
    cDCA-ICH-Power                              AICH-Power,
    sTTD-Indicator                              STTD-Indicator,
    iE-Extensions                               ProtocolExtensionContainer  { { CDCA-ICH-Parameters-CTCH-SetupRqstFDD-ExtIEs} }   OPTIONAL,
    ...
}

CDCA-ICH-Parameters-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- **************************************************************
--
-- COMMON TRANSPORT CHANNEL SETUP REQUEST TDD
--
-- **************************************************************

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

CommonTransportChannelSetupRequestTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-C-ID                                             CRITICALITY reject      TYPE  C-ID                                PRESENCE
    mandatory   }|
    { ID    id-ConfigurationGenerationID                        CRITICALITY reject      TYPE  ConfigurationGenerationID             PRESENCE
    mandatory   }|
    { ID    id-CommonPhysicalChannelType-CTCH-SetupRqstTDD      CRITICALITY ignore      TYPE  CommonPhysicalChannelType-CTCH-SetupRqstTDD
    PRESENCE    mandatory   },
    ...
}

CommonTransportChannelSetupRequestTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
```

```
}

CommonPhysicalChannelType-CTCH-SetupRqstTDD ::= CHOICE {
    secondary-CCPCH-parameters                  Secondary-CCPCH-CTCH-SetupRqstTDD,
    pRACH-parameters                            PRACH-CTCH-SetupRqstTDD,
    ...
}

Secondary-CCPCH-CTCH-SetupRqstTDD ::= SEQUENCE {
    sCCPCH-CCTrCH-ID                            CCTrCH-ID,
    tFCS                                        TFCS,
    tFCI-Coding                                 TFCI-Coding,
    punctureLimit                               PunctureLimit,
    secondaryCCPCH-parameterList                Secondary-CCPCH-parameterList-CTCH-SetupRqstTDD,
    fACH-ParametersList                         FACH-ParametersList-CTCH-SetupRqstTDD       OPTIONAL,
    pCH-Parameters                              PCH-Parameters-CTCH-SetupRqstTDD            OPTIONAL,
    iE-Extensions                               ProtocolExtensionContainer  {{Secondary-CCPCHItem-CTCH-SetupRqstTDD-ExtIEs}}   OPTIONAL,
    ...
}

Secondary-CCPCHItem-CTCH-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

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 }
}

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 ::= {
    ...
}

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 ::= {
    ...
}

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 mandatory }
}

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 ::= {
    ...
}

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 ::= {
    ...
}

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 mandatory }
}

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 ::= {
    ...
}

-- **************************************************************
--
-- COMMON TRANSPORT CHANNEL SETUP RESPONSE
--
-- **************************************************************

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

CommonTransportChannelSetupResponse-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-FACH-ParametersList-CTCH-SetupRsp    CRITICALITY ignore      TYPE    FACH-CommonTransportChannel-InformationResponse     PRESENCE
    optional    }|
    { ID    id-PCH-Parameters-CTCH-SetupRsp         CRITICALITY ignore      TYPE    CommonTransportChannel-InformationResponse          PRESENCE
    optional    }|
    { ID    id-RACH-Parameters-CTCH-SetupRsp        CRITICALITY ignore      TYPE    CommonTransportChannel-InformationResponse       PRESENCE
    optional    }|
    { ID    id-CPCH-Parameters-CTCH-SetupRsp        CRITICALITY ignore              TYPE    CommonTransportChannel-InformationResponse
    PRESENCE    optional    }|
    { ID    id-CriticalityDiagnostics                       CRITICALITY     ignore      TYPE    CriticalityDiagnostics                  PRESENCE
    optional    },
    ...
}

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

FACH-CommonTransportChannel-InformationResponse ::= SEQUENCE (SIZE (1..maxNrOfFACHs)) OF CommonTransportChannel-InformationResponse

-- **************************************************************
--
-- COMMON TRANSPORT CHANNEL SETUP FAILURE
--
-- **************************************************************

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

CommonTransportChannelSetupFailure-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-Cause                    CRITICALITY ignore      TYPE    Cause                   PRESENCE mandatory   }|
    { ID    id-CriticalityDiagnostics   CRITICALITY ignore      TYPE    CriticalityDiagnostics  PRESENCE optional    },
    ...
}
```

```
CommonTransportChannelSetupFailure-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- **************************************************************
--
-- COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST FDD
--
-- **************************************************************

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

CommonTransportChannelReconfigurationRequestFDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-C-ID                                     CRITICALITY reject      TYPE    C-ID                                    PRESENCE mandatory   }|
    { ID    id-ConfigurationGenerationID                CRITICALITY reject      TYPE    ConfigurationGenerationID               PRESENCE mandatory   }|
    { ID    id-CommonPhysicalChannelType-CTCH-ReconfRqstFDD CRITICALITY reject  TYPE    CommonPhysicalChannelType-CTCH-ReconfRqstFDD PRESENCE
    mandatory   },
    ...
}

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

CommonPhysicalChannelType-CTCH-ReconfRqstFDD ::= CHOICE {
    secondary-CCPCH-parameters      Secondary-CCPCHList-CTCH-ReconfRqstFDD,
    pRACH-parameters                PRACHList-CTCH-ReconfRqstFDD,
    cPCH-parameters                 CPCHList-CTCH-ReconfRqstFDD,
    ...
}

Secondary-CCPCHList-CTCH-ReconfRqstFDD ::= SEQUENCE {
    fACH-ParametersList-CTCH-ReconfRqstFDD      FACH-ParametersList-CTCH-ReconfRqstFDD  OPTIONAL,
    pCH-Parameters-CTCH-ReconfRqstFDD           PCH-Parameters-CTCH-ReconfRqstFDD       OPTIONAL,
    pICH-Parameters-CTCH-ReconfRqstFDD          PICH-Parameters-CTCH-ReconfRqstFDD      OPTIONAL,
    iE-Extensions                               ProtocolExtensionContainer { { Secondary-CCPCH-CTCH-ReconfRqstFDD-ExtIEs} } OPTIONAL,
    ...
}

Secondary-CCPCH-CTCH-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

FACH-ParametersList-CTCH-ReconfRqstFDD ::= ProtocolIE-Single-Container {{ FACH-ParametersListIEs-CTCH-ReconfRqstFDD }}

FACH-ParametersListIEs-CTCH-ReconfRqstFDD NBAP-PROTOCOL-IES ::= {
    { ID id-FACH-ParametersListIE-CTCH-ReconfRqstFDD    CRITICALITY reject  TYPE FACH-ParametersListIE-CTCH-ReconfRqstFDD   PRESENCE mandatory }
}
```

```
FACH-ParametersListIE-CTCH-ReconfRqstFDD ::= SEQUENCE (SIZE (1..maxFACHCell)) OF FACH-ParametersItem-CTCH-ReconfRqstFDD

FACH-ParametersItem-CTCH-ReconfRqstFDD ::= SEQUENCE {
    commonTransportChannelID                CommonTransportChannelID,
    maxFACH-Power                           DL-Power        OPTIONAL,
    toAWS                                   ToAWS           OPTIONAL,
    toAWE                                   ToAWE           OPTIONAL,
    iE-Extensions                           ProtocolExtensionContainer  { { FACH-ParametersItem-CTCH-ReconfRqstFDD-ExtIEs} }   OPTIONAL,
    ...
}

FACH-ParametersItem-CTCH-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PCH-Parameters-CTCH-ReconfRqstFDD ::= ProtocolIE-Single-Container {{ PCH-ParametersIE-CTCH-ReconfRqstFDD }}

PCH-ParametersIE-CTCH-ReconfRqstFDD NBAP-PROTOCOL-IES ::= {
    { ID id-PCH-ParametersItem-CTCH-ReconfRqstFDD   CRITICALITY reject  TYPE PCH-ParametersItem-CTCH-ReconfRqstFDD  PRESENCE mandatory }
}

PCH-ParametersItem-CTCH-ReconfRqstFDD ::= SEQUENCE {
    commonTransportChannelID                CommonTransportChannelID,
    pCH-Power                               DL-Power        OPTIONAL,
    toAWS                                   ToAWS           OPTIONAL,
    toAWE                                   ToAWE           OPTIONAL,
    iE-Extensions                           ProtocolExtensionContainer  { { PCH-ParametersItem-CTCH-ReconfRqstFDD-ExtIEs} }       OPTIONAL,
    ...
}

PCH-ParametersItem-CTCH-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PICH-Parameters-CTCH-ReconfRqstFDD ::= ProtocolIE-Single-Container {{ PICH-ParametersIE-CTCH-ReconfRqstFDD }}

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 ::= {
```

```
    ...
}

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 ::= {
    ...
}

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 ::= {
    ...
}

-- **************************************************************
--
-- COMMON TRANSPORT CHANNEL RECONFIGURATION RESPONSE
--
-- **************************************************************

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

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

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

-- **************************************************************
--
-- COMMON TRANSPORT CHANNEL RECONFIGURATION FAILURE
--
-- **************************************************************

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

CommonTransportChannelReconfigurationFailure-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-Cause                        CRITICALITY ignore          TYPE    Cause                   PRESENCE mandatory   }|
    { ID    id-CriticalityDiagnostics       CRITICALITY ignore          TYPE    CriticalityDiagnostics    PRESENCE optional },
    ...
}
```

```
CommonTransportChannelReconfigurationFailure-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- **************************************************************
--
-- COMMON TRANSPORT CHANNEL DELETION REQUEST
--
-- **************************************************************

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

CommonTransportChannelDeletionRequest-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-C-ID                             CRITICALITY reject      TYPE    C-ID                    PRESENCE    mandatory}|
    { ID    id-CommonPhysicalChannelID          CRITICALITY reject      TYPE    CommonPhysicalChannelID    PRESENCE mandatory}|
        { ID    id-ConfigurationGenerationID        CRITICALITY reject      TYPE    ConfigurationGenerationID PRESENCE mandatory},
    ...
}

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

-- **************************************************************
--
-- COMMON TRANSPORT CHANNEL DELETION RESPONSE
--
-- **************************************************************

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

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

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

-- **************************************************************
--
-- BLOCK RESOURCE REQUEST
--
-- **************************************************************
```

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

BlockResourceRequest-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-C-ID                           CRITICALITY reject      TYPE    C-ID                       PRESENCE mandatory   }|
    { ID    id-BlockingPriorityIndicator      CRITICALITY reject      TYPE    BlockingPriorityIndicator    PRESENCE mandatory   }|
    { ID    id-ShutdownTimer                  CRITICALITY reject      TYPE    ShutdownTimer              PRESENCE conditional },
    -- The IE shall be present if the Blocking Priority IndicatorIE indicates "Normal Priority"--
    ...
}

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

-- **************************************************************
--
-- BLOCK RESOURCE RESPONSE
--
-- **************************************************************

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

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

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

-- **************************************************************
--
-- BLOCK RESOURCE FAILURE
--
-- **************************************************************

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

BlockResourceFailure-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-Cause                        CRITICALITY     ignore      TYPE    Cause                  PRESENCE mandatory   }|
```

```
    { ID    id-CriticalityDiagnostics       CRITICALITY     ignore      TYPE    CriticalityDiagnostics     PRESENCE optional },
    ...
}

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

-- **************************************************************
--
-- UNBLOCK RESOURCE INDICATION
--
-- **************************************************************

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

UnblockResourceIndication-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-C-ID         CRITICALITY     ignore      TYPE    C-ID        PRESENCE    mandatory},
    ...
}

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

-- **************************************************************
--
-- AUDIT REQUIRED INDICATION
--
-- **************************************************************

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

AuditRequiredIndication-IEs NBAP-PROTOCOL-IES ::= {
    ...
}

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

-- **************************************************************
--
-- AUDIT REQUEST
--
-- **************************************************************
```

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

AuditRequest-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-Start-Of-Audit-Sequence-Indicator        CRITICALITY     reject  TYPE Start-Of-Audit-Sequence-Indicator   PRESENCE  mandatory },
    ...
}

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

-- **************************************************************
--
-- AUDIT RESPONSE
--
-- **************************************************************

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

AuditResponse-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-End-Of-Audit-Sequence-Indicator          CRITICALITY     ignore  TYPE    End-Of-Audit-Sequence-Indicator     PRESENCE mandatory }|
    { ID    id-Cell-InformationList-AuditRsp            CRITICALITY     ignore          TYPE    Cell-InformationList-AuditRsp        PRESENCE
    optional    }|
    { ID    id-CCP-InformationList-AuditRsp             CRITICALITY     ignore          TYPE    CCP-InformationList-AuditRsp      PRESENCE optional
    }|
    -- CCP (Communication Control Port) --
    { ID    id-Local-Cell-InformationList-AuditRsp      CRITICALITY     ignore          TYPE    Local-Cell-InformationList-AuditRsp     PRESENCE
    optional    }|
    { ID    id-Local-Cell-Group-InformationList-AuditRsp    CRITICALITY     ignore      TYPE    Local-Cell-Group-InformationList-AuditRsp  PRESENCE
    optional    }|
    { ID    id-CriticalityDiagnostics                   CRITICALITY     ignore          TYPE    CriticalityDiagnostics            PRESENCE optional
    },
    ...
}

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

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 ::= {
    ...
}

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 ::= {
    ...
}

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 ::= {
    ...
}

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 ::= {
    ...
}

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

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,
    iE-Extensions                   ProtocolExtensionContainer  { { CellItem-CM-Rqst-ExtIEs} }    OPTIONAL,
    ...
}

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

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 ::= {
    ...
}

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 ::= {
    ...
}
```

```
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 ::= {
    ...
}

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 ::= {
    ...
}

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 ::= {
    ...
}

-- **************************************************************
--
-- CELL SETUP REQUEST TDD
--
-- **************************************************************

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

CellSetupRequestTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-Local-Cell-ID                                    CRITICALITY     reject      TYPE  Local-Cell-ID                           PRESENCE
    mandatory   }|
        { ID    id-C-ID                                             CRITICALITY     reject      TYPE C-ID                               PRESENCE
    mandatory   }|
    { ID    id-ConfigurationGenerationID                        CRITICALITY     reject      TYPE  ConfigurationGenerationID             PRESENCE
    mandatory   }|
    { ID    id-UARFCNforNt                                      CRITICALITY     reject      TYPE UARFCN                                 PRESENCE
    mandatory   }|
    { ID    id-CellParameterID                                  CRITICALITY     reject      TYPE  CellParameterID                       PRESENCE
    mandatory   }|
    { ID    id-MaximumTransmissionPower                         CRITICALITY     reject      TYPE  MaximumTransmissionPower              PRESENCE
    mandatory   }|
    { ID    id-TransmissionDiversityApplied                     CRITICALITY     reject      TYPE  TransmissionDiversityApplied         PRESENCE
    mandatory   }|
    { ID    id-SyncCase                                         CRITICALITY     reject      TYPE  SyncCase                           PRESENCE
    mandatory   }|
    { ID    id-Synchronisation-Configuration-Cell-SetupRqst     CRITICALITY     reject      TYPE  Synchronisation-Configuration-Cell-SetupRqst
    PRESENCE    mandatory   }|
    { ID    id-DPCHConstant                                     CRITICALITY     reject      TYPE  ConstantValue                         PRESENCE
    mandatory   }|
    { ID    id-PUSCHConstant                                    CRITICALITY     reject      TYPE  ConstantValue                         PRESENCE
    mandatory   }|
    { ID    id-PRACHConstant                                    CRITICALITY     reject      TYPE  ConstantValue                         PRESENCE
    mandatory   }|
    { ID    id-TimingAdvanceApplied                             CRITICALITY     reject      TYPE  TimingAdvanceApplied                  PRESENCE
    mandatory   }|
    { ID    id-SCH-Information-Cell-SetupRqstTDD                CRITICALITY     reject      TYPE  SCH-Information-Cell-SetupRqstTDD
    PRESENCE    mandatory   }|
    { ID    id-PCCPCH-Information-Cell-SetupRqstTDD             CRITICALITY     reject      TYPE  PCCPCH-Information-Cell-SetupRqstTDD
    PRESENCE    mandatory   }|
    { ID    id-TimeSlotConfigurationList-Cell-SetupRqstTDD      CRITICALITY     reject      TYPE  TimeSlotConfigurationList-Cell-SetupRqstTDD
    PRESENCE    mandatory   },
    ...
}
```

```
CellSetupRequestTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}


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

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 ::= {
    ...
}

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

```
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 ::= {
    ...
}

-- **************************************************************
--
-- 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    }|
```

```
    { ID    id-SCH-Information-Cell-ReconfRqstTDD              CRITICALITY     reject      TYPE  SCH-Information-Cell-ReconfRqstTDD
    PRESENCE    optional    }|
    { ID    id-PCCPCH-Information-Cell-ReconfRqstTDD           CRITICALITY     reject      TYPE  PCCPCH-Information-Cell-ReconfRqstTDD
    PRESENCE    optional    }|
    { ID    id-MaximumTransmissionPower                        CRITICALITY     reject      TYPE  MaximumTransmissionPower                PRESENCE
    optional    }|
    { ID    id-DPCHConstant                                    CRITICALITY     reject      TYPE  ConstantValue                          PRESENCE
    optional    }|
    { ID    id-PUSCHConstant                                   CRITICALITY     reject      TYPE  ConstantValue                          PRESENCE
        optional    }|
    { ID    id-PRACHConstant                                   CRITICALITY     reject      TYPE  ConstantValue                          PRESENCE
    optional    }|
    { ID    id-TimeSlotConfigurationList-Cell-ReconfRqstTDD    CRITICALITY     reject      TYPE  TimeSlotConfigurationList-Cell-ReconfRqstTDD
    PRESENCE    mandatory   },
    ...
}

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

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 ::= {
```

```
    ...
}

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

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

Local-Cell-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
    { ID id-Local-Cell-InformationItem-ResourceStatusInd   CRITICALITY ignore   TYPE Local-Cell-InformationItem-ResourceStatusInd    PRESENCE
mandatory }
}

Local-Cell-InformationItem-ResourceStatusInd ::= SEQUENCE {
    local-CellID                        Local-Cell-ID,
    addorDeleteIndicator                AddorDeleteIndicator,
    dl-or-global-capacityCredit         DL-or-Global-CapacityCredit     OPTIONAL,
    -- This IE shall be present if AddorDeleteIndicator IE is set to 'add'
    ul-capacityCredit                   UL-CapacityCredit       OPTIONAL,
    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 ::= {
    ...
}
```

```
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 ::= {
    ...
}

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 ::= {
    ...
}

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 ::= {
    ...
}

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 ::= {
    ...
}

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, --TDD only
    iE-Extensions                       ProtocolExtensionContainer { { Cell-InformationItem-ResourceStatusInd-ExtIEs} } OPTIONAL,
    ...
}

Cell-InformationItem-ResourceStatusInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

P-SCH-Information-ResourceStatusInd ::= ProtocolIE-Single-Container {{ P-SCH-InformationIE-ResourceStatusInd }}

P-SCH-InformationIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
    { ID id-P-SCH-Information   CRITICALITY ignore  TYPE Common-PhysicalChannel-Status-Information     PRESENCE mandatory }
}

S-SCH-Information-ResourceStatusInd ::= ProtocolIE-Single-Container {{ S-SCH-InformationIE-ResourceStatusInd }}

S-SCH-InformationIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
    { ID id-S-SCH-Information   CRITICALITY ignore  TYPE Common-PhysicalChannel-Status-Information     PRESENCE mandatory }
}

P-CPICH-Information-ResourceStatusInd ::= ProtocolIE-Single-Container {{ P-CPICH-InformationIE-ResourceStatusInd }}

P-CPICH-InformationIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
    { ID id-P-CPICH-Information   CRITICALITY ignore    TYPE Common-PhysicalChannel-Status-Information    PRESENCE mandatory }
}

S-CPICH-InformationList-ResourceStatusInd ::= SEQUENCE (SIZE (1..maxSCPICHCell)) OF ProtocolIE-Single-Container {{ S-CPICH-InformationItemIE-
ResourceStatusInd }}

S-CPICH-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
```

```
    { ID id-S-CPICH-Information   CRITICALITY ignore    TYPE Common-PhysicalChannel-Status-Information    PRESENCE mandatory }
}

P-CCPCH-Information-ResourceStatusInd ::= ProtocolIE-Single-Container {{ P-CCPCH-InformationIE-ResourceStatusInd }}

P-CCPCH-InformationIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
    { ID id-P-CCPCH-Information   CRITICALITY ignore    TYPE Common-PhysicalChannel-Status-Information    PRESENCE mandatory }
}

BCH-Information-ResourceStatusInd ::= ProtocolIE-Single-Container {{ BCH-InformationIE-ResourceStatusInd }}

BCH-InformationIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
    { ID id-BCH-Information   CRITICALITY ignore    TYPE Common-TransportChannel-Status-Information    PRESENCE mandatory }
}

S-CCPCH-InformationList-ResourceStatusInd ::= SEQUENCE (SIZE (1..maxSCCPCHCell)) OF ProtocolIE-Single-Container {{ S-CCPCH-InformationItemIE-
ResourceStatusInd }}

S-CCPCH-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
    { ID id-S-CCPCH-Information   CRITICALITY ignore    TYPE Common-PhysicalChannel-Status-Information    PRESENCE mandatory }
}

PCH-Information-ResourceStatusInd ::= ProtocolIE-Single-Container {{ PCH-InformationIE-ResourceStatusInd }}

PCH-InformationIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
    { ID id-PCH-Information   CRITICALITY ignore    TYPE Common-TransportChannel-Status-Information    PRESENCE mandatory }
}

PICH-Information-ResourceStatusInd ::= ProtocolIE-Single-Container {{ PICH-InformationIE-ResourceStatusInd }}

PICH-InformationIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
    { ID id-PICH-Information   CRITICALITY ignore   TYPE Common-PhysicalChannel-Status-Information     PRESENCE mandatory }
}

FACH-InformationList-ResourceStatusInd ::= SEQUENCE (SIZE (1..maxFACHCell)) OF ProtocolIE-Single-Container {{ FACH-InformationItemIE-
ResourceStatusInd }}

FACH-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
    { ID id-FACH-Information   CRITICALITY ignore   TYPE Common-TransportChannel-Status-Information    PRESENCE mandatory }
}

PRACH-InformationList-ResourceStatusInd ::= SEQUENCE (SIZE (1..maxPRACHCell)) OF ProtocolIE-Single-Container {{ PRACH-InformationItemIE-
ResourceStatusInd }}

PRACH-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
    { ID id-PRACH-Information   CRITICALITY ignore  TYPE Common-PhysicalChannel-Status-Information     PRESENCE mandatory }
}

RACH-InformationList-ResourceStatusInd ::= SEQUENCE (SIZE (1..maxPRACHCell)) OF ProtocolIE-Single-Container {{ RACH-InformationItemIE-
ResourceStatusInd }}

RACH-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
    { ID id-RACH-Information   CRITICALITY ignore   TYPE Common-TransportChannel-Status-Information    PRESENCE mandatory }
}
```

```
AICH-InformationList-ResourceStatusInd ::= SEQUENCE (SIZE (1..maxPRACHCell)) OF ProtocolIE-Single-Container {{ AICH-InformationItemIE-
ResourceStatusInd }}

AICH-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
    { ID id-AICH-Information   CRITICALITY ignore   TYPE Common-PhysicalChannel-Status-Information     PRESENCE mandatory }
}

PCPCH-InformationList-ResourceStatusInd ::= SEQUENCE (SIZE (1..maxPCPCHCell)) OF ProtocolIE-Single-Container {{ PCPCH-InformationItemIE-
ResourceStatusInd }}

PCPCH-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
    { ID id-PCPCH-Information   CRITICALITY ignore  TYPE Common-PhysicalChannel-Status-Information     PRESENCE optional }
}

CPCH-InformationList-ResourceStatusInd ::= SEQUENCE (SIZE (1..maxCPCHCell)) OF ProtocolIE-Single-Container {{ CPCH-InformationItemIE-
ResourceStatusInd }}

CPCH-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
    { ID id-CPCH-Information   CRITICALITY ignore   TYPE Common-TransportChannel-Status-Information    PRESENCE optional }
}

AP-AICH-InformationList-ResourceStatusInd ::= SEQUENCE (SIZE (1..maxCPCHCell)) OF ProtocolIE-Single-Container {{ AP-AICH-InformationItemIE-
ResourceStatusInd }}

AP-AICH-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
    { ID id-AP-AICH-Information   CRITICALITY ignore    TYPE Common-PhysicalChannel-Status-Information    PRESENCE optional }
}

CDCA-ICH-InformationList-ResourceStatusInd ::= SEQUENCE (SIZE (1..maxCPCHCell)) OF ProtocolIE-Single-Container {{ CDCA-ICH-InformationItemIE-
ResourceStatusInd }}

CDCA-ICH-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
    { ID id-CDCA-ICH-Information   CRITICALITY ignore   TYPE Common-PhysicalChannel-Status-Information    PRESENCE optional }
}

SCH-Information-ResourceStatusInd ::= ProtocolIE-Single-Container {{ SCH-InformationIE-ResourceStatusInd }}

SCH-InformationIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
    { ID id-SCH-Information   CRITICALITY ignore    TYPE Common-PhysicalChannel-Status-Information     PRESENCE mandatory }
}

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

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 ::= {
    ...
}

DL-DPCH-Information-RL-SetupRqstFDD ::= SEQUENCE {
    tFCS                                TFCS,
    dl-DPCH-SlotFormat                  DL-DPCH-SlotFormat,
    tFCI-SignallingMode                 TFCI-SignallingMode,
    tFCI-Presence                       TFCI-Presence   OPTIONAL,
    -- this IE shall be present if the DL DPCH slot format IE is set to any of the values from 12 to 16 --
    multiplexingPosition                MultiplexingPosition,
    pDSCH-RL-ID                         RL-ID           OPTIONAL,
    -- This IE shall be present if the DSCH Information IE is present --
    pDSCH-CodeMapping                   PDSCH-CodeMapping       OPTIONAL,
    -- This IE shall be present if the DSCH Information IE is present --
    powerOffsetInformation              PowerOffsetInformation-RL-SetupRqstFDD,
    fdd-TPC-DownlinkStepSize            FDD-TPC-DownlinkStepSize,
    limitedPowerIncrease                LimitedPowerIncrease,
    innerLoopDLPCStatus                 InnerLoopDLPCStatus,
    iE-Extensions                       ProtocolExtensionContainer { { DL-DPCH-Information-RL-SetupRqstFDD-ExtIEs} } OPTIONAL,
    ...
}

DL-DPCH-Information-RL-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PowerOffsetInformation-RL-SetupRqstFDD ::= SEQUENCE {
    pO1-ForTFCI-Bits                    PowerOffset,
    pO2-ForTPC-Bits                     PowerOffset,
    pO3-ForPilotBits                    PowerOffset,
    iE-Extensions                       ProtocolExtensionContainer { { PowerOffsetInformation-RL-SetupRqstFDD-ExtIEs} } OPTIONAL,
    ...
}

PowerOffsetInformation-RL-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TFCI2-Bearer-Information-RL-SetupRqstFDD ::= SEQUENCE {
    toAWS                               ToAWS,
    toAWE                               ToAWE,
    iE-Extensions                       ProtocolExtensionContainer { { TFCI2-Bearer-Information-RL-SetupRqstFDD-ExtIEs} }   OPTIONAL,
    ...
}

TFCI2-Bearer-Information-RL-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-InformationList-RL-SetupRqstFDD ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF
    ProtocolIE-Single-Container{{ RL-InformationItemIE-RL-SetupRqstFDD }}
```

```
RL-InformationItemIE-RL-SetupRqstFDD NBAP-PROTOCOL-IES ::= {
    { ID    id-RL-InformationItem-RL-SetupRqstFDD          CRITICALITY     notify          TYPE  RL-InformationItem-RL-SetupRqstFDD    PRESENCE
    mandatory}
}

RL-InformationItem-RL-SetupRqstFDD ::= SEQUENCE {
    rL-ID                               RL-ID,
    c-ID                                C-ID,
    firstRLS-indicator                  FirstRLS-Indicator,
    frameOffset                         FrameOffset,
    chipOffset                          ChipOffset,
    propagationDelay                    PropagationDelay            OPTIONAL,
    diversityControlField               DiversityControlField       OPTIONAL,
    -- This IE shall be present if the RL is not the first one in the RL Information IE
    dl-CodeInformation                  FDD-DL-CodeInformation,
    initialDL-transmissionPower         DL-Power,
    maximumDL-power                     DL-Power,
    minimumDL-power                     DL-Power,
    sSDT-Cell-Identity                  SSDT-Cell-Identity          OPTIONAL,
    transmitDiversityIndicator          TransmitDiversityIndicator      OPTIONAL,
    -- This IE shall be present if Diversity Mode IE in UL DPCH Information group is not set to 'none'
    iE-Extensions                       ProtocolExtensionContainer { { RL-InformationItem-RL-SetupRqstFDD-ExtIEs} }   OPTIONAL,
    ...
}

RL-InformationItem-RL-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- **************************************************************
--
-- 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-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,
    iE-Extensions                           ProtocolExtensionContainer { { UL-CCTrCH-InformationItem-RL-SetupRqstTDD-ExtIEs} }    OPTIONAL,
    ...
}

UL-CCTrCH-InformationItem-RL-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

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 ::= {
    ...
}

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,
    iE-Extensions                           ProtocolExtensionContainer { { DL-CCTrCH-InformationItem-RL-SetupRqstTDD-ExtIEs} }    OPTIONAL,
    ...
}

DL-CCTrCH-InformationItem-RL-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CCTrCH-TPCList-RL-SetupRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF CCTrCH-TPCItem-RL-SetupRqstTDD

CCTrCH-TPCItem-RL-SetupRqstTDD   ::= SEQUENCE {
    cCTrCH-ID                               CCTrCH-ID,
    iE-Extensions                           ProtocolExtensionContainer { { CCTrCH-TPCItem-RL-SetupRqstTDD-ExtIEs} }   OPTIONAL,
    ...
}

CCTrCH-TPCItem-RL-SetupRqstTDD-ExtIEs 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 ::= {
    ...
}

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

RL-Information-RL-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- **************************************************************
--
-- RADIO LINK SETUP RESPONSE FDD
--
-- **************************************************************

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

RadioLinkSetupResponseFDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-CRNC-CommunicationContextID                      CRITICALITY ignore          TYPE  CRNC-CommunicationContextID
    PRESENCE    mandatory   }|
    { ID    id-NodeB-CommunicationContextID                     CRITICALITY ignore          TYPE  NodeB-CommunicationContextID              PRESENCE
    mandatory   }|
    { ID    id-CommunicationControlPortID                       CRITICALITY ignore          TYPE  CommunicationControlPortID               PRESENCE
    mandatory   }|
    { ID    id-RL-InformationResponseList-RL-SetupRspFDD        CRITICALITY ignore          TYPE  RL-InformationResponseList-RL-SetupRspFDD
    PRESENCE    mandatory   }|
    { ID    id-TFCI2-BearerInformationResponse  CRITICALITY ignore          TYPE    TFCI2-BearerInformationResponse PRESENCE optional }|
    { ID    id-CriticalityDiagnostics                           CRITICALITY ignore          TYPE  CriticalityDiagnostics                   PRESENCE
    optional    },
    ...
}

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

RL-InformationResponseList-RL-SetupRspFDD ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container{{ RL-InformationResponseItemIE-RL-
SetupRspFDD }}

RL-InformationResponseItemIE-RL-SetupRspFDD NBAP-PROTOCOL-IES ::= {
    { ID    id-RL-InformationResponseItem-RL-SetupRspFDD            CRITICALITY     ignore      TYPE RL-InformationResponseItem-RL-SetupRspFDD
    PRESENCE    mandatory}
}

RL-InformationResponseItem-RL-SetupRspFDD ::= SEQUENCE {
```

```
    rL-ID                                       RL-ID,
    rL-Set-ID                                   RL-Set-ID,
    received-total-wide-band-power                                      Received-total-wide-band-power-Value,
    diversityIndication             DiversityIndication-RL-SetupRspFDD,
    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 ::= {
    ...
}

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    mandatory   }|
    { ID    id-CriticalityDiagnostics                           CRITICALITY     ignore          TYPE CriticalityDiagnostics
    PRESENCE    optional    },
    ...
}

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

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 ::= {
    ...
}

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 }
```

```
}

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

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 ::= {
    ...
}

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

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

RadioLinkAdditionRequestTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-NodeB-CommunicationContextID                         CRITICALITY     reject       TYPE  NodeB-CommunicationContextID
    PRESENCE    mandatory   }|
    { ID    id-UL-CCTrCH-InformationList-RL-AdditionRqstTDD         CRITICALITY     reject       TYPE  UL-CCTrCH-InformationList-RL-AdditionRqstTDD
            PRESENCE    optional    }|
    { ID    id-DL-CCTrCH-InformationList-RL-AdditionRqstTDD         CRITICALITY     reject       TYPE  DL-CCTrCH-InformationList-RL-AdditionRqstTDD
            PRESENCE    optional    }|
    { ID    id-RL-Information-RL-AdditionRqstTDD                    CRITICALITY     reject       TYPE  RL-Information-RL-AdditionRqstTDD
        PRESENCE    mandatory   },
    ...
}

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

UL-CCTrCH-InformationList-RL-AdditionRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF UL-CCTrCH-InformationItem-RL-AdditionRqstTDD

UL-CCTrCH-InformationItem-RL-AdditionRqstTDD ::= SEQUENCE {
    cCTrCH-ID                               CCTrCH-ID,
    uL-DPCH-Information                     UL-DPCH-InformationList-RL-AdditionRqstTDD      OPTIONAL,
    iE-Extensions                           ProtocolExtensionContainer { { UL-CCTrCH-InformationItem-RL-AdditionRqstTDD-ExtIEs} }   OPTIONAL,
    ...
}

UL-CCTrCH-InformationItem-RL-AdditionRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

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    mandatory}
}

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 ::= {
    ...
}

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}
}

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,
    iE-Extensions                               ProtocolExtensionContainer { { RL-information-RL-AdditionRqstTDD-ExtIEs} }        OPTIONAL,
    ...
 }

RL-information-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 ::= {
    ...
}

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    mandatory   }|
    { ID    id-CriticalityDiagnostics                           CRITICALITY ignore          TYPE  CriticalityDiagnostics                    PRESENCE
    optional    },
    ...
}

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

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 }
}

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

```
-- RADIO LINK ADDITION FAILURE FDD
--
-- **************************************************************

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

RadioLinkAdditionFailureFDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-CRNC-CommunicationContextID          CRITICALITY     ignore      TYPE    CRNC-CommunicationContextID         PRESENCE mandatory   }|
    { ID    id-CauseLevel-RL-AdditionFailureFDD     CRITICALITY     ignore      TYPE    CauseLevel-RL-AdditionFailureFDD    PRESENCE mandatory   }|
    { ID    id-CriticalityDiagnostics               CRITICALITY     ignore      TYPE    CriticalityDiagnostics              PRESENCE optional    },
    ...
}

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

CauseLevel-RL-AdditionFailureFDD ::= CHOICE {
    generalCause        GeneralCauseList-RL-AdditionFailureFDD,
    rLSpecificCause     RLSpecificCauseList-RL-AdditionFailureFDD,
    ...
}

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

GeneralCauseItem-RL-AdditionFailureFDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RLSpecificCauseList-RL-AdditionFailureFDD ::= SEQUENCE {
    unsuccessful-RL-InformationRespList-RL-AdditionFailureFDD       Unsuccessful-RL-InformationRespList-RL-AdditionFailureFDD,
    successful-RL-InformationRespList-RL-AdditionFailureFDD         Successful-RL-InformationRespList-RL-AdditionFailureFDD  OPTIONAL,
    iE-Extensions                           ProtocolExtensionContainer { { RLSpecificCauseItem-RL-AdditionFailureFDD-ExtIEs} }      OPTIONAL,
    ...
}

RLSpecificCauseItem-RL-AdditionFailureFDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Unsuccessful-RL-InformationRespList-RL-AdditionFailureFDD ::= SEQUENCE  (SIZE (1..maxNrOfRLs-1)) OF ProtocolIE-Single-Container {{ Unsuccessful-RL-
InformationRespItemIE-RL-AdditionFailureFDD }}

Unsuccessful-RL-InformationRespItemIE-RL-AdditionFailureFDD NBAP-PROTOCOL-IES ::= {
    { ID    id-Unsuccessful-RL-InformationRespItem-RL-AdditionFailureFDD        CRITICALITY     ignore     TYPE  Unsuccessful-RL-
InformationRespItem-RL-AdditionFailureFDD   PRESENCE    mandatory}
```

```
}

Unsuccessful-RL-InformationRespItem-RL-AdditionFailureFDD ::= SEQUENCE {
    rL-ID                                   RL-ID,
    cause                                   Cause,
    iE-Extensions                           ProtocolExtensionContainer { { Unsuccessful-RL-InformationRespItem-RL-AdditionFailureFDD-ExtIEs} }
            OPTIONAL,
    ...
}

Unsuccessful-RL-InformationRespItem-RL-AdditionFailureFDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Successful-RL-InformationRespList-RL-AdditionFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfRLs-2)) OF ProtocolIE-Single-Container {{ Successful-RL-
InformationRespItemIE-RL-AdditionFailureFDD }}

Successful-RL-InformationRespItemIE-RL-AdditionFailureFDD NBAP-PROTOCOL-IES ::= {
    { ID    id-Successful-RL-InformationRespItem-RL-AdditionFailureFDD      CRITICALITY     ignore      TYPE  Successful-RL-InformationRespItem-RL-
AdditionFailureFDD      PRESENCE    mandatory}
}

Successful-RL-InformationRespItem-RL-AdditionFailureFDD ::= SEQUENCE {
    rL-ID                                   RL-ID,
    rL-Set-ID                               RL-Set-ID,
    received-total-wide-band-power          Received-total-wide-band-power-Value,
    diversityIndication                     DiversityIndication-RL-AdditionFailureFDD,
    sSDT-SupportIndicator                   SSDT-SupportIndicator,
    iE-Extensions                           ProtocolExtensionContainer { { Successful-RL-InformationRespItem-RL-AdditionFailureFDD-ExtIEs} }
    OPTIONAL,
    ...
}

Successful-RL-InformationRespItem-RL-AdditionFailureFDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DiversityIndication-RL-AdditionFailureFDD ::= CHOICE {
    combining                   Combining-RL-AdditionFailureFDD,
    non-Combining               Non-Combining-RL-AdditionFailureFDD
}

Combining-RL-AdditionFailureFDD ::= SEQUENCE {
    rL-ID                                   RL-ID,
    iE-Extensions                           ProtocolExtensionContainer { { CombiningItem-RL-AdditionFailureFDD-ExtIEs} }      OPTIONAL,
    ...
 }

CombiningItem-RL-AdditionFailureFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Non-Combining-RL-AdditionFailureFDD ::= SEQUENCE {
    dCH-InformationResponse                 DCH-InformationResponse,
```

```
    iE-Extensions                                   ProtocolExtensionContainer { { Non-CombiningItem-RL-AdditionFailureFDD-ExtIEs} }
    OPTIONAL,
    ...
}

Non-CombiningItem-RL-AdditionFailureFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- **************************************************************
--
-- RADIO LINK ADDITION FAILURE TDD
--
-- **************************************************************

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

RadioLinkAdditionFailureTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-CRNC-CommunicationContextID              CRITICALITY     ignore      TYPE    CRNC-CommunicationContextID
    PRESENCE    mandatory   }|
    { ID    id-CauseLevel-RL-AdditionFailureTDD         CRITICALITY     ignore      TYPE    CauseLevel-RL-AdditionFailureTDD
    PRESENCE    mandatory }|
    { ID    id-CriticalityDiagnostics                   CRITICALITY     ignore      TYPE    CriticalityDiagnostics
    PRESENCE    optional    },
    ...
}

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

CauseLevel-RL-AdditionFailureTDD ::= CHOICE {
    generalCause        GeneralCauseList-RL-AdditionFailureTDD,
    rLSpecificCause     RLSpecificCauseList-RL-AdditionFailureTDD,
    ...
}

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

GeneralCauseItem-RL-AdditionFailureTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RLSpecificCauseList-RL-AdditionFailureTDD ::= SEQUENCE {
    unsuccessful-RL-InformationRespItem-RL-AdditionFailureTDD   Unsuccessful-RL-InformationRespItem-RL-AdditionFailureTDD,
```

```
    iE-Extensions                                          ProtocolExtensionContainer { { RLSpecificCauseItem-RL-AdditionFailureTDD-ExtIEs} }
        OPTIONAL,
    ...
}

RLSpecificCauseItem-RL-AdditionFailureTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Unsuccessful-RL-InformationRespItem-RL-AdditionFailureTDD ::= ProtocolIE-Single-Container { {Unsuccessful-RL-InformationRespItemIE-RL-
AdditionFailureTDD} }

Unsuccessful-RL-InformationRespItemIE-RL-AdditionFailureTDD NBAP-PROTOCOL-IES ::= {
    { ID id-Unsuccessful-RL-InformationResp-RL-AdditionFailureTDD   CRITICALITY ignore  TYPE Unsuccessful-RL-InformationResp-RL-AdditionFailureTDD
    PRESENCE mandatory }
}

Unsuccessful-RL-InformationResp-RL-AdditionFailureTDD ::= SEQUENCE {
    rL-ID                                  RL-ID,
    cause                                  Cause,
    iE-Extensions                          ProtocolExtensionContainer { { Unsuccessful-RL-InformationResp-RL-AdditionFailureTDD-ExtIEs} }
    OPTIONAL,
    ...
}

Unsuccessful-RL-InformationResp-RL-AdditionFailureTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- **************************************************************
--
-- RADIO LINK RECONFIGURATION PREPARE FDD
--
-- **************************************************************

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

RadioLinkReconfigurationPrepareFDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-NodeB-CommunicationContextID                 CRITICALITY     reject          TYPE  NodeB-CommunicationContextID          PRESENCE
    mandatory   } |
    { ID    id-UL-DPCH-Information-RL-ReconfPrepFDD         CRITICALITY     reject          TYPE  UL-DPCH-Information-RL-ReconfPrepFDD     PRESENCE
    optional    } |
    { ID    id-DL-DPCH-Information-RL-ReconfPrepFDD         CRITICALITY     reject          TYPE  DL-DPCH-Information-RL-ReconfPrepFDD     PRESENCE
    optional    } |
    { ID    id-FDD-DCHs-to-Modify               CRITICALITY     reject          TYPE    FDD-DCHs-to-Modify         PRESENCE optional } |
    { ID    id-DCHs-to-Add-FDD                  CRITICALITY     reject          TYPE    DCH-FDD-Information           PRESENCE optional } |
    { ID    id-DCH-DeleteList-RL-ReconfPrepFDD              CRITICALITY     reject          TYPE  DCH-DeleteList-RL-ReconfPrepFDD          PRESENCE
    optional    } |
    { ID    id-DSCH-ModifyList-RL-ReconfPrepFDD             CRITICALITY     reject          TYPE  DSCH-ModifyList-RL-ReconfPrepFDD         PRESENCE
    optional    } |
```

```
    { ID    id-DSCHs-to-Add-FDD             CRITICALITY     reject          TYPE    DSCH-FDD-Information              PRESENCE optional } |
    { ID    id-DSCH-DeleteList-RL-ReconfPrepFDD             CRITICALITY     reject          TYPE  DSCH-DeleteList-RL-ReconfPrepFDD         PRESENCE
    optional    } |
    { ID    id-TFCI2-BearerSpecificInformation-RL-ReconfPrepFDD     CRITICALITY     reject      TYPE TFCI2-BearerSpecificInformation-RL-
ReconfPrepFDD
    PRESENCE optional } |
    { ID    id-RL-InformationList-RL-ReconfPrepFDD          CRITICALITY     reject          TYPE  RL-InformationList-RL-ReconfPrepFDD      PRESENCE
    optional    }|
    { ID id-Transmission-Gap-Pattern-Sequence-Information   CRITICALITY     reject          TYPE Transmission-Gap-Pattern-Sequence-Information
PRESENCE optional },
    ...
}

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

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 ::= {
    ...
}

DSCH-DeleteList-RL-ReconfPrepFDD ::= SEQUENCE (SIZE (1..maxNrOfDSCHs)) OF ProtocolIE-Single-Container {{DSCH-DeleteItemIE-RL-ReconfPrepFDD }}

DSCH-DeleteItemIE-RL-ReconfPrepFDD NBAP-PROTOCOL-IES ::= {
    { ID    id-DSCH-DeleteItem-RL-ReconfPrepFDD     CRITICALITY reject      TYPE    DSCH-DeleteItem-RL-ReconfPrepFDD  PRESENCE mandatory}
}

DSCH-DeleteItem-RL-ReconfPrepFDD ::= SEQUENCE {
    dSCH-ID                                     DSCH-ID,
    iE-Extensions                               ProtocolExtensionContainer { { DSCH-DeleteItem-RL-ReconfPrepFDD-ExtIEs} }     OPTIONAL,
    ...
}

DSCH-DeleteItem-RL-ReconfPrepFDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TFCI2-BearerSpecificInformation-RL-ReconfPrepFDD ::= CHOICE {
    addOrModify             AddOrModify-TFCI2-RL-ReconfPrepFDD,
    delete                  NULL
```

```
}

AddOrModify-TFCI2-RL-ReconfPrepFDD ::= SEQUENCE {
    toAWS                               ToAWS,
    toAWE                               ToAWE,
    iE-Extensions                       ProtocolExtensionContainer { { AddOrModify-TFCI2-RL-ReconfPrepFDD-ExtIEs} }   OPTIONAL,
    ...
}

AddOrModify-TFCI2-RL-ReconfPrepFDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

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 ::= {
    ...
}

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

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

RadioLinkReconfigurationPrepareTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-NodeB-CommunicationContextID                         CRITICALITY     reject      TYPE NodeB-CommunicationContextID
    PRESENCE    mandatory   }|
```

```
    { ID    id-UL-CCTrCH-InformationAddList-RL-ReconfPrepTDD           CRITICALITY     reject    TYPE  UL-CCTrCH-InformationAddList-RL-
ReconfPrepTDD           PRESENCE    optional        } |
    { ID    id-UL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD        CRITICALITY     reject    TYPE  UL-CCTrCH-InformationModifyList-RL-
ReconfPrepTDD           PRESENCE    optional        } |
    { ID    id-UL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD        CRITICALITY     reject    TYPE  UL-CCTrCH-InformationDeleteList-RL-
ReconfPrepTDD           PRESENCE    optional        } |
    { ID    id-DL-CCTrCH-InformationAddList-RL-ReconfPrepTDD           CRITICALITY     reject    TYPE  DL-CCTrCH-InformationAddList-RL-
ReconfPrepTDD           PRESENCE    optional        } |
    { ID    id-DL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD        CRITICALITY     reject    TYPE  DL-CCTrCH-InformationModifyList-RL-
ReconfPrepTDD           PRESENCE    optional        } |
    { ID    id-DL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD        CRITICALITY     reject    TYPE  DL-CCTrCH-InformationDeleteList-RL-
ReconfPrepTDD           PRESENCE    optional        } |
    { ID    id-TDD-DCHs-to-Modify                      CRITICALITY     reject      TYPE    TDD-DCHs-to-Modify                PRESENCE optional
    } |
    { ID    id-DCHs-to-Add-TDD                         CRITICALITY     reject      TYPE    DCH-TDD-Information               PRESENCE optional
    } |
    { ID    id-DCH-DeleteList-RL-ReconfPrepTDD                      CRITICALITY     reject      TYPE DCH-DeleteList-RL-ReconfPrepTDD
    PRESENCE    optional        } |
    { ID    id-DSCH-Information-ModifyList-RL-ReconfPrepTDD         CRITICALITY     reject      TYPE DSCH-Information-ModifyList-RL-ReconfPrepTDD
    PRESENCE    optional        } |
    { ID    id-DSCHs-to-Add-TDD         CRITICALITY     reject      TYPE    DSCH-TDD-Information        PRESENCE    optional    } |
    { ID    id-DSCH-Information-DeleteList-RL-ReconfPrepTDD         CRITICALITY     reject      TYPE DSCH-Information-DeleteList-RL-ReconfPrepTDD
    PRESENCE    optional        } |
    { ID    id-USCH-Information-ModifyList-RL-ReconfPrepTDD         CRITICALITY     reject      TYPE USCH-Information-ModifyList-RL-ReconfPrepTDD
    PRESENCE    optional        } |
    { ID    id-USCH-Information-Add         CRITICALITY     reject      TYPE    USCH-Information        PRESENCE    optional    } |
    { ID    id-USCH-Information-DeleteList-RL-ReconfPrepTDD         CRITICALITY     reject      TYPE USCH-Information-DeleteList-RL-ReconfPrepTDD
    PRESENCE    optional        } |
    { ID    id-RL-Information-RL-ReconfPrepTDD                      CRITICALITY     reject      TYPE RL-Information-RL-ReconfPrepTDD
    PRESENCE    optional        },
    ...
}

RadioLinkReconfigurationPrepareTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-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 ::= {
    ...
}
```

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

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-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 ::= {
    ...
}

UL-Timeslot-InformationModify-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfULTSs)) OF UL-Timeslot-InformationModify-ModifyItem-RL-
ReconfPrepTDD

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-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 ::= {
    ...
}

CCTrCH-TPCAddList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF CCTrCH-TPCAddItem-RL-ReconfPrepTDD

CCTrCH-TPCAddItem-RL-ReconfPrepTDD   ::= SEQUENCE {
    cCTrCH-ID                               CCTrCH-ID,
    iE-Extensions                           ProtocolExtensionContainer { { CCTrCH-TPCAddItem-RL-ReconfPrepTDD-ExtIEs} }     OPTIONAL,
    ...
}

CCTrCH-TPCAddItem-RL-ReconfPrepTDD-ExtIEs  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-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 ::= {
    ...
}

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 }}

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-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 ::= {
    ...
}

DL-Timeslot-InformationModify-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfDLTSs)) OF DL-Timeslot-InformationModify-ModifyItem-RL-
ReconfPrepTDD

DL-Timeslot-InformationModify-ModifyItem-RL-ReconfPrepTDD    ::= SEQUENCE {
    timeSlot                            TimeSlot,
    midambleShiftAndBurstType           MidambleShiftAndBurstType           OPTIONAL,
    tFCI-Presence                       TFCI-Presence           OPTIONAL,
    dL-Code-InformationModify-ModifyList-RL-ReconfPrepTDD               DL-Code-InformationModify-ModifyList-RL-ReconfPrepTDD        OPTIONAL,
    iE-Extensions                       ProtocolExtensionContainer { { DL-Timeslot-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}

DL-Timeslot-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
DL-Code-InformationModify-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (0..maxNrOfDPCHs)) OF DL-Code-InformationModify-ModifyItem-RL-
ReconfPrepTDD

DL-Code-InformationModify-ModifyItem-RL-ReconfPrepTDD    ::= SEQUENCE {
    dPCH-ID                             DPCH-ID,
    tdd-ChannelisationCode              TDD-ChannelisationCode      OPTIONAL,
    iE-Extensions                       ProtocolExtensionContainer { { DL-Code-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}

DL-Code-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-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 ::= {
    ...
}

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 ::= {
    ...
}

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 },
    ...
}

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

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

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 ::= {
    ...
}

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 ::= {
    ...
}
```

```
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 ::= {
    ...
}

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

UL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container {{ UL-CCTrCH-
InformationModifyItemIE-RL-ReconfRqstTDD}}

UL-CCTrCH-InformationModifyItemIE-RL-ReconfRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID    id-UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD         CRITICALITY     notify       TYPE  UL-CCTrCH-InformationModifyItem-RL-
ReconfRqstTDD       PRESENCE    mandatory}
}

UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD ::= SEQUENCE {
    cCTrCH-ID                                       CCTrCH-ID,
    tFCS                                            TFCS            OPTIONAL,
```

```
    punctureLimit                                   PunctureLimit   OPTIONAL,
    iE-Extensions                                   ProtocolExtensionContainer { { UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD-ExtIEs} }
    OPTIONAL,
    ...
}

UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container {{ UL-CCTrCH-
InformationDeleteItemIE-RL-ReconfRqstTDD}}

UL-CCTrCH-InformationDeleteItemIE-RL-ReconfRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID    id-UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD         CRITICALITY     notify      TYPE  UL-CCTrCH-InformationDeleteItem-RL-
ReconfRqstTDD       PRESENCE    mandatory}
}

UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD ::= SEQUENCE {
    cCTrCH-ID                                       CCTrCH-ID,
    iE-Extensions                                   ProtocolExtensionContainer { { UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD-ExtIEs} }
    OPTIONAL,
    ...
}

UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container {{ DL-CCTrCH-
InformationModifyItemIE-RL-ReconfRqstTDD}}

DL-CCTrCH-InformationModifyItemIE-RL-ReconfRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID    id-DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD         CRITICALITY     notify      TYPE  DL-CCTrCH-InformationModifyItem-RL-
ReconfRqstTDD       PRESENCE    mandatory}
}

DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD ::= SEQUENCE {
    cCTrCH-ID                                       CCTrCH-ID,
    tFCS                                            TFCS            OPTIONAL,
    punctureLimit                                   PunctureLimit   OPTIONAL,
    iE-Extensions                                   ProtocolExtensionContainer { { DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD-ExtIEs} }
    OPTIONAL,
    ...
}

DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container {{ DL-CCTrCH-
InformationDeleteItemIE-RL-ReconfRqstTDD}}

DL-CCTrCH-InformationDeleteItemIE-RL-ReconfRqstTDD NBAP-PROTOCOL-IES ::= {
```

```
    { ID    id-DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD        CRITICALITY     notify      TYPE  DL-CCTrCH-InformationDeleteItem-RL-
ReconfRqstTDD       PRESENCE    mandatory}
}

DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD ::= SEQUENCE {
    cCTrCH-ID                                       CCTrCH-ID,
    iE-Extensions                                   ProtocolExtensionContainer { { DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD-ExtIEs} }
    OPTIONAL,
    ...
}

DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-DeleteList-RL-ReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-DeleteItem-RL-ReconfRqstTDD

DCH-DeleteItem-RL-ReconfRqstTDD ::= SEQUENCE {
    dCH-ID                                          DCH-ID,
    iE-Extensions                                   ProtocolExtensionContainer { { DCH-DeleteItem-RL-ReconfRqstTDD-ExtIEs} }      OPTIONAL,
    ...
}

DCH-DeleteItem-RL-ReconfRqstTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-Information-RL-ReconfRqstTDD ::= SEQUENCE {
    rL-ID                                       RL-ID,
    maxDL-Power                                 DL-Power        OPTIONAL,
    minDL-Power                                 DL-Power        OPTIONAL,
    iE-Extensions                               ProtocolExtensionContainer { { RL-InformationItem-RL-ReconfRqstTDD-ExtIEs} }      OPTIONAL,
    ...
}

RL-InformationItem-RL-ReconfRqstTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

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 ::= {
    ...
}

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 setto '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 mandatory },

    ...
}

DL-PowerTimeslotControlRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- **********************************************************
--
-- DEDICATED MEASUREMENT INITIATION REQUEST
--
-- **********************************************************

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

DedicatedMeasurementInitiationRequest-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-NodeB-CommunicationContextID                 CRITICALITY     reject      TYPE    NodeB-CommunicationContextID         PRESENCE
    mandatory   } |
    { ID    id-MeasurementID                                CRITICALITY     reject      TYPE    MeasurementID                       PRESENCE
    mandatory   } |
    { ID    id-DedicatedMeasurementObjectType-DM-Rqst       CRITICALITY     reject      TYPE    DedicatedMeasurementObjectType-DM-Rqst     PRESENCE
    mandatory   } |
    { ID    id-DedicatedMeasurementType                     CRITICALITY     reject      TYPE    DedicatedMeasurementType             PRESENCE
    mandatory   } |
    { ID    id-MeasurementFilterCoefficient                 CRITICALITY     reject      TYPE    MeasurementFilterCoefficient            PRESENCE
    optional    } |
    { ID    id-ReportCharacteristics                        CRITICALITY     reject      TYPE    ReportCharacteristics                PRESENCE
    mandatory   } |
    { ID    id-CFNReportingIndicator                        CRITICALITY     reject      TYPE    FNReportingIndicator                 PRESENCE
    mandatory   } |
    { ID    id-CFN                                          CRITICALITY     reject      TYPE    CFN                                  PRESENCE
optional    } ,
    ...
}

DedicatedMeasurementInitiationRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {
```

```
    ...
}

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

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 ::= {
    ...
}

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 FDD only
    dedicatedMeasurementValue       DedicatedMeasurementValue,
    cFN                             CFN             OPTIONAL,
    iE-Extensions                   ProtocolExtensionContainer { { RL-InformationItem-DM-Rsp-ExtIEs } }     OPTIONAL,
    ...
}

RL-InformationItem-DM-Rsp-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

RL-SetItem-DM-Rsp-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-Set-InformationList-DM-Rsp ::= SEQUENCE (SIZE (1..maxNrOfRLSets)) OF ProtocolIE-Single-Container {{ RL-Set-InformationItemIE-DM-Rsp }}

RL-Set-InformationItemIE-DM-Rsp NBAP-PROTOCOL-IES ::= {
    { ID id-RL-Set-InformationItem-DM-Rsp       CRITICALITY ignore      TYPE    RL-Set-InformationItem-DM-Rsp PRESENCE mandatory}
}

RL-Set-InformationItem-DM-Rsp ::= SEQUENCE {
    rL-Set-ID                       RL-Set-ID,
    dedicatedMeasurementValue       DedicatedMeasurementValue,
    cFN                             CFN             OPTIONAL,
    iE-Extensions                   ProtocolExtensionContainer { { RL-Set-InformationItem-DM-Rsp-ExtIEs} } OPTIONAL,
    ...
}

RL-Set-InformationItem-DM-Rsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

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

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

DedicatedMeasurementInitiationFailure-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-CRNC-CommunicationContextID          CRITICALITY     ignore          TYPE    CRNC-CommunicationContextID     PRESENCE mandatory   }
|
    { ID    id-MeasurementID                        CRITICALITY     ignore          TYPE    MeasurementID             PRESENCE mandatory   } |
    { ID    id-Cause                                CRITICALITY     ignore          TYPE    Cause                   PRESENCE mandatory   } |
    { ID    id-CriticalityDiagnostics               CRITICALITY     ignore          TYPE    CriticalityDiagnostics       PRESENCE optional },
    ...
}

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

-- **************************************************************
--
-- DEDICATED MEASUREMENT REPORT
--
-- **************************************************************

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

DedicatedMeasurementReport-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-CRNC-CommunicationContextID                      CRITICALITY     ignore      TYPE  CRNC-CommunicationContextID              PRESENCE
    mandatory   } |
    { ID    id-MeasurementID                                    CRITICALITY     ignore      TYPE  MeasurementID                       PRESENCE
    mandatory   } |
    { ID    id-DedicatedMeasurementObjectType-DM-Rprt           CRITICALITY     ignore      TYPE  DedicatedMeasurementObjectType-DM-Rprt   PRESENCE
    mandatory   } ,
    ...
}

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

DedicatedMeasurementObjectType-DM-Rprt ::= CHOICE {
    rL                                  RL-DM-Rprt,
    rLS                                 RL-Set-DM-Rprt,     -- 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 ::= {
    ...
}

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

RL-SetItem-DM-Rprt-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-Set-InformationList-DM-Rprt ::= SEQUENCE (SIZE (1..maxNrOfRLSets)) OF ProtocolIE-Single-Container {{ RL-Set-InformationItemIE-DM-Rprt }}

RL-Set-InformationItemIE-DM-Rprt NBAP-PROTOCOL-IES ::= {
    { ID id-RL-Set-InformationItem-DM-Rprt  CRITICALITY ignore  TYPE RL-Set-InformationItem-DM-Rprt     PRESENCE mandatory   }
}

RL-Set-InformationItem-DM-Rprt ::= SEQUENCE {
    rL-Set-ID                       RL-Set-ID,
    dedicatedMeasurementValueInformation    DedicatedMeasurementValueInformation,
    iE-Extensions                   ProtocolExtensionContainer { { RL-Set-InformationItem-DM-Rprt-ExtIEs} } OPTIONAL,
    ...
}

RL-Set-InformationItem-DM-Rprt-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
```

```
}

-- **************************************************************
--
-- DEDICATED MEASUREMENT TERMINATION REQUEST
--
-- **************************************************************

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

DedicatedMeasurementTerminationRequest-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-NodeB-CommunicationContextID         CRITICALITY     ignore          TYPE    NodeB-CommunicationContextID    PRESENCE mandatory   }
|
    { ID    id-MeasurementID                        CRITICALITY     ignore          TYPE    MeasurementID                PRESENCE mandatory   },
    ...
}

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

-- **************************************************************
--
-- DEDICATED MEASUREMENT FAILURE INDICATION
--
-- **************************************************************

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

DedicatedMeasurementFailureIndication-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-CRNC-CommunicationContextID      CRITICALITY     ignore      TYPE    CRNC-CommunicationContextID    PRESENCE mandatory   } |
    { ID    id-MeasurementID                    CRITICALITY     ignore      TYPE    MeasurementID            PRESENCE mandatory   } |
    { ID    id-Cause                            CRITICALITY     ignore      TYPE    Cause                    PRESENCE mandatory   },
    ...
}

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

-- **************************************************************
--
-- RADIO LINK FAILURE INDICATION
--
-- **************************************************************
```

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

RadioLinkFailureIndication-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-CRNC-CommunicationContextID              CRITICALITY     ignore          TYPE    CRNC-CommunicationContextID          PRESENCE
    mandatory   } |
    { ID    id-Reporting-Object-RL-FailureInd           CRITICALITY     ignore          TYPE    Reporting-Object-RL-FailureInd    PRESENCE
    mandatory   } ,
    ...
}

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

Reporting-Object-RL-FailureInd ::= CHOICE {
    rL                      RL-RL-FailureInd,
    rL-Set                  RL-Set-RL-FailureInd, --FDD only
    ...,
    cCTrCH                  CCTrCH-RL-FailureInd --TDD only
}

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

RLItem-RL-FailureInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-InformationList-RL-FailureInd ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container {{ RL-InformationItemIE-RL-FailureInd}}

RL-InformationItemIE-RL-FailureInd NBAP-PROTOCOL-IES ::= {
    { ID    id-RL-InformationItem-RL-FailureInd         CRITICALITY     ignore          TYPE    RL-InformationItem-RL-FailureInd        PRESENCE
    mandatory}
 }

RL-InformationItem-RL-FailureInd ::= SEQUENCE {
    rL-ID                                   RL-ID,
    cause                                   Cause,
    iE-Extensions                           ProtocolExtensionContainer { { RL-InformationItem-RL-FailureInd-ExtIEs } }     OPTIONAL,
    ...
 }

RL-InformationItem-RL-FailureInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-Set-RL-FailureInd ::= SEQUENCE {
```

```
    rL-Set-InformationList-RL-FailureInd        RL-Set-InformationList-RL-FailureInd,
    iE-Extensions                          ProtocolExtensionContainer { { RL-SetItem-RL-FailureInd-ExtIEs } }     OPTIONAL,
    ...
 }

RL-SetItem-RL-FailureInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-Set-InformationList-RL-FailureInd ::= SEQUENCE (SIZE (1..maxNrOfRLSets)) OF ProtocolIE-Single-Container {{ RL-Set-InformationItemIE-RL-
FailureInd }}

RL-Set-InformationItemIE-RL-FailureInd NBAP-PROTOCOL-IES ::= {
    { ID id-RL-Set-InformationItem-RL-FailureInd    CRITICALITY ignore      TYPE RL-Set-InformationItem-RL-FailureInd    PRESENCE mandatory   }
}

RL-Set-InformationItem-RL-FailureInd ::= SEQUENCE {
    rL-Set-ID               RL-Set-ID,
    cause                   Cause,
    iE-Extensions           ProtocolExtensionContainer { { RL-Set-InformationItem-RL-FailureInd-ExtIEs} } OPTIONAL,
    ...
}

RL-Set-InformationItem-RL-FailureInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CCTrCH-RL-FailureInd ::= SEQUENCE {
    rL-ID                                   RL-ID,
    cCTrCH-InformationList-RL-FailureInd        CCTrCH-InformationList-RL-FailureInd,
    iE-Extensions                          ProtocolExtensionContainer { { CCTrCHItem-RL-FailureInd-ExtIEs } }     OPTIONAL,
    ...
 }

CCTrCHItem-RL-FailureInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CCTrCH-InformationList-RL-FailureInd ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container {{ CCTrCH-InformationItemIE-RL-
FailureInd}}

CCTrCH-InformationItemIE-RL-FailureInd NBAP-PROTOCOL-IES ::= {
    { ID    id-CCTrCH-InformationItem-RL-FailureInd         CRITICALITY     ignore          TYPE  CCTrCH-InformationItem-RL-FailureInd
    PRESENCE    mandatory}
 }

CCTrCH-InformationItem-RL-FailureInd ::= SEQUENCE {
    cCTrCH-ID                               CCTrCH-ID,
    cause                                   Cause,
    iE-Extensions                           ProtocolExtensionContainer { { CCTrCH-InformationItem-RL-FailureInd-ExtIEs } }    OPTIONAL,
    ...
 }

CCTrCH-InformationItem-RL-FailureInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
```

```
    ...
}

-- **************************************************************
--
-- RADIO LINK PREEMPTION REQUIRED INDICATION
--
-- **************************************************************

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

RadioLinkPreemptionRequiredIndication-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-CRNC-CommunicationContextID                 CRITICALITY     ignore          TYPE  CRNC-CommunicationContextID           PRESENCE
    mandatory       } |
    { ID id-RL-InformationList-RL-PreemptRequiredInd    CRITICALITY ignore  TYPE RL-InformationList-RL-PreemptRequiredInd   PRESENCE optional },
    ...
}

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

RL-InformationList-RL-PreemptRequiredInd           ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container { {RL-InformationItemIE-RL-
PreemptRequiredInd}}

RL-InformationItemIE-RL-PreemptRequiredInd NBAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationItem-RL-PreemptRequiredInd        CRITICALITY ignore  TYPE RL-InformationItem-RL-PreemptRequiredInd     PRESENCE
mandatory   },
    ...
}

RL-InformationItem-RL-PreemptRequiredInd::= SEQUENCE {
    rL-ID                       RL-ID,
    iE-Extensions               ProtocolExtensionContainer { {RL-InformationItem-RL-PreemptRequiredInd-ExtIEs} } OPTIONAL,
    ...
}

RL-InformationItem-RL-PreemptRequiredInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- **************************************************************
--
-- RADIO LINK RESTORE INDICATION
--
-- **************************************************************

RadioLinkRestoreIndication ::= SEQUENCE {
    protocolIEs             ProtocolIE-Container    {{RadioLinkRestoreIndication-IEs}},
    protocolExtensions      ProtocolExtensionContainer  {{RadioLinkRestoreIndication-Extensions}}    OPTIONAL,
```

```
    ...
}

RadioLinkRestoreIndication-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-CRNC-CommunicationContextID              CRITICALITY     ignore          TYPE    CRNC-CommunicationContextID          PRESENCE
    mandatory   } |
    { ID    id-Reporting-Object-RL-RestoreInd           CRITICALITY     ignore          TYPE    Reporting-Object-RL-RestoreInd    PRESENCE
    mandatory   },
    ...
}

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

Reporting-Object-RL-RestoreInd ::= CHOICE {
    rL                      RL-RL-RestoreInd, --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}},
    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 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 ::= {
    ...
}

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,
    iE-Extensions                               ProtocolExtensionContainer { {PDSCHSets-AddItem-PSCH-ReconfRqst-ExtIEs} }   OPTIONAL,
    ...
}

PDSCHSets-AddItem-PSCH-ReconfRqst-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

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 ::= {
```

```
    ...
}

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 ::= {
    ...
}

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    mandatory}
}

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 ::= {
    ...
}

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,
    iE-Extensions                           ProtocolExtensionContainer { {PUSCHSets-AddItem-PSCH-ReconfRqst-ExtIEs} }   OPTIONAL,
    ...
}

PUSCHSets-AddItem-PSCH-ReconfRqst-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

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 ::= {
    ...
}

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,
    iE-Extensions                               ProtocolExtensionContainer { {PUSCHSets-ModifyItem-PSCH-ReconfRqst-ExtIEs} }   OPTIONAL,
    ...
}

PUSCHSets-ModifyItem-PSCH-ReconfRqst-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

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 ::= {
    ...
}

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 ::= {
    ...
}

-- **************************************************************
--
-- PHYSICAL SHARED CHANNEL RECONFIGURATION RESPONSE TDD
--
```

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

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

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

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


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

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

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

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

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

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

GeneralCauseItem-PSCH-ReconfFailureTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
```

```
}

SetSpecificCauseList-PSCH-ReconfFailureTDD ::= SEQUENCE {
    unsuccessful-PDSCHSetList-PSCH-ReconfFailureTDD Unsuccessful-PDSCHSetList-PSCH-ReconfFailureTDD    OPTIONAL,
    unsuccessful-PUSCHSetList-PSCH-ReconfFailureTDD Unsuccessful-PUSCHSetList-PSCH-ReconfFailureTDD    OPTIONAL,
    iE-Extensions                                   ProtocolExtensionContainer { { SetSpecificCauseItem-PSCH-ReconfFailureTDD-ExtIEs} }
    OPTIONAL,
    ...
}

SetSpecificCauseItem-PSCH-ReconfFailureTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Unsuccessful-PDSCHSetList-PSCH-ReconfFailureTDD ::= SEQUENCE (SIZE (0.. maxNrOfPDSCHSets)) OF ProtocolIE-Single-Container {{ Unsuccessful-
PDSCHSetItemIE-PSCH-ReconfFailureTDD }}

Unsuccessful-PDSCHSetItemIE-PSCH-ReconfFailureTDD NBAP-PROTOCOL-IES ::= {
    { ID    id-Unsuccessful-PDSCHSetItem-PSCH-ReconfFailureTDD  CRITICALITY ignore  TYPE Unsuccessful-PDSCHSetItem-PSCH-ReconfFailureTDDPRESENCE
mandatory}
}

Unsuccessful-PDSCHSetItem-PSCH-ReconfFailureTDD ::= SEQUENCE {
    pDSCHSet-ID             PDSCHSet-ID,
    cause                   Cause,
    iE-Extensions           ProtocolExtensionContainer { {Unsuccessful-PDSCHSetItem-PSCH-ReconfFailureTDD-ExtIEs} }   OPTIONAL,
    ...
}

Unsuccessful-PDSCHSetItem-PSCH-ReconfFailureTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Unsuccessful-PUSCHSetList-PSCH-ReconfFailureTDD ::= SEQUENCE (SIZE (0.. maxNrOfPUSCHSets)) OF ProtocolIE-Single-Container {{ Unsuccessful-
PUSCHSetItemIE-PSCH-ReconfFailureTDD }}

Unsuccessful-PUSCHSetItemIE-PSCH-ReconfFailureTDD NBAP-PROTOCOL-IES ::= {
    { ID    id-Unsuccessful-PUSCHSetItem-PSCH-ReconfFailureTDD  CRITICALITY ignore  TYPE Unsuccessful-PUSCHSetItem-PSCH-ReconfFailureTDDPRESENCE
mandatory}
}

Unsuccessful-PUSCHSetItem-PSCH-ReconfFailureTDD ::= SEQUENCE {
    pUSCHSet-ID             PUSCHSet-ID,
    cause                   Cause,
    iE-Extensions           ProtocolExtensionContainer { {Unsuccessful-PUSCHSetItem-PSCH-ReconfFailureTDD-ExtIEs} }   OPTIONAL,
    ...
}

Unsuccessful-PUSCHSetItem-PSCH-ReconfFailureTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

```
-- RESET REQUEST
--
-- **************************************************************

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

ResetRequest-IEs NBAP-PROTOCOL-IES ::= {
    {ID id-ResetIndicator       CRITICALITY ignore      TYPE    ResetIndicator      PRESENCE    mandatory},
    ...
}

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

ResetIndicator ::= CHOICE {
    communicationContext            CommunicationContextList-Reset,
    communicationControlPort        CommunicationControlPortList-Reset,
    nodeB                           NULL,
    ...
}

CommunicationContextList-Reset ::= SEQUENCE {
    communicationContextInfoList-Reset      CommunicationContextInfoList-Reset,
    iE-Extensions                           ProtocolExtensionContainer  { {CommunicationContextItem-Reset-ExtIEs} }   OPTIONAL,
    ...
}

CommunicationContextItem-Reset-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CommunicationContextInfoList-Reset ::= SEQUENCE (SIZE (1.. maxCommunicationContext))    OF ProtocolIE-Single-Container {{
CommunicationContextInfoItemIE-Reset }}

CommunicationContextInfoItemIE-Reset NBAP-PROTOCOL-IES ::= {
    {ID id-CommunicationContextInfoItem-Reset       CRITICALITY reject      TYPE CommunicationContextInfoItem-Reset   PRESENCE mandatory}
```

```
}

CommunicationContextInfoItem-Reset ::= SEQUENCE {
    communicationContextType-Reset          CommunicationContextType-Reset,
    iE-Extensions                           ProtocolExtensionContainer  { { CommunicationContextInfoItem-Reset-ExtIEs} }    OPTIONAL,
    ...
}

CommunicationContextInfoItem-Reset-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CommunicationContextType-Reset ::= CHOICE {
    cRNC-CommunicationContextID             CRNC-CommunicationContextID,
    nodeB-CommunicationContextID            NodeB-CommunicationContextID,
    ...
}

CommunicationControlPortList-Reset ::= SEQUENCE {
    communicationControlPortInfoList-Reset      CommunicationControlPortInfoList-Reset,
    iE-Extensions                               ProtocolExtensionContainer  { {CommunicationControlPortItem-Reset-ExtIEs} }    OPTIONAL,
    ...
}

CommunicationControlPortItem-Reset-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CommunicationControlPortInfoList-Reset ::= SEQUENCE (SIZE (1.. maxCCPinNodeB))  OF ProtocolIE-Single-Container
{{CommunicationControlPortInfoItemIE-Reset }}

CommunicationControlPortInfoItemIE-Reset NBAP-PROTOCOL-IES ::= {
    {ID id-CommunicationControlPortInfoItem-Reset       CRITICALITY reject      TYPE CommunicationControlPortInfoItem-Reset    PRESENCE mandatory}
}

CommunicationControlPortInfoItem-Reset ::= SEQUENCE {
    communicationControlPortID          CommunicationControlPortID,
    iE-Extensions                       ProtocolExtensionContainer { {CommunicationControlPortInfoItem-Reset-ExtIEs} }OPTIONAL,
    ...
}
```

```
CommunicationControlPortInfoItem-Reset-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- **************************************************************
--
-- RESET RESPONSE
--
-- **************************************************************

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

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

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

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
    maxNrOfTFCs,
    maxNrOfErrors,
    maxCTFC,
    maxNrOfTFs,
    maxTTI-count,
    maxRateMatching,
    maxCodeNrComp-1,
```

```
    maxNrOfCodeGroups,
    maxNrOfTFCIGroups,
    maxNrOfTFCI1Combs,
    maxNrOfTFCI2Combs,
    maxNrOfTFCI2Combs-1,
    maxNrOfSF,
    maxTGPS,
    maxNrOfUSCHs,
    maxNrOfULTSs,
    maxNrOfDPCHs,
    maxNrOfCodes,
    maxNrOfDSCHs,
    maxNrOfDLTSs,
    maxNrOfDCHs,
    maxNrOfLevels,

    id-MessageStructure,
    id-TypeOfError
FROM NBAP-Constants

    Criticality,
    ProcedureID,
    ProtocolIE-ID,
    TransactionID,
    TriggeringMessage
FROM NBAP-CommonDataTypes

    NBAP-PROTOCOL-IES,
    ProtocolExtensionContainer{},
    ProtocolIE-Single-Container{},
    NBAP-PROTOCOL-EXTENSION
FROM NBAP-Containers;

-- ========================================
--  A
-- ========================================

Acknowledged-PCPCH-access-preambles ::= INTEGER (0..15,...)
-- 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 ::= {
    ...
}

APPreambleSignature ::= INTEGER (0..15)

APSubChannelNumber ::= INTEGER (0..11)

AvailabilityStatus ::= ENUMERATED {
    empty,
    in-test,
    failed,
    power-off,
    off-line,
    off-duty,
```

```
    dependency,
    degraded,
    not-installed,
    log-full,
    ...
}

-- ========================================
--  B
-- ========================================

BCCH-ModificationTime ::= INTEGER  (0..511)
-- Time = BCCH-ModificationTime * 8
-- Range 0 to 4088, step 8
-- All SFN values in which MIB may be mapped are allowed

BindingID ::= OCTET STRING (SIZE (1..4, ...))

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
}

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,...)

CFN ::= INTEGER (0..255)

Channel-Assignment-Indication ::= ENUMERATED {
    cA-Active,
    cA-Inactive
}

ChipOffset ::= INTEGER (0..38399)
-- Unit Chip

C-ID ::= INTEGER (0..65535)

Closedlooptimingadjustmentmode  ::= ENUMERATED {
    adj-1-slot,
    adj-2-slot,
    ...
}

CommonChannelsCapacityConsumptionLaw ::= SEQUENCE (SIZE(1..maxNrOfSF)) OF
    SEQUENCE {
        dl-Cost     INTEGER (0..65535),
        ul-Cost     INTEGER (0..65535),
        iE-Extensions       ProtocolExtensionContainer { { CommonChannelsCapacityConsumptionLaw-ExtIEs } }    OPTIONAL,
    ...
}

CommonChannelsCapacityConsumptionLaw-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CommonMeasurementType ::= ENUMERATED  {
    received-total-wide-band-power,
    transmitted-carrier-power,
    acknowledged-prach-preambles,
```

```
    ul-timeslot-iscp,
    acknowledged-PCPCH-access-preambles,
    detected-PCPCH-access-preambles,
    ...
}

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,
    ...
}

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,...)

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)

-- ==========================================
--  D
-- ==========================================

DCH-ID ::= INTEGER (0..255)

DCH-FDD-Information ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-FDD-InformationItem

DCH-FDD-InformationItem ::= SEQUENCE {
    payloadCRC-PresenceIndicator        PayloadCRC-PresenceIndicator,
    ul-FP-Mode                          UL-FP-Mode,
    toAWS                               ToAWS,
    toAWE                               ToAWE,
    dCH-SpecificInformationList         DCH-Specific-FDD-InformationList,
    iE-Extensions                       ProtocolExtensionContainer { { DCH-FDD-InformationItem-ExtIEs} }   OPTIONAL,
    ...
}

DCH-FDD-InformationItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
```

```
    ...
}

DCH-Specific-FDD-InformationList ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-Specific-FDD-Item

DCH-Specific-FDD-Item ::=   SEQUENCE {
    dCH-ID                              DCH-ID,
    ul-TransportFormatSet               TransportFormatSet,
    dl-TransportFormatSet               TransportFormatSet,
    allocationRetentionPriority         AllocationRetentionPriority,
    frameHandlingPriority               FrameHandlingPriority,
    qE-Selector                         QE-Selector,
    iE-Extensions                       ProtocolExtensionContainer { { DCH-Specific-FDD-Item-ExtIEs} }  OPTIONAL,
    ...
}

DCH-Specific-FDD-Item-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-InformationResponse ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-InformationResponseItem

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 this DCH is part of a set of Coordinated DCHs
    iE-Extensions                       ProtocolExtensionContainer { { DCH-Specific-TDD-Item-ExtIEs} }   OPTIONAL,
    ...
}

DCH-Specific-TDD-Item-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

FDD-DCHs-to-Modify ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF FDD-DCHs-to-ModifyItem

FDD-DCHs-to-ModifyItem   ::= SEQUENCE {
    ul-FP-Mode                          UL-FP-Mode      OPTIONAL,
    toAWS                               ToAWS           OPTIONAL,
    toAWE                               ToAWE           OPTIONAL,
    transportBearerRequestIndicator     TransportBearerRequestIndicator,
    dCH-SpecificInformationList         DCH-ModifySpecificInformation-FDD,
    iE-Extensions                       ProtocolExtensionContainer { { FDD-DCHs-to-ModifyItem-ExtIEs} }   OPTIONAL,
    ...
}

FDD-DCHs-to-ModifyItem-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-ModifySpecificInformation-FDD::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-ModifySpecificItem-FDD

DCH-ModifySpecificItem-FDD::=   SEQUENCE {
    dCH-ID                                  DCH-ID,
    ul-TransportFormatSet                   TransportFormatSet          OPTIONAL,
    dl-TransportFormatSet                   TransportFormatSet          OPTIONAL,
    allocationRetentionPriority             AllocationRetentionPriority OPTIONAL,
    frameHandlingPriority                   FrameHandlingPriority       OPTIONAL,
    iE-Extensions                           ProtocolExtensionContainer { { DCH-ModifySpecificItem-FDD-ExtIEs} }     OPTIONAL,
    ...
}

DCH-ModifySpecificItem-FDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}


TDD-DCHs-to-Modify ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-ModifyItem-TDD

DCH-ModifyItem-TDD ::= SEQUENCE {
    ul-FP-Mode                          UL-FP-Mode      OPTIONAL,
    toAWS                               ToAWS           OPTIONAL,
```

```
    toAWE                               ToAWE           OPTIONAL,
    transportBearerRequestIndicator     TransportBearerRequestIndicator,
    dCH-SpecificInformationList         DCH-ModifySpecificInformation-TDD,
    iE-Extensions                       ProtocolExtensionContainer { { TDD-DCHs-to-ModifyItem-ExtIEs} }      OPTIONAL,
    ...
}

TDD-DCHs-to-ModifyItem-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-ModifySpecificInformation-TDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-ModifySpecificItem-TDD

DCH-ModifySpecificItem-TDD ::=  SEQUENCE {
    dCH-ID                                      DCH-ID,
    ul-CCTrCH-ID                                CCTrCH-ID                   OPTIONAL,
    dl-CCTrCH-ID                                CCTrCH-ID                   OPTIONAL,
    ul-TransportFormatSet                       TransportFormatSet          OPTIONAL,
    dl-TransportFormatSet                       TransportFormatSet          OPTIONAL,
    allocationRetentionPriority                 AllocationRetentionPriority OPTIONAL,
    frameHandlingPriority                       FrameHandlingPriority       OPTIONAL,
    iE-Extensions                               ProtocolExtensionContainer { { DCH-ModifySpecificItem-TDD-ExtIEs} }        OPTIONAL,
    ...
}

DCH-ModifySpecificItem-TDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DedicatedChannelsCapacityConsumptionLaw ::= SEQUENCE ( SIZE(1..maxNrOfSF) ) OF
    SEQUENCE {
        dl-Cost-1       INTEGER (0..65535),
        dl-Cost-2       INTEGER (0..65535),
        ul-Cost-1       INTEGER (0..65535),
        ul-Cost-2       INTEGER (0..65535),
        iE-Extensions       ProtocolExtensionContainer { { DedicatedChannelsCapacityConsumptionLaw-ExtIEs } }    OPTIONAL,
        ...
}

DedicatedChannelsCapacityConsumptionLaw-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DedicatedMeasurementType ::= ENUMERATED {
    sir,
    sir-error,
    transmitted-code-power,
    rscp,
    rx-timing-deviation,
    round-trip-time,
    ...
}

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,
    ...
}

DedicatedMeasurementValueInformation ::= CHOICE {
    measurementAvailable        DedicatedMeasurementAvailable,
    measurementnotAvailable     DedicatedMeasurementnotAvailable
}

DedicatedMeasurementAvailable::= SEQUENCE {
    dedicatedmeasurementValue       DedicatedMeasurementValue,
    cFN                             CFN                         OPTIONAL,
    ie-Extensions                   ProtocolExtensionContainer { { DedicatedMeasurementAvailableItem-ExtIEs} }     OPTIONAL,
    ...
}

DedicatedMeasurementAvailableItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DedicatedMeasurementnotAvailable ::= NULL

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.

DiversityControlField ::= ENUMERATED {
    may,
    must,
    must-not,
    ...
}

DiversityMode ::= ENUMERATED {
    none,
    sTTD,
    closed-loop-mode1,
    closed-loop-mode2,
    ...
}

DL-DPCH-SlotFormat ::= INTEGER (0..16,...)
```

```
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-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-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-TPC-Pattern01Count ::= INTEGER (0..30,...)

Downlink-Compressed-Mode-Method     ::= ENUMERATED {
    puncturing,
    sFdiv2,
```

```
    higher-layer-scheduling,
    ...
}

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-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 ::= {
    ...
}

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 ::= {
```

```
    ...
}

-- ========================================
--  E
-- ========================================

End-Of-Audit-Sequence-Indicator ::= ENUMERATED {
    end-of-audit-sequence,
    not-end-of-audit-sequence
}

-- ========================================
--  F
-- ========================================

FDD-DL-ChannelisationCodeNumber ::= INTEGER(0.. 511)
-- According to the mapping in [9]. The maximum value is equal to the DL spreading factor -1--

FDD-DL-CodeInformation ::= SEQUENCE (SIZE (1..maxNrOfCodes)) OF FDD-DL-CodeInformationItem

FDD-DL-CodeInformationItem ::= SEQUENCE {
    dl-ScramblingCode                       DL-ScramblingCode,
    fdd-DL-ChannelisationCodeNumber         FDD-DL-ChannelisationCodeNumber,
    transmissionGapPatternSequenceCodeInformation       TransmissionGapPatternSequenceCodeInformation     OPTIONAL,
    iE-Extensions                           ProtocolExtensionContainer { { FDD-DL-CodeInformationItem-ExtIEs} } OPTIONAL,
    ...
}

FDD-DL-CodeInformationItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

FDD-S-CCPCH-Offset ::= INTEGER (0..149)
-- 0: 0 chip, 1: 256 chip, 2: 512 chip, .. ,149: 38144 chip [7] --

FDD-TPC-DownlinkStepSize ::= ENUMERATED {
    step-size0-5,
    step-size1,
    step-size1-5,
    step-size2,
    ...
}

FirstRLS-Indicator ::= ENUMERATED {
    first-RLS,
    not-first-RLS,
    ...
}

FNReportingIndicator ::= ENUMERATED {
 fN-reporting-required,
```

```
 fN-reporting-not-required
}

FrameHandlingPriority ::= INTEGER (0..15)
-- 0=lower priority, 15=higher priority --

FrameOffset ::= INTEGER (0..255)

-- ==========================================
--  G
-- ==========================================

GapLength               ::= INTEGER (1..14)
-- Unit slot

GapDuration             ::= INTEGER (1..144,...)
-- Unit frame

-- ==========================================
--  H
-- ==========================================

-- ==========================================
--  I
-- ==========================================

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
}

InnerLoopDLPCStatus ::= ENUMERATED {
    active,
    inactive
}

-- ==========================================
--  J
-- ==========================================

-- ==========================================
--  K
-- ==========================================

-- ==========================================
--  L
-- ==========================================

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

Local-Cell-ID ::= INTEGER (0..268435455)

-- ==========================================
--  M
-- ==========================================

MaximumDL-PowerCapability ::=  INTEGER(0..500)
-- Unit dBm, Range 0dBm .. 50dBm, Step +0.1dB

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)

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 ::= {
    ...
}

MidambleConfigurationBurstType1And3 ::=     ENUMERATED {v4, v8, v16}

MidambleConfigurationBurstType2 ::=     ENUMERATED {v3, v6}

MidambleShiftAndBurstType ::=       CHOICE {
    type1                               SEQUENCE {
        midambleConfigurationBurstType1And3 MidambleConfigurationBurstType1And3,
        midambleAllocationMode              CHOICE {
            defaultMidamble                     NULL,
            commonMidamble                      NULL,
            ueSpecificMidamble                  MidambleShiftLong,
            ...
        },
    ...
    },
    type2                               SEQUENCE {
        midambleConfigurationBurstType2     MidambleConfigurationBurstType2,
        midambleAllocationMode              CHOICE {
            defaultMidamble                     NULL,
            commonMidamble                      NULL,
            ueSpecificMidamble                  MidambleShiftShort,
            ...
        },
        ...
    },
    type3                               SEQUENCE {
        midambleConfigurationBurstType1And3 MidambleConfigurationBurstType1And3,
        midambleAllocationMode              CHOICE {
            defaultMidamble                     NULL,
            ueSpecificMidamble                  MidambleShiftLong,
        ...
        },
```

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

MidambleShiftLong ::=               INTEGER (0..15)

MidambleShiftShort ::=              INTEGER (0..5)

MinimumDL-PowerCapability ::=  INTEGER(0..800)
-- Unit dBm, Range -30dBm .. 50dBm, Step +0.1dB

MinSpreadingFactor ::= ENUMERATED {
        v4,
        v8,
        v16,
        v32,
        v64,
        v128,
        v256,
        v512
}

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

MultiplexingPosition ::= ENUMERATED {
    fixed,
    flexible
}

-- ========================================
--  N
-- ========================================

NEOT ::= INTEGER (0..8)

NFmax ::= INTEGER (1..64,...)

N-INSYNC-IND ::= INTEGER (1..256)

N-OUTSYNC-IND ::= INTEGER (1..256)

NodeB-CommunicationContextID ::= INTEGER (0..1048575)

NStartMessage ::= INTEGER (1..8)
```

```
-- ========================================
--  O
-- ========================================

-- ========================================
--  P
-- ========================================

PagingIndicatorLength ::= ENUMERATED {
    v2,
    v4,
    v8,
    ...
}

PayloadCRC-PresenceIndicator ::= ENUMERATED {
    cRC-Included,
    cRC-NotIncluded,
    ...
}

PCCPCH-Power ::= INTEGER (-150..400,...)
-- PCCPCH-power = power * 10
-- If power <= -15 PCCPCH shall be set to -150
-- If power >= 40 PCCPCH shall be set to 400
-- Unit dBm, Range -15dBm .. +40 dBm, Step +0.1dB

PCP-Length ::= ENUMERATED{
    v0,
    v8
}

PDSCH-CodeMapping ::= SEQUENCE {
    dl-ScramblingCode               DL-ScramblingCode,
    signallingMethod                    CHOICE {
        code-Range                      PDSCH-CodeMapping-PDSCH-CodeMappingInformationList,
        tFCI-Range                      PDSCH-CodeMapping-DSCH-MappingInformationList,
        explicit                            PDSCH-CodeMapping-PDSCH-CodeInformationList,
        ...,
        replace                         PDSCH-CodeMapping-ReplacedPDSCH-CodeInformationList
    },
    iE-Extensions                           ProtocolExtensionContainer  { { PDSCH-CodeMapping-ExtIEs} }    OPTIONAL,
    ...
}

PDSCH-CodeMapping-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PDSCH-CodeMapping-CodeNumberComp ::= INTEGER (0..maxCodeNrComp-1)

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
    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,
    ...
}

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

Pre-emptionCapability ::= ENUMERATED {
    shall-not-trigger-pre-emption,
    may-trigger-pre-emption
}

Pre-emptionVulnerability ::= ENUMERATED {
    not-pre-emptable,
    pre-emptable
}

PrimaryCPICH-Power ::= INTEGER(-100..500)
-- step 0.1 (Range –10.0..50.0) Unit is dBm

PrimaryScramblingCode ::= INTEGER (0..511)

PriorityLevel               ::= INTEGER (0..15)
-- 0 = spare, 1 = highest priority, ...14 = lowest priority and 15 = no priority

PropagationDelay ::= INTEGER (0..255)
-- Unit: chips, step size 3 chips
-- example: 0 = 0chip, 1 = 3chips

SCH-TimeSlot ::= INTEGER (0..6)

PunctureLimit ::= INTEGER (0..15)
-- 0: 40%; 1: 44%; ... 14: 96%; 15: 100%

PUSCH-ID ::= INTEGER (0..255)

PUSCHSet-ID ::= INTEGER (0..255)

-- ========================================
--  Q
-- ========================================

QE-Selector ::= ENUMERATED {
    selected,
    non-selected
}
```

```
-- ========================================
--  R
-- ========================================

RACH-SlotFormat ::= ENUMERATED {
    v0,
    v1,
    v2,
    v3,
    ...
}

RACH-SubChannelNumbers ::= BIT STRING {
                                       subCh11(0),
                                       subCh10(1),
                                       subCh9(2),
                                       subCh8(3),
                                       subCh7(4),
                                       subCh6(5),
                                       subCh5(6),
                                       subCh4(7),
                                       subCh3(8),
                                       subCh2(9),
                                       subCh1(10),
                                       subCh0(11)
                                       } (SIZE (12))

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,
    ...
}

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-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,
    ...
}

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,
    ...
}

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

ResourceOperationalState ::= ENUMERATED {
    enabled,
    disabled
}

RL-ID ::= INTEGER (0..31)

RL-Set-ID               ::= INTEGER (0..31)

Round-Trip-Time-IncrDecrThres ::= INTEGER(0..32766)

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)

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

```
-- According to mapping in [23]

-- ========================================
--  S
-- ========================================

AdjustmentPeriod            ::= INTEGER(1..256)
-- Unit Frame

ScaledAdjustmentRatio           ::= INTEGER(0..100)
-- AdjustmentRatio  = ScaledAdjustmentRatio / 100

MaxAdjustmentStep           ::= INTEGER(1..10)
-- Unit Slot

ScramblingCodeNumber ::= INTEGER (0..15)

SecondaryCCPCH-SlotFormat ::= INTEGER(0..17,...)

Segment-Type ::= ENUMERATED {
        first-segment,
        first-segment-short,
        subsequent-segment,
        last-segment,
        last-segment-short,
        complete-SIB,
        complete-SIB-short,
        ...
}

S-FieldLength ::= ENUMERATED {
        v1,
        v2,
        ...
}

SFN ::= INTEGER (0..4095)

ShutdownTimer ::= INTEGER (1..3600)
-- Unit sec

SIB-Originator ::= ENUMERATED {
    nodeB,
    cRNC,
    ...
}

SIR-Error-Value ::= INTEGER (0..125)
-- According to mapping in [22]

SIR-Error-Value-IncrDecrThres ::= INTEGER (0..124)

SIR-Value ::= INTEGER (0..63)
-- According to mapping in [22]/[23]
```

```
SIR-Value-IncrDecrThres ::= INTEGER (0..62)

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,...)

-- ========================================
--  T
-- ========================================

T-Cell ::= ENUMERATED {
    v0,
    v1,
    v2,
    v3,
    v4,
    v5,
    v6,
    v7,
    v8,
    v9
}

T-RLFAILURE ::= INTEGER (0..255)
```

```
-- Unit seconds, Range 0s .. 25.5s, Step 0.1s

TDD-ChannelisationCode ::= ENUMERATED {
    chCode1div1,
    chCode2div1,
    chCode2div2,
    chCode4div1,
    chCode4div2,
    chCode4div3,
    chCode4div4,
    chCode8div1,
    chCode8div2,
    chCode8div3,
    chCode8div4,
    chCode8div5,
    chCode8div6,
    chCode8div7,
    chCode8div8,
    chCode16div1,
    chCode16div2,
    chCode16div3,
    chCode16div4,
    chCode16div5,
    chCode16div6,
    chCode16div7,
    chCode16div8,
    chCode16div9,
    chCode16div10,
    chCode16div11,
    chCode16div12,
    chCode16div13,
    chCode16div14,
    chCode16div15,
    chCode16div16,
    ...
}

TDD-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-DPCHOffset ::= CHOICE {
    initialOffset       INTEGER (0..255),
    noinitialOffset     INTEGER (0..63)
}
```

```
TDD-PhysicalChannelOffset ::= INTEGER (0..63)

TDD-TPC-DownlinkStepSize ::= ENUMERATED {
    step-size1,
    step-size2,
    step-size3,
    ...
}

TransportFormatCombination-Beta ::= CHOICE {
    signalledGainFactors        SEQUENCE {
        gainFactor                  CHOICE {
            fdd                         SEQUENCE {
                betaC                       BetaCD,
                betaD                       BetaCD,
                iE-Extensions       ProtocolExtensionContainer { { GainFactorFDD-ExtIEs } }     OPTIONAL,
                ...
            },
            tdd                         BetaCD,
            ...
        },
        refTFCNumber                RefTFCNumber    OPTIONAL,
        iE-Extensions           ProtocolExtensionContainer { { SignalledGainFactors-ExtIEs } }    OPTIONAL,
        ...
    },
    computedGainFactors             RefTFCNumber,
    ...
}

GainFactorFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

SignalledGainFactors-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TDD-UL-Code-Information ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF TDD-UL-Code-InformationItem

TDD-UL-Code-InformationItem ::= SEQUENCE {
    dPCH-ID                                 DPCH-ID,
    tdd-ChannelisationCode                  TDD-ChannelisationCode,
    iE-Extensions                           ProtocolExtensionContainer { { TDD-UL-Code-InformationItem-ExtIEs} }    OPTIONAL,
    ...
}

TDD-UL-Code-InformationItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

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,
    -- This IE shall be present if the split type is logical --
    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 ::= {
    ...
}


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,
    ...
}

TimeSlotStatus ::= ENUMERATED {
    active,
    not-active,
    ...
}

TimingAdvanceApplied ::= ENUMERATED {
    yes,
    no
}

ToAWE ::= INTEGER (0..2559)
-- Unit ms

ToAWS ::= INTEGER (0..1279)
-- Unit ms

Transmission-Gap-Pattern-Sequence-Information ::= SEQUENCE (SIZE (1..maxTGPS)) OF
    SEQUENCE {
        tGPSID          TGPSID,
        tGSN            TGSN,
        tGL1            GapLength,
        tGL2            GapLength   OPTIONAL,
        tGD             TGD,
        tGPL1           GapDuration,
        tGPL2           GapDuration OPTIONAL,
        uL-DL-mode      UL-DL-mode,
        downlink-Compressed-Mode-Method     Downlink-Compressed-Mode-Method     OPTIONAL,
            -- This IE shall be present if the UL/DL mode IE is set to "DL only" or "UL/DL"
        uplink-Compressed-Mode-Method       Uplink-Compressed-Mode-Method       OPTIONAL,
            -- This IE shall be present if the UL/DL mode IE is set to "UL only" or "UL/DL"
        dL-FrameType        DL-FrameType,
        delta-SIR1          DeltaSIR,
        delta-SIR-after1    DeltaSIR,
```

```
        delta-SIR2          DeltaSIR    OPTIONAL,
        delta-SIR-after2    DeltaSIR    OPTIONAL,
        iE-Extensions           ProtocolExtensionContainer { {Transmission-Gap-Pattern-Sequence-Information-ExtIEs} } OPTIONAL,
        ...
    }


Transmission-Gap-Pattern-Sequence-Information-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}


TransmissionGapPatternSequenceCodeInformation   ::= ENUMERATED{
   code-change,
   nocode-change
}

Transmitted-Carrier-Power-Value ::= INTEGER(0..100)
-- According to mapping in [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 ::= {
    ...
}

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 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  ,
    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,
    ...
}

TransportFormatSet-TransportBlockSize ::= INTEGER (0..5000)

TransportLayerAddress ::= BIT STRING (SIZE (1..160, ...))

TSTD-Indicator ::= ENUMERATED {
    active,
    inactive
}

TypeOfError ::= ENUMERATED {
    not-understood,
    missing,
    ...
}

-- ========================================
--  U
-- ========================================
```

```
UARFCN ::= INTEGER (0..16383, ...)
-- corresponds to 1885.2MHz .. 2024.8MHz

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-DPCCH-SlotFormat ::= INTEGER (0..5,...)

UL-SIR ::= INTEGER (-82..173)
-- According to mapping in [16]

UL-FP-Mode ::= ENUMERATED {
    normal,
    silent,
    ...
}

UL-PhysCH-SF-Variation ::= ENUMERATED {
    sf-variation-supported,
    sf-variation-not-supported
}

UL-ScramblingCode ::= SEQUENCE {
    uL-ScramblingCodeNumber         UL-ScramblingCodeNumber,
    uL-ScramblingCodeLength         UL-ScramblingCodeLength,
```

```
    iE-Extensions                   ProtocolExtensionContainer { { UL-ScramblingCode-ExtIEs } }   OPTIONAL,
    ...
}

UL-ScramblingCode-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-ScramblingCodeNumber ::= INTEGER (0..16777215)

UL-ScramblingCodeLength ::= ENUMERATED {
    short,
    long
}

UL-TimeSlot-ISCP-Info ::= SEQUENCE (SIZE (1..maxNrOfULTSs)) OF  UL-TimeSlot-ISCP-InfoItem

UL-TimeSlot-ISCP-InfoItem ::= SEQUENCE {
    timeSlot                        TimeSlot,
    iSCP                            UL-TimeslotISCP-Value,
    iE-Extensions                   ProtocolExtensionContainer { { UL-TimeSlot-ISCP-InfoItem-ExtIEs} }     OPTIONAL,
    ...
 }

UL-TimeSlot-ISCP-InfoItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

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 ::= {
    ...
}

USCH-InformationResponse ::= SEQUENCE (SIZE (1..maxNrOfUSCHs)) OF USCH-InformationResponseItem

USCH-InformationResponseItem ::= SEQUENCE {
    uSCH-ID                                     USCH-ID,
    bindingID                                   BindingID               OPTIONAL,
    transportLayerAddress                       TransportLayerAddress   OPTIONAL,
    iE-Extensions                               ProtocolExtensionContainer { { USCH-InformationResponseItem-ExtIEs} }     OPTIONAL,
    ...
}

USCH-InformationResponseItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
```

```
    ...
}

UL-TimeslotISCP-Value ::= INTEGER (0..127)
-- According to mapping in [23]

UL-TimeslotISCP-Value-IncrDecrThres ::= INTEGER (0..126)

USCH-ID ::= INTEGER (0..255)

-- ==========================================
--  V
-- ==========================================

-- ==========================================
--  W
-- ==========================================

-- ==========================================
--  X
-- ==========================================

-- ==========================================
--  Y
-- ==========================================

-- ==========================================
--  Z
-- ==========================================

END
```

9.3.5 Common Definitions

```
-- **************************************************************
--
-- Common definitions
--
-- **************************************************************

NBAP-CommonDataTypes {
itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
umts-Access (20) modules (3) nbap (2) version1 (1) nbap-CommonDataTypes (3)  }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

-- **************************************************************
--
-- Extension constants
--
-- **************************************************************
```

```
maxPrivateIEs                   INTEGER ::= 65535
maxProtocolExtensions           INTEGER ::= 65535
maxProtocolIEs                  INTEGER ::= 65535

-- **************************************************************
--
-- Common Data Types
--
-- **************************************************************

Criticality     ::= ENUMERATED { reject, ignore, notify }

MessageDiscriminator    ::= ENUMERATED { common, dedicated }

Presence        ::= ENUMERATED { optional, conditional, mandatory }

PrivateIE-ID    ::= CHOICE {
    local               INTEGER (0..maxPrivateIEs),
    global              OBJECT IDENTIFIER
}

ProcedureCode   ::= INTEGER (0..255)

ProcedureID     ::= SEQUENCE {
    procedureCode           ProcedureCode,
    ddMode                  ENUMERATED { tdd, fdd, common, ... }
}

ProtocolIE-ID       ::= INTEGER (0..maxProtocolIEs)

TransactionID       ::= CHOICE {
    shortTransActionId      INTEGER (0..127),
    longTransActionId       INTEGER (0..32767)
}

TriggeringMessage   ::= ENUMERATED { initiating-message, successful-outcome, unsuccessfull-outcome, outcome }

END
```

9.3.6 Constant Definitions

```
-- **************************************************************
--
-- Constant definitions
--
-- **************************************************************

NBAP-Constants {
itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
umts-Access (20) modules (3) nbap (2) version1 (1) nbap-Constants (4)}

DEFINITIONS AUTOMATIC TAGS ::=
```

```
BEGIN

IMPORTS
    ProcedureCode,
    ProtocolIE-ID
FROM NBAP-CommonDataTypes;

-- **************************************************************
--
-- Elementary Procedures
--
-- **************************************************************

id-audit                                            ProcedureCode ::= 0
id-auditRequired                                    ProcedureCode ::= 1
id-blockResource                                    ProcedureCode ::= 2
id-cellDeletion                                     ProcedureCode ::= 3
id-cellReconfiguration                              ProcedureCode ::= 4
id-cellSetup                                        ProcedureCode ::= 5
id-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-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-synchronisedRadioLinkReconfigurationCancellation ProcedureCode ::= 29
id-synchronisedRadioLinkReconfigurationCommit       ProcedureCode ::= 30
id-synchronisedRadioLinkReconfigurationPreparation  ProcedureCode ::= 31
id-systemInformationUpdate                          ProcedureCode ::= 32
id-unblockResource                                  ProcedureCode ::= 33
id-unSynchronisedRadioLinkReconfiguration           ProcedureCode ::= 34
```

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

maxNrOfCodes                INTEGER ::= 10
maxNrOfDLTSs                INTEGER ::= 15
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
maxNrOfSCCPCHs              INTEGER ::= 8
maxNrOfCPCHs                INTEGER ::= 16
maxNrOfPCPCHs               INTEGER ::= 64
maxNrOfDCHs                 INTEGER ::= 128
maxNrOfDSCHs                INTEGER ::= 32
maxNrOfFACHs                INTEGER ::= 8
maxNrOfCCTrCHs              INTEGER ::= 16
maxNrOfPDSCHs               INTEGER ::= 256
maxNrOfPUSCHs               INTEGER ::= 256
maxNrOfPDSCHSets            INTEGER ::= 256
maxNrOfPUSCHSets            INTEGER ::= 256
maxNrOfULTSs                INTEGER ::= 15
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
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
maxNrOfCodeGroups           INTEGER ::= 256
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

-- **************************************************************
--
-- 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-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-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-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-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-P-CCPCH-Information                                      ProtocolIE-ID ::= 144
id-P-CCPCH-InformationItem-ResourceStatusInd                ProtocolIE-ID ::= 145
id-P-CPICH-Information                                      ProtocolIE-ID ::= 146
id-P-CPICH-InformationItem-ResourceStatusInd                ProtocolIE-ID ::= 147
id-P-SCH-Information                                        ProtocolIE-ID ::= 148
id-PCCPCH-Information-Cell-ReconfRqstTDD                    ProtocolIE-ID ::= 150
id-PCCPCH-Information-Cell-SetupRqstTDD                     ProtocolIE-ID ::= 151
```

```
id-PCH-Parameters-CTCH-ReconfRqstTDD                        ProtocolIE-ID ::= 155
id-PCH-ParametersItem-CTCH-SetupRqstFDD                     ProtocolIE-ID ::= 156
id-PCH-ParametersItem-CTCH-SetupRqstTDD                     ProtocolIE-ID ::= 157
id-PCH-Information                                          ProtocolIE-ID ::= 158
id-PDSCH-Information-AddListIE-PSCH-ReconfRqst              ProtocolIE-ID ::= 161
id-PDSCH-Information-ModifyListIE-PSCH-ReconfRqst           ProtocolIE-ID ::= 162
id-PDSCHSets-AddList-PSCH-ReconfRqst                        ProtocolIE-ID ::= 163
id-PDSCHSets-DeleteList-PSCH-ReconfRqst                     ProtocolIE-ID ::= 164
id-PDSCHSets-ModifyList-PSCH-ReconfRqst                     ProtocolIE-ID ::= 165
id-PICH-Information                                         ProtocolIE-ID ::= 166
id-PICH-Parameters-CTCH-ReconfRqstTDD                       ProtocolIE-ID ::= 168
id-PowerAdjustmentType                                      ProtocolIE-ID ::= 169
id-PRACH-Information                                        ProtocolIE-ID ::= 170
id-PrimaryCCPCH-Information-Cell-ReconfRqstFDD              ProtocolIE-ID ::= 175
id-PrimaryCCPCH-Information-Cell-SetupRqstFDD               ProtocolIE-ID ::= 176
id-PrimaryCPICH-Information-Cell-ReconfRqstFDD              ProtocolIE-ID ::= 177
id-PrimaryCPICH-Information-Cell-SetupRqstFDD               ProtocolIE-ID ::= 178
id-PrimarySCH-Information-Cell-ReconfRqstFDD                ProtocolIE-ID ::= 179
id-PrimarySCH-Information-Cell-SetupRqstFDD                 ProtocolIE-ID ::= 180
id-PrimaryScramblingCode                                    ProtocolIE-ID ::= 181
id-SCH-Information-Cell-ReconfRqstTDD                       ProtocolIE-ID ::= 183
id-SCH-Information-Cell-SetupRqstTDD                        ProtocolIE-ID ::= 184
id-PUSCH-Information-AddListIE-PSCH-ReconfRqst              ProtocolIE-ID ::= 185
id-PUSCH-Information-ModifyListIE-PSCH-ReconfRqst           ProtocolIE-ID ::= 186
id-PUSCHSets-AddList-PSCH-ReconfRqst                        ProtocolIE-ID ::= 187
id-PUSCHSets-DeleteList-PSCH-ReconfRqst                     ProtocolIE-ID ::= 188
id-PUSCHSets-ModifyList-PSCH-ReconfRqst                     ProtocolIE-ID ::= 189
id-RACH-Information                                         ProtocolIE-ID ::= 190
id-RACH-ParametersItem-CTCH-SetupRqstFDD                    ProtocolIE-ID ::= 196
id-RACH-ParameterItem-CTCH-SetupRqstTDD                     ProtocolIE-ID ::= 197
id-ReportCharacteristics                                    ProtocolIE-ID ::= 198
id-Reporting-Object-RL-FailureInd                           ProtocolIE-ID ::= 199
id-Reporting-Object-RL-RestoreInd                           ProtocolIE-ID ::= 200
id-RL-InformationItem-DM-Rprt                               ProtocolIE-ID ::= 202
id-RL-InformationItem-DM-Rqst                               ProtocolIE-ID ::= 203
id-RL-InformationItem-DM-Rsp                                ProtocolIE-ID ::= 204
id-RL-InformationItem-RL-AdditionRqstFDD                    ProtocolIE-ID ::= 205
id-RL-informationItem-RL-DeletionRqst                       ProtocolIE-ID ::= 206
id-RL-InformationItem-RL-FailureInd                         ProtocolIE-ID ::= 207
id-RL-InformationItem-RL-PreemptRequiredInd                 ProtocolIE-ID ::= 286
id-RL-InformationItem-RL-ReconfPrepFDD                      ProtocolIE-ID ::= 208
id-RL-InformationItem-RL-ReconfRqstFDD                      ProtocolIE-ID ::= 209
id-RL-InformationItem-RL-RestoreInd                         ProtocolIE-ID ::= 210
id-RL-InformationItem-RL-SetupRqstFDD                       ProtocolIE-ID ::= 211
id-RL-InformationList-RL-AdditionRqstFDD                    ProtocolIE-ID ::= 212
id-RL-informationList-RL-DeletionRqst                       ProtocolIE-ID ::= 213
id-RL-InformationList-RL-PreemptRequiredInd                 ProtocolIE-ID ::= 237
id-RL-InformationList-RL-ReconfPrepFDD                      ProtocolIE-ID ::= 214
id-RL-InformationList-RL-ReconfRqstFDD                      ProtocolIE-ID ::= 215
id-RL-InformationList-RL-SetupRqstFDD                       ProtocolIE-ID ::= 216
id-RL-InformationResponseItem-RL-AdditionRspFDD             ProtocolIE-ID ::= 217
id-RL-InformationResponseItem-RL-ReconfReady                ProtocolIE-ID ::= 218
id-RL-InformationResponseItem-RL-ReconfRsp                  ProtocolIE-ID ::= 219
id-RL-InformationResponseItem-RL-SetupRspFDD                ProtocolIE-ID ::= 220
```

```
id-RL-InformationResponseList-RL-AdditionRspFDD                 ProtocolIE-ID ::= 221
id-RL-InformationResponseList-RL-ReconfReady                    ProtocolIE-ID ::= 222
id-RL-InformationResponseList-RL-ReconfRsp                      ProtocolIE-ID ::= 223
id-RL-InformationResponseList-RL-SetupRspFDD                    ProtocolIE-ID ::= 224
id-RL-InformationResponse-RL-AdditionRspTDD                     ProtocolIE-ID ::= 225
id-RL-InformationResponse-RL-SetupRspTDD                        ProtocolIE-ID ::= 226
id-RL-Information-RL-AdditionRqstTDD                            ProtocolIE-ID ::= 227
id-RL-Information-RL-ReconfRqstTDD                              ProtocolIE-ID ::= 228
id-RL-Information-RL-ReconfPrepTDD                              ProtocolIE-ID ::= 229
id-RL-Information-RL-SetupRqstTDD                               ProtocolIE-ID ::= 230
id-RL-ReconfigurationFailureItem-RL-ReconfFailure               ProtocolIE-ID ::= 236
id-RL-Set-InformationItem-DM-Rprt                               ProtocolIE-ID ::= 238
id-RL-Set-InformationItem-DM-Rsp                                ProtocolIE-ID ::= 240
id-RL-Set-InformationItem-RL-FailureInd                         ProtocolIE-ID ::= 241
id-RL-Set-InformationItem-RL-RestoreInd                         ProtocolIE-ID ::= 242
id-S-CCPCH-Information                                          ProtocolIE-ID ::= 247
id-S-CPICH-Information                                          ProtocolIE-ID ::= 249
id-SCH-Information                                              ProtocolIE-ID ::= 251
id-S-SCH-Information                                            ProtocolIE-ID ::= 253
id-Secondary-CCPCHListIE-CTCH-ReconfRqstTDD                     ProtocolIE-ID ::= 257
id-Secondary-CCPCH-parameterListIE-CTCH-SetupRqstTDD            ProtocolIE-ID ::= 258
id-Secondary-CCPCH-Parameters-CTCH-ReconfRqstTDD                ProtocolIE-ID ::= 259
id-SecondaryCPICH-InformationItem-Cell-ReconfRqstFDD            ProtocolIE-ID ::= 260
id-SecondaryCPICH-InformationItem-Cell-SetupRqstFDD             ProtocolIE-ID ::= 261
id-SecondaryCPICH-InformationList-Cell-ReconfRqstFDD            ProtocolIE-ID ::= 262
id-SecondaryCPICH-InformationList-Cell-SetupRqstFDD             ProtocolIE-ID ::= 263
id-SecondarySCH-Information-Cell-ReconfRqstFDD                  ProtocolIE-ID ::= 264
id-SecondarySCH-Information-Cell-SetupRqstFDD                   ProtocolIE-ID ::= 265
id-SegmentInformationListIE-SystemInfoUpdate                    ProtocolIE-ID ::= 266
id-SFN                                                          ProtocolIE-ID ::= 268
id-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-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
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-Active-Pattern-Sequence-Information                            ProtocolIE-ID ::= 315
id-AICH-ParametersListIE-CTCH-ReconfRqstFDD                       ProtocolIE-ID ::= 316
id-AdjustmentRatio                                                ProtocolIE-ID ::= 317
id-AP-AICH-Information                                            ProtocolIE-ID ::= 320
id-AP-AICH-ParametersListIE-CTCH-ReconfRqstFDD                    ProtocolIE-ID ::= 322
id-FACH-ParametersListIE-CTCH-ReconfRqstFDD                       ProtocolIE-ID ::= 323
id-CauseLevel-PSCH-ReconfFailureTDD                               ProtocolIE-ID ::= 324
id-CauseLevel-RL-AdditionFailureFDD                               ProtocolIE-ID ::= 325
id-CauseLevel-RL-AdditionFailureTDD                               ProtocolIE-ID ::= 326
id-CauseLevel-RL-ReconfFailure                                    ProtocolIE-ID ::= 327
id-CauseLevel-RL-SetupFailureFDD                                  ProtocolIE-ID ::= 328
id-CauseLevel-RL-SetupFailureTDD                                  ProtocolIE-ID ::= 329
id-CDCA-ICH-Information                                           ProtocolIE-ID ::= 330
id-CDCA-ICH-ParametersListIE-CTCH-ReconfRqstFDD                   ProtocolIE-ID ::= 332
id-Closed-Loop-Timing-Adjustment-Mode                             ProtocolIE-ID ::= 333
id-CommonPhysicalChannelType-CTCH-ReconfRqstFDD                   ProtocolIE-ID ::= 334
id-Compressed-Mode-Deactivation-Flag                              ProtocolIE-ID ::= 335
id-CPCH-Information                                               ProtocolIE-ID ::= 336
id-CPCH-Parameters-CTCH-SetupRsp                                  ProtocolIE-ID ::= 342
id-CPCH-ParametersListIE-CTCH-ReconfRqstFDD                       ProtocolIE-ID ::= 343
id-DL-CCTrCH-InformationAddList-RL-ReconfPrepTDD                  ProtocolIE-ID ::= 346
id-DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD               ProtocolIE-ID ::= 347
id-DL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD               ProtocolIE-ID ::= 348
id-DL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD               ProtocolIE-ID ::= 349
id-DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD               ProtocolIE-ID ::= 350
id-DL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD               ProtocolIE-ID ::= 351
id-DL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD               ProtocolIE-ID ::= 352
id-DL-DPCH-InformationAddListIE-RL-ReconfPrepTDD                  ProtocolIE-ID ::= 353
id-DL-DPCH-InformationModify-AddListIE-RL-ReconfPrepTDD           ProtocolIE-ID ::= 355
id-DL-DPCH-InformationModify-DeleteListIE-RL-ReconfPrepTDD        ProtocolIE-ID ::= 356
id-DL-DPCH-InformationModify-ModifyListIE-RL-ReconfPrepTDD        ProtocolIE-ID ::= 357
id-DL-TPC-Pattern01Count                                          ProtocolIE-ID ::= 358
id-DPCHConstant                                                   ProtocolIE-ID ::= 359
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-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-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-InitDL-Power                                                    ProtocolIE-ID ::= 509
id-PDSCH-RL-ID                                                     ProtocolIE-ID ::= 66

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:

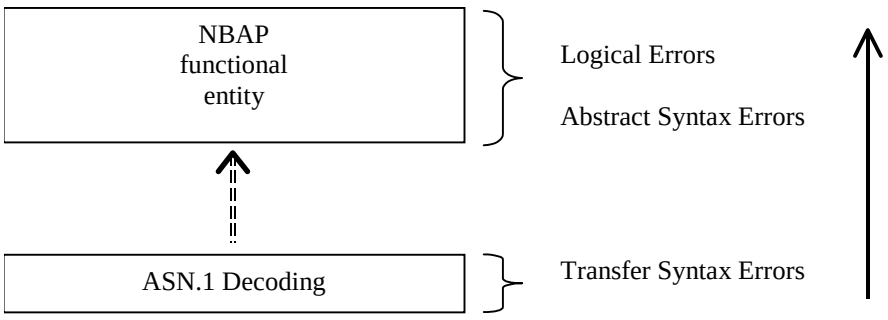


Figure 38: Protocol Errors in NBAP.

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).

   Note that this restriction is applicable to a sending entity for constructing messages.

2. EP: The comprehension of different EPs within a standard version or between different standard versions is not mandated. Any EP that is not supported may be considered not comprehended, even if another EP from that standard version is comprehended, and action based on criticality shall be applied.

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* according to the following:

Reject IE:

- If a message *initiating* a procedure is received containing one or more IEs/IE groups marked with "*Reject IE*" which the receiving node does not comprehend; none of the functional requests of the message shall be executed. The receiving node shall reject the procedure and report the rejection of one or more IEs/IE groups using the message normally used to report unsuccessful outcome of the procedure. In case the information received in the initiating message was insufficient to determine a value for all IEs that are required to be present in the message used to report the unsuccessful outcome of the procedure, the receiving node shall instead terminate the procedure and initiate the Error Indication procedure.

- If a message *initiating* a procedure that does not have a message to report unsuccessful outcome is received containing one or more IEs/IE groups marked with "*Reject IE*" which the receiving node does not comprehend, the receiving node shall terminate the procedure and initiate the Error Indication procedure.

- If a *response* message is received containing one or more IEs/IE groups marked with "*Reject IE*" that the receiving node does not comprehend, the receiving node shall consider the procedure as unsuccessfully terminated and initiate local error handling.

Ignore IE and Notify Sender:

- If a message *initiating* a procedure is received containing one or more IEs/IE groups marked with "*Ignore IE and Notify Sender*" which the receiving node does not comprehend, the receiving node shall ignore the content of the not comprehended IEs/IE groups, continue with the procedure as if the not comprehended IEs/IE groups were not received (except for the reporting) using the understood IEs/IE groups and report in the response message of the procedure that one or more IEs/IE groups have been ignored. In case the information received in the initiating message was insufficient to determine a value for all IEs that are required to be present in the response message, the receiving node shall instead terminate the procedure and initiate the Error Indication procedure.

- If a message *initiating* a procedure that does not have a message to report the outcome of the procedure is received containing one or more IEs/IE groups marked with "*Ignore IE and Notify Sender*" which the receiving node does not comprehend, the receiving node shall ignore the content of the not comprehended IEs/IE groups, continue with the procedure as if the not comprehended IEs/IE groups were not received (except for the reporting) using the understood IEs/IE groups, and initiate the Error Indication procedure to report that one or more IEs/IE groups have been ignored.

- If a *response* message is received containing one or more IEs/IE groups marked with "*Ignore IE and Notify Sender*" which the receiving node does not comprehend, the receiving node shall ignore the content of the not comprehended IEs/IE groups, continue with the procedure as if the not comprehended IEs/IE groups were not received (except for the reporting) using the understood IEs/IE groups and initiate the Error Indication procedure.

Ignore IE:

- If a message *initiating* a procedure is received containing one or more IEs/IE groups marked with "*Ignore IE*" which the receiving node does not comprehend, the receiving node shall ignore the content of the not comprehended IEs/IE groups and continue with the procedure as if the not comprehended IEs/IE groups were not received using the understood IEs/IE groups.

- If a *response* message is received containing one or more IEs/IE groups marked with "*Ignore IE*" which the receiving node does not comprehend, the receiving node shall ignore the content of the not comprehended

IEs/IE groups and continue with the procedure as if the not comprehended IEs/IE groups were not received using the understood IEs/IE groups.

When reporting not comprehended IEs/IE groups marked with "*Reject IE*" or "*Ignore IE and Notify Sender*" using a response message defined for the procedure, the *Information Element Criticality Diagnostics* IE shall be included in the *Criticality Diagnostics* IE for each reported IE/IE group. In the *Information Element Criticality Diagnostics* IE the *Repetition Number* IE shall be included and in addition, if the not comprehended IE/IE group is not at message hierarchy level 1 (top level; see annex C) also the *Message Structure* IE shall be included.

When reporting not comprehended IEs/IE groups marked with "*Reject IE*" or "*Ignore IE and Notify Sender*" using the Error Indication procedure, the *Procedure ID* IE, the *Triggering Message* IE, *Procedure Criticality* IE, the *Transaction ID* IE, and the *Information Element Criticality Diagnostics* IE shall be included in the *Criticality Diagnostics* IE for each reported IE/IE group. In the *Information Element Criticality Diagnostics* IE the *Repetition Number* IE shall be included and in addition, if the not comprehended IE/IE group is not at message hierarchy level 1 (top level; see annex C) also the *Message Structure* IE shall be included.

10.3.5 Missing IE or IE Group

The receiving node shall treat the missing IE/IE group according to the criticality information for the missing IE/IE group in the received message specified in the version of this specification used by the receiver:

Reject IE:

- If a received message *initiating* a procedure is missing one or more IEs/IE groups with specified criticality "*Reject IE*"; none of the functional requests of the message shall be executed. The receiving node shall reject the procedure and report the missing IEs/IE groups using the message normally used to report unsuccessful outcome of the procedure. In case the information received in the initiating message was insufficient to determine a value for all IEs that are required to be present in the message used to report the unsuccessful outcome of the procedure, the receiving node shall instead terminate the procedure and initiate the Error Indication procedure.

- If a received message *initiating* a procedure that does not have a message to report unsuccessful outcome is missing one or more IEs/IE groups with specified criticality "*Reject IE*", the receiving node shall terminate the procedure and initiate the Error Indication procedure.

- If a received *response* message is missing one or more IEs/IE groups with specified criticality "*Reject IE*", the receiving node shall consider the procedure as unsuccessfully terminated and initiate local error handling.

Ignore IE and Notify Sender:

- If a received message *initiating* a procedure is missing one or more IEs/IE groups with specified criticality "*Ignore IE and Notify Sender*", the receiving node shall ignore that those IEs are missing and continue with the procedure based on the other IEs/IE groups present in the message and report in the response message of the procedure that one or more IEs/IE groups were missing. In case the information received in the initiating message was insufficient to determine a value for all IEs that are required to be present in the response message, the receiving node shall instead terminate the procedure and initiate the Error Indication procedure.

- If a received message *initiating* a procedure that does not have a message to report the outcome of the procedure is missing one or more IEs/IE groups with specified criticality "*Ignore IE and Notify Sender*", the receiving node shall ignore that those IEs are missing and continue with the procedure based on the other IEs/IE groups present in the message and initiate the Error Indication procedure to report that one or more IEs/IE groups were missing.

- If a received *response* message is missing one or more IEs/IE groups with specified criticality "*Ignore IE and Notify Sender*", the receiving node shall ignore that those IEs are missing and continue with the procedure based on the other IEs/IE groups present in the message and initiate the Error Indication procedure to report that one or more IEs/IE groups were missing.

Ignore IE:

- If a received message *initiating* a procedure is missing one or more IEs/IE groups with specified criticality "*Ignore IE*", the receiving node shall ignore that those IEs are missing and continue with the procedure based on the other IEs/IE groups present in the message.

- If a received *response* message is missing one or more IEs/IE groups with specified criticality "*Ignore IE*", the receiving node shall ignore that those IEs/IE groups are missing and continue with the procedure based on the other IEs/IE groups present in the message.

When reporting missing IEs/IE groups with specified criticality "*Reject IE*" or "*Ignore IE and Notify Sender*" using a response message defined for the procedure, the *Information Element Criticality Diagnostics* IE shall be included in the *Criticality Diagnostics* IE for each reported IE/IE group. In the *Information Element Criticality Diagnostics* IE the *Repetition Number* IE shall be included and in addition, if the missing IE/IE group is not at message hierarchy level 1 (top level; see annex C) also the *Message Structure* IE shall be included.

When reporting missing IEs/IE groups with specified criticality "*Reject IE*" or "*Ignore IE and Notify Sender*" using the Error Indication procedure, the *Procedure ID* IE, the *Triggering Message* IE, *Procedure Criticality* IE, the *Transaction ID* IE, and the *Information Element Criticality Diagnostics* IE shall be included in the *Criticality Diagnostics* IE for each reported IE/IE group. In the *Information Element Criticality Diagnostics* IE, the *Repetition Number* IE shall be included and in addition, if the missing IE/IE group is not at message hierarchy level 1 (top level; see annex C) also the *Message Structure* IE shall be included.

10.3.6 IEs or IE Groups Received in Wrong Order or With Too Many Occurrences or Erroneously Present

If a message with IEs or IE groups in wrong order or with too many occurrences is received or if IEs or IE groups with a conditional presence are present when the condition is not met (i.e. erroneously present), the receiving node shall behave according to the following:

- If a message *initiating* a procedure is received containing IEs or IE groups in wrong order or with too many occurrences or erroneously present, none of the functional requests of the message shall be executed. The receiving node shall reject the procedure and report the cause value "Abstract Syntax Error (Falsely Constructed Message)" using the message normally used to report unsuccessful outcome of the procedure. In case the information received in the initiating message was insufficient to determine a value for all IEs that are required to be present in the message used to report the unsuccessful outcome of the procedure, the receiving node shall instead terminate the procedure and initiate the Error Indication procedure.

- If a message *initiating* a procedure that does not have a message to report unsuccessful outcome is received containing IEs or IE groups in wrong order or with too many occurrences or erroneously present, the receiving node shall terminate the procedure and initiate the Error Indication procedure, and use cause value "Abstract Syntax Error (Falsely Constructed Message)".

- If a *response* message is received containing IEs or IE groups in wrong order or with too many occurrences or erroneously present, the receiving node shall consider the procedure as unsuccessfully terminated and initiate local error handling.

When determining the correct order only the IEs specified in the specification version used by the receiver shall be considered.

10.4 Logical Error

Logical error situations occur when a message is comprehended correctly, but the information contained within the message is not valid (i.e. semantic error), or describes a procedure which is not compatible with the state of the receiver. In these conditions, the following behaviour shall be performed (unless otherwise specified) as defined by the class of the elementary procedure, irrespective of the criticality of the IEs/IE groups containing the erroneous values.

Class 1:

Where the logical error occurs in a request message of a class 1 procedure, and the procedure has a failure message, the failure message shall be sent with an appropriate cause value.

Typical cause values are:

- Protocol Causes:

  1. Semantic Error

2. Message not compatible with receiver state

Where the logical error is contained in a request message of a class 1 procedure, and the procedure does not have a failure message, the procedure shall be terminated and the ERROR INDICATION procedure shall be initiated with an appropriate cause value.The *Procedure ID* IE, the *Triggering Message* IE and the *Transaction ID* IE within the *Criticality Diagnostics* IE shall then be included in order to identify the message containing the logical error.

Where the logical error exists in a response message of a class 1 procedure, the procedure shall be considered as unsuccessfully terminated and local error handling shall be initiated.

Class 2:

Where the logical error occurs in a message of a class 2 procedure, the procedure shall be terminated and the ERROR INDICATION procedure shall be initiated with an appropriate cause value. The *Procedure ID* IE, the *Triggering Message* IE and the *Transaction ID* IE within the *Criticality Diagnostics* IE shall then be included in order to identify the message containing the logical error.

10.5 Exceptions

The error handling for all the cases described hereafter shall take precedence over any other error handling described in the other subclauses of clause 10.

- If any type of error (Transfer Syntax Error, Abstract Syntax Error or Logical Error) is detected in the ERROR INDICATION message, it shall not trigger the Error Indication procedure in the receiving Node but local error handling.

- In case a response message, failure message or ERROR INDICATION message needs to be returned, but the information necessary to determine the receiver of that message is missing, the procedure shall be considered as unsuccessfully terminated and local error handling shall be initiated.

- 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.

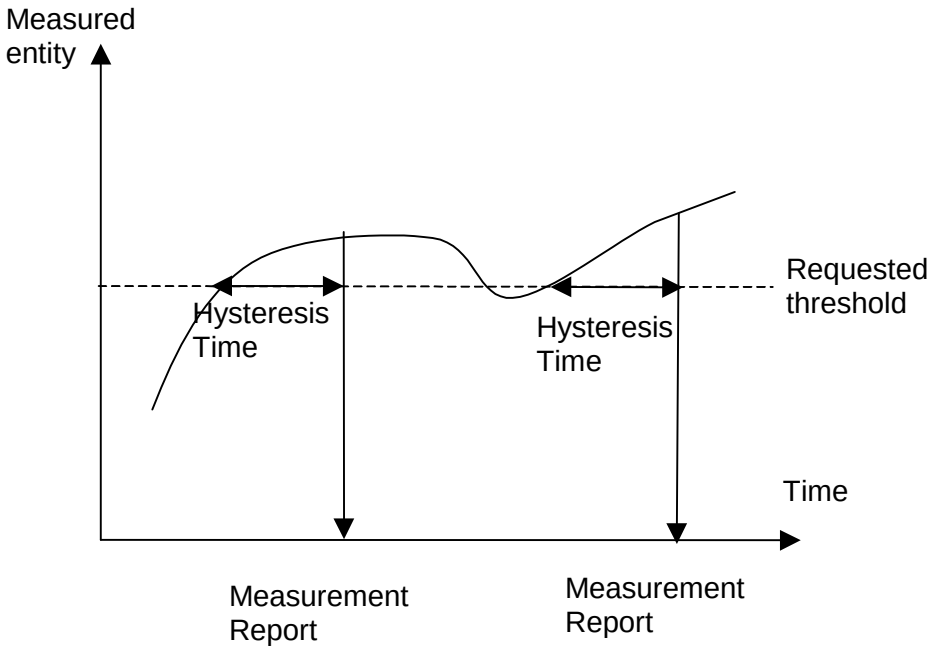


Figure B.1: Event A reporting with Hysteresis Time specified

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.

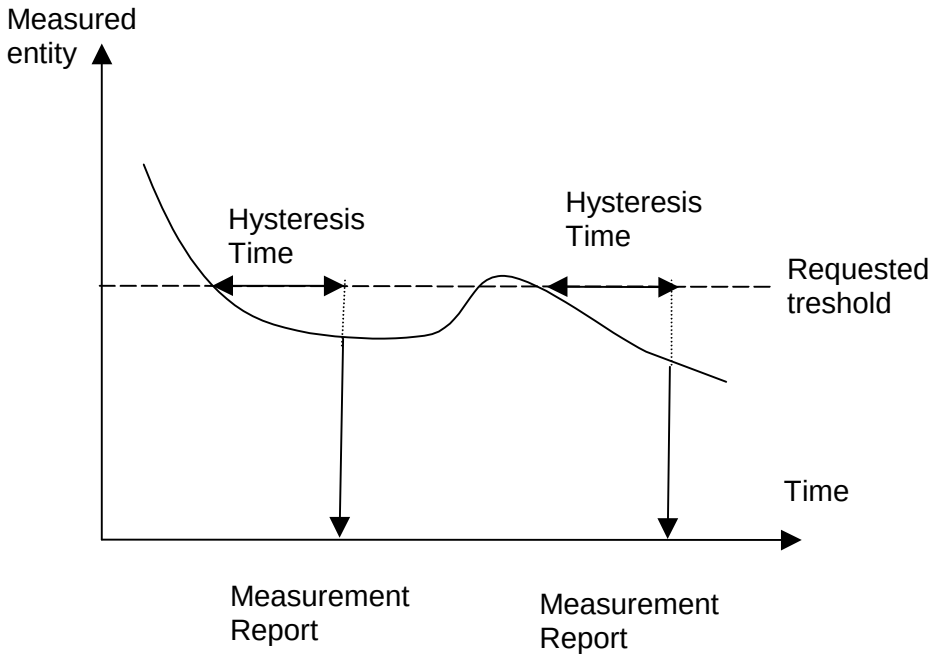


Figure B.2: Event B reporting with Hysteresis Time specified

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.

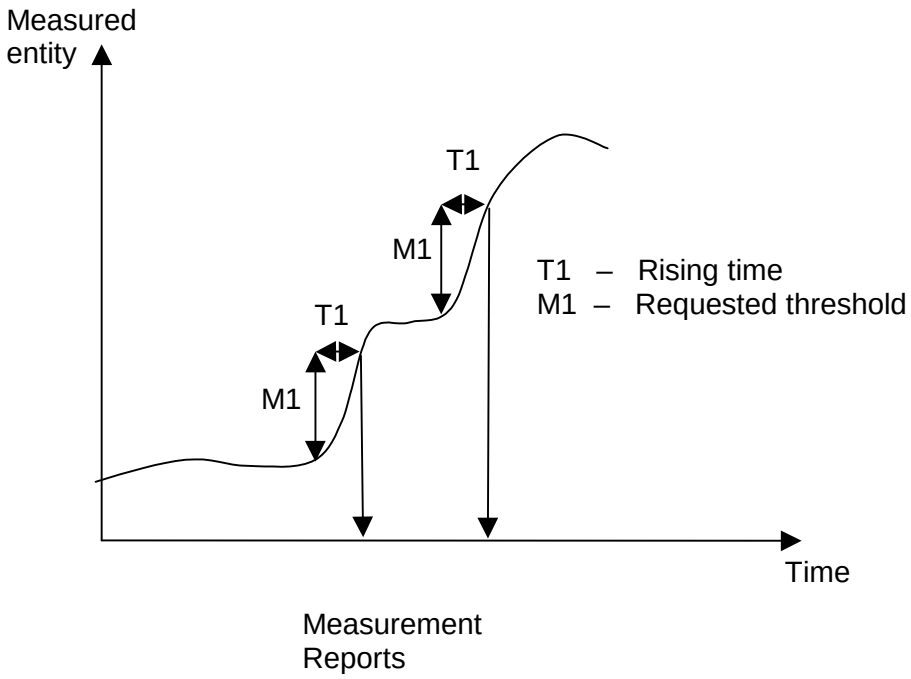


Figure B.3: Event C reporting

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.

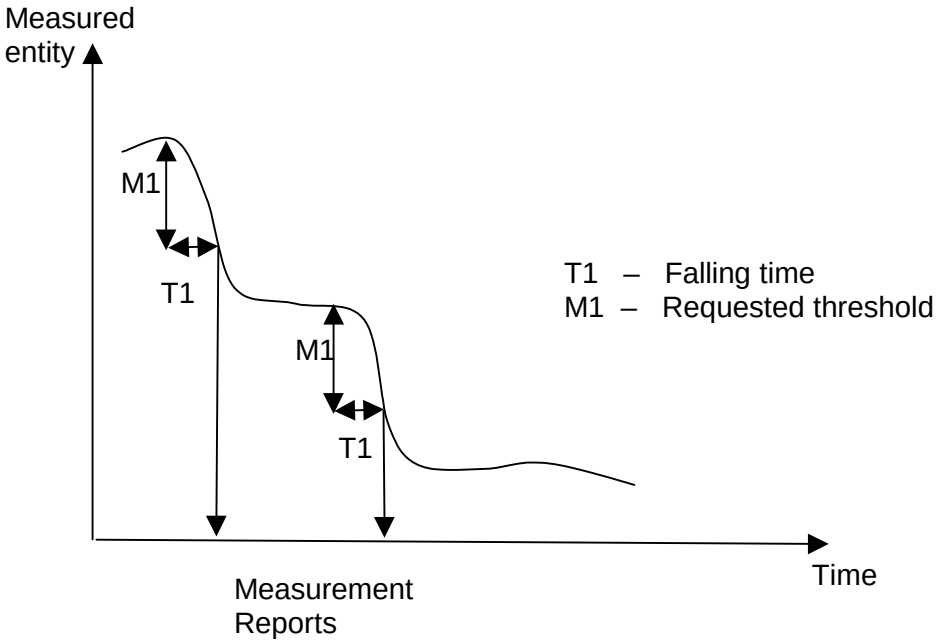


Figure B.4: Event D reporting

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) the Measurement Reporting procedure (Report B) is initiated and the periodic reporting is terminated.

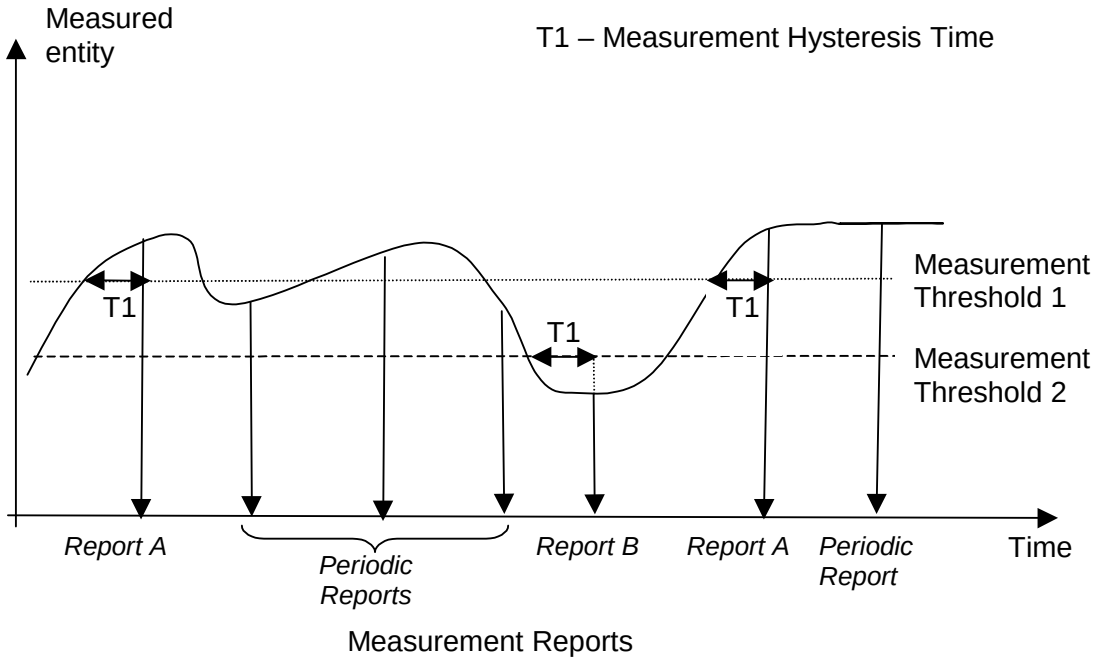


Figure B.5: Event E reporting with Hysteresis Time specified and Periodic Reporting requested

When the *Report Characteristics* IE is set to "Event F" (figure B.6), the Measurement Reporting procedure (Report A) is initiated always when the measured entity falls below the "Measurement Threshold 1" and stays there for the "Measurement Hysteresis Time" (T1 in figure B.6). If *Report Periodicity* IE is provided 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.

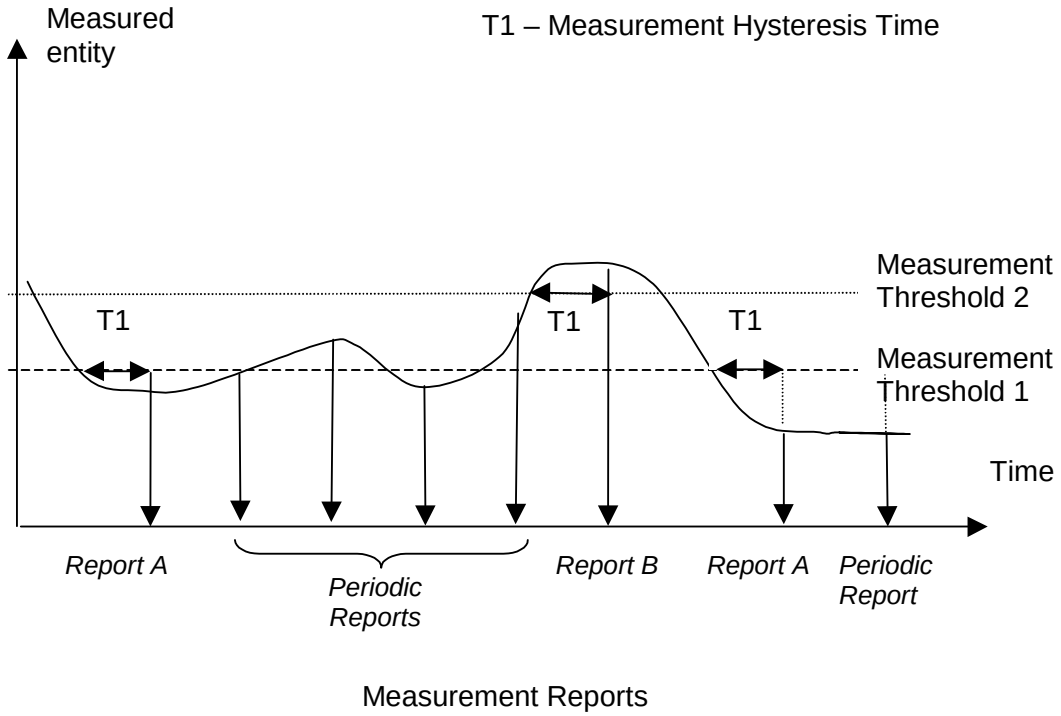


Figure B.6: Event F reporting with Hysteresis Time specified and Periodic Reporting requested

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.

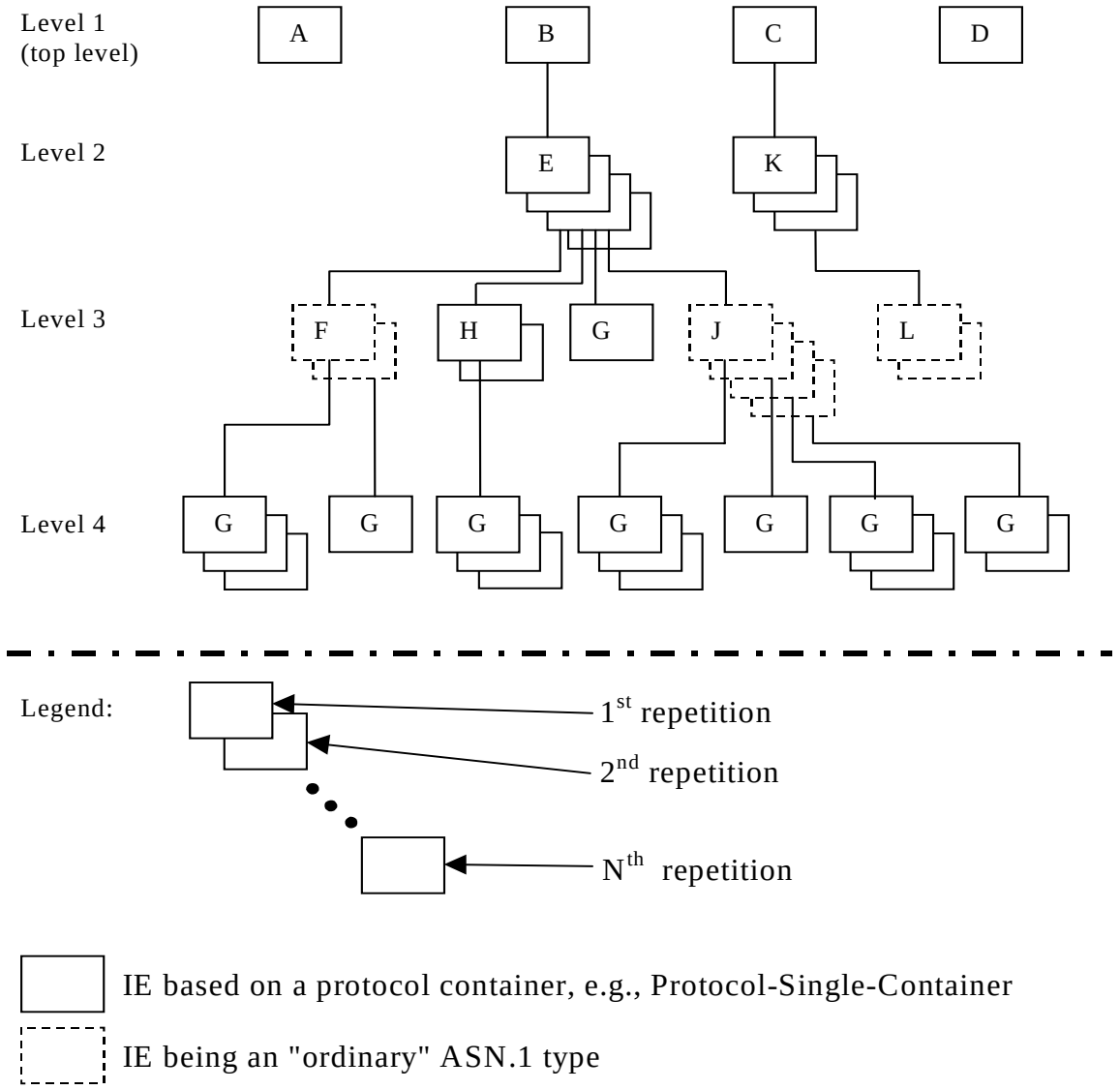


Figure C.1: Example of content of a received NBAP message based on the EXAMPLE MESSAGE

C.3 Content of Criticality Diagnostics

C.3.1 Example 1

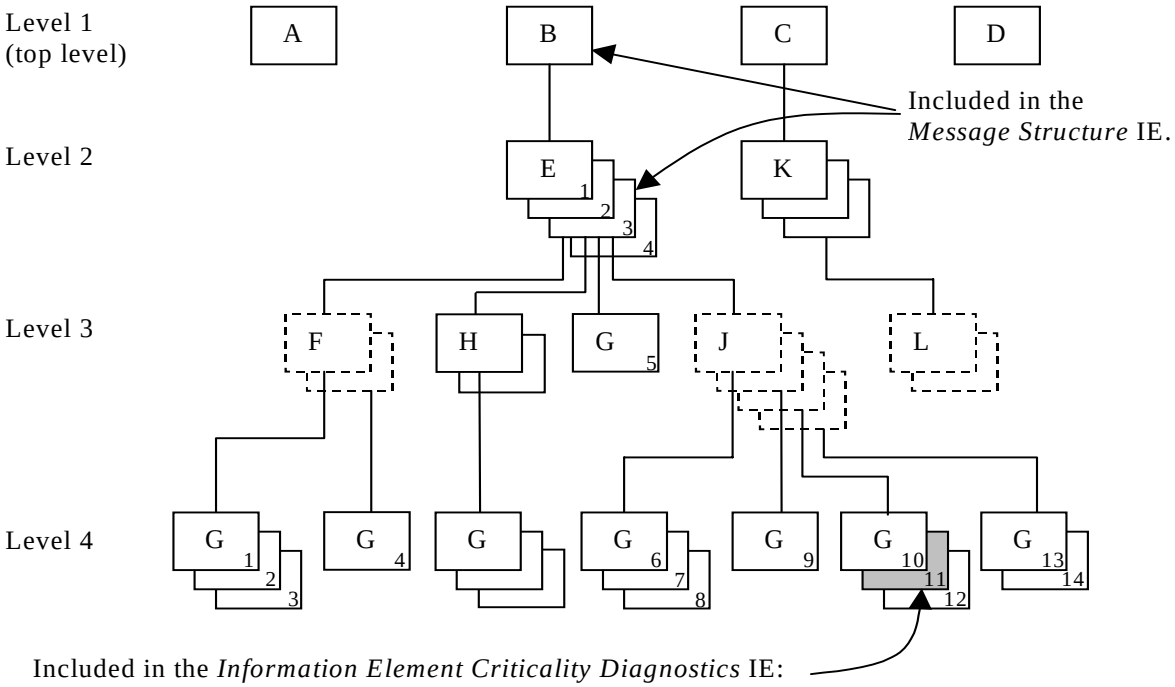


Figure C.2: Example of a received NBAP message containing a not comprehended IE

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

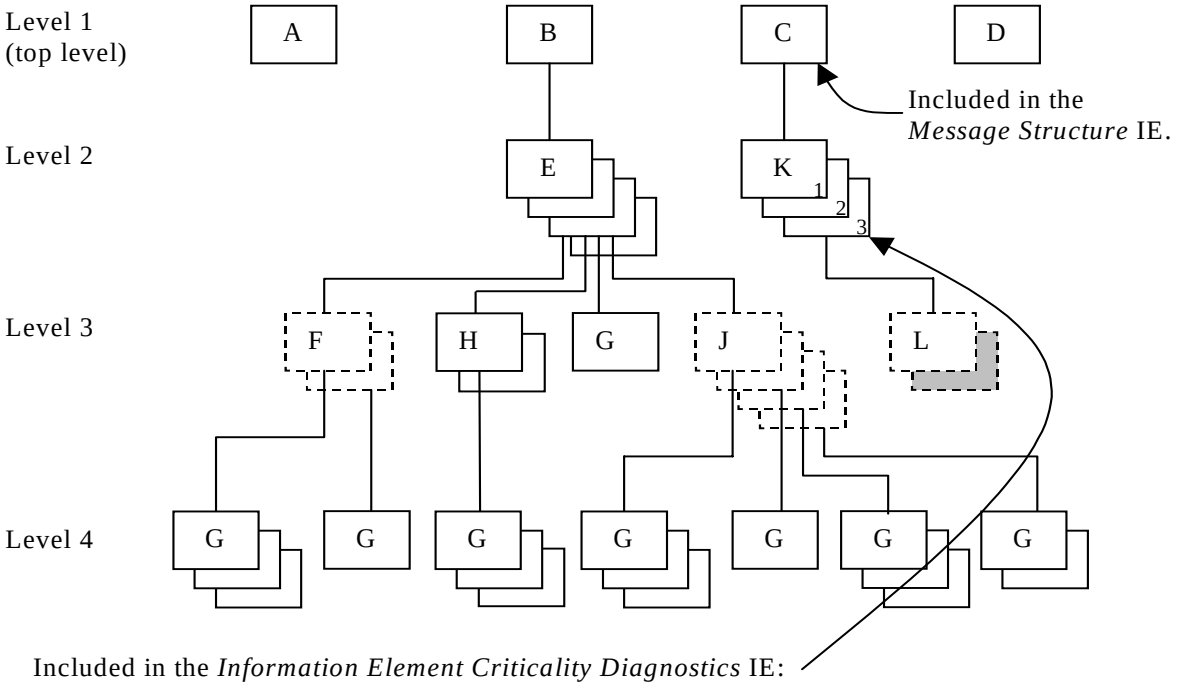


Figure C.3: Example of a received NBAP message containing a not comprehended IE

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 understood	
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

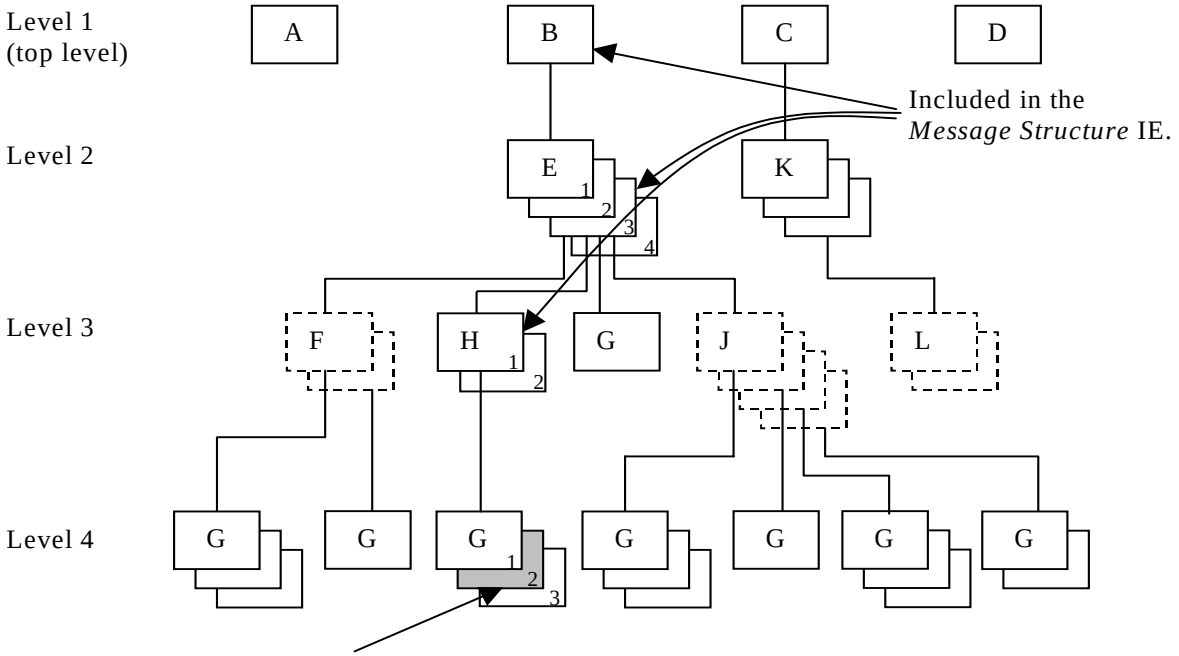


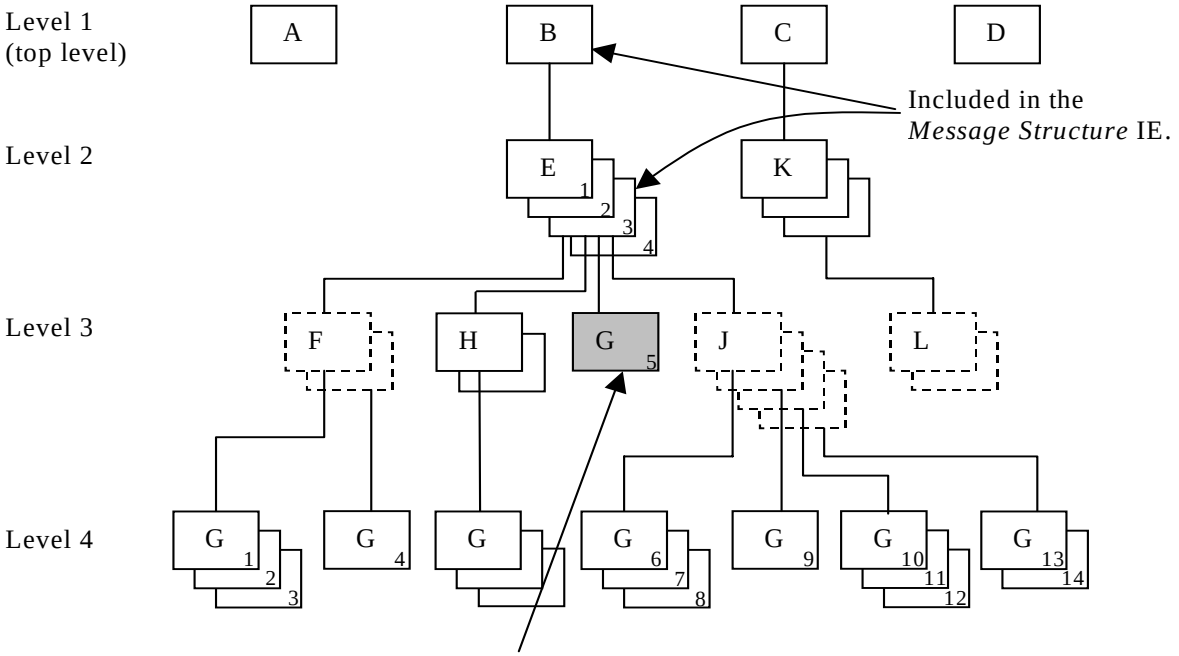
Figure C.4: Example of a received NBAP message containing a not comprehended IE

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 understood	
Message Structure, *first repetition*		
>IE ID	id-B	IE ID from level 1.
Message Structure, *second repetition*		
>IE ID	id-E	IE ID from level 2.
>Repetition Number	3	Repetition number from level 2.
Message Structure, *third repetition*		
>IE ID	id-H	IE ID from the lowest level above the reported level, i.e. level 3.
>Repetition Number	1	Repetition number from the lowest level above the reported level, i.e. level 3.

Note 5. The repetition number of level 4 indicates the number of repetitions of IE G received up to the detected erroneous repetition, counted below the same instance of the previous level with assigned criticality (instance 1 of IE H on level 3).

C.3.4 Example 4



Included in the *Information Element Criticality Diagnostics* IE:
a) *IE ID* IE
b) *Repetition Number* IE

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

If there is an error within the instance marked as grey in the IE G in the IE E shown in the figure C.5 above, this will be reported within the *Information Element Criticality Diagnostics* IE within the *Criticality Diagnostics* IE as follows:

IE name	Value	Comment
IE Criticality	reject	Criticality for IE on the reported level, i.e. level 3.
IE ID	id-G	IE ID from the reported level, i.e. level 3.
Repetition Number	5	Repetition number on the reported level, i.e. level 3. (Since the IE E (level 2) is the lowest level included in the *Message Structure* IE this is the fifth occurrence of IE G within the IE E (level 2).
Type of Error	not understood	
Message Structure, *first repetition*		
>IE ID	id-B	IE ID from level 1.
Message Structure, *second repetition*		
>IE ID	id-E	IE ID from the lowest level above the reported level, i.e. level 2.
>Repetition Number	3	Repetition number from the lowest level above the reported level, i.e. level 2.

Note 6. The repetition number of the reported IE indicates the number of repetitions of IE G received up to the detected erroneous repetition, counting all occurrences of the IE G below the same instance of the previous level with assigned criticality (instance 3 of IE E on level 2).

C.3.5 Example 5

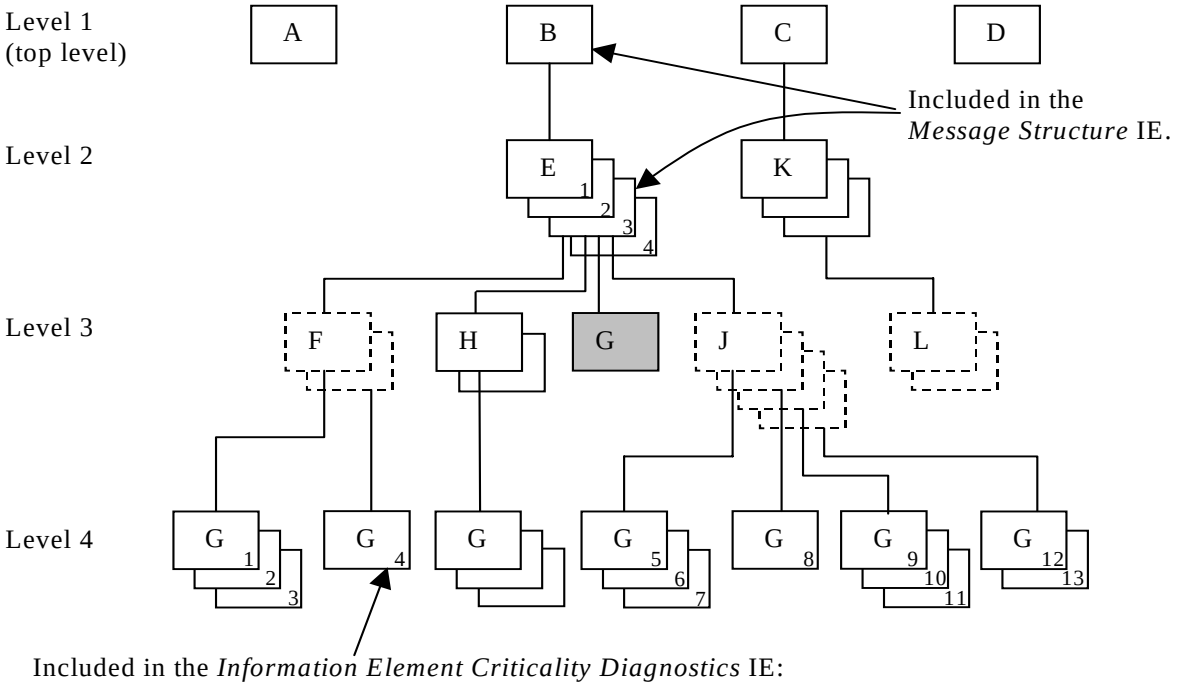


Figure C.6: Example of a received NBAP message with a missing IE

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

RAN_12	3.5.0	389, 391, 393, 395, 397, 399, 401, 403, 405, 407	RP-010383	3.6.0	Approved at TSG RAN #12
RAN_12	3.5.0	411, 420, 422, 426, 430, 432, 436, 438, 440, 442	RP-010384	3.6.0	Approved at TSG RAN #12
RAN_12	3.5.0	445, 448, 455, 461, 463, 466	RP-010385	3.6.0	Approved at TSG RAN #12
RAN 13	3.6.0	409	RP-010587	3.7.0	Ambiguity in CM handling
RAN 13	3.6.0	474	RP-010587	3.7.0	Correction to Information Block Deletion
RAN 13	3.6.0	477	RP-010587	3.7.0	Clarification of the AICH power
RAN 13	3.6.0	480	RP-010587	3.7.0	Nbap criticality
RAN 13	3.6.0	482	RP-010587	3.7.0	Corrections to the PDSCH Code Mapping IE
RAN 13	3.6.0	483	RP-010587	3.7.0	Correction to the handling of DL Code Information in RL Reconfiguration procedures
RAN 13	3.6.0	487	RP-010587	3.7.0	Transport bearer replacement clarification
RAN 13	3.6.0	489	RP-010587	3.7.0	Correct max Codes discrepancy between tabular and ASN.1
RAN 13	3.6.0	490	RP-010587	3.7.0	S-CCPCH Corrections for TDD
RAN 13	3.6.0	495	RP-010587	3.7.0	Correction to the Error handling of the ERROR INDICATION message
RAN 13	3.6.0	499	RP-010588	3.7.0	Clarification of Abnormal Conditions/Unsuccessful Operation
RAN 13	3.6.0	503	RP-010588	3.7.0	Error handling of erroneously present conditional IEs
RAN 13	3.6.0	506	RP-010588	3.7.0	Correction for maxNrOfCPCHs
RAN 13	3.6.0	508	RP-010588	3.7.0	Correction for N_EOT
RAN 13	3.6.0	512	RP-010588	3.7.0	Bitstrings ordering
RAN 13	3.6.0	516	RP-010588	3.7.0	Mapping of TFCS to TFCI
RAN 13	3.6.0	520	RP-010588	3.7.0	TDD Channelisation code range definition
RAN 13	3.6.0	523	RP-010588	3.7.0	Clarification of chapter 10
RAN 13	3.6.0	525	RP-010588	3.7.0	Clarification of use of Diversity Control Indicator
RAN 13	3.6.0	527	RP-010588	3.7.0	Clarification of coordinated DCHs
RAN 14	3.7.0	529	RP-010862	3.8.0	CR on Priority range
RAN 14	3.7.0	533	RP-010862	3.8.0	Bitstrings ordering
RAN 14	3.7.0	535	RP-010862	3.8.0	Added UTRAN modes in the IE Type and Reference and Semantics Description in IEs in NBAP messages
RAN 14	3.7.0	537	RP-010862	3.8.0	Alignment to RAN4 spec for Transmitted Code Power Measurement
RAN 14	3.7.0	539	RP-010862	3.8.0	Correction the Clause 10 Error Handling
RAN 14	3.7.0	541	RP-010862	3.8.0	Clarification of TrCh Ordering in TFCS
RAN 14	3.7.0	543	RP-010862	3.8.0	Reconstruction of the procedure text for Radio Link Setup in case of TDD
RAN 14	3.7.0	549	RP-010862	3.8.0	Transmit Diversity for TDD
RAN 14	3.7.0	551	RP-010862	3.8.0	Clarification for the definition of the ASN.1 constants
RAN 14	3.7.0	558	RP-010862	3.8.0	Terminology Corrections
RAN 14	3.7.0	561	RP-010863	3.8.0	Procedure Code Criticality in Error Indication
RAN 14	3.7.0	564	RP-010863	3.8.0	Clarification for the Power Adjustment Type IE in the DL POWER CONTROL REQUEST message
RAN 14	3.7.0	566	RP-010863	3.8.0	Forward Compatibility for DL Power Balancing
RAN 14	3.7.0	568	RP-010863	3.8.0	Reconfiguration clarification
RAN 14	3.7.0	570	RP-010863	3.8.0	Addition of amendment to clarify the PER encoding of bitstrings
RAN 14	3.7.0	574	RP-010863	3.8.0	Transport Bearer replacement clarification for the DSCH case
RAN 14	3.7.0	576	RP-010863	3.8.0	Clarification of the Transaction ID
RAN 14	3.7.0	578	RP-010863	3.8.0	CPCH-related corrections
RAN 14	3.7.0	581	RP-010863	3.8.0	Correction of S field length
RAN 15	3.8.0	590	RP-020174	3.9.0	Incorrect Physical Shared Channel TDD Procedure definition in ASN.1

RAN 15	3.8.0	592	RP-020174	3.9.0	Removal of criticality information for Transaction ID in the ERROR INDICATION message
RAN 15	3.8.0	599	RP-020174	3.9.0	Clarification to measurement unit at Higher Layer Filtering.
RAN 15	3.8.0	604	RP-020174	3.9.0	Correction of the Limited Power Increase in Synchronised Radio Link Reconfiguration Preparation
RAN 15	3.8.0	622	RP-020174	3.9.0	Correction to physical channels which SCTD can be applied (Iub)
RAN 15	3.8.0	627	RP-020174	3.9.0	Removing of channel coding option "no coding" for FDD
RAN 16	3.9.0	630r2	RP-020412	3.10.0	Criticality Information Decoding Failure Handling
RAN 16	3.9.0	634r1	RP-020412	3.10.0	Alignment of tabular and ASN.1 coding for DL power
RAN 16	3.9.0	637r1	RP-020412	3.10.0	Correction to RL Restore Indication
RAN 16	3.9.0	646	RP-020412	3.10.0	Use of PDSCH RL ID for TDD DSCH/USCH
RAN 16	3.9.0	660	RP-020412	3.10.0	Correction to the use of the CFN IE / SFN IE in the Measurement Initiation procedures
RAN 16	3.9.0	663	RP-020412	3.10.0	TFCI 0 definition for TDD
RAN 16	3.9.0	668r2	RP-020412	3.10.0	NBAP Review – Alignment on the ASN.1
RAN 16	3.9.0	684r1	RP-020412	3.10.0	Clarification for the usage of the cause value
RAN 16	3.9.0	696r1	RP-020412	3.10.0	TFCI2 bearer clarification
RAN 16	3.9.0	702	RP-020412	3.10.0	NBAP Review – Alignment of the ASN.1
RAN 17	3.10.0	719r1	RP-020589	3.11.0	Replacing all occurences of $P_{SIR}(k)$ by δP_{curr} in 25.423
RAN 17	3.10.0	737r1	RP-020604	3.11.0	Handling of conflicting specification text
RAN 18	3.11.0	783	RP-020744	3.12.0	Correction for the DL DPDCH transmission
RAN 19	3.12.0	804r1	RP-030082	3.13.0	Corrections to Channelisation Code TFCI Mapping for TDD
RAN 19	3.12.0	816	RP-030066	3.13.0	Corrections to DCH Combining in RL SETUP and RL ADDITION
RAN 21	3.13.0	879	RP-030443	3.14.0	Corrections to Tx Diversity
-	3.14.0	-	-	3.14.1	ASN.1 editorials

History

Document history		
V3.0.0	January 2000	Publication
V3.1.0	March 2000	Publication
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