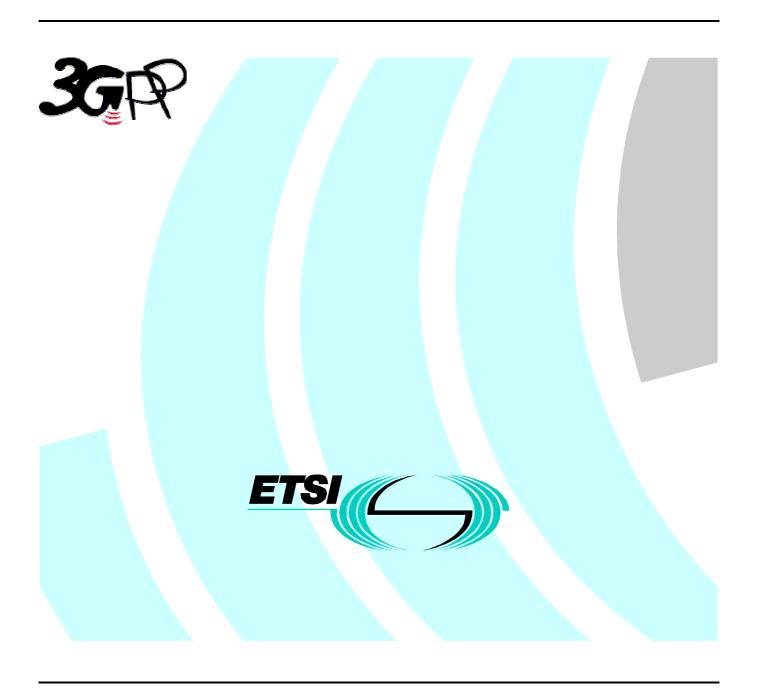
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## **Foreword**

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;
  - 3 Indicates TSG approved document under change control.
- y the second digit is incremented for all changes of substance, i.e. technical enhancements, corrections, updates, etc.
- z the third digit is incremented when editorial only changes have been incorporated in the document.

#### 1 Scope

The present document specifies the radio network layer signalling 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". CCITT Recommendation X.731 (01/92): "Information Technology – Open Systems [3] Interconnection – Systems Management: State Management function". 3GPP TS 25.215: "Physical layer - Measurements (FDD)". [4] 3GPP TS 25.225: "Physical layer – Measurements (TDD)". [5] [6] 3GPP TS 25.430: "UTRAN Iub General Aspect and Principle". 3GPP TS 25.211: "Physical channels and mapping of transport channels onto physical channels [7] (FDD)". 3GPP TS 25.212: "Multiplexing and channel coding (FDD)". [8] 3GPP TS 25.213: "Spreading and modulation (FDD)". [9] [10] 3GPP TS 25.214: "Physical layer procedures (FDD)". ITU-T Recommendation X.691, (12/97) "Information technology - ASN.1 encoding rules -[11] 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".
- ITU-T Recommendation X.681, (12/97) "Information Technology Abstract Syntax Notation One [13] (ASN.1): Information object specification".
- [14] 3GPP TS 25.104: "UTRA (BS) FDD; Radio Transmission and Reception".
- 3GPP TS 25.105: "UTRA (BS) TDD; Radio Transmission and Reception". [15]
- 3GPP TS 25.427: "UTRAN Iur/Iub Interface User Plane Protocol for DCH Data Stream". [16]
- [17] 3GPP TS 25.402: "Synchronisation in UTRAN Stage2".
- 3GPP TS 25.331: "RRC Protocol Specification". [18]

[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
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
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.

DD specific (of common) paragraphs between the PDD 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.

ΙE 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.

When referring to the value of an information element (IE) in the specification the "Value" is Value of an IE

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.

#### Services Expected from Signalling Transport 6

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

#### **Functions of NBAP** 7

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 Node B to initiate measurements in the Node B. The function also allows the Node B to report the result of the measurements.
- Radio Link Management. This function allows the CRNC to manage radio links using dedicated resources in a Node B.
- Radio Link Supervision. This function allows the CRNC to report failures and restorations of a Radio Link.

- Compressed Mode Control [FDD]. This function allows the CRNC to control the usage of compressed mode in a Node B.
- Measurements on Dedicated Resources. This function allows the CRNC to initiate measurements in the Node B. The function also allows the Node B to report the result of the measurements.
- DL Power Drifting Correction [FDD]. This function allows the CRNC to adjust the DL power level of one or more Radio Links in order to avoid DL power drifting between the Radio Links.
- Reporting of General Error Situations. This function allows reporting of general error situations, for which function specific error messages have not been defined.
- Physical Shared Channel Management [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
radio Ellik Odporvision.	b) Radio Link Restoration
Compressed Mode Control [FDD]	a) Radio Link Setup
Compressed Mode Control [1 22]	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 UE context for a specific UE in Node B or are not related to a specific UE. NBAP common procedures also incorporate logical O&M [1] procedures.

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

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

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

Table 2: Class 1

Elementary	Message	Successful Outcome	Unsuccessful Outcome
Procedure		Response message	Response message
Cell Setup	CELL SETUP REQUEST	CELL SETUP RESPONSE	CELL SETUP FAILURE
Cell Reconfiguration	CELL RECONFIGURATION REQUEST	CELL RECONFIGURATION	CELL RECONFIGURATION
		RESPONSE	FAILURE
Cell Deletion	CELL DELETION REQUEST	CELL DELETION RESPONSE	
Common	COMMON TRANSPORT	COMMON TRANSPORT	COMMON TRANSPORT
Transport Channel Setup	CHANNEL SETUP REQUEST	CHANNEL SETUP RESPONSE	CHANNEL SETUP FAILURE
Common	COMMON TRANSPORT	COMMON TRANSPORT	COMMON TRANSPORT
Transport	CHANNEL	CHANNEL	CHANNEL
Channel Reconfiguration	RECONFIGURATION REQUEST	RECONFIGURATION RESPONSE	RECONFIGURATION FAILURE
Common	COMMON TRANSPORT	COMMON TRANSPORT	
Transport	CHANNEL DELETION	CHANNEL DELETION	
Channel Deletion	REQUEST	RESPONSE	DINOIGAL OLIADED
Physical Shared Channel	PHYSICAL SHARED CHANNEL	PHYSICAL SHARED CHANNEL	PHYSICAL SHARED CHANNEL
Reconfigure	RECONFIGURATION	RECONFIGURATION	RECONFIGURATION
[TDD]	REQUEST	RESPONSE	FAILURE
Audit	AUDIT REQUEST	AUDIT RESPONSE	AUDIT FAILURE
Block Resource	BLOCK RESOURCE	BLOCK RESOURCE	BLOCK RESOURCE
	REQUEST	RESPONSE	FAILURE
Radio Link Setup	RADIO LINK SETUP REQUEST	RADIO LINK SETUP RESPONSE	RADIO LINK SETUP FAILURE
System	SYSTEM INFORMATION	SYSTEM INFORMATION	SYSTEM INFORMATION
Information Update	UPDATE REQUEST	UPDATE RESPONSE	UPDATE FAILURE
Common	COMMON MEASUREMENT	COMMON	COMMON
Measurement Initiation	INITIATION REQUEST	MEASUREMENT INITIATION RESPONSE	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	RADIO LINK	RADIO LINK
Radio Link	RECONFIGURATION	RECONFIGURATION	RECONFIGURATION
Reconfiguration	PREPARE	READY	FAILURE
Preparation			
Unsynchronised	RADIO LINK	RADIO LINK	RADIO LINK
Radio Link	RECONFIGURATION	RECONFIGURATION	RECONFIGURATION
Reconfiguration Dedicated	REQUEST DEDICATED	RESPONSE DEDICATED	FAILURE DEDICATED
Measurement	MEASUREMENT	MEASUREMENT	MEASUREMENT
Initiation	INITIATION REQUEST	INITIATION RESPONSE	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	COMMON MEASUREMENT	
Termination	TERMINATION REQUEST	
Common Measurement Failure	COMMON MEASUREMENT	
	FAILURE INDICATION	
Synchronised Radio Link	RADIO LINK RECONFIGURATION	
Reconfiguration Commit	COMMIT	
Synchronised Radio Link	RADIO LINK RECONFIGURATION	
Reconfiguration Cancellation	CANCELLATION	
Radio Link Failure	RADIO LINK FAILURE INDICATION	
Radio Link Restoration	RADIO LINK RESTORE INDICATION	
Dedicated Measurement Reporting	DEDICATED MEASUREMENT REPORT	
Dedicated Measurement	DEDICATED MEASUREMENT	
Termination	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	DL POWER TIMESLOT CONTROL	
[TDD]	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

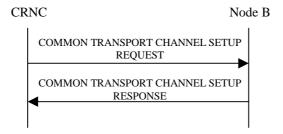


Figure 1: Common Transport Channel Setup procedure, Successful Operation

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

One message can configure only one of the following combinations:

- [FDD one Secondary CCPCH, and FACHs, PCH and PICH related to that Secondary CCPCH], or
- [TDD one CCTrCH consisting of Secondary CCPCHs and FACHes, PCH with the corresponding PICH related to that group of Secondary CCPCHs], or
- one 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 a Secondary CCPCH, the Node B shall configure and activate it according to the COMMON TRANSPORT CHANNEL SETUP REQUEST message.]

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

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

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

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

PRACH:

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

[FDD-PCPCHs]:

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

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

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

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

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

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

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

#### 8.2.1.3 Unsuccessful Operation

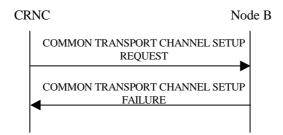


Figure 2: Common Transport Channel Setup procedure, Unsuccessful Operation

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

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

Typical cause values are as follows:

#### **Radio Network Layer Cause**

- Cell not available
- Power level not supported
- Node B Resources unavailable
- Requested Tx Diversity Mode not supported
- UL SF not supported
- DL SF not supported
- Common Transport Channel Type not supported

#### **Transport Layer Cause**

- Transport Resources Unavailable

#### **Miscellaneous Cause**

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

#### 8.2.1.4 Abnormal Conditions

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

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

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

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

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

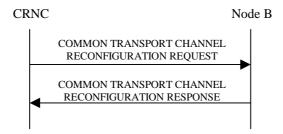


Figure 3: Common Transport Channel Reconfiguration, Successful Operation

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

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].

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

CCPCH shall use.]

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

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

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

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

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

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

shall use.]

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

#### 8.2.2.3 Unsuccessful Operation

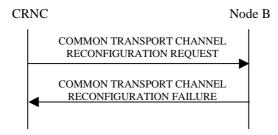


Figure 4: Common Transport Channel Reconfiguration procedure, Unsuccessful Operation

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

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

Typical cause values are as follows:

#### **Radio Network Layer Cause**

- Cell not available
- Power level not supported
- Node B Resources unavailable

#### **Transport Layer Cause**

- Transport Resources Unavailable

#### Miscellaneous Cause

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

#### 8.2.2.4 Abnormal Conditions

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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

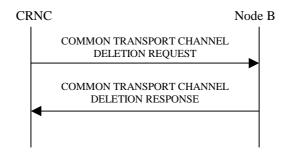


Figure 5: Common Transport Channel Deletion procedure, Successful Operation

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

**Secondary CCPCH:** When the COMMON TRANSPORT CHANNEL DELETION REQUEST message

contains a Secondary CCPCH, Node B shall delete the indicated channel and the FACHs and PCH supported by that Secondary CCPCH. If there is a PCH that is deleted, the PICH

associated with that PCH shall also be deleted.

**PRACH:** When the COMMON TRANSPORT CHANNEL DELETION REQUEST message

contains a PRACH, Node B shall delete the indicated channel and the RACH supported by

the PRACH. [FDD - The AICH associated with the RACH shall also be deleted.]

[FDD – PCPCHes]: When the COMMON TRANSPORT CHANNEL DELETION REQUEST message

contains one of PCPCHes for a CPCH, Node B shall delete all PCPCHs associated with the indicated channel and the CPCH supported by the PCPCHes. The AP-AICH and CD/CA-

ICH associated with the CPCH shall also be deleted.

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

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

#### 8.2.3.3 Unsuccessful Operation

#### 8.2.3.4 Abnormal Conditions

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

#### 8.2.4 Block Resource

#### 8.2.4.1 General

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

The logical resource that can be blocked is a cell.

#### 8.2.4.2 Successful Operation

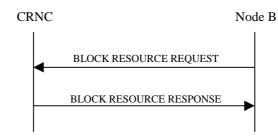


Figure 6: Block Resource procedure, Successful Operation

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

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

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

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

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

If the resources are successfully blocked, the CRNC shall respond with a BLOCK RESOURCE RESPONSE message. Upon reception of the BLOCK RESOURCE RESPONSE message, the Node B may disable [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

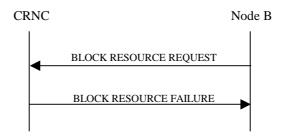


Figure 7: Block Resource procedure, Unsuccessful Operation

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. 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.

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

#### 8.2.5.3 Abnormal Conditions

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#### 8.2.6 Audit Required

#### 8.2.6.1 General

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

#### 8.2.6.2 Successful Operation



Figure 9: Audit Required procedure, Successful Operation

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

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

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

#### 8.2.6.3 Abnormal Conditions

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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-sync the Node B to the status of logical resources known by the CRNC, that the Node B can support.

#### 8.2.7.2 Successful Operation

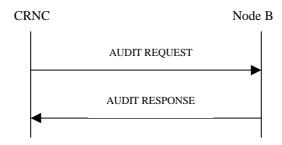


Figure 10: Audit procedure, Successful Operation

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

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

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

#### Information Provided In One Audit Sequence.

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

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

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 can not be trusted, the Node B shall set this *Configuration Generation ID* IE = '0'.

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

#### 8.2.7.3 Unsuccessful Operation

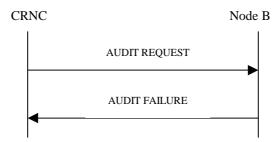


Figure 10A: Audit procedure, Unsuccessful Operation

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

#### 8.2.7.4 Abnormal Conditions

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

#### 8.2.8 Common Measurement Initiation

#### 8.2.8.1 General

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

#### 8.2.8.2 Successful Operation

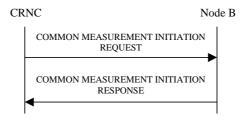


Figure 11: Common Measurement Initiation procedure, Successful Operation

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

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

[TDD - If the Time Slot Information is provided in the *Common Measurement Object Type* IE , the measurement request shall apply to the requested time slot individually.]

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

If the *SFN Reporting Indicator* IE is set to "FN Reporting Required", the *SFN* IE shall be included in the measurement report or in the measurement response, the latter only in the case the *Report Characteristics* IE is set to 'On-Demand'. The reported SFN shall be the SFN at the time when the measurement value was reported by the layer 3 filter, referred to as point C in the measurement model [25].

If the *SFN* IE is provided, it indicates the frame for which the first measurement shall be provided. The provided measurement value shall be the one reported by the layer 3 filter, referred to as point C in the measurement model [25].

#### **Report characteristics**

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

If the *Report Characteristics* IE is set to 'On-Demand', the Node B shall report the result of the requested measurement immediately.

If the *Report Characteristics* IE is set to 'Periodic', the Node B shall periodically initiate a Measurement Reporting procedure for this measurement, with the requested report frequency.

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

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

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

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

If the *Report Characteristics* IE is set to 'Event E', the Node B shall initiate the Common Measurement Reporting procedure when the measured entity rises above the 'Measurement Threshold 1' and stays there for the 'Measurement Hysteresis Time' (Report A). When the conditions for Report A are met and the *Report Periodicity* IE is provided, the Node B shall initiate the Common Measurement Reporting procedure periodically. If the conditions for Report A have been met and the measured entity falls below the 'Measurement Threshold 2' and stays there for the 'Measurement Hysteresis Time', the Node B shall initiate the Common Measurement Reporting procedure (Report B) as well as terminating any corresponding periodic reporting. If 'Measurement Threshold 2' is not present, the Node B shall use 'Measurement Threshold 1' instead. If no 'Measurement Hysteresis Time' is provided, the Node B shall use the value zero as hysteresis times for both Report A and Report B.

If the *Report Characteristics* IE is set to 'Event F', the Node B shall initiate the Common Measurement Reporting procedure when the measured entity falls below the 'Measurement Threshold 1' and stays there for the 'Measurement Hysteresis Time' (Report A). When the conditions for Report A are met and the *Report Periodicity* IE is provided the Node B shall also initiate the Common Measurement Reporting procedure periodically. If the conditions for Report A have been met and the measured entity rises above the 'Measurement Threshold 2' and stays there for the 'Measurement Hysteresis Time', the Node B shall initiate the Common Measurement Reporting procedure (Report B) as well as terminating any corresponding periodic reporting. If 'Measurement Threshold 2' is not present, the Node B shall use 'Measurement Threshold 1' instead. If no 'Measurement Hysteresis Time' is provided, the Node B shall use the value zero as hysteresis times for both Report A and Report B.

If the *Report Characteristics* IE is not set to 'On-Demand', the Node B is required to perform reporting for a common measurement object, in accordance with the conditions provided in the COMMON MEASUREMENT INITIATION REQUEST message, as long as the object exists. If no common measurement object(s) for which a measurement is defined exists any more the Node B shall terminate the measurement locally without reporting this to the CRNC.

If at the start of the measurement, the reporting criteria are fulfilled for any of Event A, Event B, Event E or Event F, the Node B shall initiate the Common Measurement Reporting procedure immediately, and then continue with the measurements as specified in the COMMON MEASUREMENT INITIATION REQUEST message.

#### Higher layer filtering

The *Measurement Filter Coefficient* IE indicates how filtering of the measurement values shall be performed before measurement event evaluation and reporting.

The averaging shall be performed according to the following formula.

$$F_n = (1-a) \cdot F_{n-1} + a \cdot M_n$$

The variables in the formula are defined as follows:

 $F_n$  is the updated filtered measurement result

 $F_{n-1}$  is the old filtered measurement result

 $M_n$  is the latest received measurement result from physical layer measurements

 $a = 1/2^{(k/2)}$ -, 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 when 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 sent over the Node B control port. The message shall include the same Measurement ID that was used in the COMMON MEASUREMENT INITIATION REQUEST message and the *Cause* IE set to an appropriate value.

Typical cause values are as follows:

#### **Radio Network Layer Cause**

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

#### 8.2.8.4 Abnormal Conditions

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

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

# 8.2.9 Common Measurement Reporting

## 8.2.9.1 General

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

# 8.2.9.2 Successful Operation



Figure 13: Common Measurement Reporting procedure, Successful Operation

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

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

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

## 8.2.9.3 Abnormal Conditions

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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 measurements corresponding to the Common Measurement ID.

#### 8.2.10.3 Abnormal Conditions

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

# 8.2.12.2 Successful Operation

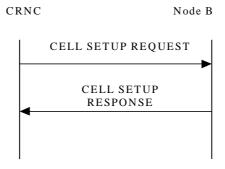


Figure 16: Cell Setup procedure, Successful Operation

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

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

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

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

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

[FDD- When the cell is successfully configured CPICH(s), Primary SCH, Secondary SCH, Primary CCPCH and BCH exist.][TDD - When the cell is successfully configured 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 state Enabled [6].

# 8.2.12.3 Unsuccessful Operation

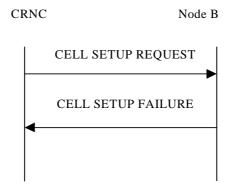


Figure 17: Cell Setup procedure: Unsuccessful Operation

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 CRNC.

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

The Cause IE shall be set to an appropriate value.

Typical cause values are as follows:

## Radio Network Layer Cause

- S-CPICH not supported
- Requested Tx Diversity Mode not supported
- Power level not supported
- Node B Resources unavailable

#### **Miscellaneous Cause**

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

## 8.2.12.4 Abnormal Conditions

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

# 8.2.13 Cell Reconfiguration

#### 8.2.13.1 General

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

# 8.2.13.2 Successful Operation

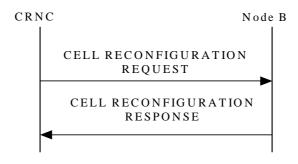


Figure 18: Cell Reconfiguration procedure, Successful Operation

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

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

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

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

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

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

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

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

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

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

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

[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 IE value. When the parameters in the *Synchronisation Configuration* IE affect the thresholds applied to a RL set, the Node B shall immediately apply the new thresholds. When applying the new thresholds the Node B shall not change the state or value of any of the timers and counters for which the new thresholds apply.

## 8.2.13.3 Unsuccessful Operation

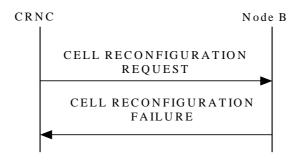


Figure 19: Cell Reconfiguration procedure: Unsuccessful Operation

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

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

The Cause IE shall be set to an appropriate value.

Typical cause values are as follows:

#### Radio Network Layer Cause

- Power level not supported
- Node B Resources unavailable

#### 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 Node B.

# 8.2.14.2 Successful Operation

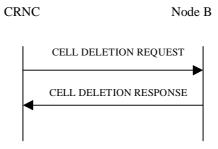


Figure 10: Cell Deletion procedure, Successful Operation

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

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

# 8.2.14.3 Unsuccessful Operation

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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 Node B the Node B shall respond with the CELL DELETION RESPONSE message.

# 8.2.15 Resource Status Indication

## 8.2.15.1 General

This procedure is used in the following cases:

- 1. When a Local Cell becomes Existing at the Node B.
- 2. When a Local Cell is to be deleted in Node B, i.e. become Not Existing.
- 3. When the capabilities of the Local Cell change at the Node B.
- 4. When a cell has changed its capability and/or its resource operational state at Node B.
- 5. When common physical channels and/or common transport channels have changed their capabilities at a Node B.
- 6. When a communication control port changed its resource operational state at the Node B.
- 7. When a Local Cell Group has changed its resource capability at the Node B.

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

# 8.2.15.2 Successful Operation



Figure 21: Resource Status Indication procedure, Successful Operation

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

## **Local Cell Becomes Existing:**

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

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

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

#### **Local Cell Deletion:**

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

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

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

## Capability Change of a Cell:

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

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

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

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

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

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

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

## Capability Change of a Local Cell Group:

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

## General:

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

## 8.2.15.3 Abnormal Conditions

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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 content to the system information segments broadcast on the BCCH.

# 8.2.16.2 Successful Operation

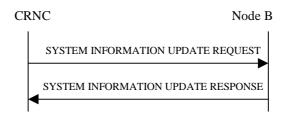


Figure 22: System Information Update procedure, Successful Operation

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

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

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

#### **Information Block addition**

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

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

- SFN mod IB\_SG\_REP = IB\_SG\_POS

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

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

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

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

#### **Information Block deletion**

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

## **Information Block update**

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

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

# 8.2.16.3 Unsuccessful Operation

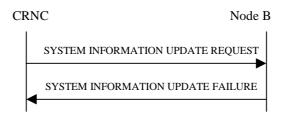


Figure 23: System Information Update procedure: Unsuccessful Operation

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

Typical cause values are:

#### Radio Network Layer Cause

- SIB Origination in Node B not Supported

#### **Miscellaneous Cause**

- Hardware failure
- Control Processing overload
- O&M Intervention

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

#### 8.2.16.4 Abnormal Conditions

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

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

- After having handled a certain MIB/SB/SIB information IE repetition, an illegal BCCH schedule results;
- If a MIB/SB/SIB information IE repetition includes an IB SG REP IE or an IB SG POS IE and there is already an IB in the BCCH schedule with the same IB Type and IB OC ID which is not requested to be deleted from the BCCH schedule by an IB deletion indicated in a MIB/SB/SIB information IE repetition present in the SYSTEM INFORMATION UPDATE REQUEST message before the IB addition is indicated. This rule shall apply even if the scheduling instructions in IB SG REP IE and IB SG POS IE were the same as the current scheduling instructions for the concerned IB;
- If a MIB/SB/SIB information IE repetition includes no *IB SG REP* IE and *IB SG POS* IE and there is no IB in the BCCH schedule with the same IB Type and IB OC ID;
- If a MIB/SB/SIB information IE repetition includes no *IB SG REP* IE and *IB SG POS* IE and there is already an IB in the BCCH schedule with the same IB Type and IB OC ID but it is requested to be deleted from the BCCH schedule by an IB deletion indicated in a *MIB/SB/SIB information* IE repetition present in the SYSTEM INFORMATION UPDATE REQUEST message before the IB addition is indicated.

# 8.2.17 Radio Link Setup

## 8.2.17.1 General

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

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

[TDD – The RL Setup procedure is used for establish one radio link including one or more transport channels. The transport channels can be a 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 Node B.

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

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

## **Transport Channels Handling:**

#### DCH(s):

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

If the RADIO LINK SETUP REQUEST message includes a *DCH Information* IE with multiple *DCH Specific Info* IEs then, the Node B shall treat the DCHs in the *DCH Information* IE as a set of co-ordinated DCHs. The Node B shall include these DCHs in the new configuration only if it can include all of them in the new configuration.

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

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

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

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

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

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

[FDD – The *Diversity Control Field* IE indicates for each RL (except the first RL in the message) whether the Node B shall combine the concerned RL or not. If the *Diversity Control Field* IE is set to "May", then Node B shall decide for either of the alternatives. If the *Diversity Control Field* IE is set to "Must", the Node B shall combine the RL with one of the other RL. Diversity combining is applied to Dedicated Transport Channels (DCH), i.e. it is not applied to the DSCHs. When a new RL is to be combined, the Node B shall choose which RL(s) to combine it with. If the *Diversity Control Field* IE is set to "Must not", the Node B shall not combine the RL with any other existing RL.]

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

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

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

#### DSCH(s):

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

[FDD – If the RADIO LINK SETUP REQUEST message includes the *TFC12 Bearer Information* IE then the Node B shall support the establishment of a transport bearer on which the DSCH TFCI Signaling control frames shall be received. The Node B shall manage the time of arrival of these frames according to the values of ToAWS and ToAWE specified in the IE's. The *Binding ID* IE and *Transport Layer Address* IE for the new bearer to be set up for this purpose shall be returned in the RADIO LINK SETUP RESPONSE message.]

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

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

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

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

#### **Physical Channels Handling:**

# [FDD - Compressed Mode]:

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

[FDD – If the *Downlink compressed mode method* IE in one or more Transmission Gap Pattern Sequence is set to 'SF/2' in the RADIO LINK SETUP REQUEST message, the Node B shall use or not the alternate scrambling code as indicated for each DL Channelisation Code in the *Transmission Gap Pattern Sequence Code Information* IE.]

[FDD – If the RADIO LINK SETUP REQUEST message includes the *Transmission Gap Pattern Sequence Information* IE and the *Active Pattern Sequence Information* IE, the Node B shall use the information to activate the indicated Transmission Gap Pattern Sequences(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 DRNS shall consider the concerning Transmission Gap Pattern Sequence as activated at that CFN.]
- [FDD If any received *TGCFN* IE does not have the same value as the received *CM Configuration Change CFN* IE but the first CFN after the CM Configuration Change CFN with a value equal to the *TGCFN* IE has already passed, the DRNS shall consider the concerning Transmission Gap Pattern Sequence as activated at that CFN.]
- [FDD For all other Transmission Gap Pattern Sequences included in the Active Pattern Sequence
   Information IE, the DRNS shall activate each Transmission Gap Pattern Sequence at the first CFN after
   the CM Configuration Change CFN with a value equal to the TGCFN IE for the Transmission Gap
   Pattern Sequence.]

#### [FDD - 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 *pth* to "*PhCH number p*".]

#### General:

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

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

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

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

[FDD - If the *TFCI Signalling Mode* IE within the RADIO LINK SETUP message indicates that there shall be a hard split on the *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 *Diversity Mode* IE is "STTD", "Closedloop mode1", or "Closedloop mode2", the Node B shall activate/deactivate the Transmit Diversity to each Radio Link in accordance with *Transmit Diversity Indication* IE.]

## **DL Power Control:**

[FDD – The Node B shall start 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 is achieved for the RLS or a DL POWER CONTROL REQUEST message is received. 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, the  $P_{SIR}(k)$ , as described in ref.[10] subclause 5.2.1.3, shall be added to the maximum DL power in slot k.]

[TDD – 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 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 RL 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, 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.]

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

[FDD – The *First RLS Indicator* IE indicates if the concerning RL shall be considered part of the first RLS established towards this UE. The *First RLS Indicator* IE shall be used by the Node B together with the value of the *DL TPC pattern 01 count* IE which the Node B has received in the Cell Setup procedure, to determine the initial TPC pattern in the DL of the concerning RL and all RLs which are part of the same RLS, as described in [10], section 5.1.2.2.1.2.]

[FDD – For each RL not having a common generation of the TPC commands in the DL with another RL, the Node B shall assign the *RL Set ID* IE included in the RADIO LINK SETUP RESPONSE message a value that uniquely identifies the RL Set within the Node B Communication context.]

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

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

## Response Message:

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

After sending of the RADIO LINK SETUP RESPONSE message the Node B shall continuously attempt to obtain UL synchronisation on the Uu and start reception on the new RL. [FDD – The Node B shall start transmission on the new RL after synchronisation is achieved in the DL user plane as specified in [16].] [TDD – The Node B shall start

# 8.2.17.3 Unsuccessful Operation



Figure 25: Radio Link Setup procedure: Unsuccessful Operation

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

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

Typical cause values are as follows:

## Radio Network Layer Cause

- Combining not supported
- Combining Resources not available
- Requested Tx Diversity Mode not supported
- Number of DL codes not supported
- Number of UL codes not supported
- UL SF not supported
- DL SF not supported
- Dedicated Transport Channel Type not supported
- Downlink Shared Channel Type not supported
- Uplink Shared Channel Type not supported
- CM not supported

#### **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

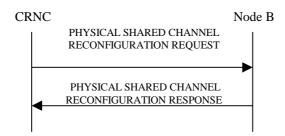


Figure 26: Physical Shared Channel Reconfiguration: Successful Operation

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

If the PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST message includes an *SFN* IE the Node B will 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 new sets to 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, and shall make these available to all the current and future DSCH and USCH transport channels; and shall respond with PHYSICAL SHARED CHANNEL RECONFIGURATION RESPONSE:

# 8.2.18.3 Unsuccessful Operation

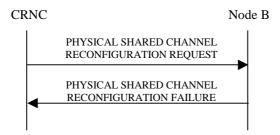


Figure 27: Physical Shared Channel Reconfiguration procedure: Unsuccessful Opreration

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

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

Typical cause values are as follows:

#### Radio Network Layer Cause

- Cell not available
- Node B Resources unavailable

#### **Transport Layer Cause**

- Transport Resources Unavailable

# Miscellaneous Cause

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

# 8.2.18.4 Abnormal Conditions

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# 8.2.19 Reset

## 8.2.19.1 General

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

# 8.2.19.2 Successful Operation

# 8.2.19.2.1 Reset Initiated by the CRNC

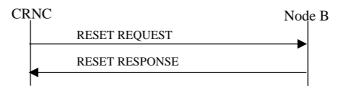


Figure 27A Reset procedure (CRNC to Node B), Successful Operation

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

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

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

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

# 8.2.19.2.2 Reset Initiated by the Node B

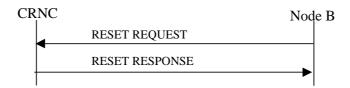


Figure 27B Reset procedure (Node B to CRNC), Successful Operation

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

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

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

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

# 8.2.19.3 Unsuccessful Operation

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## 8.2.19.4 Abnormal Conditions

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

# 8.3 NBAP Dedicated Procedures

## 8.3.1 Radio Link Addition

## 8.3.1.1 General

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

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

# 8.3.1.2 Successful Operation

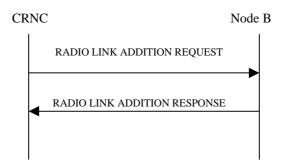


Figure: 28 Radio Link Addition procedure, Successful Operation

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

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

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

#### **Physical Channels Handling:**

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

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

# [FDD - Compressed Mode]:

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

[FDD- If the RADIO LINK ADDITION REQUEST contains the *Transmission Gap Pattern Sequence Code Information* IE for any of the allocated DL Channelisation Codes, the Node B shall apply the alternate

scrambling code as indicated for each DL Channelisation Code for which the *Transmission Gap Pattern Sequence Code Information* IE is set to "Code Change".]

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

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

#### [TDD - CCTrCH Handling]:

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

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

## **Radio Link Handling:**

#### **Diversity Combination Control:**

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

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

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

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

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

# [FDD - Transmit Diversity]:

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

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

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

[FDD – If the RADIO LINK ADDITION REQUEST message includes the *Initial DL Transmission Power* IE, the Node B shall apply the given power to the transmission on each DL DPCH of the RL when starting transmission until either UL synchronisation on the Uu is achieved for the RLS or a DL POWER REQUEST message is received. If no *Initial DL Transmission power* IE is included, the Node B shall use any transmission power level currently used on already existing RL's for this UE. No inner loop power control or balancing shall be performed during this period. The DL power shall then vary according to the inner loop

power control (see ref.[10], subclause 5.2.1.2) with DPC MODE=0 and the downlink power control procedure (see 8.3.7).]

[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 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 RL's for this UE. No inner loop power control shall be performed during this period. The DL power shall then vary according to the inner loop power control (see ref.[22], subclause 4.2.3.3).]

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

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

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

#### 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.]

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

[FDD – For each RL not having a common generation of the TPC commands in the DL with another RL, the Node B shall assign the *RL Set ID* IE included in the RADIO LINK ADDITION RESPONSE message a value that uniquely identifies the RL Set within the Node B Communication context.]

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

[FDD – After addition of the new RL(s), the UL out-of-sync algorithm defined in [10] shall for each of the previously existing and newly established RL Set(s) use the maximum value of the parameters  $N_{OUTSYNC\_IND}$  and  $T_{RLFAILURE}$ , and the minimum value of the parameters  $N_{INSYNC\_IND}$ , that are configured in the cells supporting the radio links of the RL Set.]

#### Response message:

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

After sending of the RADIO LINK ADDITION RESPONSE message the Node B shall continuously attempt to obtain UL synchronisation on the Uu and start reception on the new RL. [FDD – The Node B shall start transmission on the new RL after synchronisation is achieved in the DL user plane 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

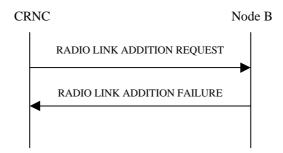


Figure 29: Radio Link Addition procedure: Unsuccessful Operation

If 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 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 all Radio Links related to one UE-UTRAN connection within a Node B.

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

# 8.3.2.2 Successful Operation

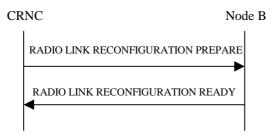


Figure 30: Synchronised Radio Link Reconfiguration Preparation procedure, Successful Operation

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

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

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

#### **DCH Modification:**

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

- If the *DCHs to Modify* IE includes the *Frame Handling Priority* IE, the Node B should store this information for this DCH in the new configuration. The received Frame Handling Priority should be used when prioritising between different frames in the downlink on the radio interface in congestion situations within the Node B once the new configuration has been activated.
- If the *DCHs to Modify* IE includes the *Transport Format Set* IE for the UL of a DCH, the Node B shall apply the new Transport Format Set in the Uplink of this DCH in the new configuration.
- If the *DCHs to Modify* IE includes the *Transport Format Set* IE for the DL of a DCH, the Node B shall apply the new Transport Format Set in the Downlink of this DCH in the new configuration.
- If the *DCHs to Modify* IE includes multiple *DCH Specific Info* IEs then the Node B shall treat the DCHs in the *DCHs to Modify* IE as a set of co-ordinated DCHs. The Node B shall include these DCHs in the new configuration only if it can include all of them in the new configuration.
- If the *DCHs to Modify* IE includes the *UL FP Mode* IE for a DCH or a DCH which belongs to a set of coordinated DCHs, the Node B shall apply the new FP Mode in the Uplink of the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- If the *DCHs to Modify* IE includes the *ToAWS* IE for a DCH or a DCH which belongs to a set of co-ordinated DCHs, the Node B shall apply the new ToAWS in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- If the *DCHs to Modify* IE includes the *ToAWE* IE for a DCH or a DCH which belongs to a set of co-ordinated DCHs, the Node B shall apply the new ToAWE in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- [TDD If the *DCHs to Modify* IE includes the *CCTrCH ID* IE for the DL of a DCH to be modified, the Node B shall apply the new CCTrCH ID in the Downlink of this DCH in the new configuration.]
- [TDD If the *DCHs to Modify* IE includes the *CCTrCH ID* IE for the UL of a DCH to be modified, the Node B shall apply the new CCTrCH ID in the Uplink of this DCH in the new configuration.]

#### **DCH Addition:**

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

- If the *DCHs to Add* IE includes multiple *DCH specific Info* IEs then, the Node B shall treat the DCHs in the *DCHs to Add* IE as a set of co-ordinated DCHs. The Node B shall include these DCHs in the new configuration only if it can include all of them in the new configuration.
- [FDD For DCHs which do not belong to a set of co-ordinated DCHs with the *QE-Selector* IE set to "selected", the Transport channel BER from that DCH shall be the base for the QE in the UL data frames. If no Transport channel BER is available for the selected DCH the Physical channel BER shall be used for the QE, ref. [16]. If the QE-Selector is set to "non-selected", the Physical channel BER shall be used for the QE in the UL data frames, ref. [16].]
- For a set of co-ordinated DCHs the Transport channel BER from the DCH with the *QE-Selector* IE set to "selected" shall be used for the QE in the UL data frames, ref. [16]. [FDD If no Transport channel BER is available for the selected DCH the Physical channel BER shall be used for the QE, ref. [16]. If all DCHs have *QE-Selector* IE set to "non-selected" the Physical channel BER shall be used for the QE, ref. [16].]
- The Node B should store the *Frame Handling Priority* IE received for a DCH to be added in the new configuration The received Frame Handling Priority should be used when prioritising between different frames in the downlink on the radio interface in congestion situations within the Node B once the new configuration has been activated.
- The Node B shall use the included *UL FP Mode* IE for a DCH or a set of co-ordinated DCHs to be added as the new FP Mode in the Uplink of the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- The Node B shall use the included *ToAWS* IE for a DCH or a set of co-ordinated DCHs to be added as the new Time of Arrival Window Start Point in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- The Node B shall use the included *ToAWE* IE for a DCH or a set of co-ordinated DCHs to be added as the new Time of Arrival Window End Point in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- [TDD The Node B shall apply the *CCTrCH ID* IE (for the DL) in the Downlink of this DCH in the new configuration.]
- [TDD The Node B shall apply the *CCTrCH ID* IE (for the UL) in the Uplink of this DCH in the new configuration.]

#### **DCH Deletion:**

If the RADIO LINK RECONFIGURATION PREPARE message includes any *DCHs to Delete* IEs, the Node B shall not include the referenced DCHs in the new configuration.

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

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

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

- [FDD If the *UL DPCH Information* IE includes the *Uplink Scrambling Code* IE, the Node B shall apply this Uplink Scrambling Code to the new configuration.]
- [FDD If the *UL DPCH Information* IE includes the *Min UL Channelisation Code Length* IE, the Node B shall apply the value in the new configuration. The Node B shall apply the contents of the *Max Number of UL DPDCHs* IE (if it is included) in the new configuration.]
- [FDD If the *UL DPCH Information* IE includes the *UL SIR Target* IE, the Node B shall use the value for the UL inner loop power control when the new configuration is being used.]

- [FDD If the *UL DPCH Information* IE includes the *Puncture Limit* IE, the Node B shall apply the value in the uplink of the new configuration.]
- [FDD The Node B shall use the *TFCS* IE for the UL (if present) when reserving resources for the uplink of the new configuration. The Node B shall apply the new TFCS in the Uplink of the new configuration.]
- [FDD If the *UL DPCH Information* IE includes the *UL DPCCH Slot Format* IE, the Node B shall set the new Uplink DPCCH Structure to the new configuration.]
- [FDD If the *UL DPCH Information* IE includes the *Diversity Mode* IE, the Node B shall apply diversity according to the given value.]
- [FDD If the *UL DPCH Information* IE includes an *SSDT Cell Identity Length* IE and/or an *S-Field Length* IE, the Node B shall apply the values in the new configuration.]

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

- [FDD The Node B shall use the *TFCS* IE for the DL (if it is present) when reserving resources for the downlink of the new configuration. The Node B shall apply the new TFCS in the Downlink of the new configuration.]
- [FDD If the *DL DPCH Information* IE includes the *TFCI Signalling Mode* IE or the *TFCI Presence* IE, the Node B shall use the information when building TFCIs in the new configuration.]
- [FDD If the *DL DPCH Information* IE includes the *DL DPCCH Slot Format* IE, group the Node B shall set the new Downlink DPCCH Structure to the new configuration.]
- [FDD If the *DL DPCH Information* IE includes the *Multiplexing Position* IE, the Node B shall apply the indicated multiplexing type in the new configuration.]
- [FDD If the *DL DPCH Information* IE includes the *Limited Power Increase* IE and the IE is set to 'Used', the Node B shall use Limited Power Increase ref. [10] subclause 5.2.1 for the inner loop DL power control in the new configuration.]
- [FDD If the *DL DPCH Information* IE includes the *Limited Power Increase* IE and the IE is set to 'Not Used', the Node B shall not use Limited Power Increase for the inner loop DL power control in the new configuration.]
- [FDD If the *DL DPCH Information* IE includes the *PDSCH code mapping* IE then the Node B shall apply the defined mapping between TFCI values and PDSCH channelisation codes.]
- [FDD If the *DL DPCH Information* IE includes the *PDSCH RL ID* IE then the Node B shall infer that the PDSCH for the specified user will be transmitted on the defined radio link.]

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

#### [TDD – UL/DL CCTrCH Modification]

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

- [TDD If the IE includes any of *TFCS* IE, *TFCI coding* IE or *Puncture Limit* IE the Node B shall apply these as the new values, otherwise the old values specified for this CCTrCH are still applicable.]
- [TDD If the IE includes any *UL DPCH to add* or *DL DPCH to add* IEs, the Node B shall include this DPCH in the new configuration.]
- [TDD If the IE includes any *UL DPCH to delete* or *DL DPCH to delete* IEs, the Node B shall remove this DPCH in the new configuration.]
  - [TDD If the IE includes any UL DPCH to modify or DL DPCH to modify IEs, and includes any of Repetition Period IE, Repetition Length IE, or TDD DPCH Offset IE or the message includes UL/DL Timeslot Information and includes any of 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 modify*, *DSCH to add* or *DSCH to delete* IEs, then the Node B shall use this information to add/modify/delete the indicated DSCH channels to/from the radio link, in the same way as the DCH info is used to add/modify/release DCHs.

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

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

[FDD – If the *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 *pth* 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 scrambling code in the new configuration.]
- [FDD If the *RL Information* IE contains the *Transmission Gap Pattern Sequence Code Information* IE in the *DL Code Information* IE for any of the allocated DL Channelisation Codes, the Node B shall apply the alternate scrambling code as indicated whenever the downlink compressed mode method SF/2 is active in the new configuration.]
- If the *RL Information* IE includes the *Maximum DL Power* and/or the *Minimum DL Power* IEs, the Node B shall apply the values in the new configuration. [FDD During compressed mode, the  $P_{SIR}(k)$ , as described in ref.[10] subclause 5.2.1.3, shall be added to the maximum DL power in slot k.]
- [TDD If the *RL Information* IE includes the *Initial DL Transmission Power* IE, the Node B shall 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 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 CCTrCH's when starting transmission for a new CCTrCH. No inner loop power control shall be performed during this period. The DL power shall then vary according to the inner loop power control (see ref.[22], subclause 4.2.3.3).]

#### 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 exist a Prepared Reconfiguration, as defined in subclause 3.1.

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

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

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

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

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

# 8.3.2.3 Unsuccessful Operation

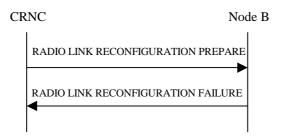


Figure 31: Synchronised Radio Link Reconfiguration Preparation procedure, Unsuccessful Operation

If the Node B cannot reserve the necessary resources for all the new DCHs of one set of co-ordinated DCHs requested to be added, it shall regard the Synchronised Radio Link Reconfiguration Preparation procedure as having failed.

If the requested Synchronised Radio Link Reconfiguration Preparation procedure fails for one or more RLs the Node B shall send the RADIO LINK RECONFIGURATION FAILURE message to the CRNC, indicating the reason for failure.

Typical cause values are as follows:

#### **Radio Network Layer Cause**

- UL SF not supported
- DL SF not supported
- Downlink Shared Channel Type not supported
- Uplink Shared Channel Type not supported
- CM not supported
- Number of DL codes not supported
- Number of UL codes not supported

#### **Transport Layer Cause**

- Transport Resources Unavailable

## Miscellaneous Cause

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

# 8.3.2.4 Abnormal Conditions

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

If more than one DCH of a set of co-ordinated DCHs has the *QE-Selector* IE set to "selected" [TDD – or no DCH of a set of co-ordinated DCHs has the *QE-Selector* IE set to "selected"] the Node B shall regard the Synchronised Radio Link Reconfiguration Preparation procedure as failed and shall respond with a RADIO LINK RECONFIGURATION FAILURE message.

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

If the RADIO LINK RECONFIGURATION PREPARE message includes a *DCHs to Modify* IE or *DCHs to Add* IE with multiple *DCH Specific Info* IEs, and if the DCHs in the *DCHs to Modify* IE or *DCHs to Add* IE do not have the same *Transmission Time Interval* IE in the *Semi-static Transport Format Information* IE, then the Node B shall reject the procedure using the RADIO LINK 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.

[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 Sequence status IE repetitions shall be started when the indicated *TGCFN* IE elapses. The *CFN* IE and *TGCFN* IE for each sequence refer to the next coming CFN with that value. If the values of the *CFN* IE and the *TGCFN* IE are equal, the concerning Transmission Gap Pattern Sequence shall be started immediately at the CFN with a value equal to the value received in the *CFN* IE.]

#### 8.3.3.3 Abnormal Conditions

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

# 8.3.4 Synchronised Radio Link Reconfiguration Cancellation

## 8.3.4.1 General

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

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

# 8.3.4.2 Successful Operation



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

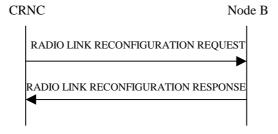


Figure 34: Unsynchronised Radio Link Reconfiguration Procedure, Successful Operation

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

Upon reception, the Node B shall modify the configuration of the Radio Link(s) according to the parameters given in the message. Unless specified below, the meaning of parameters is specified in other specifications.

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

### **DCH Modification:**

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

- If the *DCHs to Modify* IE includes on the *Frame Handling Priority* IE, the Node B should store this information for this DCH in the new configuration. The received Frame Handling Priority should be used when prioritising between different frames in the downlink on the radio interface in congestion situations within the Node B once the new configuration has been activated.
- If the *DCHs to Modify* IE includes the *Transport Format Set* IE for the UL, the Node B shall apply the new Transport Format Set in the Uplink of this DCH in the new configuration.
- If the *DCHs to Modify* IE includes the *Transport Format Set* IE for the DL, the Node B shall apply the new Transport Format Set in the Downlink of this DCH in the new configuration.
- If the *DCHs to Modify* IE includes multiple *DCH Specific Info* IEs then the Node B shall treat the DCHs in the *DCHs to Modify* IE as a set of co-ordinated DCHs. The Node B shall include these DCHs in the new configuration only if it can include all of them in the new configuration.
- If the *DCHs to Modify* IE includes the *UL FP Mode* IE for a DCH or a set of co-ordinated DCHs, the Node B shall apply the new FP Mode in the Uplink of the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- If the *DCHs to Modify* IE includes the *ToAWS* IE for a DCH or a set of co-ordinated DCHs, the Node B shall apply the new ToAWS in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- If the *DCHs to Modify* IE includes the *ToAWE* IE for a DCH or a set of co-ordinated DCHs, the Node B shall apply the new ToAWE in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- [TDD If the RADIO LINK RECONFIGURATION REQUEST message includes the *CCTrCH ID* IE for the DL of a DCH to be modified, the Node B shall apply the new CCTrCH ID in the Downlink of this DCH in the new configuration.]
- [TDD If the RADIO LINK RECONFIGURATION REQUEST message includes the *CCTrCH ID* IE for the UL of a DCH to be modified, the Node B shall apply the new CCTrCH ID in the Uplink of this DCH in the new configuration.]

# **DCH Addition:**

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

- If a *DCHs to Add* IE includes multiple *DCH Specific Info* IEs for a DCH to be added, the Node B shall treat the DCHs in the *DCHs to Add* IE as a set of co-ordinated DCHs. The Node B shall include these DCHs in the new configuration only if it can include all of them in the new configuration.
- [FDD For DCHs which do not belong to a set of co-ordinated DCHs with the *QE-Selector* IE set to "selected", the Node B shall use the Transport channel BER from that DCHas the base for the QE in the UL data frames. If no Transport channel BER is available for the selected DCH, the Physical channel BER shall be used for the QE [16]. If the QE-Selector is set to "non-selected", the Physical channel BER shall be used for the QE in the UL data frames, ref. [16].]
- For a set of co-ordinated DCHs, the Node B shall use the Transport channel BER from the DCH with the *QE-Selector* IE set to "selected" as the QE in the UL data frames [16]. [FDD If no Transport channel BER is available for the selected DCH, the Physical channel BER shall be used for the QE [16]. If all DCHs have *QE-Selector* IE set to "non-selected" the Physical channel BER shall be used for the QE [16].]
- The Node B should store the *Frame Handling Priority* IE received for a DCH to be added in the new configuration. The received Frame Handling Priority should be used when prioritising between different frames in the downlink on the radio interface in congestion situations within the Node B once the new configuration has been activated.
- The Node B shall use the included *UL FP Mode* IE for a DCH or a set of co-ordinated DCHs to be added as the new FP Mode in the Uplink of the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.

- The Node B shall use the included *ToAWS* IE for a DCH or a set of co-ordinated DCHs to be added as the new Time of Arrival Window Start Point in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- The Node B shall use the included *ToAWE* IE for a DCH or a set of co-ordinated DCHs to be added as the new Time of Arrival Window End Point in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- [TDD If the RADIO LINK RECONFIGURATION REQUEST message includes the *CCTrCH ID* IE for the DL of a DCH to be modified, the Node B shall apply the new CCTrCH ID in the downlink of this DCH in the new configuration.]
- [TDD If the RADIO LINK RECONFIGURATION REQUEST message includes the *CCTrCH ID* IE for the UL of a DCH to be modified, the Node B shall apply the new CCTrCH ID in the Uplink of this DCH in the new configuration.]

#### **DCH Deletion:**

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

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

## [FDD - Physical Channel Modification:]

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

FDD – If the *UL DPCH Information* IE includes the *TFCS* IE for the UL, the Node B shall apply the new TFCS in the Uplink of the new configuration.]

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

- [FDD If the *DL DPCH Information* IE includes on the *TFCS* IE for the DL, the Node B shall apply the new TFCS in the Downlink of the new configuration.]
- [FDD If the *DL DPCH Information* IE includes the *TFCI Signalling Mode* IE, the Node B shall use the use the information when building TFCIs in the new configuration.
- [FDD If the *DL DPCH Information* IE includes the *Limited Power Increase* IE and the IE is set to 'Used', the Node B shall, if supported, use Limited Power Increase according to ref. [10] subclause 5.2.1 for the inner loop DL power control in the new configuration.]
- [FDD If the *DL DPCH Information* IE message includes the *Limited Power Increase* IE and the IE is set to 'Not Used', the Node B shall not use Limited Power Increase for the inner loop DL power control in the new configuration.]

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

# [TDD – UL/DL CCTrCH Modification]

[TDD – If the RADIO LINK RECONFIGURATION REQUEST message includes any *UL CCTrCH to modify* IE or *DL CCTrCH to modify* IE in the Radio Link(s), the Node B shall reserve necessary resources for the new configuration of the Radio Link(s) according to the parameters given in the message.]

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

# [TDD – UL/DL CCTrCH Deletion]

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

#### **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.
- 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 During compressed mode, the  $P_{SIR}(k)$ , as described in ref.[10] subclause 5.2.1.3, shall be added to the maximum DL power in slot k.]
- [FDD If the *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.

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

The Node B shall include in the RADIO LINK RECONFIGURATION RESPONSE message the *Transport Layer Address* IE and the *Binding ID* IE in the *DCH Information Response* IE for any Transport Channel being added, or any Transport Channel being modified for which a new transport bearer was requested with the *Transport Bearer Request Indicator* IE. The detailed frame protocol handling during transport bearer replacement is described in [16], subclause 5.10.1.

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

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

# 8.3.5.3 Unsuccessful Operation

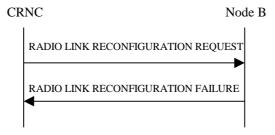


Figure 35: Unsynchronised Radio Link Reconfiguration procedure, Unsuccessful Operation

If the Node B cannot allocate the necessary resources for all the new DCHs of one set of coordinated, DCHs requested to be set-up it shall regard the Unsynchronised Radio Link Reconfiguration procedure as having failed.

If the requested Unsynchronised Radio Link Reconfiguration procedure fails for one or more Radio Link(s) the Node B shall send the RADIO LINK RECONFIGURATION FAILURE message to the CRNC, indicating the reason for failure.

Typical cause values are as follows:

#### Radio Network Layer Cause

- CM not supported

#### **Transport Layer Cause**

- Transport Resources Unavailable

#### **Miscellaneous Cause**

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

# 8.3.5.4 Abnormal Conditions

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

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

If more than one DCH of a set of co-ordinated DCHs has the *QE-Selector* IE set to "selected" [TDD – or no DCH of a set of co-ordinated DCHs has the *QE-Selector* IE set to "selected"] the Node B shall regard the Unsynchronised Radio Link Reconfiguration Preparation procedure as failed and shall respond with a RADIO LINK RECONFIGURATION FAILURE message.

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

# 8.3.6 Radio Link Deletion

#### 8.3.6.1 General

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

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

# 8.3.6.2 Successful Operation

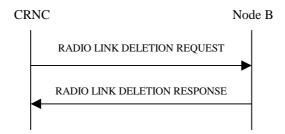


Figure 36: Radio Link Deletion procedure, Successful Operation

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

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

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

# 8.3.6.3 Unsuccessful Operation

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# 8.3.6.4 Abnormal Conditions

If the RL indicated by the *RL ID* IE, *Node B Communication ID* IE and *CRNC Communication ID* IE does not exists, the Node B shall response with the RADIO LINK DELETION RESPONSE message and use the *CRNC Communication Context ID* IE received in the RADIO LINK DELETION REQUEST message.

# 8.3.7 Downlink Power Control [FDD]

## 8.3.7.1 General

The purpose of this procedure is to balance the DL transmission powers of one or more Radio Links used for the related UE-UTRAN connection within the Node B. The Downlink Power Control procedure may be initiated by the CRNC at any time when the Node B communication context exists, irrespective of other ongoing CRNC initiated dedicated NBAP procedures towards this Node B communication context. The only exception occurs when the CRNC has requested the deletion of the last RL via this Node B, in which case the Downlink Power Control procedure shall no longer be initiated.

## 8.3.7.2 Successful Operation



Figure 37: Downlink Power Control procedure, Successful Operation

The procedure is initiated by the CRNC sending a DL POWER CONTROL REQUEST message to the Node B.

The Power Adjustment Type IE defines the characteristic of the power adjustment.

If the value of the *Power Adjustment Type* IE is *Common*, the Node B shall perform the power adjustment (see below) for all radio links associated with the context identified by the *Node B Communication Context ID* IE using a common DL reference power level.

If the value of the *Power Adjustment Type* IE is *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 value of the *Power Adjustment Type* IE is '*None*', the Node B shall suspend on going power adjustments for all radio links for the UE Context.

If the *Inner Loop DL PC Status* IE is present and set to 'Active', the Node B shall activate inner loop DL power control for all radio links for the Node B communication context. If the *Inner Loop DL PC Status* IE is present and set to 'Inactive', the Node B shall deactivate inner loop DL power control for all radio links for the Node B communication context according to ref. [10].

#### **Power Adjustment**

The power balancing adjustment shall be superimposed on the inner loop power control adjustment (see Ref. [10]) if activated. The power balancing adjustment shall be such that:

$$\sum P_{bal} = (1 - r)(P_{ref} + P_{P-CPICH} - P_{init})$$
 with an accuracy of  $\pm 0.5$  dB

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

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

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

#### 8.3.7.3 Abnormal Conditions

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# 8.3.8 Dedicated Measurement Initiation

## 8.3.8.1 General

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

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

# 8.3.8.2 Successful Operation

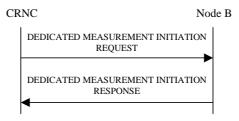


Figure 38: Dedicated Measurement Initiation procedure, Successful Operation

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* IE is set to "RL", measurement results shall be reported for all indicated Radio Links.

[FDD – If the *Dedicated Measurement Object Type* IE is set to "RLS", measurement results shall be reported for all indicated Radio Link Sets.]

[FDD - If the *Dedicated Measurement Object Type* IE is set to "ALL RL", measurement results shall be reported for all current and future Radio Links within the Node B Communication Context.]

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

[FDD – If the *Dedicated Measurement Object Type* IE is set to "ALL RLS", measurement results shall be reported for all existing and future Radio Link Sets within the Node B Communication Context.]

[TDD – If the *DPCH ID* IE is provided within the RL Information the measurement request shall apply for the requested physical channel individually. If no *DPCH ID* IE 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 measurement report or in the measurement response, the latter only in the case the *Report Characteristics* IE is set to 'On-Demand'. The reported CFN shall be the CFN at the time when the measurement value was reported by the layer 3 filter, referred to as point C in the measurement model [25].

If the *CFN* IE is provided, it indicates the frame for which the first measurement shall be provided. The provided measurement value shall be the one reported by the layer 3 filter, referred to as point C in the measurement model [25].

#### **Report characteristics**

The Report Characteristics IE is set to how the reporting of the measurement shall be performed. See also Annex B.

If the *Report Characteristics* IE is set to 'On-Demand', the Node B shall return the result of the measurement immediately.

If the *Report Characteristics* IE is set to 'Periodic', the Node B shall periodically initiate the Dedicated Measurement Report procedure for this measurement, with the requested report frequency.

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

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

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

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

If the *Report Characteristics* IE is set to 'Event E', the Node B shall initiate the Dedicated Measurement Reporting procedure when the measured entity rises above the 'Measurement Threshold 1' and stays there for the 'Measurement Hysteresis Time' (Report A). When the conditions for Report A are met and the *Report Periodicity* IE is provided the Node B shall also initiate the Dedicated Measurement Reporting procedure periodically. If the conditions for Report A have been met and the measured entity falls below the 'Measurement Threshold 2' and stays there for the 'Measurement

Hysteresis Time', the Node B shall initiate the Dedicated Measurement Reporting procedure (Report B) as well as terminating any corresponding periodic reporting. If 'Measurement Threshold 2' is not present, the Node B shall use 'Measurement Threshold 1' instead. If no 'Measurement Hysteresis Time' is provided, the Node B shall use the value zero as hysteresis times for both Report A and Report B.

If the *Report Characteristics* IE is set to 'Event F', the Node B shall initiate the Dedicated Measurement Reporting procedure when the measured entity falls below the 'Measurement Threshold 1' and stays there for the 'Measurement Hysteresis Time' (Report A). When the conditions for Report A are met and the *Report Periodicity* IE is provided the Node B shall also initiate the Dedicated Measurement Reporting procedure periodically. If the conditions for Report A have been met and the measured entity rises above the 'Measurement Threshold 2' and stays there for the 'Measurement Hysteresis Time', the Node B shall initiate the Dedicated Measurement Reporting procedure (Report B) as well as terminating any corresponding periodic reporting. If 'Measurement Threshold 2' is not present, the Node B shall use 'Measurement Threshold 1' instead. If no 'Measurement Hysteresis Time' is provided, the Node B shall use the value zero as hysteresis times for both Report A and Report B.

If the *Report Characteristics* IE is not set to 'On-Demand', the Node B is required to perform reporting for a dedicated measurement object, in accordance with the conditions provided in the DEDICATED MEASUREMENT INITIATION REQUEST message, as long as the object exists. If no dedicated measurement object(s) for which a measurement is defined exists any more the Node B shall terminate the measurement locally, i.e. without reporting this to the CRNC.

If at the start of the measurement, the reporting criteria are fulfilled for any of Event A, Event B, Event E or Event F, the Node B shall initiate the Dedicated Measurement Reporting procedure immediately, and then continue with the measurements as specified in the DEDICATED MEASUREMENT INITIATION REQUEST message.

#### Higher layer filtering

The *Measurement Filter Coefficient* IE indicates how filtering of the measurement values shall be performed before measurement event evaluation and reporting.

The averaging shall be performed according to the following formula.

$$F_n = (1-a) \cdot F_{n-1} + a \cdot M_n$$

The variables in the formula are defined as follows

 $F_n$  is the updated filtered measurement result

 $F_{n-1}$  is the old filtered measurement result

 $M_n$  is the latest received measurement result from physical layer measurements

 $a = 1/2^{(k/2)}$ , 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  $M_I$  when the first measurement result from the physical layer measurement is received.

#### Response message

If the Node B was able to initiate the measurement requested by the CRNC, it shall respond with the DEDICATED MEASUREMENT INITIATION RESPONSE message using the communication control port assigned to the Node B communication context. The message shall include the same Measurement ID that was used in the measurement request.

Only in the case when *Report Characteristics* IE is set to "On-Demand", the DEDICATED MEASUREMENT INITIATION RESPONSE message shall contain the measurement result. In this case also the *Dedicated Measurement Object* IE shall be included if it was included in the request message.

In the case that the *Node B Communication Context ID* IE is set to 'All NBCC', the *CRNC Communication Context ID* IE in the DEDICATED MEASUREMENT INITIATION RESPONSE shall be set to the value 'All CRNCCC', which is reserved for this purpose.

#### **Interaction with Reset Procedure**

If a measurement has been requested with the *Node B Communication Context ID* IE set to 'All NBCC', the Node B shall terminate the measurement locally if either the CRNC or the Node B initiates the Reset procedure for the relevant Communication Control Port or the entire Node B.

### 8.3.8.3 Unsuccessful Operation

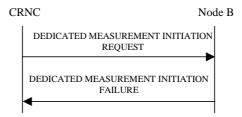


Figure 39: Dedicated Measurement Request procedure: Unsuccessful Operation

If the requested measurement cannot be initiated, the Node B shall send a DEDICATED MEASUREMENT INITIATION FAILURE message using the communication control port assigned to the Node B communication context. The message shall include the same Measurement ID that was used in the DEDICATED MEASUREMENT INITIATION REQUEST message and the *Cause* IE set to an appropriate value.

In the case that the *Node B Communication Context ID* IE is set to 'All NBCC' the *CRNC Communication Context ID* IE in the DEDICATED MEASUREMENT INITIATION FAILURE shall be set to the value 'All CRNCCC', which is reserved for this purpose.

Typical cause values are as follows:

#### Radio Network Layer cause

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

#### Miscellaneous Cause

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

### 8.3.8.4 Abnormal Conditions

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

# 8.3.9 Dedicated Measurement Reporting

### 8.3.9.1 General

This procedure is used by the Node B to report the result of measurements requested by the CRNC with the Dedicated Measurement Initiation procedure. The Node B may initiate the Dedicated Measurement Reporting procedure at any time after establishing a Radio Link, as long as the Node B communication context exists.

### 8.3.9.2 Successful Operation



Figure 40: Dedicated Measurement Reporting procedure, Successful Operation

If the requested measurement reporting criteria are met, the Node B shall initiate the Dedicated Measurement Reporting procedure. The DEDICATED MEASUREMENT REPORT message shall use the communication control port assigned to the Node B communication context. If the measurement was initiated (by the Dedicated Measurement Initiation procedure) for multiple dedicated measurement objects, the Node B may include measurement values for multiple objects in the DEDICATED MEASUREMENT REPORT message. Unless specified below, the meaning of the parameters are given in other specifications.

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

If the achieved measurement accuracy does not fulfil the given accuracy requirement, the Measurement not available shall be reported.

### 8.3.9.3 Abnormal Conditions

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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 measurements corresponding to the received Dedicated Measurement ID.

#### 8.3.10.3 Abnormal Conditions

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### 8.3.11 Dedicated Measurement Failure

#### 8.3.11.1 General

This procedure is used by the Node B to notify the CRNC that a measurement previously requested by the Dedicated Measurement Initiation procedure can no longer be reported. The Node B is allowed to initiate the DEDICATED MEASUREMENT FAILURE INDICATION message at any time after having sent the RADIO LINK SETUP RESPONSE message, as long as the Node B communication context exists.

### 8.3.11.2 Successful Operation



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 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

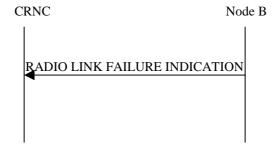


Figure 43: Radio Link Failure procedure, Successful Operation

When Node B detects that one or more Radio Link [FDD - or Radio Link Sets] [TDD - or CCTrCHs within a Radio Link] is no longer available, it sends the RADIO LINK FAILURE INDICATION message to CRNC indicating the

failed Radio Links or Radio Link Sets or CCTrCHs with the most appropriate cause values in the *Cause* IE. If the failure concerns one or more individual Radio Links the Node B shall indicate the affected Radio Link(s) using the *RL Information* IE. [FDD - The Node B shall indicate the affected Radio Link Set(s) using the *RL Set Information* IE.] [TDD – If the failure concerns only the failure of one or more CCTrCH's within in a radio link the Node B shall indicate the affected CCTrCH's using the *CCTrCH ID* IE.]

When the Radio Link Failure procedure is used to notify the loss of UL synchronisation of a [FDD – Radio Link Set] [TDD – Radio Link or CCTrCHs within a Radio Link] on the Uu, the message shall be sent, with the cause value 'Synchronisation Failure', when indicated by the UL out-of-sync algorithm defined in [10] and [21]. [FDD – The algorithm in [10] shall use the maximum value of the parameters N\_OUTSYNC\_IND and T\_RLFAILURE, and the minimum value of the parameters N\_INSYNC\_IND, that are configured in the cells supporting the radio links of the RL Set.]

[FDD – When the Radio Link Failure procedure is used to indicate permanent failure in one or more Radio Links/Radio Link Sets due the occurrence of an UL or DL frame with more than one transmission gap caused by one or more compressed mode pattern sequences, the DL transmission shall be stopped and the RADIO LINK FAILURE INDICATION message shall be sent with the cause value 'Invalid CM Settings'. After sending the RADIO LINK FAILURE INDICATION message to notify the permanent failure, the Node B shall not remove the Radio Link(s)/Radio Link Set(s) from the UE Context, or the UE Context itself.]

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

Typical cause values are:

#### **Radio Network Layer Causes:**

- Synchronisation Failure
- Invalid CM settings

#### **Transport Layer Causes:**

- Transport Resources Unavailable

#### **Miscellaneous Causes:**

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

### 8.3.12.3 Abnormal Conditions

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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.

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 sync detection algorithm defined in ref. [10] and [21]. [FDD – The algorithm in ref. [10] shall use the minimum value of the parameters N\_INSYNC\_IND that are configured in the cells supporting the radio links of the RL Set.]

[TDD – If the re-established Uu synchronisation concerns one or more individual Radio Links the Node B shall indicate the affected Radio Link(s) using the *RL Information* IE.] [TDD – If the re-established Uu synchronization concerns one or more individual CCTrCHs within a radio link the Node B shall indicate the affected CCTrCHs using the *CCTrCH ID* IE.] [FDD – If the re-established Uu synchronisation concerns one or more Radio Link Sets the Node B shall indicate the affected Radio Link Set(s) using the *RL Set Information* IE.]

#### 8.3.13.3 Abnormal Condition

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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 UE-UTRAN connection.

The Compressed Mode Command procedure shall not be initiated if a Prepared Reconfiguration exists, as defined in subclause 3.1.

### 8.3.14.2 Successful Operation



Figure 47: Compressed Mode Command procedure, Successful Operation

The Node B shall deactivate all the ongoing Transmission Gap Pattern Sequences at the *CM Configuration Change CFN* IE requested by CRNC when receiving COMPRESSED MODE COMMAND message from the CRNC. From that moment on all Transmission Gap Pattern Sequences included in *Transmission Gap Pattern Sequence Status* IE repetitions (if present) shall be started when the indicated *TGCFN* IE elapses. The *CM Configuration Change CFN* IE in the *Active Pattern Sequence Information* IE and *TGCFN* IE for each sequence refer to the next coming CFN with that value.

If the values of the *CM Configuration Change CFN* IE and the *TGCFN* IE are equal, the concerning Transmission Gap Pattern Sequence shall be started immediately at the CFN with a value equal to the value received in the *CM Configuration Change CFN* IE.

#### 8.3.14.3 Abnormal Conditions

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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.

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

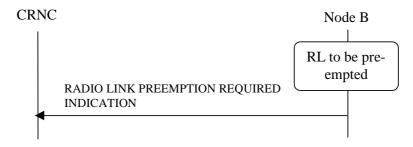


Figure 47B: RL Pre-emption procedure, Successful Operation

When Node B detects that a one or more Radio Links should be pre-empted, see Annex A, it shall send the RADIO LINK PREEMPTION REQUIRED INDICATION message to the CRNC. If all Radio Links for a CRNC Communication Context ID should be pre-empted, the *RL Information* IE shall be omitted. If one or several but not all Radio Links should be pre-empted for a CRNC Communication Context, the Radio Links that should be pre-empted shall be indicated in the *RL Information* IE. The Radio Link(s) that should be pre-empted should be deleted by the CRNC.

### 8.3.16.3 Abnormal Conditions

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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 report detected errors in one incoming message, provided they cannot be reported by an appropriate response message.

#### 8.4.1.2 Successful Operation

When the conditions defined in subclause 10 are fulfilled, the Error Indication procedure is initiated by an ERROR INDICATION message sent from the receiving node.

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

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

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

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

Typical cause values for the ERROR INDICATION message are:

#### **Protocol Causes:**

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



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

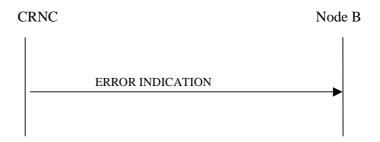


Figure 50: Error Indication procedure (CRNC to Node B), Successful Operation

#### 8.4.1.3 Abnormal Conditions

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# 9 Elements for NBAP communication

# 9.1 Message Functional Definition and Content

### 9.1.1 General

Subclause 9.1 presents the contents of NBAP messages in tabular format. The corresponding ASN.1 definition is presented in subclause 9.3. In case there is contradiction between the tabular format in subclause 9.1 and the ASN.1 definition, the ASN.1 shall take precedence, except for the definition of conditions for the presence of conditional IEs, where the tabular format shall take precedence.

NOTE: The messages have been defined in accordance to the guidelines specified in ref. [26].

# 9.1.2 Message Contents

#### 9.1.2.1 Presence

An information element can be of the following types:

М	IEs marked as Mandatory (M) shall always be included in the message.
0	IEs marked as Optional (O) may or may not be included in the message.
С	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 <u>if the group is present.</u>

# 9.1.2.2 Criticality

Each information element or Group of information elements may have a criticality information applied to it. Following cases are possible:

_	No criticality information is applied explicitly.
YES	Criticality information is applied. 'YES' is usable only for non-repeatable information elements.
GLOBAL	The information element and all its repetitions together have one common criticality information.
	'GLOBAL' is usable only for repeatable information elements.
EACH	Each repetition of the information element has its own criticality information. It is not allowed to assign
	different criticality values to the repetitions. 'EACH' is usable only for repeatable information elements.

### 9.1.2.3 Range

The Range column indicates the allowed number of copies of repetitive IEs/IE.

### 9.1.2.4 Assigned Criticality

This column provides the actual criticality information as defined in subclause 10.3.2, if applicable.

# 9.1.3 COMMON TRANSPORT CHANNEL SETUP REQUEST

# 9.1.3.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	М		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	М				YES	ignore
>Secondary CCPCH					_	
>>Secondary CCPCH		1				
>>>Common Physical Channel ID	М		9.2.1.13		_	
>>>FDD SCCPCH Offset	M		9.2.2.15	Corresponds to [7]: S-	_	
>>>DL Scrambling Code	C-PCH		9.2.2.13		_	
>>>FDD DL Channelisation Code Number	M		9.2.2.14		_	
>>>TFCS	М		9.2.1.58	For the DL.	_	
>>>Secondary CCPCH Slot Format	М		9.2.2.43		_	
>>>TFCI Presence	C – SlotFormat		9.2.1.57	Refer to TS [7]	-	
>>>Multiplexing Position	М		9.2.2.23		_	
>>>Power Offset		1			_	
Information						
>>>PO1	М		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 <ma xnoofF ACHs&gt;</ma 			GLOBAL	reject
>>>Common Transport Channel ID	М		9.2.1.14		_	
>>>>Transport Format Set	М		9.2.1.59	For the DL.	_	
>>>ToAWS	М		9.2.1.61		_	
>>>ToAWE	М		9.2.1.60		_	
>>>Max FACH Power	М		DL Power 9.2.1.21	Maximum allowed power on the FACH.	_	
>>>PCH Parameters		01			YES	reject
>>>Common Transport Channel ID	М		9.2.1.14		_	,
>>>>Transport Format Set	М		9.2.1.59	For the DL.	_	

	Т		1	1		
>>>ToAWS	М		9.2.1.61		_	
>>>ToAWE	М		9.2.1.60		_	
>>>PCH Power	M		DL Power		_	
			9.2.1.21			
>>>PICH		1			-	
Parameters						
>>>>Common	М		9.2.1.13		_	
Physical Channel			0.2			
ID						
>>>>FDD DL	М		9.2.2.14		_	
Channelisation	IVI		9.2.2.14		_	
Code Number			0.0.4.404			
>>>>PICH Power	M		9.2.1.49A			
>>>>PICH Mode	М		9.2.2.26	Number of	_	
				PI per frame		
>>>>STTD	М		9.2.2.48		_	
Indicator						
>PRACH						
>>PRACH		1				
>>>Common Physical	М		9.2.1.13		_	
Channel ID						
>>>Scrambling Code	М		9.2.2.42		_	
Number	'''		0.2.2.12			
>>>TFCS	М		9.2.1.58	For the UL.		
	1			FOI THE OL.	_	
>>>Preamble Signatures	M	4 14	9.2.2.31		_	
>>>Allowed Slot		1 <ma< td=""><td></td><td></td><td>_</td><td></td></ma<>			_	
Format Information		xnoofSI				
		otForm				
		atsPRA				
		CH>				
>>>RACH Slot	M		9.2.2.37		_	
Format						
>>>RACH Sub Channel	М		9.2.2.38		_	
Numbers						
>>>Puncture Limit	М		9.2.1.50	For the UL	_	
>>>Preamble Threshold	M		9.2.2.32	1 01 110 02	_	
>>>RACH Parameters	IVI	1	9.2.2.32		YES	Doignt
		1	00444		150	Reject
>>>Common	M		9.2.1.14		_	
Transport Channel ID						
>>>Transport Format	М		9.2.1.59	For the UL.	_	
Set						
>>AICH Parameters		1			_	
>>>Common Physical	М		9.2.1.13		_	
Channel ID	<u> </u>					
>>>AICH Transmission	М		9.2.2.1		_	
Timing						
>>>FDD DL Channelisation	М		9.2.2.14		-	
Code Number						
>>>AICH Power	М		9.2.2.D		_	
>>>STTD Indicator	M					
	IVI		9.2.2.48		_	
>PCPCHes	1	1			_	
>>CPCH Parameters		1			_	
>>>Common Transport	М		9.2.1.14		_	
Channel ID						
>>>Transport Format Set	М		9.2.1.59	For the UL.	_	
>>>AP Preamble	М		CPCH			
Scrambling Code			Scrambling			
	1		Code			

	1		T	1	1	
			Number			
CD Droomble	NA.		9.2.2.4B CPCH			
>>>CD Preamble	М				_	
Scrambling Code			Scrambling			
			Code			
			Number			
			9.2.2.4B			
>>>TFCS	M		9.2.1.58	For the UL	_	
>>>CD Signatures	0		Preamble	Note: When	_	
			Signatures	not present,		
			9.2.2.31	all CD		
				signatures		
				are to be		
				used.		
>>>CD Sub Channel			9.2.2.1C		_	
Numbers						
>>>Puncture Limit	М		9.2.1.50	For the UL	_	
>>>CPCH UL DPCCH Slot	M		9.2.2.4C	For UL	_	
Format				CPCH		
				message		
				control part		
>>>UL SIR	М		UL SIR		_	
777 OL OII (	141		9.2.2.58			
>>>Initial DL transmission	М		DL Power		_	
Power	IVI		9.2.1.21		_	
>>>Maximum DL Power	М		DL Power			
>>>iviaximum DL Fowei	IVI				_	
>>>Minimum DL Power	М		9.2.1.21 DL Power			
>>>IVIIIIIIIIIIIII DL Powei	IVI				_	
BO2	N 4		9.2.1.21	Dawar offers		
>>>PO2	М		Power	Power offset	_	
			Offset	for the TPC		
	<b>.</b>		9.2.2.29	bits		
>>>PO3	М		Power	Power offset	_	
			Offset	for the pilot		
			9.2.2.29	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	M		9.2.2.1D		_	
Indication						
>>>CPCH Allowed Total	M		9.2.2.4A		_	
Rate						
>>>PCPCH Channel		1 <ma< td=""><td></td><td></td><td></td><td></td></ma<>				
Information		xnoofP				
		CPCHs				
		>				
>>>>Common Physical	М		9.2.1.13		_	
Channel ID			1			
>>>>CPCH Scrambling	М		9.2.2.4B	For UL	_	
Code Number	[			PCPCH		
>>>>DL Scrambling Code	М		9.2.2.13	For DL	_	
Scrambling Code	141		3.2.2.13	CPCH	_	
				message		
EDD DI	1.4		00044	part		
>>>FDD DL	М		9.2.2.14	For DL	_	
01 " " 0 "	i	1	1	CPCH	1	
Channelisation Code						
Channelisation Code Number				message part		

505.	T			1		ı
>>>PCP Length	M		9.2.2.24A		_	
>>>UCSM Information	C-NCA	1			_	
>>>>Min UL	M		9.2.2.22		_	
Channelisation Code						
Length						
>>>>NF_max	M		9.2.2.23B		_	
>>>>Channel		0 <ma< td=""><td></td><td></td><td>_</td><td></td></ma<>			_	
Request Parameters		xAPSig				
		Num>				
>>>>AP Preamble	M		9.2.2.1A		_	
Signature						
>>>>AP Sub	0		9.2.2.1B		_	
Channel Number						
>>>VCAM Mapping	C-CA	1 <ma< td=""><td></td><td>Refer to TS</td><td>_</td><td></td></ma<>		Refer to TS	_	
Information		xnoofL		[18]		
		en>				
>>>Min UL	М		9.2.2.22		_	
Channelisation Code			1			
Length						
>>>NF_max	М		9.2.2.23B		_	
>>>Max Number of	M		9.2.2.20A		_	
PCPCHes	141		0.2.2.207			
>>>SF Request		1 <ma< td=""><td></td><td></td><td>_</td><td></td></ma<>			_	
Parameters		xAPSig				
T drameters		Num>				
>>>>AP Preamble	М	IVairi>	9.2.2.1A		_	
Signature	IVI		9.2.2.17		_	
>>>>AP Sub Channel	0		9.2.2.1B			
Number			9.2.2.10		_	
>>>AP-AICH Parameters		1				
	M	1	9.2.1.13		_	
>>>>Common Physical Channel ID	IVI		9.2.1.13		_	
>>>FDD DL	M		00011			
	IVI		9.2.2.14		_	
Channelisation Code						
Number	N4		AIOLI			
>>>AP-AICH Power	M		AICH		_	
			Power			
001011.5	1.4		9.2.2.D	F 001011		
>>>>CSICH Power	M		AICH	For CSICH	_	
			Power	bits at end of		
			9.2.2.D	AP-AICH		
				slot		
>>>STTD Indicator	M		9.2.2.48		_	
>>>CD/CA-ICH		1			_	
Parameters	1		<b>.</b>			
>>>Common Physical	M		9.2.1.13		_	
Channel ID			ļ			
>>>FDD DL	M		9.2.2.14		_	
Channelisation Code						
Number						
>>>CD/CA-ICH Power	М		AICH			
			Power			
			9.2.2.D			
>>>STTD Indicator	М		9.2.2.48		_	
	1				1	

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	М		9.2.1.46		YES	reject
Transaction ID	М		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	М				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	М		9.2.3.22		_	
>>Puncture Limit	М		9.2.1.50		_	
>>Secondary CCPCH		1 <ma xnoofS CCPC Hs&gt;</ma 			GLOBAL	reject
>>>Common Physical Channel ID	М		9.2.1.13		_	
>>>TDD Channelisation Code	М		9.2.3.19		_	
>>>Time Slot	М		9.2.3.23		_	
>>>Midamble shift and Burst Type	М		9.2.3.7		_	
>>>TDD Physical Channel Offset	М		9.2.3.20		_	
>>>Repetition Period	М		9.2.3.16			
>>>Repetition Length	М		9.2.3.15		_	
>>>SCCPCH Power	М		DL Power 9.2.1.21		_	
>>FACH		0 <ma xnoofF ACHs&gt;</ma 			GLOBAL	reject
>>>Common Transport Channel ID	М		9.2.1.14		_	
>>>FACH CCTrCH ID	М		CCTrCH ID 9.2.3.3		-	
>>>Transport Format Set	M		9.2.1.59	For the DL.	-	
>>>ToAWS	М		9.2.1.61		_	
>>>ToAWE	M		9.2.1.60		_	

>>PCH		01			YES	reject
>>>Common Transport Channel ID	М		9.2.1.14		_	
>>>PCH CCTrCH ID	М		CCTrCH ID 9.2.3.3		-	
>>>Transport Format Set	М		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	М		9.2.1.13		_	
>>>>TDD Channelisation Code	М		9.2.3.19		_	
>>>Time Slot	М		9.2.3.23		_	
>>>>Midamble shift and Burst Type	М		9.2.3.7		_	
>>>>TDD Physical Channel Offset	М		9.2.3.20		_	
>>>Repetition period	М		9.2.3.16		_	
>>>Repetition length	М		9.2.3.15		_	
>>>>Paging Indicator Length	М		9.2.3.8		_	
>>>PICH Power	М		9.2.1.49A		_	
>PRACH					_	
>>PRACH	М	1			YES	reject
>>>Common Physical Channel ID	М		9.2.1.13		_	
>>>TFCS	М		9.2.1.58		_	
>>>Time Slot	М		9.2.3.23			
>>>TDD Channelisation Code	М		9.2.3.19		_	
>>>Max PRACH Midamble Shifts	М		9.2.3.6		_	
>>>PRACH Midamble	М		9.2.3.14		_	
>>>RACH		1			YES	reject
>>>Common Transport Channel ID	М		9.2.1.14		_	
>>>Transport Format Set	М		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	Semantics	Criticality	Assigned
			and reference	description		Criticality
Message Discriminator	M		9.2.1.45		_	
Message Type	М		9.2.1.46		YES	reject
Transaction ID	М		9.2.1.62		_	,
FACH Parameters info		0 <ma< td=""><td></td><td>The FACH</td><td>GLOBAL</td><td>ignore</td></ma<>		The FACH	GLOBAL	ignore
		xnoofF		Parameters		J
		ACHs>		may be		
				combined		
				with PCH		
				Parameters		
>FACH Parameters	M		Common		_	
			Transport			
			Channel			
			Information			
			Response			
			9.2.1.14A			
PCH Parameters	0		Common	The PCH	YES	ignore
			Transport	Parameters		
			Channel	may be		
			Information	combined		
			Response	with FACH		
			9.2.1.14A	Parameters	\/=0	
RACH parameters	0		Common	The RACH	YES	ignore
			Transport	Parameters		
			Channel	shall not be		
			Information Response	combined with FACH		
			9.2.1.14A	Parameters		
			9.2.1.14A	or PCH		
				Parameters		
CPCH parameters	0		Common	The CPCH	YES	ignore
o. ori paramotoro			Transport	Parameters	1.20	1911010
			Channel	shall not be		
			Information	combined		
			Response	with FACH		
			9.2.1.14A	Parameters		
				or PCH		
				Parameters		
				or RACH		
				Parameters		
Criticality Diagnostics	0		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	М		9.2.1.45		_	_
Message Type	М		9.2.1.46		YES	reject
Transaction ID	М		9.2.1.62		_	_
Cause	М		9.2.1.6		YES	ignore
Criticality Diagnostics	0		9.2.1.17		YES	ignore

#### 9.1.6 COMMON TRANSPORT CHANNEL RECONFIGURATION **REQUEST**

#### FDD Message 9.1.6.1

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	М		9.2.1.45		_	
Message Type	М		9.2.1.46		YES	reject
Transaction ID	М		9.2.1.62		_	-
C-ID	М		9.2.1.9		YES	reject
Configuration Generation ID	М		9.2.1.16		YES	reject
CHOICE Common Physical Channel To Be Configured	М				YES	reject
>Secondary CCPCH					_	
>>FACH parameters		0 <maxfa CHCell&gt;</maxfa 			GLOBAL	reject
>>>Common Transport Channel ID	М		9.2.1.14		-	
>>>Max FACH Power	0		DL Power 9.2.1.21	Maximum allowed power on the FACH.	ı	
>>>ToAWS	0		9.2.1.61		ı	
>>>ToAWE	0		9.2.1.60		_	
>>PCH Parameters		01			YES	reject
>>>Common Transport Channel ID	М		9.2.1.14		_	
>>>PCH Power	0		DL Power 9.2.1.21	Power to be used on the PCH.	_	
>>>ToAWS	0		9.2.1.61		_	
>>>ToAWE	0		9.2.1.60		_	
>>PICH Parameters		01			YES	reject
>>>Common Physical Channel ID	М		9.2.1.13		_	
>>>PICH Power	0		9.2.1.49A		_	
>PRACH					_	
>>PRACH Parameters		0 <mexpr ACHCell&gt;</mexpr 			GLOBAL	reject
>>>Common Physical Channel ID	М		9.2.1.13		_	
>>>Preamble Signatures	0		9.2.2.31		-	
>>>Allowed Slot Format Information		0 <maxno ofSlotForm atsPRACH &gt;</maxno 			-	
>>>RACH Slot Format	М		9.2.2.37		-	
>>>RACH Sub Channel Numbers	0		9.2.2.38		_	
>>AICH Parameters		0 <maxpr ACHCell&gt;</maxpr 			GLOBAL	reject
>>>Common	M	, tor rogii>	9.2.1.13		_	
///OUTITION	141		J.Z. 1. 1J	l	····	

Physical Channel ID						
>>>AICH Power	0		9.2.2.D		_	
>CPCH					_	
>>CPCH Parameters		0 <maxno ofCPCHs&gt;</maxno 			GLOBAL	reject
>>>Common Transport Channel ID	М		9.2.1.14		_	
>>>UL SIR	0		9.2.2.58		_	
>>>Initial DL transmission Power	0		DL Power 9.2.1.21		-	
>>>Maximum DL Power	0		DL Power 9.2.1.21		-	
>>>Minimum DL Power	0		DL Power 9.2.1.21		_	
>>AP-AICH Parameters		0 <maxno ofCPCHs&gt;</maxno 			GLOBAL	reject
>>>Common Physical Channel ID	М		9.2.1.13		_	
>>>AP-AICH Power	0		AICH Power 9.2.2.D		-	
>>>CSICH Power	0		AICH Power 9.2.2.D	For CSICH bits at end of AP-AICH slot	-	
>>CD/CA-ICH Parameters		0 <maxno ofCPCHs&gt;</maxno 			GLOBAL	reject
>>>Common Physical Channel ID	М		9.2.1.13		-	
>>>CD/CA-ICH Power	0		AICH Power 9.2.2.D		_	

Range bound	Explanation
MaxFACHCell	Maximum number of FACHs that can be defined in a Cell
MaxnoofCPCHs	Maximum number of CPCHs that can be defined in a Cell
MaxPRACHCell	Maximum number of PRACHs and AICHe that can be defined in a Cell
MaxnoofSlotFormatsPRACH	Maximum number of SF for a PRACH

# 9.1.6.2 TDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	М		9.2.1.45		_	
Message Type	М		9.2.1.46		YES	reject
Transaction ID	М		9.2.1.62		_	
C-ID	М		9.2.1.9		YES	reject
Configuration Generation ID	М		9.2.1.16		YES	reject
Secondary CCPCH parameters		01			YES	reject

>CCTrCH ID	М		9.2.3.3	For DL CCTrCH supporting one or several Secondary CCPCHs	_	
>Secondary CCPCHs to be configured		0 <maxnoofs ccpchs=""></maxnoofs>			GLOBAL	reject
>>Common Physical Channel ID	М		9.2.1.13		-	
>>SCCPCH Power	0		DL power 9.2.1.21		_	
PICH Parameters		0 1			YES	reject
>Common Physical Channel ID	М		9.2.1.13		-	•
>PICH Power	0		9.2.1.49A		_	
FACH parameters		0 <maxno ofFACHs&gt;</maxno 			GLOBAL	reject
>Common Transport Channel ID	М		9.2.1.14		_	
>ToAWS	0		9.2.1.61		_	
>ToAWE	0		9.2.1.60			
PCH parameters		01			YES	reject
>Common Transport Channel ID	М		9.2.1.14		_	
>ToAWS	0		9.2.1.61		_	· ·
>ToAWE	0		9.2.1.60		_	

Range bound	Explanation
MaxnoofSCCPCHs	Maximum number of SCCPCH 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	М		9.2.1.45		_	
Message Type	М		9.2.1.46		YES	reject
Transaction ID	М		9.2.1.62		_	
Criticality Diagnostics	0		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	М		9.2.1.45		_	
Message Type	М		9.2.1.46		YES	reject
Transaction ID	М		9.2.1.62		_	
Cause	М		9.2.1.6		YES	ignore
Criticality Diagnostics	0		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	М		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	М		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	М		9.2.1.62		_	
Criticality Diagnostics	0		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	М		9.2.1.45		_	
Message Type	М		9.2.1.46		YES	reject
Transaction ID	М		9.2.1.62		_	
Criticality Diagnostics	0		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	М		9.2.1.45		_	
Message Type	М		9.2.1.46		YES	reject
Transaction ID	М		9.2.1.62		_	
Cause	М		9.2.1.6		YES	ignore
Criticality Diagnostics	0		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	М		9.2.1.45		ı	
Message Type	М		9.2.1.46		YES	ignore
Transaction ID	М		9.2.1.62		_	
C-ID	М		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		ı	
Message Type	M		9.2.1.46		YES	ignore
Transaction ID	М		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	М		9.2.1.45		_	
Message Type	М		9.2.1.46		YES	reject
Transaction ID	М		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	М		9.2.1.45		-	
Message Type	М		9.2.1.46		YES	reject
Transaction ID	М		9.2.1.62		1	•
End Of Audit Sequence Indicator	М		9.2.1.29A		YES	ignore
Cell Information		0 <maxcellin NodeB &gt;</maxcellin 			EACH	ignore
>C-ID	М		9.2.1.9		-	
>Configuration Generation ID	M		9.2.1.16		I	
>Resource Operational State	М		9.2.1.52		1	
>Availability Status	М		9.2.1.2		1	
>Local Cell ID	M		9.2.1.38	The local cell that the cell is configured on	-	
>Primary SCH Information	0		Common Physical Channel Status Information 9.2.1.13A		YES	ignore
>Secondary SCH Information	0		Common Physical Channel Status Information 9.2.1.13A		YES	ignore
>Primary CPICH Information	0		Common Physical Channel Status Information 9.2.1.13A		YES	ignore
>Secondary CPICH Information		0 <maxsc PICHCell&gt;</maxsc 	0.2.1110/1		EACH	ignore
>>Secondary CPICH Individual Information	M		Common Physical Channel Status Information 9.2.1.13A		-	
>Primary CCPCH Information	0		Common Physical Channel Status Information 9.2.1.13A		YES	ignore
>BCH Information	0		Common Transport Channel Status Information 9.2.1.13A		YES	ignore

>Secondary CCPCH Information		0 <maxsc CPCHCell</maxsc 		EACH	ignore
>>Secondary CCPCH Individual Information	M	>	Common Physical Channel Status Information 9.2.1.13A	-	
>PCH Information	0		Common Transport Channel Status Information 9.2.1.14B	YES	ignore
>PICH Information	0		Common Physical Channel Status Information 9.2.1.13A	YES	ignore
>FACH Information		0 <maxfa CHCell&gt;</maxfa 		EACH	ignore
>>FACH Individual Information	M		Common Transport Channel Status Information 9.2.1.14B	_	
>PRACH Information		0 <maxpr ACHCell&gt;</maxpr 		EACH	ignore
>>PRACH Individual Information	М		Common Physical Channel Status Information 9.2.1.13A	-	
>RACH Information		0 <maxra CHCell&gt;</maxra 	9.2.1.10A	EACH	ignore
>>RACH Individual Information	M	or recemp	Common Transport Channel Status Information 9.2.1.14B	-	
>AICH Information		0 <maxpr ACHCell&gt;</maxpr 		EACH	ignore
>>AICH Individual Information	М		Common Physical Channel Status Information 9.2.1.13A	-	
>PCPCH Information		0 <maxpc PCHCell&gt;</maxpc 	3.2.1.13A	EACH	ignore
>>PCPCH Individual Information	M		Common Physical Channel Status Information	-	

			9.2.1.13A			
>CPCH Information		0 <maxcp CHCell&gt;</maxcp 	9.2.1.10A		EACH	ignore
>>CPCH Individual Information	М	G. T. G. G. T.	Common Transport Channel Status Information 9.2.1.14B		П	
>AP-AICH Information		0 <maxcp CHCell&gt;</maxcp 			EACH	ignore
>>AP-AICH Individual Information	М		Common Physical Channel Status Information 9.2.1.13A		-	
>CD/CA-ICH Information		0 <maxcp CHCell&gt;</maxcp 			EACH	ignore
>>CD/CA-ICH Individual Information	М		Common Physical Channel Status Information 9.2.1.13A		-	
>SCH Information	0		Common Physical Channel Status Information 9.2.1.13A	TDD Sync Channel	YES	ignore
Communication Control Port Information		0 <maxccpi nNodeB&gt;</maxccpi 			EACH	ignore
>Communication Control Port ID	М		9.2.1.15		-	
>Resource Operational State	М		9.2.1.52		_	
>Availability Status	М		9.2.1.2		_	
Local Cell Information		0 <maxlocal CellinNode B&gt;</maxlocal 			EACH	ignore
>Local Cell ID	М	_	9.2.1.38		_	
>DL or Global Capacity Credit	M		9.2.1.20B		_	
>UL Capacity Credit	0		9.2.1.65A		_	
>Common Channels Capacity Consumption Law	М		9.2.1.9A		-	
>Dedicated Channels Capacity Consumption Law	М		9.2.1.20A		-	
>Maximum DL Power Capability	0		9.2.1.39		-	
>Minimum Spreading Factor	0		9.2.1.47		_	
>Minimum DL Power Capability	0		9.2.1.46A		_	

>Local Cell Group ID	0		9.2.1.37A	_	
Local Cell Group Information		0 <maxlocal CellinNode B&gt;</maxlocal 		EACH	ignore
>Local Cell Group ID	M		9.2.1.37A	_	
>DL or Global Capacity Credit	М		9.2.1.20B	I	
>UL Capacity Credit	0		9.2.1.65A	-	
>Common Channels Capacity Consumption Law	M		9.2.1.9A	ı	
>Dedicated Channels Capacity Consumption Law	M		9.2.1.20A	-	
Criticality Diagnostics	0		9.2.1.17	YES	ignore

Range bound	Explanation
MaxCellinNodeB	Maximum number of Cell that can be configured in Node B
MaxCCPinNodeB	Maximum number of communication control ports that can exist in the Node B
MaxCPCHCell	Maximum number of CPCHes that can be defined in a Cell
MaxLocalCellinNodeB	Maximum number of Local Cells that can exist in the Node B
MaxPCPCHCell	Maximum number of PCPCHes that can be defined in a Cell
MaxSCPICHCell	Maximum number of Secondary CPICH that can be defined in a Cell.
MaxSCCPCHCell	Maximum number of Secondary CCPCH that can be defined in a Cell.
MaxFACHCell	Maximum number of FACHes that can be defined in a Cell
MaxPRACHCell	Maximum number of PRACHes that can be defined in a Cell
MaxRACHCell	Maximum number of RACHes that can be defined in a Cell

# 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	0		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		ı	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		-	
Measurement ID	M		9.2.1.42		YES	reject
Common Measurement Object Type	M		9.2.1.10		YES	reject
CHOICE Common Measurement Object Type	М				YES	reject
>Cell					_	
>>C-ID	M		9.2.1.9		_	
>>Time Slot	0		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	М		9.2.1.14		_	
>>Spreading Factor	0		Minimum UL Channelisa tion Code Length 9.2.2.22		-	
Common Measurement Type	М		9.2.1.11		YES	reject
Measurement Filter Coefficient	0		9.2.1.41		YES	reject
Report Characteristics	М		9.2.1.51		YES	reject
SFN reporting indicator	M		FN reporting indicator 9.2.1.29B		YES	reject
SFN	0		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	М		9.2.1.45		_	
Message Type	М		9.2.1.46		YES	reject
Transaction ID	М		9.2.1.62		-	
Measurement ID	М		9.2.1.42		YES	ignore
CHOICE Common Measurement Object Type	0			Common Measuremen t Object Type that the measuremen t was initiated with.	YES	ignore
>Cell					YES	
>>Common Measurement value	М		9.2.1.12		_	
>RACH				FDD only	ı	
>>Common Measurement Value	M		9.2.1.12		_	
>CPCH				FDD only	_	
>>Common Measurement Value	М		9.2.1.12	-	1	
SFN	0		9.2.1.53A	Common Measuremen t Time Reference	YES	ignore
Criticality Diagnostics	0		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	0		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	М			Common Measuremen t Object Type that the measuremen t 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	0		9.2.1.53A	Common Measuremen t 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	М		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	М		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	М		9.2.1.65	Corresponds to Nu [14]	YES	reject
UARFCN	М		9.2.1.65	Corresponds to Nd [14]	YES	reject

		Т	I I	T	
Maximum Transmission Power	M		9.2.1.40	YES	reject
Closed Loop Timing Adjustment Mode	0		9.2.2.2A	YES	reject
Primary Scrambling Code	М		9.2.2.34	YES	reject
Synchronisation		1		YES	reject
Configuration					•
>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	М		9.2.1.13	_	
>Secondary SCH power	М		DL Power 9.2.1.21	_	
>TSTD Indicator	М		9.2.1.64	_	
Primary CPICH Information		1		YES	reject
>Common Physical Channel ID	М		9.2.1.13	-	
>Primary CPICH power	М		9.2.2.33	_	
>Transmit Diversity Indicator	M		9.2.2.53	-	
Secondary CPICH Information		0 <maxsc PICHCell&gt;</maxsc 		EACH	reject
>Common Physical Channel ID	М		9.2.1.13	-	
>DL Scrambling code	М		9.2.2.13	_	
>FDD DL Channelisation Code Number	М		9.2.2.14	_	
>Secondary CPICH Power	М		DL Power 9.2.1.21	_	
>Transmit Diversity Indicator	М		9.2.2.53	-	
Primary CCPCH		1		YES	reject
Information					,
>Common Physical Channel ID	М		9.2.1.13	-	
>BCH Information		1		_	
>>Common Transport	М		9.2.1.14	_	
Channel ID	ļ <u></u>				
>>BCH Power	M		DL Power 9.2.1.21	_	
>STTD Indicator	M		9.2.2.48	_	
Limited power increase		1		YES	reject
information	ļ.,		0.000		
>Power_Raise_Limit	M		9.2.2.29A	_	
>DL_power_averaging_wi ndow_size	M		9.2.2.12A	_	

Range bound	Explanation
MaxSCPICHCell	Maximum number of Secondary CPICH that can be
	defined in a Cell.

# 9.1.24.2 TDD Message

IE/Group Name	Presence	Range	IE type	Semantics	Criticality	Assigned
			and reference	description		Criticality
Massage Discriminator	M					
Message Discriminator	M		9.2.1.45 9.2.1.46		YES	roinat
Message Type Transaction ID	M		9.2.1.46		YES	reject
Local Cell ID	M		9.2.1.82		YES	roinat
C-ID	M		9.2.1.36		YES	reject reject
Configuration Generation Id	M		9.2.1.9		YES	
UARFCN	M		9.2.1.16	Corresponds	YES	reject reject
				to Nt [15]		-
Cell Parameter ID	M		9.2.3.4		YES	reject
Maximum Transmission Power	M		9.2.1.40		YES	reject
Transmission Diversity	М		9.2.3.26	On DCHs	YES	reject
Applied			0.0040		\/F0	
Sync Case	М		9.2.3.18		YES	reject
Synchronisation		1			YES	reject
Configuration	M		9.2.1.47A			
>N_INSYNC_IND	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				_	
>N_OUTSYNC_IND	М		9.2.1.47B		_	
>T_RLFAILURE	M		9.2.1.56A		_	
DPCH Constant Value	M		Constant Value		YES	reject
PUSCH Constant Value	М		Constant Value		YES	reject
PRACH Constant Value	M		Constant Value		YES	reject
Timing Advance Applied	М		9.2.3.22A		YES	reject
SCH Information	1	1			YES	reject
>Common Physical	М		9.2.1.13			10,000
Channel ID	IVI		9.2.1.13			
>CHOICE Sync Case	М				YES	reject
>>Case 1	IVI				-	10,000
>>>Time Slot	М		9.2.3.23		_	
>> Case 2	1		0.2.0.20		_	
>>>SCH Time Slot	М		9.2.3.17		_	
>SCH Power	M		DL Power 9.2.1.21		_	
>TSTD Indicator	М		9.2.1.64		_	
PCCPCH Information	141	1	0.2.1.01		YES	reject
>Common Physical	M	'	9.2.1.13		-	10,000
Channel ID >TDD Physical Channel	M		9.2.3.20		_	
Offset						
>Repetition Period	M		9.2.3.16		_	
>Repetition Length	M		9.2.3.15		_	
>PCCPCH Power	M		9.2.3.9		_	
>Block STTD Indicator	M		9.2.3.1		_	
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	М		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		_	
Criticality Diagnostics	0		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	0		9.2.1.17		YES	ignore

# 9.1.27 CELL RECONFIGURATION REQUEST

## 9.1.27.1 FDD Message

IE/Group Name	Presence	Range	IE type and	Semantics	Criticality	Assigned
			reference	description		Criticality
Message Discriminator	М		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	0		9.2.1.40		YES	reject
Power						
Synchronisation		0,1			YES	reject
Configuration						
>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	M		9.2.1.13		_	
Channel ID						
>Primary SCH power	M		DL Power 9.2.1.21		_	
Secondary SCH Information		0,1			YES	reject
>Common Physical Channel ID	М		9.2.1.13		_	
>Secondary SCH power	М		DL Power 9.2.1.21		_	
Primary CPICH		0,1			YES	reject
Information						
>Common Physical Channel ID	M		9.2.1.13		_	
>Primary CPICH power	M		9.2.2.33		_	
Secondary CPICH		0 <maxsc< td=""><td></td><td></td><td>YES</td><td>reject</td></maxsc<>			YES	reject
Information		PICHCell>				
>Common Physical Channel ID	M		9.2.1.13		_	
>Secondary CPICH Power	М		DL Power 9.2.1.21		_	
Primary CCPCH Information		0,1			YES	reject
>BCH Information		1			_	
>>Common Transport Channel ID	М		9.2.1.14		_	
>>BCH Power	М		DL Power 9.2.1.21		_	

Range bound	Explanation
MaxSCPICHCell	Maximum number of Secondary CPICH that can be
	defined in a Cell.

## 9.1.27.2 TDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		_	
Message Type	М		9.2.1.46		YES	reject
Transaction ID	М		9.2.1.62		_	
C-ID	М		9.2.1.9		YES	reject
Configuration Generation ID	М		9.2.1.16		YES	reject
Synchronisation Configuration		0,1			YES	reject
>N_INSYNC_IND	М		9.2.1.47A		_	
>N_OUTSYNC_IND	М		9.2.1.47B		_	
>T_RLFAILURE	M		9.2.1.56A		_	
Timing Advance Applied	0		9.2.3.22A		YES	reject
SCH Information		0,1			YES	reject
>Common Physical Channel ID	M		9.2.1.13		_	
>SCH Power	М		DL Power 9.2.1.21		_	
PCCPCH Information		0,1			YES	reject
>Common Physical Channel ID	М		9.2.1.13		_	
>PCCPCH Power	М		9.2.3.9		_	
Maximum Transmission Power	0		9.2.1.40		YES	reject
DPCH Constant Value	0		Constant Value		YES	reject
PUSCH Constant Value	0		Constant Value		YES	reject
PRACH Constant Value	0		Constant Value		YES	reject
Time Slot Configuration		115			GLOBAL	reject
>Time Slot	М		9.2.3.23		_	
>Time Slot Status	М		9.2.3.25		_	
>Time Slot Direction	М		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	М		9.2.1.45		_	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	М		9.2.1.62		_	
Criticality Diagnostics	0		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	М		9.2.1.45		_	
Message Type	М		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		_	
Cause	M		9.2.1.6		YES	ignore
Criticality Diagnostics	0		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	М		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	0		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		_	<u> </u>
Indication Type	M		9.2.1.36		YES	ignore
CHOICE Indication Type	М				YES	ignore
>No Failure					_	_ ŭ
>>Local Cell Information		1 <max LocalCellin NodeB &gt;</max 			EACH	ignore
>>>Local Cell ID	M		9.2.1.38		_	
>>>Add/Delete	M		9.2.1.1		_	
Indicator						
>>>DL or Global Capacity Credit	C-add		9.2.1.20B		_	
>>>UL Capacity Credit	0		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	0		9.2.1.37A		_	
>>Local Cell Group Information		0 <maxlocal CellinNode B&gt;</maxlocal 			EACH	ignore
>>>Local Cell Group ID	М		9.2.1.37A		_	
>>>DL or Global Capacity Credit	М		9.2.1.20B		_	
>>>UL Capacity Credit	0		9.2.1.65A		_	
>>>Common Channels Capacity Consumption Law	М		9.2.1.9A		-	
>>>Dedicated Channels Capacity Consumption Law	М		9.2.1.20A		-	
>Service Impacting		<u> </u>			-	
>>Local Cell Information		0 <maxlocal CellinNode B&gt;</maxlocal 			EACH	ignore
>>>Local Cell ID	M		9.2.1.38		_	
>>>DL or Global Capacity Credit	0		9.2.1.20B		_	
>>>UL Capacity Credit	0		9.2.1.65A		_	
>>>Common Channels Capacity Consumption	0		9.2.2.3		-	

Low	1					
Law	0		9.2.1.20A		_	
>>>Dedicated			3.2.1.20A		_	
Channels Capacity						
Consumption Law	0		9.2.1.39			
>>>Maximum DL			9.2.1.39		_	
Power Capability			0.04.47			
>>>Minimum	0		9.2.1.47		_	
Spreading Factor						
>>>Minimum DL Power	0		9.2.1.46A		_	
Capability						
>>Local Cell Group		0			EACH	ignore
Information		<maxlocal< td=""><td></td><td></td><td></td><td></td></maxlocal<>				
		CellinNode				
	M	B>	9.2.1.37A			
>>>Local Cell Group	IVI		9.2.1.37A		_	
ID						
>>>DL or Global	0		9.2.2.12		_	
Capacity Credit						
>>>UL Capacity Credit	0		9.2.2.60		_	
>>>Common Channels	0		9.2.2.3			
Capacity Consumption	1					
Law	1					
>>>Dedicated	0		9.2.1.20A		_	
Channels Capacity						
Consumption Law	1					
>>Communication		0			EACH	ignore
Control Port		<maxccpi< td=""><td></td><td></td><td>L/(OII</td><td>ignore</td></maxccpi<>			L/(OII	ignore
		nNodeB>				
Information						
>>>Communication	M		9.2.1.15		_	
Control Port ID						
>>>Resource	М		9.2.1.52		_	
Operational State						
>>>Availability Status	М		9.2.1.2		_	
>>Cell Information		0	0.2		EACH	ignore
>>Cell illiormation		<maxcellin< td=""><td></td><td></td><td>L/(OII</td><td>ignore</td></maxcellin<>			L/(OII	ignore
		NodeB>				
>>>C-ID	М		9.2.1.9		_	
>>>Resource	0		9.2.1.52		_	
Operational State	1					
•	0		9.2.1.2		_	
>>>Availability Status	0		Common		YES	ianora
>>>Primary SCH			Physical		150	ignore
Information	1		Channel			
	1		Status			
			Information			
	<u> </u>		9.2.1.13A		<u> </u>	
>>>Secondary SCH	0		Common		YES	ignore
Information	1		Physical			-
			Channel			
	1		Status			
	1		Information			
			9.2.1.13A		VEC	! a ::
>>>Primary CPICH	0		Common		YES	ignore
Information	1		Physical Channel			
	1		Status			
			Information			
			9.2.1.13A			
	1	+	1	1	EACH	ignore
>>>Secondary CPICH		0 <maxsc< td=""><td></td><td></td><td>EACH</td><td>ignore</td></maxsc<>			EACH	ignore
>>>Secondary CPICH Information		0 <maxsc PICHCell&gt;</maxsc 			EACH	ignore

-					
CPICH Individual Information			Physical Channel Status		
			Information 9.2.1.13A		
>>>Primary CCPCH Information	0		Common Physical Channel Status Information	YES	ignore
>>>BCH Information	0		9.2.1.13A  Common Transport Channel Status Information 9.2.1.14B	YES	ignore
>>>Secondary CCPCH Information		0 <maxsc CPCHCell &gt;</maxsc 		EACH	ignore
>>>>Secondary CCPCH Individual Information	М		Common Physical Channel Status Information 9.2.1.13A	-	
>>>PCH Information	0		Common Transport Channel Status Information 9.2.1.14B	YES	ignore
>>>PICH Information	0		Common Physical Channel Status Information 9.2.1.13A	YES	ignore
>>>FACH Information		0 <maxfac HCell&gt;</maxfac 		EACH	ignore
>>>>FACH Individual Information	М		Common Transport Channel Status Information 9.2.1.14B	-	
>>>PRACH Information		0 <maxpr ACHCell&gt;</maxpr 		EACH	ignore
>>>>PRACH Individual Information	М		Common Physical Channel Status Information 9.2.1.13A	-	
>>>RACH Information		0 <maxpra CHCell&gt;</maxpra 		EACH	ignore
>>>>RACH Individual Information	M		Common Transport Channel Status Information 9.2.1.14B	-	
>>>AICH Information		0 <maxpra CHCell&gt;</maxpra 		EACH	ignore

	1	П		<u> </u>	Т	1
>>>>AICH Individual Information	M		Common Physical Channel		-	
			Status			
			Information			
		0	9.2.1.13A		EAGU	
>>>PCPCH		0 <maxpc PCHCell&gt;</maxpc 			EACH	ignore
Information		7 CHOell>	0			
>>>>PCPCH	M		Common Physical		_	
Individual Information			Channel			
			Status			
			Information			
		0	9.2.1.13A		EACH	:
>>>CPCH Information		0 <maxcpc< td=""><td></td><td></td><td>EACH</td><td>ignore</td></maxcpc<>			EACH	ignore
		HCell>				
>>>CPCH	М		Common		_	
Individual Information			Transport			
			Channel Status			
			Information			
			9.2.1.14B			
>>>AP-AICH		0			EACH	ignore
Information		<maxcpc HCell&gt;</maxcpc 				
>>>AP-AICH	M	HCell>	Common		_	
Individual Information	l IVI		Physical			
Individual information			Channel			
			Status			
			Information 9.2.1.13A			
>>>CD/CA-ICH		0	3.2.1.13A		EACH	ignore
Information		<maxcpc< td=""><td></td><td></td><td></td><td>.gc. c</td></maxcpc<>				.gc. c
		HCell>	_			
>>>CD/CA-ICH	M		Common		-	
Individual Information			Physical Channel			
			Status			
			Information			
			9.2.1.13A			
>>>SCH Information	0		Common		YES	ignore
			Physical Channel			
			Status			
			Information			
			9.2.1.13A			
Cause	0		9.2.1.6		YES	ignore

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

Range bound	Explanation
MaxLocalCellinNodeB	Maximum number of Local Cells that can exist in the
	Node B
MaxCellinNodeB	Maximum number of C ID that can be configured in
	Node B
MaxCPCHCell	Maximum number of CPCHes that can be defined in a
	Cell
MaxSCPICHCell	Maximum number of Secondary CPICH that can be
	defined in a Cell.
MaxSCCPCHCell	Maximum number of Secondary CCPCH that can be
	defined in a Cell.
MaxFACHCell	Maximum number of FACHes that can be defined in a
	Cell
MaxPCPCHCell	Maximum number of PCPCHes that can be defined in
	a Cell
MaxPRACHCell	Maximum number of PRACHes and AICHes that can
	be defined in a Cell
MaxCCPinNodeB	Maximum number of communication control ports that
	can exist in the Node B

# 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	0		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.	1	
>CHOICE IB	M				_	
DeletionIndicator						
>>NoDeletion	0.010		00455		_	
>>>SIB Originator	C-SIB		9.2.1.55		_	
>>>IB SG REP	0		9.2.1.34		_	
>>>Segment Information		1 maxIBSEG			GLOBAL	reject
>>>IB SG POS	0		9.2.1.33		_	
>>>Segment type	C – CRNCOrigi nation		9.2.1.53B		-	
>>>IB SG DATA	C – CRNCOrigi nation		9.2.1.32		I	
>>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	М		9.2.1.45		_	
Message Type	М		9.2.1.46		YES	reject
Transaction ID	М		9.2.1.62		_	
Criticality Diagnostics	0		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	0		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	М		9.2.1.45		_	
Message Type	M		9.2.1.46		YES	reject
CRNC Communication Context ID	М		9.2.1.18	The reserved value "All CRNCC C" shall not be used.	YES	reject
Transaction ID	М		9.2.1.62	20 4004.	_	
UL DPCH Information		1			YES	reject
>UL Scrambling Code	М		9.2.2.59		_	
>Min UL Channelisation Code length	М		9.2.2.22		-	
>Max Number of UL DPDCHs	C – CodeLen		9.2.2.21		I	
>puncture Limit	М		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	М		UL SIR 9.2.2.58		_	
>Diversity mode	M		9.2.2.9		1	
>SSDT cell ID Length	0		9.2.2.45		_	
>S Field Length	C-FBI		9.2.2.40		_	
DL DPCH Information		1			YES	reject
>TFCS	М		9.2.1.58	For DL	-	
>DL DPCH Slot Format	М		9.2.2.10		_	
>TFCI signalling mode	М		9.2.2.50		_	
>TFCI presence	C- SlotFormat		9.2.1.57		_	
>Multiplexing Position	М		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		1			_	
Information						
>>P01	М		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	I	
>>P03	M		Power Offset 9.2.2.29	Power offset for the pilot bits	Ī	
>FDD TPC DL Step Size	M		9.2.2.16		-	
>Limited Power Increase	M		9.2.2.18A		ı	
>Inner Loop DL PC Status DCH Information	M		9.2.2.18B DCH FDD Information 9.2.2.4D		- YES	reject
DSCH Information	0		DSCH FDD Information		YES	reject
TECI2 bearer information		01	9.2.2.13B		YES	ignore
TFCI2 bearer information		U I			IES	ignore

>ToAWS	M		9.2.1.61		-	
>ToAWE	М		9.2.1.60		-	
RL Information		1 to <maxnoof RLs&gt;</maxnoof 			EACH	notify
>RL ID	M		9.2.1.53		_	
>C-ID	M		9.2.1.9		_	
>First RLS Indicator	М		9.2.2.16A		_	
>Frame Offset	М		9.2.1.31		_	
>Chip Offset	М		9.2.2.2		_	
>Propagation Delay	0		9.2.2.35		_	
>Diversity Control Field	C – NotFirstRL		9.2.1.25		_	
>DL Code Information	М		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	М		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	ı	
>SSDT Cell Identity	0		9.2.2.44		1	
>Transmit Diversity Indicator	C – Diversity mode		9.2.2.53		-	
Transmission Gap Pattern Sequence Information	0		9.2.2.53A		YES	reject
Active Pattern Sequence Information	0		9.2.2.A		YES	reject

Condition	Explanation
CodeLen	The IE shall be present if Min UL Channelisation Code Length IE
	equals to 4.
FBI	The IE shall be present if the UL DPCCH Slot Format IE indicates
	a slot format with 1 or 2 FBI bits (see ref.[7]).
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	Semantics description	Criticality	Assigned Criticality
Managara Diagrippington	M		<b>reference</b> 9.2.1.45		_	
Message Discriminator	M		9.2.1.46		YES	reject
Message Type	M		9.2.1.40	The	YES	_
CRNC Communication Context ID				reserved value "All CRNCC C" shall not be used.	TES	reject
Transaction ID	M		9.2.1.62		_	
UL CCTrCH Information		0 to <maxno CCTrCH&gt;</maxno 			EACH	notify
>CCTrCH ID	M		9.2.3.3		_	
>TFCS	М		9.2.1.58		-	
>TFCI Coding	М		9.2.3.22		_	
>Puncture Limit	М		9.2.1.50		-	
>UL DPCH Information		01			YES	notify
>>Repetition Period	М		9.2.3.16		_	
>>Repetition Length	М		9.2.3.15		_	
>>TDD DPCH Offset	М		9.2.3.19A		_	
>>UL Timeslot Information	М		9.2.3.26C		_	
DL CCTrCH Information		0 to <maxno CCTrCH&gt;</maxno 			EACH	notify
>CCTrCH ID	M		9.2.3.3		_	
>TFCS	М		9.2.1.58		_	
>TFCI Coding	М		9.2.3.22		-	
>Puncture Limit	М		9.2.1.50		-	
>TDD TPC DL Step Size	М		9.2.3.21			
>TPC CCTrCH List		0 to <maxnoc CTrCH&gt;</maxnoc 		List of uplink CCTrCH which provide TPC	-	
>>TPC CCTrCH ID	M		CCTrCH ID 9.2.3.3		-	
>DL DPCH information		01			YES	notify
>>Repetition Period	М		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	0		DCH TDD Information 9.2.3.4C		YES	reject
DSCH Information	0		DSCH TDD Information 9.2.3.5A		YES	reject
USCH Information	0		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	М		9.2.1.31		-	
>Special Burst Scheduling	М		9.2.3.18A		-	
>Initial DL transmission	М		DL Power	Initial power	_	

Power		9.2.1.21	on DPCH		
>Maximum DL power	M	DL Power 9.2.1.21	Maximum allowed power on DPCH	_	
>Minimum DL power	М	DL Power 9.2.1.21	Minimum allowed power on DPCH	-	
>DL Time Slot ISCP Info	0	9.2.3.4F		_	

Range bound	Explanation
MaxnoCCTrCH	Number of CCTrCH for one UE.

# 9.1.37 RADIO LINK SETUP RESPONSE

## 9.1.37.1 FDD message

IE/Group Name	Presence	Range	IE type and	Semantics description	Criticality	Assigned Criticality
			reference			·
Message Discriminator	M		9.2.1.45		_	
Message Type	M		9.2.1.46		YES	reject
CRNC Communication Context ID	M		9.2.1.18	The reserved value "All CRNCC C" shall not be used.	YES	ignore
Transaction ID	M		9.2.1.62		_	
Node B Communication Context ID	М		9.2.1.48	The reserved value "All NBCC" shall not be used.	YES	ignore
Communication Control Port ID	М		9.2.1.15		YES	ignore
RL Information Response		1 to <maxnoofrl s&gt;</maxnoofrl 			EACH	ignore
>RL ID	M		9.2.1.53		_	
>RL Set ID	M		9.2.2.39			
>Received total wide band power	М		9.2.2.39A		_	
>Diversity Indication	C- NotFirstRL		9.2.1.26		_	
>CHOICE diversity Indication	М				_	
>>Combining					_	
>>>RL ID	М		9.2.1.53	Reference RL ID for the combining	_	
>>Non Combining or First RL					_	
>>>DCH Information Response	М		9.2.1.20C		-	
>DSCH Information Response	0		9.2.1.27A		YES	ignore
>SSDT Support Indicator	M		9.2.2.46		_	
TFCI2 Bearer Information Response	0		9.2.2.49A		YES	ignore
Criticality Diagnostics	0		9.2.1.17		YES	ignore

Condition	Explanation
NotFirstRL	The IE shall be present if the RL is not the first one in the
	Response IE.

Range bound	Explanation			
MaxnoofRLs	Maximum number of RLs for one UE.			

# 9.1.37.2 TDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		_	
Message Type	M		9.2.1.46		YES	reject
CRNC Communication Context ID	M		9.2.1.18	The reserved value "All CRNCC C" shall not be used.	YES	ignore
Transaction ID	M		9.2.1.62		_	
Node B Communication Context ID	M		9.2.1.48	The reserved value "All NBCC" shall not be used.	YES	ignore
Communication Control Port ID	M		9.2.1.15		YES	ignore
RL Information Response		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	0		9.2.1.20C		YES	ignore
>DSCH Information Response	0		9.2.1.27A		YES	ignore
>USCH Information Response	0		9.2.3.28		YES	ignore
Criticality Diagnostics	0		9.2.1.17		YES	ignore

# 9.1.38 RADIO LINK SETUP FAILURE

## 9.1.38.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		_	
Message Type	M		9.2.1.46		YES	reject
CRNC Communication Context ID	М		9.2.1.18	The reserved value "All CRNCC C" shall not be used.	YES	ignore
Transaction ID	M		9.2.1.62		_	
Node B Communication Context ID	C-Success		9.2.1.48	The reserved value "All NBCC" shall not be used	YES	ignore
Communication Control Port ID	0		9.2.1.15		YES	ignore
CHOICE Cause Level	М				YES	ignore
>General					-	
>>Cause	М		9.2.1.6		_	
>RL specific					_	
>>Unsuccessful RL Information Response		1 to <maxnoo frls=""></maxnoo>			EACH	ignore
>>>RL ID	М		9.2.1.53		-	
>>>Cause	М		9.2.1.6		-	
>>Successful RL Information Response		0 to <maxnoo fRLs-1&gt;</maxnoo 			EACH	ignore
>>>RL ID	М		9.2.1.53		-	
>>>RL Set ID	M		9.2.2.39			
>>>Received total wide band power	M		9.2.2.39A		_	
>>>Diversity Indication	C-NotFirstRL		9.2.1.26		_	
>>>CHOICE Diversity Indication	М				_	
>>>Combining					-	
>>>>RL ID	M		9.2.1.53	Reference RL ID for the combining	_	
>>>Non Combining or First RL					_	
>>>>DCH Information Response	М		9.2.1.20C		-	
>>>DSCH Information Response	0		9.2.1.27A		YES	ignore
>>>TFCI2 Bearer Information Response	0		9.2.2.49A		-	
>>>SDT Support Indicator	М		9.2.2.46		_	
Criticality Diagnostics	0		9.2.1.17		YES	ignore

Condition	Explanation
Success	The IE shall be present if at least one of the radio links has been
	successfully set up.
NotFirstRL	The IE shall be present if the RL is not the first one in the
	Successful RL Information Response IE.

Range bound	Explanation				
MaxnoofRLs	Maximum number of RLs for one UE.				

## 9.1.38.2 TDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	М		9.2.1.45		_	
Message Type	М		9.2.1.46		YES	reject
CRNC Communication Context ID	М		9.2.1.18	The reserved value "All CRNCC C" shall not be used.	YES	ignore
Transaction ID	M		9.2.1.62		_	
CHOICE Cause Level	М				YES	ignore
>General					_	
>>Cause	М		9.2.1.6		_	
>RL specific					_	
>>Unsuccessful RL		1			YES	ignore
Information Response						
>>>RL ID	M		9.2.1.53		_	
>>>Cause	M		9.2.1.6		_	
Criticality Diagnostics	0		9.2.1.17		YES	ignore

# 9.1.39 RADIO LINK ADDITION REQUEST

# 9.1.39.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		_	
Message Type	M		9.2.1.46		YES	reject
Node B Communication Context ID	M		9.2.1.48	The reserved value "All NBCC" shall not be used.	YES	reject
Transaction ID	M		9.2.1.62		_	
Compressed Mode Deactivation Flag	0		9.2.2.3A		YES	reject
RL Information		1 <ma xnoofR L-1&gt;</ma 			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	М		9.2.1.25		-	
>DL Code Information	М		FDD DL Code Information 9.2.2.14A		-	
>Initial DL transmission power	0		DL Power 9.2.1.21	Initial power on DPCH	_	
>Maximum DL power	0		DL Power 9.2.1.21	Maximum allowed power on DPCH	-	
>Minimum DL power	0		DL Power 9.2.1.21	Minimum allowed power on DPCH	_	
>SSDT Cell Identity	0		9.2.2.44		_	
>Transmit Diversity Indicator	0		9.2.2.53		_	

Range bound	Explanation
MaxnoofRL	Maximum number of RLs for one UE

# 9.1.39.2 TDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		_	
Message Type	M		9.2.1.46		YES	reject
Node B Communication Context ID	М		9.2.1.48	The reserved value "All NBCC" shall not be used.	YES	reject
Transaction ID	M		9.2.1.62		_	
UL CCTrCH Information		0 to <maxn o CCTrC H&gt;</maxn 			GLOBAL	reject
>CCTrCH ID	M		9.2.3.3		_	
>UL DPCH Information		01			YES	notify
>>Repetition Period	М		9.2.3.16		-	
>>Repetition Length	М		9.2.3.15		-	
>>TDD DPCH Offset	М		9.2.3.19A		-	
>>UL Timeslot Information	M		9.2.3.26C		-	
DL CCTrCH Information		0 to <maxn o CCTrC H&gt;</maxn 			GLOBAL	reject
>CCTrCH ID	M		9.2.3.3		_	
>DL DPCH information		01			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	М		9.2.1.25		_	
>Initial DL transmission Power	0		DL Power 9.2.1.21	Initial power on DPCH	_	
>Maximum DL power	0		DL Power 9.2.1.21	Maximum allowed power on DPCH	-	
>Minimum DL power	0		DL Power 9.2.1.21	Minimum allowed power on DPCH	-	
>DL Time Slot ISCP Info	0		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	М		9.2.1.45		_	
Message Type	M		9.2.1.46		YES	reject
CRNC Communication Context ID	M		9.2.1.18	The reserved value "All CRNCC C" shall not be used.	YES	ignore
Transaction ID	М		9.2.1.62		-	
RL Information Response		1 <maxno ofRL-1&gt;</maxno 			EACH	ignore
>RL ID	M		9.2.1.53		_	
>RL Set ID	М		9.2.2.9		_	
> Received total wide band power	M		9.2.2.39A		_	
>Diversity Indication	M		9.2.1.26		-	
>CHOICE Diversity Indication	M				-	
>>Combining					_	
>>>RL ID	M		9.2.1.53	Reference RL	_	
>>Non combining					_	
>>>DCH Information Response	M		9.2.1.20C		_	
>SSDT support indicator	M		9.2.2.46		-	
Criticality Diagnostics	0		9.2.1.17		YES	ignore

Range bound	Explanation
MaxnoofRL	Maximum number of RLs for one UE

# 9.1.40.2 TDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		_	
Message Type	M		9.2.1.46		YES	reject
CRNC Communication Context ID	М		9.2.1.18	The reserved value "All CRNCC C" shall not be used.	YES	ignore
Transaction ID	M		9.2.1.62		_	
RL Information response		1			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		01			_	
>>Diversity Indication	M		9.2.1.26		_	
>>CHOICE Diversity Indication	M				_	
>>>Combining				In TDD it indicates whether the old Transport Bearer shall be reused or not	_	
>>>>RL ID	М		9.2.1.53	Reference RL	_	
>>>Non combining					_	
>>>>DCH Information Response	М		9.2.1.20C		_	
>DSCH Information Response	0		9.2.1.27A		YES	ignore
>USCH Information Response	0		9.2.3.29		YES	ignore
Criticality Diagnostics	0		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
CRNC Communication Context ID	М		9.2.1.18	The reserved value "All CRNCC C" shall not be used.	YES	ignore
Transaction ID	М		9.2.1.62		-	
CHOICE Cause Level	M				YES	Ignore
>General					-	
>>Cause	М		9.2.1.6		-	
>RL specific					-	
>>Unsuccessful RL Information Response		1 <ma xnoofR L-1&gt;</ma 			EACH	ignore
>>>RL ID	M		9.2.1.53		_	
>>>Cause	M		9.2.1.6		_	
>>Succcessful RL Information Response		0 <ma xnoofR L-2&gt;</ma 			EACH	ignore
>>>RL ID	M		9.2.1.53		-	
>>>RL Set ID	M		9.2.2.39			
>>> Received total wide band power	М		9.2.2.39A		_	
>>>Diversity Indication	M		9.2.1.26		-	
>>>CHOICE Diversity Indication	М				_	
>>>Combining					-	
>>>>RL ID	M		9.2.1.53	Reference RL	_	
>>>Non combining					-	
>>>>DCH Information Response	M		9.2.1.20C		_	
>>>SSDT support indicator	М		9.2.2.46		_	
Criticality Diagnostics	0		9.2.1.17		YES	ignore

Range bound	Explanation
MaxnoofRL	Maximum number of RLs for one UE

# 9.1.41.2 TDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	М		9.2.1.45		_	
Message Type	М		9.2.1.46		YES	reject
CRNC Communication	M		9.2.1.18	The	YES	ignore
Context ID				reserved value		
				"All CRNCC		
				C" shall not		
ID	1		0.04.00	be used.		
Transaction ID	M		9.2.1.62		_	
CHOICE Cause Level	M				YES	Ignore
>General					_	
>>Cause	М		9.2.1.6		_	
>RL specific					_	
>>Unsuccessful RL		1			YES	ignore
Information						
Response						
>>>RL ID	М		9.2.1.53		_	
>>>Cause	М		9.2.1.6		_	
Criticality Diagnostics	0		9.2.1.17		YES	ignore

# 9.1.42 RADIO LINK RECONFIGURATION PREPARE

#### 9.1.42.1 FDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantic Description	Criticality	Assigned Criticality
Message Discriminator	М		9.2.1.45		_	
Message Type	М		9.2.1.46		YES	reject
Node B Communication Context ID	M		9.2.1.48	The reserved value "All NBCC" shall not be used.	YES	reject
Transaction ID	M		9.2.1.62		_	
UL DPCH Information		01			YES	reject
>UL Scrambling code	0		9.2.2.59		_	
>UL SIR Target	0		UL SIR 9.2.2.58		_	
>Min UL Channelistion Code Length	0		9.2.2.22		_	
>Max Number of UL DPDCHs	C – CodeLen		9.2.2.21		_	
>Puncture Limit	0		9.2.1.50	For UL	_	
>TFCS	0		9.2.1.58		_	
>UL DPCCH Slot Format	0		9.2.2.57		_	
>Diversity mode	0		9.2.2.9		_	
>SSDT Cell Identity Length	0		9.2.2.45		_	
>S-Field Length	0		9.2.2.40		_	
DL DPCH Information		01			YES	reject
>TFCS	0		9.2.1.58		_	
>DL DPCH Slot Format	0		9.2.2.10		_	
>TFCI Signalling Mode	0		9.2.2.50		_	
>TFCI presence	C-Slot Format		9.2.1.57		_	
>Multiplexing Position	0		9.2.2.23		_	
>PDSCH code mapping	0		9.2.2.25		_	
>PDSCH RL ID	0		RL ID 9.2.1.53		_	
>Limited Power Increase	0		9.2.2.18A		_	
DCHs to Modify	0		DCHs FDD to Modify 9.2.2.4E		YES	reject
DCHs to Add	0		DCH FDD Information 9.2.2.4D		YES	reject
DCHs to Delete		0 <max noofDC Hs&gt;</max 			GLOBAL	reject
>DCH ID	M		9.2.1.20		_	
DSCH to modify		0 <max noofDS CHs&gt;</max 			YES	reject
>DSCH ID	М		9.2.1.27		_	
>Transport Format Set	0		9.2.1.59	For the DL.	_	
>Allocation/Retention Priority	0		9.2.1.1A		_	
>Frame Handling Priority	0		9.2.1.30		_	
>ToAWS	0		9.2.1.61		_	
>ToAWE	0		9.2.1.60			

>Transport Bearer Request Indicator	M		9.2.1.62A		_	
DSCH to add	0		DSCH FDD Information 9.2.2.13B		YES	reject
DSCH to Delete		0 <max noofDS CHs&gt;</max 			YES	reject
>DSCH ID	M		9.2.1.27		_	
TFCI2 bearer specific information		01			YES	reject
>CHOICE TFCl2 bearer action	М				-	
>>Add or modify					_	
>>>ToAWS	M		9.2.1.61		_	
>>>ToAWE	M		9.2.1.60		_	
>>Delete			NULL		_	
RL Information		0 <max noofRLs</max 			EACH	reject
>RL ID	М		9.2.1.53		_	
>DL Code Information	0		FDD DL Code Information 9.2.2.14A		-	
>Maximum DL Power	0		DL Power 9.2.1.21	Maximum allowed power on DPCH	-	
>Minimum DL Power	0		DL Power 9.2.1.21	Minimum allowed power on DPCH	_	
>SSDT Indication	0		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	0		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	Semantic Description	Criticality	Assigned Criticality
Message Discriminator	М		9.2.1.45		_	
Message Type	М		9.2.1.46		YES	reject
Node B Communication Context ID	М		9.2.1.48	The reserved value "All NBCC" shall not be used.	YES	reject
Transaction ID	M		9.2.1.62		_	
UL CCTrCH to Add		0 <maxno of CCTrC Hs&gt;</maxno 			GLOBAL	reject
>CCTrCH ID	M		9.2.3.3		_	
>TFCS	М		9.2.1.58		_	
>TFCI Coding	М		9.2.3.22		_	
>Puncture Limit	М		9.2.1.50		_	
>UL DPCH Information		01			YES	reject
>>Repetition Period	М		9.2.3.16		_	•
>>Repetition Length	М		9.2.3.15		_	
>>TDD DPCH Offset	М		9.2.3.19A		_	
>>UL Timeslot Information	М		9.2.3.26C		_	
UL CCTrCH to Modify		O <maxno cctrc="" hs="" of=""></maxno>			GLOBAL	reject
>CCTrCH ID	М		9.2.3.3		_	
>TFCS	0		9.2.1.58		_	
>TFCI Coding	0		9.2.3.22		_	
>Puncture Limit	0		9.2.1.50		_	
>UL DPCH to add		01			YES	reject
>>Repetition Period	М		9.2.3.16		_	
>>Repetition Length	М		9.2.3.15		_	
>>TDD DPCH Offset	M		9.2.3.19A		_	
>>UL Timeslot Information	М		9.2.3.26C		_	
>UL DPCH to modify		01			YES	reject
>>Repetition Period	0		9.2.3.16		_	
>>Repetition Length	0		9.2.3.15		_	
>>TDD DPCH Offset	0		9.2.3.19A		_	
>>UL Timeslot Information		0 to <maxno ofULts&gt;</maxno 			-	
>>>Time Slot	M	1	9.2.3.23		_	
>>>Midamble Shift and Burst Type	0		9.2.3.7		_	
>>>TFCI Presence	0	<u> </u>	9.2.1.57		_	
>>>UL Code Information		0 to <maxno OfDPC H&gt;</maxno 			_	
>>>DPCH ID	М		9.2.3.5		_	
>>>TDD Channelisation Code	0		9.2.3.19		_	
>UL DPCH to delete		0			GLOBAL	reject

Г	Т	1	T	1	т т	
		<maxno< td=""><td></td><td></td><td></td><td></td></maxno<>				
		of DPCHs				
		>				
>>DPCH ID	М		9.2.3.5		_	
UL CCTrCH to Delete		0			GLOBAL	reject
OL GOTTOTT to Delete		<maxno< td=""><td></td><td></td><td></td><td> ,</td></maxno<>				,
		of				
		CCTrC				
		Hs>	0.000			
>CCTrCH ID	М		9.2.3.3		-	
DL CCTrCH to Add		0			GLOBAL	reject
		<maxno of<="" td=""><td></td><td></td><td></td><td></td></maxno>				
		CCTrC				
		Hs>				
>CCTrCH ID	М		9.2.3.3		_	
>TFCS	М		9.2.1.58		_	
>TFCI Coding	М		9.2.3.22		_	
>PunctureLimit	М		9.2.1.50		_	
>TPC CCTrCH List		0 to		List of uplink	_	
		<maxno< td=""><td></td><td>CCTrCH</td><td></td><td></td></maxno<>		CCTrCH		
		CCTrC		which		
		Hs>	007.0::	provide TPC		
>>TPC CCTrCH ID	М		CCTrCH ID		_	
			9.2.3.3			
>DL DPCH Information		01	5.2.5.5		YES	reject
>>Repetition Period	M		9.2.3.16		_	
•	M		9.2.3.15		_	
>>Repetition Length >>TDD DPCH Offset	M		9.2.3.19A		_	
>>DL Timeslot Information	M		9.2.3.4E		_	
	IVI	0	5.2.5.4L		GLOBAL	reject
DL CCTrCH to Modify		<maxno< td=""><td></td><td></td><td>OLOBAL</td><td>reject</td></maxno<>			OLOBAL	reject
		of				
		CCTrC				
		Hs>				
>CCTrCH ID	M		9.2.3.3.		_	
>TFCS	0		9.2.1.58		_	
>TFCI Coding	0		9.2.3.22		_	
>PunctureLimit	0		9.2.1.50		_	
>TPC CCTrCH List		0 to		List of uplink	_	
		<maxno< td=""><td></td><td>CCTrCH</td><td></td><td></td></maxno<>		CCTrCH		
		CCTrC		which		
TDC COT-CULID	M	Hs>	CCTrCH	provide TPC	_	
>>TPC CCTrCH ID	IVI		ID		_	
			9.2.3.3			
>DL DPCH to add		01			YES	reject
>>Repetition Period	M		9.2.3.16		_	
>>Repetition Length	М		9.2.3.15		_	
>>TDD DPCH Offset	М		9.2.3.19A		_	
>>DL Timeslot Information	М		9.2.3.4E		_	
>DL DPCH to modify		01			YES	reject
>>Repetition Period	0		9.2.3.16		_	,
>>Repetition Length	0		9.2.3.15		_	
>>TDD DPCH Offset	0		9.2.3.19A		_	
>>DL Timeslot Information	-	0			_	
//DE Timesiot information		<maxno< td=""><td></td><td></td><td></td><td></td></maxno<>				
		ofDLts>		<u> </u>		
>>>Time Slot	M		9.2.3.23		_	
	0	, <del></del>	9.2.3.7	1		

Burst Type						
>>>TFCI Presence	0		9.2.1.57		_	
>>>DL Code Information		0 <maxno OfDPC H&gt;</maxno 			_	
>>>DPCH ID	М		9.2.3.5		_	
>>>TDD Channelisation Code	0		9.2.3.19		_	
>DL DPCH to delete		0 <maxno of DPCHs &gt;</maxno 			GLOBAL	reject
>>DPCH ID	М		9.2.3.5		_	
DL CCTrCH to Delete		0 <maxno of CCTrC Hs&gt;</maxno 			GLOBAL	reject
>CCTrCH ID	М		9.2.3.3		_	
DCHs to Modify	0		DCHs TDD to Modify 9.2.3.4D		YES	reject
DCHs to Add	0		DCH TDD Information 9.2.3.4C		YES	reject
DCHs to Delete		0 <max noofDC Hs&gt;</max 			GLOBAL	reject
>DCH ID	М		9.2.1.20		_	
DSCH Information to modify		0 <maxno of DSCHs</maxno 			GLOBAL	reject
>DSCH ID	М		9.2.1.27		_	
>CCTrCH ID	0		9.2.3.3	DL CCTrCH in which the DSCH is mapped	_	
>Transport Format Set	0		9.2.1.59		_	
>Allocation/Retention Priority	0		9.2.1.1A		_	
>Frame Handling Priority	0		9.2.1.30		_	
>ToAWS	0		9.2.1.61		_	
>ToAWE	0		9.2.1.60		_	
>Transport Bearer Request Indicator	M		9.2.1.62A		_	
DSCH Information to add	0		DSCH TDD Information 9.2.3.5A		YES	reject
DSCH Information to delete		0 <maxno of DSCHs</maxno 			GLOBAL	reject
>DSCH ID	М		9.2.1.27			
USCH Information to modify		0 <maxno of USCHs</maxno 			GLOBAL	reject
>USCH ID	M	-	9.2.3.27		_	
			i	i	1	

>Transport Format Set	0		9.2.1.59		_	
> Allocation/Retention Priority	0		9.2.1.1A		_	
>CCTrCH ID	0		9.2.3.2	UL CCTrCH in which the USCH is mapped	ı	
>Transport Bearer Request Indicator	M		9.2.1.62A		ı	
USCH Information to add	0		USCH Information 9.2.3.28		YES	reject
USCH Information to delete		0 <maxno of USCHs</maxno 			GLOBAL	reject
>USCH ID	M		9.2.3.27		_	
RL Information		01			YES	reject
>RL ID	M		9.2.1.53		_	
>Maximum Downlink Power	0		DL Power 9.2.1.21	Maximum allowed power on DPCH	ı	
>Minimum Downlink Power	0		DL Power 9.2.1.21	Minimum allowed power on DPCH	-	
>Initial DL transmission Power	0		DL Power 9.2.1.21	Initial power on DPCH	YES	ignore

Range Bound	Explanation
MaxnoofDCHs	Maximum number of DCHs for a UE.
MaxnoofCCTrCHs	Maximum number of CCTrCHs for a UE.
Maxnoof DPCHs	Maximum number of DPCHs in one CCTrCH.
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	Semantic Description	Criticality	Assigned Criticality
Message Discriminator	М		9.2.1.45		_	
Message Type	М		9.2.1.46		YES	reject
CRNC Communication Context ID	M		9.2.1.18	The reserved value "All CRNCC C" shall not be used.	YES	ignore
Transaction ID	М		9.2.1.62		_	
RL Information Response		0 <max noofRLs &gt;</max 		Only one RL information response group for one group of combined RLs shall be present	EACH	ignore
>RL ID	M		9.2.1.53		_	
>DCH Information Response	0		9.2.1.20C		YES	ignore
>DSCH Information Response	0		9.2.1.27A		YES	ignore
>USCH Information Response	0		9.2.3.29	TDD only	YES	ignore
>TFCl2 Bearer Information Response	0		9.2.2.49A		_	
Criticality Diagnostics	0		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	Semantic Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		_	
Message Type	M		9.2.1.46		YES	reject
CRNC Communication Context ID	M		9.2.1.18	The reserved value "All CRNCC C" shall not be used.	YES	ignore
Transaction ID	M		9.2.1.62		_	
CHOICE Cause Level	M				YES	ignore
>General					_	
>>Cause	M		9.2.1.6		YES	ignore
>RL specific					_	
>>RLs Causing Reconfiguration Failure		0 <max noofRLs &gt;</max 			EACH	ignore
>>>RL ID	М		9.2.1.53		_	
>>>Cause	М		9.2.1.6		_	
Criticality Diagnostics	0		9.2.1.17		YES	ignore

Range Bound	Explanation			
MaxnoofRLs	Maximum number of RLs for a UE.			

## 9.1.45 RADIO LINK RECONFIGURATION COMMIT

IE/Group Name	Presence	Range	IE Type and Reference	Semantic Description	Criticality	Assigned Criticality
Message Discriminator	М		9.2.1.45		-	
Message type	M		9.2.1.46		YES	ignore
Node B Communication Context ID	M		9.2.1.48	The reserved value "All NBCC" shall not be used.	YES	ignore
Transaction ID	М		9.2.1.62		ı	
CFN	М		9.2.1.7		YES	ignore
Active Pattern Sequence Information	0		9.2.2.A		YES	ignore

## 9.1.46 RADIO LINK RECONFIGURATION CANCEL

IE/Group Name	Presence	Range	IE Type and Reference	Semantic Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		_	
Message type	M		9.2.1.46		YES	ignore
Node B Communication Context ID	M		9.2.1.48	The reserved value "All NBCC" shall not be used.	YES	ignore
Transaction ID	М		9.2.1.62		_	

# 9.1.47 RADIO LINK RECONFIGURATION REQUEST

#### FDD Message 9.1.47.1

IE/Group Name	Presence	Range	IE Type and Reference	Semantic Description	Criticality	Assigned Criticality
Message Discriminator	М		9.2.1.45		_	
Message Type	М		9.2.1.46		YES	reject
Node B Communication Context ID	M		9.2.1.48	The reserved value "All NBCC" shall not be used.	YES	reject
Transaction ID	М		9.2.1.62		_	
UL DPCH Information		01			YES	reject
>TFCS	0		9.2.1.58	For the UL.	_	-
DL DPCH Information		01			YES	reject
>TFCS	0		9.2.1.58	For the DL.	_	-
>TFCI Signalling Mode	0		9.2.2.50		_	
>Limited Power Increase	0		9.2.2.18A		_	
DCHs to Modify	0		DCHs FDD to Modify 9.2.2.4E		YES	reject
DCHs to Add	0		DCH FDD Information 9.2.2.4D		YES	reject
DCHs to Delete		0 <maxn oofDCHs &gt;</maxn 			GLOBAL	reject
>DCH ID	М		9.2.1.20		_	
Radio Link Information		0 <maxn oofRLs&gt;</maxn 			EACH	reject
>RL ID	M		9.2.1.53		_	
>Maximum DL Power	0		DL Power 9.2.1.21	Maximum allowed power on DPCH	_	
>Minimum DL Power	0		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	0		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	Semantic	Criticality	Assigned
			and Reference	Description		Criticality
Message Discriminator	M		9.2.1.45		_	
Message Type	M		9.2.1.46		YES	reject
Node B Communication Context ID	M		9.2.1.48	The reserved value "All NBCC" shall not be used.	YES	reject
Transaction ID	М		9.2.1.62		_	
UL CCTrCH to modify		0 <maxn oofCCTr CHs&gt;</maxn 			EACH	notify
>CCTrCH ID	М		9.2.3.3		-	
>TFCS	0		9.2.1.58		_	
>Puncture Limit	0		9.2.1.50		_	
UL CCTrCH to delete		0 <maxn oofCCTr CHs&gt;</maxn 			EACH	notify
>CCTrCH ID	M		9.2.3.3		_	
DL CCTrCH to modify		0 <maxn oofCCTr CHs&gt;</maxn 			EACH	notify
>CCTrCH ID	М		9.2.3.3		-	
>TFCS	0		9.2.1.58		-	
>Puncture Limit	0		9.2.1.50		-	
DL CCTrCH to delete		0 <maxn oofCCTr CHs&gt;</maxn 			EACH	notify
>CCTrCH ID	М		9.2.3.3		-	
DCHs to Modify	0		DCHs TDD to Modify 9.2.3.4D		YES	reject
DCHs to Add	0		DCH TDD Information 9.2.3.4C		YES	reject
DCHs to Delete		0 <maxn oofDSCH s&gt;</maxn 			GLOBAL	reject
>DCH ID	М		9.2.1.20			
RL Information		01			YES	reject
>RL ID	М		9.2.1.53		_	
>Maximum Downlink Power	0		DL Power 9.2.1.21	Maximum allowed power on DPCH	_	
>Minimum Downlink Power	0		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	Semantic Description	Criticality	Assigned Criticality
Message Discriminator	М		9.2.1.45		_	
Message Type	М		9.2.1.46		YES	reject
CRNC Communication Context ID	M		9.2.1.18	The reserved value "All CRNCC C" shall not be used.	YES	ignore
Transaction ID	М		9.2.1.62		_	
RL Information Response		0 <maxn oofRLs&gt;</maxn 		Only one RL information response group for one group of combined RLs shall be present	EACH	ignore
>RL ID	М		9.2.1.53		_	
>DCH Information Response	0		9.2.1.20C		YES	ignore
Criticality Diagnostics	0		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
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	М		9.2.1.18		YES	reject
Transaction ID	М		9.2.1.62		_	
RL Information		1 <maxn oofRLs&gt;</maxn 			EACH	notify
>RL ID	М		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	М		9.2.1.45		_	
Message Type	М		9.2.1.46		YES	reject
CRNC Communication Context ID	M		9.2.1.18	The reserved value "All CRNCC C" shall not be used.	YES	ignore
Transaction ID	M		9.2.1.62		_	
Criticality Diagnostics	0		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	М		9.2.1.46		YES	ignore
Node B Communication Context ID	М		9.2.1.48	The reserved value "All NBCC" shall not be used.	YES	ignore
Transaction ID	М		9.2.1.62		_	
Power Adjustment Type	М		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	0		9.2.2.18B		YES	ignore
DL Reference Power Information	C- Individual	1 <maxnoof RLs&gt;</maxnoof 			GLOBAL	ignore
>RL ID	М		9.2.1.53		_	
>DL Reference Power	М		DL power 9.2.1.21	Power on DPCH	_	
Max Adjustment Step	C- CommonO rIndividual		9.2.2.20		YES	ignore
Adjustment Period	C- CommonO rIndividual		9.2.2.B		YES	ignore
Adjustment Ratio	C- CommonO rIndividual		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	М		9.2.1.45		-	
Message Type	M		9.2.1.46		YES	reject
Node B Communication Context ID	M		9.2.1.48	The reserved value "All NBCC" shall not be used when the Report characteristi cs type is set to "On-Demand".	YES	reject
Transaction ID	М		9.2.1.62		-	
Measurement ID	M		9.2.1.42		YES	reject
Dedicated Measurement Object Type	М		9.2.1.22		YES	reject
CHOICE Dedicated Measurement Object Type	М				YES	reject
>RL					_	
>>RL Information		1 <maxnoofr Ls&gt;</maxnoofr 			EACH	reject
>>>RL ID	M		9.2.1.53			
>>>DPCH ID	0		9.2.3.5	TDD only	_	
>RLS				FDD only		
>>RL Set Information		1 <maxnoofr LSets&gt;</maxnoofr 			_	
>>>RL Set ID	M		9.2.2.39		_	
>ALL RL			NULL		-	
>ALL RLS			NULL	FDD only	ı	
Dedicated Measurement Type	М		9.2.1.23		YES	reject
Measurement Filter Coefficient	0		9.2.1.41		YES	reject
Report Characteristics	М		9.2.1.51		YES	reject
CFN reporting indicator	M		FN reporting indicator 9.2.1.29B		YES	reject
CFN	0		9.2.1.7		YES	reject

Range	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		ı	
Message Type	M		9.2.1.46		YES	reject
CRNC Communication Context ID	М		9.2.1.18		YES	ignore
Transaction ID	M		9.2.1.62		_	
Measurement ID	М		9.2.1.42		YES	ignore
CHOICE Dedicated Measurement Object Type	0			Dedicated Measuremen t Object Type the measuremen t was initiated with	YES	ignore
>RL or ALL RL					_	
>>RL Information		1 <maxnoofr Ls&gt;</maxnoofr 			EACH	ignore
>>>RL ID	M		9.2.1.53		_	
>>>DPCH ID	0		9.2.3.5	TDD only	_	
>>>Dedicated Measurement Value	M		9.2.1.24		_	
>>>CFN	0		9.2.1.7	Dedicated Measuremen t Time Reference	-	
>RLS or ALL RLS				FDD only	_	
>>RL Set Information		1 <maxnoofr LSets&gt;</maxnoofr 			_	
>>>RL Set ID	М		9.2.2.39		_	
>>>Dedicated Measurement Value	М		9.2.1.24		_	
>>>CFN	0		9.2.1.7	Dedicated Measuremen t Time Reference	-	
Criticality Diagnostics	0		9.2.1.17		YES	ignore

Range	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	М		9.2.1.45		_	
Message Type	М		9.2.1.46		YES	reject
CRNC Communication Context ID	М		9.2.1.18		YES	ignore
Transaction ID	M		9.2.1.62		_	
Measurement ID	М		9.2.1.42		YES	ignore
Cause	М		9.2.1.6		YES	ignore
Criticality Diagnostics	0		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	М		9.2.1.45		_	
Message Type	М		9.2.1.46		YES	ignore
CRNC Communication Context ID	М		9.2.1.18	The reserved value "All CRNCC C" shall not be used.	YES	ignore
Transaction ID	М		9.2.1.62		_	
Measurement ID	М		9.2.1.42		YES	ignore
CHOICE Dedicated  Measurement Object Type	М			Dedicated Measuremen t Object Type the measuremen t was initiated with	YES	ignore
>RL or ALL RL					_	
>>RL Information		1 <maxnoofr Ls&gt;</maxnoofr 			EACH	ignore
>>>RL ID	М		9.2.1.53		-	
>>>DPCH ID	0		9.2.3.5	TDD only	_	
>>>Dedicated Measurement Value Information	M		9.2.1.24A		I	
>RLS or ALL RLS				FDD only	_	
>>RL Set Information		1 <maxnoofr LSets&gt;</maxnoofr 			EACH	ignore
>>>RL Set ID	М		9.2.1.39			
>>>Dedicated Measurement Value Information	M		9.2.1.24A		-	

Range	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
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 measuremen t. Otherwise, the reserved value 'All NBCC' shall not be used.	YES	ignore
Transaction ID	M		9.2.1.62		_	
Measurement ID	M		9.2.1.42		YES	ignore

# 9.1.57 DEDICATED MEASUREMENT FAILURE INDICATION

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		_	
Message Type	M		9.2.1.46		YES	ignore
CRNC Communication Context ID	M		9.2.1.18	The reserved value 'All CRNCC C' shall be used if the Node B Communicati on Context ID was set to 'All NBCC' when initiating the measuremen t. Otherwise, the reserved value 'All CRNCCC' shall not be used.	YES	ignore
Transaction ID	М		9.2.1.62		_	
Measurement ID	М		9.2.1.42		YES	ignore
Cause	М		9.2.1.6		YES	ignore

# 9.1.58 RADIO LINK FAILURE INDICATION

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		_	
Message Type	M		9.2.1.46		YES	ignore
CRNC Communication Context ID	M		9.2.1.18	The reserved value "All CRNCC C" shall not	YES	ignore
				be used.		
Transaction ID  CHOICE Reporting Object	M		9.2.1.62	Object for which the Failure shall be reported.	YES	ignore
>RL					_	
>>RL Information		1 to <maxnoofrl s=""></maxnoofrl>			EACH	ignore
>>>RL ID	М		9.2.1.53		_	
>>>Cause	М		9.2.1.6		_	
>RL Set					_	
>>RL Set Information		1 to <maxnoofrl Sets&gt;</maxnoofrl 			EACH	ignore
>>>RL Set ID	М		9.2.2.39		_	
>>>Cause	M		9.2.1.6		_	
>CCTrCH						
>>RL ID	М		9.2.1.53		_	
>>CCTrCH List		1 to <maxnocct rCH&gt;</maxnocct 			EACH	ignore
>>>CCTrCH ID	М		CCTrCH ID 9.2.3.3		_	
>>>Cause	М		9.2.1.6		_	

Range bound	Explanation
MaxnoofRLs	Maximum number of RLs for one UE.
MaxnoofRLSets	Maximum number of RL Sets for one UE.
MaxnoofCCTrCHs	Maximum number of CCTrCHs for a UE.

# 9.1.59 RADIO LINK RESTORE INDICATION

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		_	
Message Type	M		9.2.1.46		YES	ignore
CRNC Communication Context ID	M		9.2.1.18	The reserved value "All CRNCC C" shall not be used.	YES	ignore
Transaction ID	M		9.2.1.62		_	
CHOICE Reporting Object	М			Object for which the Restoration shall be reported.	YES	ignore
>RL					_	
>>Radio Link Information		1 to <maxnoofrl s=""></maxnoofrl>			EACH	ignore
>>>RL ID	М		9.2.1.53		_	
>RL Set					_	
>>RL Set Information		1 to <maxnoofrl Sets&gt;</maxnoofrl 			EACH	ignore
>>>RL Set ID	M		9.2.2.39		_	
>CCTrCH						
>>RL ID	М		9.2.1.53			
>>CCTrCH List		1 to <maxnocct rCH&gt;</maxnocct 			EACH	ignore
>>>CCTrCH ID	М		CCTrCH ID 9.2.3.3		-	

Range bound	Explanation
MaxnoofRLs	Maximum number of RLs for one UE.
MaxnoofRLSets	Maximum number of RL Sets for one UE.
MaxnoofCCTrCHs	Maximum number of CCTrCHs for a UE.

# 9.1.60 COMPRESSED MODE COMMAND [FDD]

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		_	
Message Type	М		9.2.1.46		YES	ignore
Node B communication context ID	М		9.2.1.48	The reserved value "All NBCC" shall not be used.	YES	ignore
Transaction ID	М		9.2.1.62		_	
Active Pattern Sequence Information	M		9.2.2.A		YES	ignore

# 9.1.61 ERROR INDICATION

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	М		9.2.1.45		_	
Message Type	М		9.2.1.46		YES	ignore
CRNC Communication Context ID	0		9.2.1.18	The reserved value "All CRNCC C" shall not be used.	YES	ignore
Node B Communication Context ID	0		9.2.1.48	The reserved value "All NBCC" shall not be used.	YES	ignore
Transaction ID	М		9.2.1.62		YES	ignore
Cause	0		9.2.1.6		YES	ignore
Criticality Diagnostics	0		9.2.1.17		YES	ignore

# 9.1.62 PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST [TDD]

IE/Group Name	Presence	Range	IE Type and Reference	Semantic Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		-	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		-	
C-ID	M		9.2.1.9		YES	reject
SFN	0		9.2.1.53A		YES	reject
PDSCH Sets to add		0 <maxnoof PDSCHSets &gt;</maxnoof 			GLOBAL	reject
>PDSCH Set ID	M		9.2.3.11		-	
>PDSCH to add Information		1			YES	reject
>>Repetition Period	M		9.2.3.16		_	

	М		9.2.3.15		
>>Repetition Length	M		9.2.3.13		
>>TDD Physical	IVI		9.2.3.20	_	
Channel Offset		4			
>>DL Timeslot Information		1 <maxnoofdl< td=""><td></td><td>_</td><td></td></maxnoofdl<>		_	
>>>Time Slot	M	ts>	9.2.3.23	_	
>>>Midamble Shift	M		9.2.3.7	_	
and Burst Type	""		0.2.0.7		
>>>TFCI Presence	M		9.2.1.57	_	
>>>DL Code	<b></b>	1	0.2.1.01	_	
Information		<maxnoofp DSCH&gt;</maxnoofp 			
>>>>PDSCH ID	М		9.2.3.10	-	
>>>TDD	М		9.2.3.19	_	
Channelisation Code					
PDSCH Sets to Modify		0 <maxnoof PDSCHSets &gt;</maxnoof 		GLOBAL	reject
>PDSCH Set ID	М		9.2.3.11	-	
>PDSCH to modify		1		YES	reject
Information					
>>Repetition Period	0		9.2.3.16	-	
>>Repetition Length	0		9.2.3.15	_	
>>TDD Physical	0		9.2.3.20	_	
Channel Offset					
>>DL Timeslot		0		_	
Information		<maxnoofdl ts&gt;</maxnoofdl 			
>>>Time Slot	М		9.2.3.23	_	
>>>Midamble Shift	0		9.2.3.7	_	
and Burst Type					
>>>TFCI Presence	0		9.2.1.57	_	
>>>DL Code Information		0 <maxnoofp< td=""><td></td><td>_</td><td></td></maxnoofp<>		_	
	1	DSCH>			
>>>PDSCH ID	M		9.2.3.10	_	
>>>>TDD Channelisation Code	M		9.2.3.19	_	
PDSCH Sets to Delete		0 <maxnoof PDSCHSets</maxnoof 		GLOBAL	reject
- DDCCH C-+ ID	M	>	9.2.3.11	_	
>PDSCH Set ID	IVI	0 <maxnoof< td=""><td>J.Z.J.11</td><td>GLOBAL</td><td>reject</td></maxnoof<>	J.Z.J.11	GLOBAL	reject
PUSCH Sets to add		PUSCHSets		GLOBAL	reject
>PUSCH Set ID	М		9.2.3.13	- 1	
>PUSCH to add		1		YES	reject
Information					,
>>Repetition Period	М		9.2.3.16	_	
>>Repetition Length	M		9.2.3.15	_	
>>TDD Physical	M		9.2.3.20	_	
Channel Offset					
>>UL Timeslot	1	1		_	
Information		<maxnooful ts&gt;</maxnooful 			
>>>Time Slot	М		9.2.3.23	-	
>>>Midamble Shift	М		9.2.3.7	-	
and Burst Type					

>>>TFCI Presence	M		9.2.1.57	_	
>>>UL Code		1		_	
Information		<maxnoofp USCH&gt;</maxnoofp 			
>>>PUSCH ID	M		9.2.3.12	_	
>>>TDD	M		9.2.3.19	_	
Channelisation					
Code					
PUSCH Sets to Modify		0 <maxnoof PUSCHSets &gt;</maxnoof 		GLOBAL	reject
>PUSCH Set ID	M		9.2.3.13	-	
>PUSCH to modify		1		YES	reject
Information					
>>Repetition Period	0		9.2.3.16	_	
>>Repetition Length	0		9.2.3.15	_	
>>TDD Physical	0		9.2.3.20	_	
Channel Offset					
>>UL Timeslot		0		_	
Information		<maxnooful ts=""></maxnooful>			
>>>Time Slot	M		9.2.3.23	_	
>>>Midamble Shift and Burst Type	0		9.2.3.7	_	
>>>TFCI Presence	0		9.2.1.57	_	
>>>UL Code Information		0 <maxnoofp DSCH&gt;</maxnoofp 		-	
>>>PUSCH ID	М		9.2.3.12	_	
>>>>TDD	М		9.2.3.19	_	
Channelisation					
Code					
PUSCH Sets to Delete		0 <maxnoof PUSCHSets &gt;</maxnoof 		GLOBAL	reject
>PUSCH Set ID	М		9.2.3.13	-	

Range bound	Explanation
Maxnoof PDSCH Sets	Maximum number of PDSCH Sets in a cell.
Maxnoof PDSCH	Maximum number of PDSCH in a cell.
Maxnoof PUSCH Sets	Maximum number of PUSCH Sets in a cell.
Maxnoof PUSCH	Maximum number of PUSCH 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	Semantic Description	Criticality	Assigned Criticality
Message Discriminator	М		9.2.1.45		-	
Message Type	М		9.2.1.46		YES	reject
Transaction ID	М		9.2.1.62		-	
Criticality Diagnostics	0		9.2.1.17		YES	ignore

# 9.1.64 PHYSICAL SHARED CHANNEL RECONFIGURATION FAILURE [TDD]

IE/Group Name	Presence	Range	IE Type and Reference	Semantic Descriptio n	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 <maxnoof PDSCHSets</maxnoof 			EACH	ignore
>>>PDSCH Set ID	М		9.2.3.13		-	
>>>Cause	M		9.2.1.6		YES	ignore
>>Unsuccessful UL Shared channel set		0 <maxnoof PUSCHSets &gt;</maxnoof 			EACH	ignore
>>>PUSCH Set ID	M		9.2.3.13		-	
>>>Cause	M		9.2.1.6		-	
Criticality Diagnostics	0		9.2.1.17		YES	ignore

Range bound	Explanation		
Maxnoof PDSCH Sets	Maximum number of PDSCH Sets in a cell.		
Maxnoof PUSCH Sets	Maximum number of PUSCH Sets in a cell.		

# 9.1.65 RESET REQUEST

IE/Group Name	Presence	Range	IE type and reference	Semantic Descripti on	Criticality	Assigned Criticality
Message Discriminator	М		9.2.1.45		_	
Message Type	М		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		_	

CHOICE Reset Indicator	M			YES	ignore
>CommunicationContext				_	
>>Communication Context Information		1 <maxco mmunicatio nContext&gt;</maxco 		EACH	reject
>>>CHOICE Communication Context Type	M			_	
>>>>CRNC Communication Context				_	
>>>>CRNC Communication Context ID	M		9.2.1.18	_	
>>>Node B Communication Context				_	
>>>>Node B Communication Context ID	M		9.2.1.48	_	
>CommunicationControl Port				_	
>>Communication Control Port Information		1 <maxccpi nNodeB&gt;</maxccpi 		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	М		9.2.1.46		YES	reject
Transaction ID	М		9.2.1.62		_	
Criticality Diagnostics	0		9.2.1.17		YES	ignore

# 9.1.67 DL POWER TIMESLOT CONTROL REQUEST [TDD]

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		-	
Message Type	M		9.2.1.46		YES	ignore
Node B Communication Context ID	M		9.2.1.48	The reserved value "All NBCC" shall not be used.	YES	ignore
Transaction ID	M		9.2.1.62		_	
DL Time Slot ISCP Info	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 Type	M		9.2.1.46		YES	ignore
Transaction ID	M		9.2.1.62		_	
CRNC Communication Context ID	М		9.2.1.18		YES	ignore
RL Information		0 <maxno ofRLs&gt;</maxno 			EACH	ignore
>RL ID	М		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 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;
- When bits are individually named, i.e. ordered as b0, b1, etc, then b0 is the least significant bit (LSB).

# 9.2.1 Common parameters

#### 9.2.1.1 Add/Delete Indicator

The add/delete indicator shall notify the RNC whether the associated resource has been added to or removed from the Node B.

IE/Group Name	Presence	Range	IE type and	Semantics description
			reference	
Add/Delete Indicator			ENUMERAT	
			ED(Add,	
			Delete)	

#### 9.2.1.1A Allocation/Retention Priority

This parameter indicates the priority level in the allocation and retention of Node B internal resources. See Annex A.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Priority Level	M		INTEGER (015)	This IE indicates the priority of the request.  0 = spare.  1 = highest priority.  .  .  14 = Lowest priority.  15 = not used.
Pre-emption Capability	M		ENUMERAT ED(shall not trigger pre- emption, may trigger pre-emption)	
Pre-emption Vulnerability	М		ENUMERAT ED (not pre- emtable, pre-emtable)	

# 9.2.1.2 Availability Status

The availability status is used to indicate more detailed information of the availability of the resource. In accordance with ref. [6], following values are defined. If the value of this attribute is an empty set, this implies that none of the status conditions described in ref. [6] are present.

Availability Status  ENUMERAT ED (empty, in test	description	Semantics (	IE type and reference	Range	Presence	IE/Group Name
failed, power off, off line, off duty, dependency, degraded, not installed,			ENUMERAT ED (empty, in test, failed, power off, off line, off duty, dependency, degraded,			Availability Status

#### 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 (0511)	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 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			Octetstring	
			(14,)	

# 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			ENUMERAT ED(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	M		Enumerated	
Cause			(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,	
			Nigerals an of LU	
			Number of UL codes not	
Trongrant			supported)	
>Transport Layer	N/		Enumerated	
>Transport Layer Cause	M		Enumerated (Transport resource	
			(Transport resource unavailable,	
			Unspecified,	
			)	
>Protocol			,	
>Protocol Cause			Enumerated	
Tables Sudde			(Transfer syntax error,	
			Abstract syntax error (reject),	
L			, \	

		Abstract syntax error (ignore and notify), Message not compatible with receiver state, Semantic error, Unspecified, Abstract syntax error (falsely constructed message),)	
>Misc			
>Miscellaneous Cause	M	Enumerated (Control processing overload Hardware failure, O&M intervention, Not enough user plane processing resources, Unspecified,)	

The meaning of the different cause values is described in the following table. In general, "not supported" cause values indicate that the concerning capability is missing. On the other hand, "not available" cause values indicate that the concerning capability is present, but insufficient resources were available to perform the requested action.

Radio Network Layer cause	Meaning
BCCH scheduling error	The Node B has detected an illegal BCCH schedule update (see subclause
	8.2.16.3)
Cell not Available,	The concerning cell or local cell is not available
Combining not supported	The Node B does not support RL combining for the concerning cells
Combining Resources Not Available	The value of the received <i>Diversity Control Field</i> IE was set to 'Must', but
	the Node B cannot perform the requested combining
CM not supported	The concerning cell(s) do not support Compressed Mode
Common Transport Channel Type not	The concerning cell(s) do not support the RACH and/or FACH and/or
supported	CPCH Common Transport Channel Type
Dedicated Transport Channel Type not	The concerning cell(s) do not support the Dedicated Transport Channel
supported	Type
DL Radio Resources not Available	The Node B does not have sufficient DL radio resources available
DL SF not supported	The concerning cell(s) do not support the requested DL SF
DL Shared Channel Type not	The concerning cell(s) do not support the Downlink Shared Channel
supported	Туре
Invalid CM Settings	The concerning cell(s) consider the requested Compressed Mode settings
	invalid
Measurement not Supported For The	At least one of the concerning cell(s) does not support the requested
Object	measurement on the concerning object type
Measurement Temporarily not	The Node B can temporarily not provide the requested measurement
Available	value
Node B resources unavailable	The Node B does not have sufficient resources available
Number of DL codes not supported	The concerning cell(s) do not support the requested number of DL codes
Number of UL codes not supported	The concerning cell(s) do not support the requested number of UL codes
Power Level not Supported	A DL power level was requested which the concerning cell(s) do not
	support
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 COMMIT
	message was received previously, but the concerning CFN has not yet
	elapsed
Requested Configuration not	The concerning cell(s) do not support the requested configuration i.e.
Supported	power levels, Transport Formats, physical channel parameters
Requested Tx Diversity mode not	The concerning cell(s) do not support the requested transmit diversity
supported	mode

RL already Activated/ allocated	The Node B has already allocated an RL with the requested RL-id for this
	UE context
S-CPICH not supported	The concerning cell(s) do not support S-CPICH
SIB Orgination in Node B not	The Node B does not support the origination of the requested SIB for the
Supported	concerning cell
Synchronisation Failure	Loss of UL Uu synchronisation
Tx diversity no longer supported	Tx diversity can no longer be supported in the concerning cell.
UL Radio Resources not Available	The Node B does not have sufficient UL radio resources available
UL SF not supported	The concerning cell(s) do not support the requested minimum UL SF
UL Shared Channel Type not	The concerning cell(s) do not support the Uplink Shared Channel Type
supported	
Unknown C-ID	The Node B is not aware of a cell with the provided C-ID
Unknown Local Cell ID	The Node B is not aware of a local cell with the provided Local Cell ID
Unspecified	Sent when none of the above cause values applies but still the cause is
	Radio Network layer related

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

Protocol cause	Meaning
Abstract Syntax Error (Reject)	The received message included an abstract syntax error and the
	concerning criticality indicated "reject" (see subclause 10.3)
Abstract Syntax Error (Ignore and	The received message included an abstract syntax error and the
Notify)	concerning criticality indicated "ignore and notify" (see subclause 10.3)
Abstract syntax error (falsely	The received message contained IEs in wrong order or with too many
constructed message)	occurrences (see subclause 10.3)
Message not Compatible with	The received message was not compatible with the receiver state (see
Receiver State	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	Node B has insufficient user plane processing resources available
Resources	
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	
			(0255)	

#### 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	
			(065535)	

#### 9.2.1.9A Common Channels Capacity Consumption Law

The capacity consumption law indicates the CRNC how the Capacity Credit is consumed by NBAP set of procedures, depending on the allocated Spreading Factor. [FDD- For the PRACH, the reference spreading factor shall be the minimum possible spreading factor amongst the ones defined by the 'RACH slot format' IE(s) in the Common Transport Channel Setup or Reconfiguration procedures. For the PCPCH, the reference spreading factor shall be the minimum spreading factor computed from the TFCS as described in [8].]

This capacity consumption law indicates the consumption law to be used with the following procedures:

- Common Transport Channel Setup
- Common Transport Channel Deletion
- [FDD- Common Transport Channel Reconfiguration]

For the Common Transport Channel Setup procedure, the cost given in the consumption law shall be debited from the Capacity Credit, whereas it shall be credited to the Capacity Credit for the Common Transport Channel Deletion one.

[FDD- For the Common Transport Channel Reconfiguration procedure, the difference of the consumption cost for the new spreading factor and the consumption cost for the old spreading factor shall be debited from the Capacity Credit (or credited if this difference is negative).]

If the modelling of the internal resource capability of the Node B is modelled independently for the Uplink and Downlink, the "DL cost" shall be applied to the "DL or Global Capacity Credit" and the "UL Cost" shall be applied to the "UL Capacity Credit". If it is modelled as shared resources, both the "DL cost" and the "UL cost" shall be applied to the "DL or Global Capacity Credit".

[FDD- When the Common Transport Channel Setup, Deletion or Reconfiguration procedures are used, the Capacity Credit shall be updated considering all physical channels related in these procedures (S-CCPCH, PICH, PRACH, AICH, PCPCH, CD/CA-ICH and AP-AICH), i.e. one cost shall be credited to or debited from the Capacity Credit per physical channel.]

[FDD- The costs given in the consumption law are the costs per channelization code. When multiple channelization codes are used by a physical channel, the cost credited to or debited from the Capacity Credit for this physical channel shall be taken as N times the cost given in the consumption law, where N is the number of channelization codes.]

[TDD - When the Common Transport Channel Setup, or Deletion procedures are used, the Capacity Credit shall be updated considering all physical channels related in these procedures (S-CCPCH, PICH, PRACH), i.e. one cost shall be credited to or debited from the Capacity Credit per physical channel.]

IE/Group Name	Presence	Range	IE type and reference	Semantics description
SF allocation law		<maxnumberofs F&gt;</maxnumberofs 		[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	М		INTEGER (065535)	-
>UL cost	М		INTEGER (065535)	

Range bound	Explanation
MaxNumberOfSF	Maximum number of Spreading Factors

# 9.2.1.10 Common Measurement Object Type

The Common Measurement Object type indicates the type of object that the measurement is to be performed on.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Common Measurement			ENUMERAT	
Object Type			ED (CELL,	
			RACH,	
			CPCH,)	

# 9.2.1.11 Common Measurement Type

The Common Measurement Type identifies which measurement that shall be performed.

IE/Group Name	Presence	Range	IE Type and	Semantics Description
			Reference	
Common Measurement Type			ENUMERAT	UL Timeslot ISCP is used by
			ED	TDD only,
			(Received	Acknowledged PRACH
			total wide	preambles, Acknowledged
			band power,	PCPCH Access Preambles,
			Transmitted	Detected PCPCH Access
			Carrier	Preambles are used by FDD
			Power,	only
			Acknowledg	
			ed PRACH	
			preambles,	
			UL Timeslot	
			ISCP,	
			Acknowledg	
			ed PCPCH	
			Access	
			Preambles,	
			Detected	
			PCPCH	
			Access	
			Preambles,	
			)	

#### 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	М		INTEGER(0100)	According to mapping in [22] and [23]
>Received Total Wide Band Power				
>>Received total wide band power Value	М		INTEGER(0. .621)	According to mapping in [22] and [23]
>Acknowledged PRACH Preambles				FDD only
>>Acknowledged PRACH Preamble Value [FDD only]	М		INTEGER(0240,)	According to mapping in [22]
>UL Timeslot ISCP			. ,	TDD only
>>UL Timeslot ISCP [TDD only]	M		INTEGER(0127)	According to mapping in [23]
>Acknowledged PCPCH Access Preambles				FDD only
>>Acknowledged PCPCH Access Preambles [FDD only]	M		INTEGER(0. .15,)	According to mapping in [22]
>Detected PCPCH Access Preambles				FDD only
>>Detected PCPCH Access Preambles [FDD only]	M		INTEGER(0240,)	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	Criticality	Assigned Criticality
CHOICE Measurement Availability Indicator	M				-	
>Measurement Available					-	
>>Common Measurement value	М		9.2.1.12		-	
>Measurement not Available			NULL		_	

# 9.2.1.13 Common Physical Channel ID

Common Physical Channel ID is the unique identifier for one common physical channel within a cell.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Common Physical Channel ID			Integer(0 255)	

# 9.2.1.13A Common Physical Channel Status Information

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Common Physical Channel ID	М		9.2.1.13		_	
Resource Operational State	М		9.2.1.52		_	
Availability Status	М		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			Integer(0	
ID			255)	

#### 9.2.1.14A Common Transport Channel Information Response

The Common Transport Channel Information Response IE provides information for Common Transport Channels that have been established or modified.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Common Transport Channel ID	М		9.2.1.14		_	
Binding ID	0		9.2.1.4		_	
Transport Layer Address	0		9.2.1.63		_	

#### 9.2.1.14B Common Transport Channel Status Information

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Common Transport Channel ID	М		9.2.1.14		-	
Resource Operational State	М		9.2.1.52		_	
Availability Status	М		9.2.1.2		_	

#### 9.2.1.15 Communication Control Port ID

A Communication Control Port corresponds to one signalling bearer between the RNC and Node B for the control of Node B Communication Contexts. Node B may have multiple Communication Control Ports (one per Traffic Termination Point). The Communication Control Port is selected at creation of the Node B Communication Context. The Communication Control Port ID is the identifier of the Communication Control Port.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Communication Control Port ID			INTEGER	
			(065535)	

# 9.2.1.16 Configuration Generation ID

The Configuration Generation ID describes the generation of the configuration of logical resources in a cell.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Configuration Generation ID			Integer(0 255)	Value '0' means "No configuration". At possible wraparound of the ID counter in CRNC the value '0' shall not be used.

# 9.2.1.17 Criticality Diagnostics

The *Criticality Diagnostics* IE is sent by a Node B or the CRNC when parts of a received message have not been comprehended or are missing, or if the message contained logical errors. When applicable, it contains information about which IEs that were not comprehended or were missing.

For further details on how to use the Criticality Diagnostics IE, see Annex C.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Procedure ID		01		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 (0255)	
>Ddmode	М		ENUMERAT ED (FDD, TDD, Common)	Common = common to FDD and TDD.
Triggering Message	0		ENUMERAT ED(initiating message, successful outcome, unsuccessful outcome, outcome)	The Triggering Message is used only if the Criticality Diagnostics is part of Error Indication.
Procedure Criticality	0		ENUMERAT ED(reject, ignore, notify)	This Procedure Criticality is used for reporting the Criticality of the Triggering message (Procedure). The value 'ignore' shall never be used.
Transaction ID	0		Transaction ID 9.2.1.62	
Information Element Criticality Diagnostics		0 to <maxnoof errors=""></maxnoof>		
>IE Criticality	M		ENUMERAT ED(reject, ignore, notify)	The IE Criticality is used for reporting the criticality of the triggering IE. The value 'ignore' shall never be used.
>IE ID	M		INTEGER (065535)	The IE ID of the not understood or missing IE
>Repetition Number	0		INTEGER (0255)	The Repetition Number IE gives
				in case of a not understood IE:     The number of occurrences of the reported IE up to and including the not understood occurrence
				in case of a missing IE:     The number of     occurrences up to but not     including the missing     occurrence.
				Note: All the counted occurrences of the reported IE must have the same topdown hierachical message structure of IEs with assigned criticality above them.
>Message Structure	0		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.
>Type of Error	M	ENUMERAT	
		ED(not	
		understood,	
		missing,)	

Range bound	Explanation
Maxnooferrors	Maximum no. of IE errors allowed to be reported with a single
	message.

#### 9.2.1.18 CRNC Communication Context ID

The CRNC Communication Context ID is the identifier of the Communication Context in the CRNC.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
CRNC Communication Context ID			INTEGER (02^20 -1)	2^20-1 is reserved value to indicate all the CRNC communication contexts that can be reached by the communication control port (All CRNCCC).

#### 9.2.1.19 DCH Combination Indicator

Void

#### 9.2.1.20 DCH ID

The DCH ID is the identifier of an active dedicated transport channel. It is unique for each active DCH among the active DCHs simultaneously allocated for the same UE.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
DCH ID			INTEGER	
			(0255)	

### 9.2.1.20A Dedicated Channels Capacity Consumption Law

The capacity consumption law indicates the CRNC how the Capacity Credit is consumed by NBAP set of procedures, depending on the [FDD - allocated Spreading Factor and the RL/RLS situation] [TDD – allocated Spreading Factor on each DPCH and the assigned timeslot]. [FDD- In uplink, the reference spreading factor shall be the minimum spreading factor signalled in the Radio Link Setup Request message (*Min UL Channelisation Code length* IE).].

This capacity consumption law indicates the consumption law to be used with the following procedures:

- Radio Link Setup
- Radio Link Addition
- Radio Link Reconfiguration
- Radio Link Deletion
- [TDD Physical Shared Channel Reconfiguration]

For the Radio Link Setup and Radio Link Addition procedures, the cost given in the consumption law shall be debited from the Capacity Credit, whereas it shall credited to the Capacity Credit for the Radio Link Deletion procedure. For the

Radio Link Reconfiguration procedure, the difference of the consumption cost for the new spreading factor and the consumption cost for the old spreading factor shall be debited from the Capacity Credit (or credited when this difference is negative).

If the modelling of the internal resource capability of the Node B is modelled independently for the Uplink and Downlink, the DL cost shall be applied to the DL or Global Capacity Credit and the UL Cost shall be applied to the UL Capacity Credit. If it is modelled as shared resources, both the DL costs" and the UL costs shall be applied to the DL or Global Capacity Credit.

[FDD - For a Radio Link creating a Radio Link Set (first RL of a RLS), the cost for the RL (cost 2) and RLS (cost 1) shall be taken into account. When adding a Radio Link to a Radio Link Set, only the RL cost (cost 2) shall be taken into account.

In the case of multiple Radio Links are established in one procedure, for every created Radio Link Set the first Radio Link is always the Radio Link with the lowest repetition number.]

[FDD- When a PDSCH is allocated in the Radio Link Setup procedure, the processing cost associated to this PDSCH, equal to the DL cost RL, shall be debited from the Capacity Credit, in addition to the processing cost of the radio links. In a similar way, this cost shall be credited to the Capacity Credit, when a PDSCH is deleted and the difference between the new cost and the old cost shall be debited from the Capacity Credit (or credited if this difference is negative) when a PDSCH is reconfigured.]

[FDD- The costs given in the consumption law are the costs per channelization code. When multiple channelization codes are used by either the radio links or the PDSCH, the cost credited to or debited from the Capacity Credit shall be taken as N times the cost for one code, where N is the number of channelization codes.]

[TDD – The cost for a radio link is a sum of the costs for each DPCH. For the first DPCH assigned to any user in a cell within a timeslot, the initial cost for a DPCH in a timeslot (cost 1) and the cost for a DPCH (cost 2) shall be taken into account. For any DPCH that is not the first DPCH assigned for any user in a cell within a timeslot, only the cost for a DPCH (cost 2) shall be taken into account.

[TDD – The cost for shared channels is a sum of the costs for each PDSCH and PUSCH assigned to a PUSCH or PDSCH set. For the first PDSCH or PUSCH assigned to any user in a cell within a timeslot, the initial cost for a PDSCH/PUSCH in a timeslot (cost 1) and the cost for a PDSCH/PUSCH (cost 2) shall be taken into account. For any PDSCH/PUSCH that is not the first PDSCH/PUSCH assigned to any user in a cell within a timeslot, only the cost for a PDSCH/PUSCH (cost 2) shall be taken into account.

[TDD - In case of Physical Shared Channel Reconfiguration, the sum of the consumption cost of the each PDSCH/PUSCH of the previous configuration shall be credited to the capacity credit, and the sum of the consumption cost of each PDSCH/PUSCH of the new configuration shall be subtracted from the capacity credit.]

IE/Group Name	Presence	Range	IE type and reference	Semantics description
SF allocation law		1 <maxnumberof SF&gt;</maxnumberof 		[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 (065535)	[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 (065535)	[FDD – This is the cost of a RL,] [TDD – This is the cost of a DPCH/PDSCH/PUSCH]
>UL cost 1	M		INTEGER (065535)	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	М		INTEGER (065535)	[FDD – This is the cost of a RL,] [TDD – This is the cost of a DPCH/PDSCH/PUSCH.]

Range bound	Explanation
MaxNumberOfSF	Maximum number of Spreading Factors

# 9.2.1.20B DL or Global Capacity Credit

The capacity credit indicates to the CRNC the Downlink or global capacity of a Local Cell or a Local Cell Group.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
DL or Global Capacity Credit			INTEGER (065535)	

# 9.2.1.20C DCH Information Response

 $\label{thm:condition} The \textit{DCH Information Response} \ IE \ provides \ information \ for \ DCHs \ that \ have \ been \ established \ or \ modified.$ 

IE/Group Name	Presence	Range	IE type and	Semantics description	Criticality	Assigned Criticality
			reference	S		
DCH Information Response		1 to <maxnoofdc Hs&gt;</maxnoofdc 		Only one DCH per set of coordinated DCH shall be included	_	
>DCH ID	М		9.2.1.20		_	
>Binding ID	0		9.2.1.4		_	
>Transport Layer Address	0		9.2.1.63		_	

Range bound	Explanation
MaxnoofDCHs	Maximum number of DCH per UE.

#### 9.2.1.21 DL Power

The DL Power IE indicates a power level relative to the [FDD-primary CPICH power] [TDD-primary CCPCH power] configured in a cell [FDD-If referred to a DPCH, it indicates the power of the transmitted DPDCH symbols].

IE/Group Name	Presence	Range	IE type and reference	Semantics description
DL Power			Enumerated( -35+15dB)	Step 0.1dB

# 9.2.1.22 Dedicated Measurement Object Type

The Dedicated Measurement Object type indicates the type of object that the measurement is to be performed on.

IE/Group Name	Presence	Range	IE Type and	Semantics Description
			Reference	
Dedicated Measurement			ENUMERAT	
Object Type			ED (RL,	
			RLS,	
			ALL RL,	
			ALL RLS,)	

# 9.2.1.23 Dedicated Measurement Type

The Dedicated Measurement Type identifies the type of measurement that shall be performed.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Dedicated Measurement Type			ENUMERAT ED (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(063)	According to mapping in [22] and [23]
>SIR Error Value				FDD only
>>SIR error Value	M		INTEGER(0125)	According to mapping in [22]
>Transmitted Code Power				
>>Transmitted Code Power Value	М		INTEGER(0127)	According to mapping in [22] and [23]
>RSCP			,	TDD only
>>RSCP	М		INTEGER(0127)	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	М		INTEGER(032767)	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	Criticality	Assigned Criticality
CHOICE Measurement Availability Indicator	М				ı	
>Measurement Available					1	
>>Dedicated Measurement Value	М		9.2.1.24		_	
>>CFN	0		9.2.1.7	Dedicated Measuremen t Time Reference	ı	
>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			ENUMERAT	
			ED(May,	
			Must, Must	
			not)	

# 9.2.1.26 Diversity Indication

The Diversity Indication indicates if the RL has been or has not been combined with another RL.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Diversity Indication			ENUMERAT	
			ED	
			(Combined,	
			not	
			combined)	

#### 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	
			(0255)	

#### 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 s	Criticality	Assigned Criticality
DSCH Information Response		1 to <numof DSCH&gt;</numof 			_	
>DSCH ID	М		9.2.1.27		-	
>Binding ID	0		9.2.1.4		_	
>Transport Layer Address	0		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	Semantics description
			reference	
End Of Audit Sequence			ENUMERAT	End of audit sequence = all
Indicator			ED(end of	audit information has been
			audit	provided by the Node B;
			sequence,	Not end of audit sequence =
			not end of	more audit information is
			audit	available;
			sequence)	

#### 9.2.1.29B FN reporting indicator

Frame Number reporting indicator.

Indicates if the SFN or CFN shall be included together with the reported measurement value.

IE/Group Name	Presence	Range	IE type and	Semantics description
			reference	
FN reporting indicator			ENUMERAT	
			ED(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=lower priority,
			(015)	15=higher priority

# 9.2.1.31 Frame Offset

Frame Offset is the required offset between the dedicated channel downlink transmission frames (CFN, Connection Frame Number) and the broadcast channel frame offset (Cell Frame Number). The Frame\_offset is used in the translation between Connection Frame Number (CFN) on Iub/Iur and least significant 8 bits of SFN (System Frame Number) on Uu. The Frame Offset is UE and cell specific.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Frame Offset			INTEGER	Frames
			(0255)	

#### 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 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			ENUMERAT	Repetition period for the IB
			ED (4, 8, 16, 32, 64, 128,	segment in frames
			256, 512,	
			1024, 2048,	
			4096)	

# 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, SIB13.4, SIB15.1, SIB15.1, SIB15.1, SIB15.2, SIB15.3, SIB16,	
			SIB17, SIB15.4, SIB18)	

# 9.2.1.36 Indication Type

The indication type shall indicate the category of a failure with respect to its impact on the logical resources supported at Node B.

IE/Group Name	Presence	Range	IE type and	Semantics description
			reference	
Indication Type			ENUMERAT	Service Impacting – The
			ED (No	failure has impacted on the
			Failure,	logical resources supported at
			Service	Node B.
			Impacting,	
			)	

#### 9.2.1.37 Limited Power Increase

Void.

#### 9.2.1.37A Local Cell Group ID

The Local Cell Group ID represents resources in the Node B, which has been pooled from a capacity point of view.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Local Cell Group ID			Local Cell ID	
			9.2.1.38	

#### 9.2.1.38 Local Cell ID

The local cell ID represents resources in Node B that can be used for the configuration of a cell.

IE/Group Name	Presence	Range	IE Type and	Semantics Description
			Reference	
Local Cell ID			INTEGER(0	
			26843545	
			5)	
			,	ļ

# 9.2.1.39 Maximum DL Power Capability

This parameter indicates the maximum DL power capability for a local cell within Node B. The reference point is the antenna connector.

IE/Group Name	Presence	Range	IE type and	Semantics description
			reference	
Maximum DL Power Capability			ENUMERAT	dBm, granularity 0.1 dB
			ED(0500)	0: 0 dBm
				1: 0.1 dBm
				499: 49.9 dBm
				500: 50.0 dBm

#### 9.2.1.40 Maximum Transmission Power

Maximum Transmission Power is maximum power for all downlink channels added together, that is allowed to be used simultaneously in a cell. The reference point is the antenna connector.

IE/Group Name	Presence	Range	IE Type and	Semantics Description
			Reference	
Maximum transmission Power			ENUMERAT	Unit dBm
			ED(0500)	
			( /	Granularity 0.1 dB
				0: 0 dBm
				1: 0.1 dBm
				1. 0.1 dBiii
				 400: 40 0 dD
				499: 49.9 dBm
				500: 50.0 dBm

# 9.2.1.40A Measurement Availability Indicator

Indicates if measurement is available or not.

reference	
ENUMERATE D(measureme nt available, measurement	
	ENUMERATE D(measureme nt available,

#### 9.2.1.41 Measurement Filter Coefficient

The Measurement Filter Coefficient determines the amount of filtering to be applied for measurements.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Measurement Filter			ENUMERAT	
Coefficient			ED (0, 1, 2,	
			3, 4, 5, 6, 7,	
			8, 9, 11, 13,	
			15, 17, 19,	
			)	

#### 9.2.1.42 Measurement ID

The Measurement ID uniquely identifies any measurement per (Node B- or communication) control port.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Measurement ID			Integer(0	
			2^20-1)	

#### 9.2.1.43 Measurement Increase/Decrease Threshold

The Measurement Increase/Decrease Threshold defines the threshold that shall trigger Event C or D.

Information Element / Group Name	Presence	Range	IE Type and Reference	Semantics Description
CHOICE Increase/Decrease Threshold				
>Received Total Wide Band Power				
>>Received total wide band power	М		INTEGER(0 620)	0: 0 dB 1: 0.1 dB 2: 0.2 dB
>Transmitted Carrier Power				620: 62dB
>>Transmitted Carrier Power	M		INTEGER(0 100)	According to mapping in [22] and [23]
>Acknowledged PRACH Preambles				FDD only
>>Acknowledged PRACH Preambles	М		INTEGER(0240,)	According to mapping in [22]
>UL Timeslot ISCP				TDD only
>>UL Timeslot ISCP	М		INTEGER(0 126)	0: 0 dB 1: 0.5 dB 2: 1 dB
				 126: 63 dB
>SIR >>SIR	M		INTEGER(0 62)	0: 0 dB 1: 0.5 dB 2: 1 dB
>SIR Error				62: 31dB FDD only
>>SIR Error	M		INTEGER(0 124)	0: 0 dB 1: 0.5 dB 2: 1 dB
				 124: 62 dB, [FDD only]
>Transmitted Code Power				
>>Transmitted Code Power	M		INTEGER(0 112,)	0: 0 dB 1: 0.5 dB 2: 1 dB  112: 56 dB
>RSCP				TDD only
>>RSCP	M		INTEGER(0 126)	0: 0 dB 1: 0.5 dB 2: 1 dB
D (T: T)				126: 63 dB
>Round Trip Time	1.4		INITEOED/C	FDD only
>>Round Trip Time	M		INTEGER(0 32766)	0: 0 chips 1: 0.0625 chips 2: 0.1250 chips
>Acknowledged PCPCH Access Preambles				32766: 2047.875 chips FDD only
>>Acknowledged PCPCH Access Preambles	М		INTEGER(0 15,)	According to mapping in [22]
>Detected PCPCH Access Preambles			,	FDD only
>>Detected PCPCH Access Preambles	М		INTEGER(0240,)	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.

Information Element / Group Name	Presence	Range	IE Type and Reference	Semantics Description
CHOICE Measurement Threshold				
>Received Total Wide Band Power				
>>Received total wide band power	М		INTEGER(0. .621)	According to mapping in [22] and [23]
>Transmitted Carrier Power				
>>Transmitted Carrier Power	М		INTEGER(0100)	According to mapping in [22] and [23]
>Acknowledged PRACH Preambles				FDD only
>>Acknowledged PRACH Preambles	M		INTEGER(0240,)	According to mapping in [22]
>UL Timeslot ISCP				TDD only
>>UL Timeslot ISCP	M		INTEGER(0127)	According to mapping in [23]
>SIR				
>>SIR	M		INTEGER(063)	According to mapping in [22] and [23]
>SIR Error				FDD only
>>SIR Error	M		INTEGER(0125)	According to mapping in [22]
>Transmitted Code Power				
>>Transmitted Code Power	M		INTEGER(0127)	According to mapping in [22] and [23]
>RSCP				TDD only
>>RSCP	М		INTEGER(0127)	According to mapping in [23]
>Rx Timing Deviation				TDD only
>>Rx Timing Deviation	-M		INTEGER(08191)	According to mapping in [23]
>Round Trip Time				FDD only
>>Round Trip Time	М		INTEGER(032767)	According to mapping in [22]
>Acknowledged PCPCH Access Preambles				FDD only
>>Acknowledged PCPCH Access Preambles	М		INTEGER(015,)	According to mapping in [22]
>Detected PCPCH Access Preambles			,	FDD only
>>Detected PCPCH Access Preambles	М		INTEGER(0240,)	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			ENUMERAT	
<u> </u>			ED(Common	
			,Dedicated)	

# 9.2.1.45A Message Structure

The *Message Structure* IE gives information for each level with assigned criticality in an hierarchical message structure from top level down to the lowest level above the reported level for the occured error (reported in the *Information Element Criticality Diagnostics* IE).

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message structure		1 to <maxnoofle vels&gt;</maxnoofle 		The first repetition of the Message Structure IE corresponds to the top level of the message. The last repetition of the Message Structure IE corresponds to the level above the reported level for the occured error of the message.	GLOBAL	ignore
>IE ID	М		INTEGER (065535)	The IE ID of this level's IE containing the not understood or missing IE.	-	
>Repetition Number	0		INTEGER (1256)	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 no. of message levels to report. The value for
	maxnooflevels is 256.

# 9.2.1.46 Message Type

The Message Type uniquely identifies the message being sent.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Procedure ID	M	1		•
>Procedure Code	M		ENUMERATED ( COMMON TRANSPORT CHANNEL SETUP, COMMON TRANSPORT CHANNEL RECONFIGURATION, COMMON TRANSPORT CHANNEL DELETION, BLOCK RESOURCE, AUDIT REQUIRED, AUDIT, COMMON MEASUREMENT INITIATION, COMMON MEASUREMENT TERMINATION, COMMON MEASUREMENT FAILURE, CELL SETUP, CELL RECONFIGURATION, CELL DELETION, RESOURCE STATUS INDICATION, SYSTEM INFORMATION UPDATE, RL SETUP, RL ADDITION, SYNCHRONISED RL RECONFIGURATION COMMIT, SYNCHRONISED RL RECONFIGURATION CANCELLATION, UNSYNCHRONISED RL RECONFIGURATION CANCELLATION, UNSYNCHRONISED RL RECONFIGURATION CANCELLATION, UNSYNCHRONISED RL RECONFIGURATION, RL DELETION, DL POWER CONTROL, DL POWER CONTROL, DL POWER TIMESLOT CONTROL, DEDICATED MEASUREMENT INITIATION, DEDICATED MEASUREMENT TERMINATION, DEDICATED MEASUREMENT TERMINATION, DEDICATED MEASUREMENT FAILURE, RL FAILURE, RL RESTORATION, COMPRESSED MODE COMMAND, ERROR INDICATION, PHYSICAL SHARED CHANNEL RECONFIGURATION, RESET,	
>Ddmode	M		) ENUMERATED (FDD, TDD, Common,)	Common = common to FDD and TDD.
Type of Message	М		ENUMERATED (Initiating Message, Successful Outcome, Unsuccessful Outcome, Outcome)	100.

## 9.2.1.46A Minimum DL Power Capability

This parameter indicates the minimum DL power capability for a local cell within Node B. The reference point is the antenna connector.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Minimum DL Power Capability			ENUMERAT ED(0800)	dBm, granularity 0.1 dB 0: -30.0 dBm 1: -29.9 dBm
				 799: 49.9 dBm 800: 50.0 dBm

## 9.2.1.47 Minimum Spreading Factor

This parameter indicates the minimum spreading factor supported at a cell within the Node B.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Minimum Spreading Factor			Enumerated( 4, 8, 16, 32, 64, 128, 256, 512)	

## 9.2.1.47A N\_INSYNC\_IND

This parameter defines the number of successive in-sync indications after which the Node B shall trigger the Radio Link Restore procedure (see also ref. [10] and [21]).

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
N_INSYNC_IND			Integer (1, 2,, 256)	

## 9.2.1.47B N\_OUTSYNC\_IND

This parameter defines the number of consecutive out-of-sync indications after which the timer T\_RLFAILURE shall be started (see also ref. [10] and [21]).

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
N_OUTSYNC_IND			Integer (1, 2,, 256)	

#### 9.2.1.48 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 (02^20-1)	2^20-1 is reserved value to indicate all the existing and future Node B communication contexts that can be reached by the communication control port (All NBCC).

## 9.2.1.49 Payload CRC Presence Indicator

This parameter indicates whether FP payload 16 bit CRC is used or not.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Payload CRC Presence			ENUMERAT	
Indicator			ED (CRC	
			Included,	
			CRC not	
			included)	

## 9.2.1.49A PICH Power

The PICH Power IE indicates a power level relative to the [FDD-primary CPICH power] [TDD-primary CCPCH power] configured in a cell.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
PICH Power			Enumerated( -10+5dB)	Step 1dB

#### 9.2.1.50 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 (015)	0: 40% 1: 44 %
				 14: 96% 15: 100% (no puncturing)

#### 9.2.1.50A QE-Selector

The QE-Selector indicates from which source the value for the quality estimate (QE) shall be taken.

IE/Group Name	Presence	Range	IE type and	Semantics description
			reference	
QE-Selector			ENUMERAT	
			ED(selected,	
			non-	
			selected)	

## 9.2.1.51 Report Characteristics

The report characteristics, defines how the reporting shall be performed.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
CHOICE Report				
Characteristics			NII II I	
>OnDemand >Periodic			NULL	
>>Report Periodicity	М		ENUMERAT ED (10ms1mi n,) step 10ms, (1min1hr,) step 1min,	The frequency with which the Node B shall send measurement reports.
>Event A			N4	The discrete state and the second state at
>>Measurement Threshold	М		Measureme nt Threshold 9.2.1.44	The threshold for which the Node B shall trigger a measurement report.
>>Measurement Hysteresis Time	0		ENUMERAT ED (10ms1mi n,) step 10ms,	
>Event B				
>>Measurement Threshold	M		Measureme nt Threshold 9.2.1.44	The threshold for which the Node B shall trigger a measurement report.
>>Measurement Hysteresis Time	0		ENUMERAT ED (10ms1mi n,) step 10ms,	
>Event C				
>>Measurement Increase/Decrease Threshold	M		Measureme nt Increase/De crease Threshold 9.2.1.43	
>>Measurement Change Time	М		ENUMERAT ED (10ms1mi n,) step 10ms,	The time the measurement entity shall rise on (in ms), in order to trigger a measurement report.
>Event D				
>>Measurement Increase/Decrease Threshold	M		Measureme nt Increase/De crease Threshold 9.2.1.43	
>>Measurement Change Time	М		ENUMERAT ED (10ms1mi n,) step 10ms,	The time the measurement entity shall fall (in ms), in order to trigger a measurement report.
>Event E				
>>Measurement Threshold 1	M		Measureme nt Threshold 9.2.1.44	
>>Measurement Threshold 2	0		Measureme nt Threshold 9.2.1.44	
>>Measurement Hysteresis Time	0		ENUMERAT ED (10ms1mi	The hysteresis time in ms

>>Report Periodicity	0	n,) step 10ms, ENUMERAT ED (10ms1mi	The frequency with which the Node B shall send measurement reports.
		n,) step 10ms, (1min1hr, ) step 1min,	
>Event F			
>>Measurement Threshold 1	М	Measureme nt Threshold 9.2.1.44	
>>Measurement Threshold 2	0	Measureme nt Threshold 9.2.1.44	
>>Measurement Hysteresis Time	0	ENUMERAT ED (10ms1mi n,) step 10ms,	The hysteresis time in ms
>Report Periodicity	0	ENUMERAT ED (10ms1mi n,) step 10ms, (1min1hr,) step 1min,	The frequency with which the Node B shall send measurement reports.

## 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			ENUMERAT ED(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 (031)	

## 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 (04095)	

## 9.2.1.53B Segment type

Segment type as defined in [18].

IE/Group Name	Presence	Range	IE type and	Semantics description
			reference	
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)	Value in seconds

## 9.2.1.56A T\_RLFAILURE

The Radio Link Failure procedure shall be triggered after a period of time T\_RLFAILURE has elapsed with a persisting out-of-sync indication (see also ref. [10] and [21]).

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
T_RLFAILURE			ENUMERAT	In seconds
			ED (0, 0.1,	
			0.2,, 25.5)	

#### 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	Semantics description
			reference	
Start Of Audit Sequence			ENUMERAT	
Indicator			ED(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. In TDD if it is present in the timeslot, it will be included within the first Channelization code listed.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
TFCI presence			ENUMERAT	
			ED (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) 1

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 Node B communication
>>TFCS		440		contexts are assigned any DSCH transport channels OR c) The mode is TDD
		1 to <maxnooftfcs></maxnooftfcs>		The first instance of the parameter corresponds to TFCI zero, the second to 1 and so on.
>>>CTFC	M		INTEGER(0 MaxCTFC)	Integer number calculated according to [18]
>>>CHOICE Gain Factors >>>>Signalled Gain	C- PhysChan			
Factors >>>>CHOICE				
Mode >>>>FDD				
>>>>Gain Factor βc	М		Integer (015)	For UL DPCCH or control part of PRACH or control part of PCPCH in FDD; mapping in accordance to [9]
>>>>>Gain Factor β <sub>D</sub>	M		Integer (015)	For UL DPDCH or data part of PRACH or data part of PCPCH in FDD: mapping in accordance to [9]
>>>>TDD				
>>>>>Gain Factor β	М		Integer (015)	For UL DPCH in TDD; mapping in accordance to [20]
>>>>Reference TFC nr	0		Integer (03)	If this TFC is a reference TFC, this IE indicates the reference number
>>>>Computed Gain Factors				
>>>>Reference TFC nr	M		Integer (03)	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 Node B communication contexts is assigned one or more DSCH transport channels
>>Transport format combination_DCH		1 to <maxtfci_1_co mbs&gt;</maxtfci_1_co 		The first instance of the parameter <i>Transport format combination_DCH</i> corresponds to TFCI (field 1) = 0, the second to TFCI (field 1) = 1 and so on.
>>>CTFC(field1)	М		Integer(0M axCTFC)	Integer number calculated according to [18]. The calculation of CTFC ignores any DSCH transport channels which may be assigned
>>Choice Signalling method				
>>>TFCI range		4.		
>>>>TFC mapping on DSCH		1 to <maxnotfcigrou ps&gt;</maxnotfcigrou 		

>>>>Max TFCI(field2) value	M		Integer(11 023)	This is the Maximum value in the range of TFCI(field2) values for which the specified CTFC(field2) applies
>>>>CTFC(field2)	M		Integer(0M axCTFC)	Integer number calculated according to [18]. The calculation of CTFC ignores any DCH transport channels which may be assigned
>>>Explicit				
>>>>Transport format combination_DSCH		1 to <maxtfci_2_co mbs&gt;</maxtfci_2_co 		The first instance of the parameter <i>Transport format</i> combination_DSCH corresponds to TFCI (field2) = 0, the second to TFCI (field 2) = 1 and so on.
>>>>CTFC(field2)	M		Integer(0M axCTFC)	Integer number calculated according to [18]. The calculation of CTFC ignores any DCH transport channels which may be assigned

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
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]

# 9.2.1.59 Transport Format Set

The Transport Format Set is defined as the set of Transport Formats associated to a Transport Channel, e.g. DCH.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Dynamic Transport Format Information		1 to <maxtfcount></maxtfcount>		The first instance of the parameter corresponds to TFI zero, the second to 1 and so on.
>Number of Transport blocks	М		INTEGER (0512)	
>Transport Block Size	C - Blocks		INTEGER (05000)	Bits
>CHOICE Mode	M			
>>TDD				
>>>Transmission Time interval Information	C- TTIdynami c	1 to <maxttlcount></maxttlcount>		
>>>>Transmission time interval	M		Enumerated(10, 20, 40, 80,)	ms
Semi-static Transport Format Information		1		
>Transmission time interval	М		ENUMERATED (10, 20, 40, 80, dynamic,)	ms Value "dynamic" for TDD only
>Type of channel coding	M		ENUMERATED (No coding, Convolutional, Turbo,)	
>Coding Rate	C – Coding		ENUMERATED (1/2, 1/3,)	
>Rate matching attribute	М		INTEGER (1maxRM)	
>CRC size	M		ENUMERATED (0, 8, 12, 16, 24,)	
>CHOICE Mode	М			
>>TDD				
>>>2 <sup>nd</sup> interleaving mode	M		Enumerated(Fra me 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".
TTldynamic	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.
MaxTTlcount	The amount of different TTI that are possible for that transport format.

## 9.2.1.60 ToAWE

TOAWE is the window endpoint. DL data frames are expected to be received before this window endpoint. TOAWE is defined with a positive value relative Latest Time of Arrival (LTOA). A data frame arriving after TOAWE gives a Timing Adjustment Control frame response.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
ToAWE			INTEGER	ms.
			(02559)	

#### 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	ms.
			(01279)	

#### 9.2.1.62 Transaction ID

The transaction ID is used to associate all the messages belonging to the same procedure Messages belonging to the same procedure shall use the same transaction ID.

The transaction ID is determined by the initiating peer of a procedure. For common procedures the transaction ID shall uniquely identify a procedure within all ongoing parallel procedures initiated by one protocol peer, using the same procedure code and signalled over the same Node B control port. For dedicated procedures the transaction ID shall uniquely identify a procedure within all ongoing parallel procedures initiated by one protocol peer, using the same procedure code and initiated towards the same Node B/CRNC context.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Transaction ID			CHOICE	
			INTEGER	
			(0127) or	
			INTEGER	
			(032767)	

## 9.2.1.62A Transport Bearer Request Indicator

Indicates whether a new transport bearer needs to be established for carrying the concerning transport channel.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Transport Bearer Request			ENUMERAT	
Indicator			ED(Bearer	
			Requested,	
			Bearer not	
			Requested,	
			)	

## 9.2.1.63 Transport Layer Address

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			ENUMERAT ED(active, inactive)	

## 9.2.1.65 UARFCN

Designate the central frequency of the channel number.

Information Element / Group Name	Presence	Range	IE Type and Reference	Semantics Description
UARFCN			INTEGER (016383,)	corresponds to 0.0Hz 3276.6MHz (subclause 5.4.3 in [14] and [15])

## 9.2.1.65A UL Capacity Credit

The capacity credit indicates to the CRNC the Uplink capacity of a Local Cell or a Local Cell Group.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
UL Capacity Credit			INTEGER	
OL Capacity Credit			_	
			(065535)	

#### 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				
			ENUMERAT	
			ED (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 to <maxtgps></maxtgps>		
>TGPSI Identifier	M		Integer(1< MaxTGPS>)	If the group is not present, none of the pattern sequences are activated. References an already defined sequence.
>TGPRC	М		Integer (0511)	The number of transmission gap patterns within the Transmission Gap Pattern Sequence.  0=Infinity
>TGCFN	M		CFN 9.2.1.7	Connection Frame Number of the first frame of the first pattern 1 within the Transmission Gap Pattern Sequence.

Range bound	Explanation			
MaxTGPS	Maximum number of active pattern sequences. Value 6.			

## 9.2.2.B Adjustment Period

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Adjustment Period			INTEGER	Frames
			(1 256)	

## 9.2.2.C Adjustment Ratio

 $\label{eq:Adjustment} \textit{Adjustment Ratio IE} \; (\textit{Radj}) \; \text{defines the convergence rate used for the associated Adjustment Period.}$ 

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Adjustment Ratio			INTEGER (0 100)	The Adjustment Ratio is given with a granularity of 0.01  0 -> 0.00 1 -> 0.01 100 -> 1.00

## 9.2.2.D AICH Power

The AICH Power IE indicates a power level (measured as the power per transmitted acquisition indicator when several AIs are transmitted in parallel) relative to the primary CPICH power configured in a cell.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
AICH Power			Integer(- 22+5)	Offset in dB

## 9.2.2.1 AICH Transmission Timing

IE/Group Name	Presence	Range	IE type and reference	Semantics description
AICH Transmission Timing			ENUMERAT ED (0, 1)	See parameter AICH_Transmission_Timing in ref. [7].

## 9.2.2.1A AP Preamble Signature

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
AP Preamble Signature			INTEGER (015)	Described in ref. [9]

#### 9.2.2.1B AP Sub Channel Number

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
AP Sub Channel Number			INTEGER (011)	Described in ref. [10]

#### 9.2.2.1C CD Sub Channel Numbers

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
CD Sub Channel Numbers			BIT STRING (12)	Each bit indicates availability for a subchannel, where the subchannels are numbered "subchannel 0" to "subchannel 11". The value 1 of a bit indicates that the corresponding subchannel is available and the value 0 indicates that it is not available. The order of bits is to be interpreted according to subclause 9.3.4. See also [10].

## 9.2.2.1D Channel Assignment Indication

The Channel Assingment Indication indicates whether CA is active or inactive. When CA is active, CPCH is in Versatile Channel Assingment Method (VCAM) mode and when CA is inactive, CPCH is in UE Channel Selection Method (UCSM) mode. In VCAM mode (CA active), CA message in CD/CA-ICH shall be sent.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Channel Assignment			ENUMERAT	
Indication			ED (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	Chips
			(038399)	

## 9.2.2.2A Closed Loop Timing Adjustment Mode

Indicates when the phase/amplitude adjustment is performed in the DL in relation to the receipt of the UL feedback command in case of closed loop mode transmit diversity on DPCH.

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
Closed Loop Timing Adjustment Mode			ENUMERAT ED (Offset1,	According to ref. [10] subclause 7.1:
			Offset2,)	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

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	Semantics description
			reference	
Compressed Mode			ENUMERAT	
Deactivation flag			ED(Deactiva	
_			te,	
			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			ENUMERAT ED (15, 30,	Channel Symbol Rate (ksps)
			60, 120, 240,	
			480, 960, 1920, 2880,	
			3840, 4800,	
			5760,)	

## 9.2.2.4B CPCH Scrambling Code Number

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
CPCH Scrambling Code Number			INTEGER (079)	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			INTEGER	
format			(02,)	

## 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 s	Criticality	Assigned Criticality
DCH FDD Information		1 to <maxnoof DCHs&gt;</maxnoof 			-	
>Payload CRC Presence Indicator	М		9.2.1.49		ı	
>UL FP mode	M		9.2.1.66		_	
>ToAWS	М		9.2.1.61		_	
>ToAWE	М		9.2.1.60		_	
>DCH Specific Info		1 <maxno ofDCHs&gt;</maxno 			_	
>>DCH ID	М		9.2.1.20		_	
>>Transport Format Set	М		9.2.1.59	For UL	_	
>>Transport Format Set	М		9.2.1.59	For DL	_	
>>Allocation/Retention Priority	М		9.2.1.1A		_	
>>Frame Handling Priority	М		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 s	Criticality	Assigned Criticality
DCHs FDD to Modify		1 <max noofDC Hs&gt;</max 			_	
>UL FP Mode	0		9.2.1.66		_	
>ToAWS	0		9.2.1.61		_	
>ToAWE	0		9.2.1.60		_	
>Transport Bearer Request Indicator	М		9.2.1.62A		_	
>DCH Specific Info		1 <max noofDC Hs&gt;</max 			_	
>>DCH ID	М		9.2.1.20		_	
>>Transport Format Set	0		9.2.1.59	For the UL.	_	
>>Transport Format Set	0		9.2.1.59	For the DL.	_	
>>Allocation/Retention Priority	0		9.2.1.1A		_	
>>Frame Handling Priority	0		9.2.1.20		_	

Range bound	Explanation		
MaxnoofDCHs	Maximum number of DCHs for one UE.		

9.2.2.5 D-Field Length

Void.

9.2.2.6 Dedicated Channels Capacity Consumption Law

Void

9.2.2.7 Diversity Control Field

Void.

9.2.2.8 Diversity Indication

Void.

9.2.2.9 Diversity mode

Define the diversity mode to be applied.

IE/Group Name	Presence	Range	IE type and	Semantics description
			reference	
Diversity Mode			ENUMERAT	
			ED(None,	
			STTD,	
			Closed loop	
			mode 1,	
			Closed loop	
			mode2,)	

## 9.2.2.10 DL DPCH Slot Format

Indicates the slot format used in DPCH in DL, accordingly to ref. [7].

IE/Group Name	Presence	Range	IE type and reference	Semantics description
DL DPCH slot format			INTEGER	
			(016,)	

9.2.2.11 DL frame type

Void.

9.2.2.12 DL or Global Capacity Credit

Void

9.2.2.12A DL\_power\_averaging\_window\_size

DL\_power\_averaging\_window\_size IE defines the window size when Limited Power Increase is used [10].

IE/Group Name	Presence	Range	IE type and reference	Semantics description
DL_power_averaging_window_size			INTEGER	1-60 inner loop power
			(160)	adjustments, step size 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	Semantics description
			reference	
DL Scrambling Code			INTEGER	0= Primary scrambling code of
			(015)	the cell
				115= 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(030)	

#### 9.2.2.13B DSCH FDD Information

The DSCH FDD Information IE provides information for DSCHs to be established.

IE/Group Name	Presence	Range	IE type and reference	Semantics descriptions	Criticalit y	Assigned Criticality
DSCH FDD Information		1 to <maxnoof DSCHs&gt;</maxnoof 			_	
>DSCH ID	M		9.2.1.27		_	
>Transport Format Set	M		9.2.1.59	For DSCH	_	
>Allocation/Retention Priority	М		9.2.1.1A		_	
>Frame Handling Priority	M		9.2.1.30		_	
>ToAWS	М		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 s	Criticality	Assigned Criticality
FDD DL Code Information		1 to <maxnoof- Codes&gt;</maxnoof- 			1	
>DL Scrambling Code	M		9.2.2.13		_	
>FDD DL Channelisation Code Number	M		9.2.2.14		_	
>Transmission Gap Pattern Sequence Code Information	0		9.2.2.53B		_	

Range bound	Explanation
MaxnoofCodes	Maximum number of DL code information.

## 9.2.2.15 FDD SCCPCH Offset

The Secondary CCPCH offset is defined as the time offset towards the Primary CCPCH in the cell. The offset is a multiple of 256 chips.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
FDD SCCPCH Offset			INTEGER(0 149)	0: 0 chip 1: 256 chip 2: 512 chip  149: 38144 chip

## 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			ENUMERAT	
			ED (0.5, 1,	
			1.5, 2,)	

#### 9.2.2.16A First RLS Indicator

The First *RLS Indicator* IE indicates if a specific Radio Link and all Radio Links which are part of the same Radio Link Set, shall be considered as the first radio links established towards the UE or not.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
First RLS Indicator			ENUMERAT	
			ED (first	
			RLS, not first	
			RLS)	

## 9.2.2.17 Gap Period

Void.

## 9.2.2.18 Gap Position Mode

Void.

## 9.2.2.18A Limited Power Increase

The parameter is used for a more efficient use of the inner loop DL power control for non real time data.

If the limited power increase is used, Node B shall use the limited power increase algorithm as specified in [10], subclause 5.2.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Limited Power Increase			ENUMERAT	
			ED(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			ENUMERAT	
·			ED(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)	Slots

#### 9.2.2.20A Max Number of PCPCHes

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Max Number of PCPCHes			INTEGER(164,)	

#### 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 (16)	

## 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	Semantics description
			reference	
Min UL Channelisation Code			ENUMERAT	
length			ED(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			ENUMERAT	
			ED(Fixed,	
			Flexible)	ļ

## 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	TTI
			(08)	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	
			(164,)	

## 9.2.2.23C N\_Start\_Message

The N\_Start\_Message is defined as number of Frames for start message of DL DPDCHes for a CPCH.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
N_Start_Message			INTEGER	
			(18)	

## 9.2.2.24 Pattern Duration (PD)

IE/Group Name	Presence	Range	IE type and reference	Semantics description
PD			INTEGER(02047,)	Frames If the value is set to '0', the Pattern Duration shall be interpreted as 'infinite'

## 9.2.2.24A PCP Length

Indicates CPCH power control preamble length.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
PCP Length			ENUMERAT	
			ED(0,8)	

## 9.2.2.25 PDSCH code mapping

This IE indicates the association between each possible value of TFCI(field 2) and the corresponding PDSCH channelisation code(s). There are three fundamentally different ways that the UTRAN must choose between in order to signal the mapping information, these are described below. The signalling capacity consumed by the different methods

will vary depending on the way in which the UTRAN configures usage of the DSCH. A fourth option is also provided which allows the UTRAN to replace individual entries in the TFCI(field 2) to PDSCH code mapping table with new PDSCH code values.

#### Method #1 - Using code range

The mapping is described in terms of a number of groups, each group associated with a given spreading factor. Each TFCI(field2) value corresponds to a given PDSCH channelisation code or set of PDSCH codes for multi-code. The Node B maps TFCI(field2) values to PDSCH codes in the following way:

- The PDSCH codes used for TFCI(field 2) = 0 are given by the SF of the Code Group 1 (i.e. first instance in *PDSCH code mapping*) and the code numbers between CodeNumber<sub>0</sub> (where CodeNumber<sub>0</sub> = "Start code number" of Code Group 1) and CodeNumber<sub>0</sub> + "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<sub>k</sub> = CodeNumber<sub>k-1</sub> + "multi-code info" and CodeNumber<sub>k</sub> + "multi-code info" 1.
  If "Stop code number" = "Start code number" + "multi-code info" 1 then this is to be interpreted as defining the mapping between the channelisation code(s) and a single TFCI.
- The Node B constructs its mapping table by repeating this process for all the Code Groups in the order they are instantiated in *PDSCH code mapping*. The first TFCI(field 2) value used in each group is the largest TFCI(field 2) value reached in the previous group incremented by one.

Note: This imposes that "Stop code number" – "Start code number" + 1 is a multiple of the value "multi-code info" for each instance of *PDSCH code mapping*. Furthermore, in the case where multi-code is not used, then "multi-code info" = 1 and the process above also applies.

#### Method #2 - Using TFCI range

The mapping is described in terms of a number of groups, each group corresponding to a given PDSCH channelisation code or codes for multicode.

- The set of PDSCH codes specified in the first instance applies for all values of TFCI(field 2) between 0 and the specified "Max TFCI(field2)".
- The process continues in the same way for the following groups with the TFCI(field 2) value starting at the largest value reached in the previous instance incremented by one. So the set of PDSCH codes specified in a given instance apply for all the values of TFCI(field 2) between the "Max TFCI(field2) value" specified in the previous instance incremented by one and the specified "Max TFCI(field2)" of the considered instance.

A set of PDSCH codes is composed of all the codes between "Code Number" and "Code Number" + "multicode" - 1. So if multi-code is not used, the set of PDSCH codes is reduced to one element indicated by the *Code Number* IE.

#### Method #3 - Explicit

The mapping between TFCI(field 2) value and PDSCH channelisation code (or a set of PDSCH codes for multicode) is spelt out explicitly for each value of TFCI (field2).

A set of PDSCH codes is composed of all the codes between "Code Number" and "Code Number" + "multicode" – 1. So if multi-code is not used, the set of PDSCH codes is reduced to one element indicated by the *Code Number* IE.

#### Method #4 - Replace

The "TFCI (field2)" value(s) for which the mapping to PDSCH channelisation code (or a set of PDSCH codes for multicode) is changed are explicitly signalled. Furthermore, the new mapping between TFCI(field 2) value and PDSCH channelisation code(s) is spelt out explicitly for each value of TFCI (field2).

A set of PDSCH codes is composed of all the codes between "Code Number" and "Code Number" + "multicode" – 1. So if multi-code is not used, the set of PDSCH codes is reduced to one element indicated by the *Code Number* IE.

Information Element/Group	Presence	Range	IE type and	Semantics description
name			reference	
DL Scrambling Code	M		INTEGER	Scrambling code on which
			(015)	PDSCH is transmitted.
				0= Primary scrambling code of
				the cell
				115 = Secondary
				scrambling code

CHOICE Signalling Method				
>code range				
>>PDSCH code mapping		1 <maxno CodeGrou ps&gt;</maxno 		
>>>Spreading factor	М	For	Enumerated( 4, 8, 16, 32, 64, 128, 256)	
>>>multi-code info	М		Integer(116	
>>>Start code number	M		Integer(0m axCodeNum Comp-1)	PDSCH code start, Numbering as described in [18]
>>>Stop code number	M		Integer(0m axCodeNum Comp-1)	PDSCH code stop, Numbering as described in [18]
>TFCI range				
>>DSCH mapping		1 <maxno TFCIGroup s&gt;1</maxno 		
>>>Max TFCI(field2) value	M		Integer(110 23)	This is the maximum value in the range of TFCI(field 2) values for which the specified PDSCH code applies
>>>Spreading factor	M		Enumerated( 4, 8, 16, 32, 64, 128, 256)	SF of PDSCH code
>>>multi-code info	М		Integer(116	
>>>Code number	M		Integer(0m axCodeNum Comp-1)	Code number of PDSCH code. Numbering as described in [18]
>Explicit				
>>PDSCH code		1 <maxtf CI_2_Com bs&gt;</maxtf 		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	М		Integer(116	
>>>Code number	M		Integer(0m axCodeNum Comp-1)	Code number of PDSCH code.  Numbering as described in  [18]
>Replace				
>>Replaced PDSCH code		1 <maxtf CI_2_Com bs&gt;</maxtf 		
>>>TFCI (field2)	M		Integer (01023)	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	М		Integer(116	
>>>Code number	M		Integer(0m axCodeNum Comp-1)	Code number of PDSCH code. Numbering as described in [18]

Range Bound	Explanation
MaxCodeNumComp	Maximum number of codes at the defined spreading factor, within the complete code tree.
MaxTFCI_2_Combs	Maximum number of TFCI (field 2) combinations (given by 2 raised to the power of the length of the TFCI field 2)
MaxNoTFCIGroups	Maximum number of groups, each group described in terms of a range of TFCI(field 2) values for which a single PDSCH code applies.
MaxNoCodeGroups	Maximum number of groups, each group described in terms of a range of PDSCH channelisation code values for which a single spreading factor applies.

## 9.2.2.26 PICH Mode

The number of paging indicators (PIs) in a PICH frame.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
PICH Mode			Enumerated( 18, 36, 72, 144)	Number of PI per frame

## 9.2.2.27 Power Adjustment Type

Defines the characteristic of the power adjustment.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Power Adjustment Type			ENUMERAT	
			ED (None,	
			Common,	
			Individual)	

## 9.2.2.28 Power Control Mode

Void.

## 9.2.2.29 Power Offset

This IE defines a power offset relative to the Downlink transmission power of a DPCH or a Secondary CCPCH.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Power Offset			INTEGER	Step 0.25 dB, range 0-6 dB
			(024)	

## 9.2.2.29A Power\_Raise\_Limit

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Power_Raise_Limit			INTEGER (010)	0-10 dB, step size 1 dB

#### 9.2.2.30 Power Resume Mode

Void.

## 9.2.2.31 Preamble Signature

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Preamble Signatures			BIT STRING (16)	Each bit indicates availability for a signature, where the signatures are numbered "signature 0" up to "signature 15". The value 1 of a bit indicates that the corresponding signature is available and the value 0 that it is not available. The order of bits is to be interpreted according to subclause 9.3.4. See also [9].

#### 9.2.2.32 Preamble Threshold

The IE sets the threshold for preamble detection. The ratio between received preamble power during the preamble period and interference level shall be above this threshold in order to be acknowledged.

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
Preamble Threshold			INTEGER (0 , 1,,72)	0: - 36.0 dB 1: - 35.5 dB 2: - 35.0 dB  72: 0.0 dB

## 9.2.2.33 Primary CPICH Power

Primary CPICH power is the power that shall be used for transmitting the P-CPICH in a cell. The reference point is the antenna connector.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Primary CPICH power			Enumerated (-10,, 50)	Unit dBm
			( 10,, 00)	Granularity 0.1 dB

## 9.2.2.34 Primary Scrambling code

The Primary scrambling code to be used in the cell.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Primary Scrambling Code			Integer (0 511)	

## 9.2.2.35 Propagation Delay

Propagation delay is the one-way propagation delay of the radio signal from the MS to the Node B.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Propagation Delay			INTEGER	Chips. Step size is 3 chips.
			(0255)	0=0 chips,
				1=3 chips,

#### 9.2.2.36 QE-Selector

Void.

## 9.2.2.37 RACH Slot Format

IE/Group Name	Presence	Range	IE type and reference	Semantics description
RACH Slot Format			ENUMERAT ED(03,)	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	
			(031)	

## 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			INTEGER(0.	According to mapping in [22].
power			.621)	

## 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			ENUMERAT	
			ED (1, 2,)	

## 9.2.2.41 Scrambling Code Change

Void.

## 9.2.2.42 Scrambling Code Number

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Scrambling Code Word Number			INTEGER (015)	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(017,)	

## 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			ENUMERAT ED (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			ENUMERAT	
			ED(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			ENUMERAT	
			ED (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			ENUMERAT ED(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			ENUMERAT ED(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: 0 chip
			(0 , 1,,9)	1: 256 chip
				9: 2304 chip
				[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 s	Criticality	Assigned Criticality
Binding ID	M		9.2.1.4		-	
Transport Layer Address	M		9.2.1.63		-	

## 9.2.2.50 TFCI signalling mode

This parameter indicates if the normal or split mode is used for the TFCI. In the event that the split mode is to be used then the IE indicates whether the split is 'Hard' or 'Logical', and in the event that the split is 'Logical' the IE indicates the number of bits in TFCI (field 2).

IE/Group Name	Presence	Range	IE type and reference	Semantics description
TFCI signalling option	M		ENUMERAT ED (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 (110)	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			ENUMERAT ED(active, inactive)	

## 9.2.2.53A Transmission Gap Pattern Sequence Information

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Transmission gap pattern Sequence Information		1 to <maxtgps></maxtgps>		
>TGPSI Identifier	М		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.</maxtgps>
>TGSN	M		Integer (014)	Transmission Gap Starting Slot Number The slot number of the first transmission gap slot within the TGCFN.
>TGL1	M		Integer(114 )	The length of the first Transmission Gap within the transmission gap pattern expressed in number of slots.
>TGL2	0		Integer (114)	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	М		Integer (1144,)	The duration of transmission gap pattern 1 in frames.
>TGPL2	0		Integer (1144,)	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	М		Enumerated (A, B,)	Defines if frame structure type 'A' or 'B' shall be used in downlink compressed mode.
>DeltaSIR1	M		Integer (030)	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)
>DeltaSIRafter1	M		Integer	Step 0.1 dB, Range 0-3dB  Delta in SIR target value to be

		(030)	set in the Node B one frame after the frame containing the start of the first transmission gap in the transmission gap pattern,.  Step 0.1 dB, Range 0-3dB
>DeltaSIR2	0	Integer (030)	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.  Step 0.1 dB, Range 0-3dB
>DeltaSIRafter2	0	Integer (030)	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.  Step 0.1 dB, Range 0-3dB

Condition	Explanation
UL	The IE shall be present if the <i>UL/DL mode</i> IE is set to "UL only" or
	"UL/DL".
DL	The IE shall be present if the <i>UL/DL mode</i> IE is set to "DL only" or
	"UL/DL".

Range bound	Explanation		
MaxTGPS	Maximum number of transmission gap pattern sequences.		

## 9.2.2.53B Transmission Gap Pattern Sequence Code Information

This IE indicates whether the alternative scrambling code shall used for the Downlink compressed mode method or not in the Transmission Gap Pattern Sequence. For details see [18].

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Scrambling code change			Enumerated (Code Change, No Code Change)	Indicates whether the alternative scrambling code is used for compressed mode method 'SF/2'.

9.2.2.54 UL/DL compressed mode selection:

Void.

9.2.2.55 UL delta SIR

Void.

## 9.2.2.56 UL delta SIR after

Void.

## 9.2.2.57 UL DPCCH Slot Format

Indicates the slot format used in DPCCH in UL, accordingly to ref. [7].

IE/Group Name	Presence	Range	IE type and reference	Semantics description
UL DPCCH slot format			INTEGER	
			(05,)	

#### 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			ENUMERAT	Step 0.1 dB
			ED (-8.2 17.3)	

## 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	Semantics description
			reference	
UL scrambling code number	M		INTEGER	
			(0 2 <sup>24</sup> -1)	
UL scrambling code length	M		ENUMERAT	
			ED(Short,	
			Long)	

## 9.2.2.60 UL Capacity Credit

Void

# 9.2.3 TDD specific Parameters

## 9.2.3.1 Block STTD Indicator

Indicates if Block STTD antenna diversity is applied or not to the PCCPCH.

Information Element/Group	Presence	Range	IE type and	Semantics description
Name			reference	
Block STTD Indicator			ENUMERAT ED(active, inactive)	

## 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 (015)	

#### 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	
			(0127,)	ļ

## 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	Unit dB
			(-1010,)	Granularity 1 dB.

#### 9.2.3.4B DL Timeslot ISCP

DL Timeslot ISCP is the measured interference in a downlink timeslot at the UE, see ref. [5].

IE/Group Name	Presence	Range	IE type and reference	Semantics description
DL Timeslot ISCP			INTEGER ( 091)	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 s	Criticality	Assigned Criticality
DCH TDD Information		1 to <maxnoof DCHs&gt;</maxnoof 			_	
>Payload CRC Presence Indicator	М		9.2.1.49		_	
>UL FP mode	M		9.2.1.66		_	
>ToAWS	M		9.2.1.61		_	
>ToAWE	M		9.2.1.60		_	
>DCH Specific Info		1 <maxno ofDCHs&gt;</maxno 			_	
>>DCH ID	M		9.2.1.20		_	
>>CCTrCH ID	М		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	М		9.2.1.59	For DL	_	
>>Allocation/Retention Priority	М		9.2.1.1A		_	
>>Frame Handling Priority	М		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 s	Criticality	Assigned Criticality
DCHs TDD to Modify		1 <maxn oofDCHs &gt;</maxn 			GLOBAL	reject
>UL FP Mode	0		9.2.1.66		_	
>ToAWS	0		9.2.1.61		_	
>ToAWE	0		9.2.1.60		_	
>Transport Bearer Request Indicator	М		9.2.1.62A		_	
>DCH Specific Info		1 <maxn oofDCHs &gt;</maxn 			_	
>>DCH ID	М		9.2.1.20		_	
>>CCTrCH ID	0		9.2.3.3	UL CCTrCH in which the DCH is mapped.	_	
>>CCTrCH ID	0		9.2.3.3	DL CCTrCH in which the DCH is mapped	_	
>>Transport Format Set	0		9.2.1.59	For the UL.	_	
>>Transport Format Set	0		9.2.1.59	For the DL.	_	
>>Allocation/Retention Priority	0		9.2.1.1A		_	
>>Frame Handling Priority	0		9.2.1.30		_	

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\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 s	Criticality	Assigned Criticality
DL Timeslot Information		1 <maxnoof DLts&gt;</maxnoof 			_	
>Time Slot	М		9.2.3.23		_	
>Midamble Shift and Burst Type	М		9.2.3.7		_	
>TFCI Presence	М		9.2.1.57		_	
>DL Code Information	М		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 s	Criticality	Assigned Criticalit y
DL Time Slot ISCP Info		1 <maxnoofdl ts&gt;</maxnoofdl 			I	
>Time Slot	M		9.2.3.23		ı	
>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 (0239)	

# 9.2.3.5A DSCH TDD Information

The DSCH TDD Information IE provides information for DSCHs to be established.

IE/Group Name	Presence	Range	IE type and reference	Semantics descriptions	Criticality	Assigned Criticality
DSCH TDD Information		1 to <maxnoof DSCHs&gt;</maxnoof 			_	
>DSCH ID	М		9.2.1.27		_	
>CCTrCH ID	M		9.2.3.2	DL CCTrCH in which the DSCH is mapped	-	
>Transport Format Set	М		9.2.1.59	For DSCH	_	
>Allocation/Retention Priority	M		9.2.1.1A		_	
>Frame handling Priority	M		9.2.1.30		_	
>ToAWS	М		9.2.1.61		_	
>ToAWE	М		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 Shifts			ENUMERAT ED (4, 8,)	

# 9.2.3.7 Midamble shift and burst type

This information element indicates burst type and midamble allocation.

The 256 chip midamble supports 3 different time shifts, the 512 chips midamble may support 8 or even 16 time shifts.

Three different midamble allocation schemes exist:

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

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

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
CHOICE Burst Type				
>Type1				
>>Midamble Allocation Mode	М		Enumerated (Default midamble, Common midamble, UE specific midamble)	
>> Midamble Configuration Burst Type 1 And 3	М		Integer(4, 8, 16)	As defined in [19]
>>Midamble Shift	C-UE		Integer(015)	
>Type2				
>>Midamble Allocation Mode	M		Enumerated (Default midamble, Common midamble, UE specific midamble)	
>> Midamble Configuration Burst Type 2	М		Integer(3,6)	As defined in [19]
>>Midamble Shift	C-UE		INTEGER (05)	
>Type3				UL only
>>Midamble Allocation Mode	M		Enumerated (Default midamble, UE specific midamble)	
>> Midamble Configuration Burst Type 1 And 3	M		Integer(4, 8, 16)	As defined in [19]
>>Midamble Shift	C-UE		Integer(015)	

Condition	Explanation
UE	The IE shall be present if the Midamble Allocation
	Mode IE is set to "UE-specific midamble".

# 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			ENUMERAT	
			ED (2, 4,	
			8,)	ļ.

#### 9.2.3.9 PCCPCH Power

Primary CCPCH power is the power that shall be used for transmitting the P CCPCH in a cell. The P CCPCH power is the reference power in a TDD-cell. The reference point is the antenna connector.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
PCCPCH Power			INTEGER(-	Unit dBm
			15+40,)	Granularity 0.1 dB

### 9.2.3.10 PDSCH ID

The PDSCH ID identifies unambiguously a PDSCH inside a cell.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
PDSCH ID			INTEGER (0255)	

# 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	See ref. [6]
			(0255)	

#### 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	
			(0255)	

#### 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 (0255)	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			ENUMERAT ED	
			(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			ENUMERAT	
			ED(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.	

# 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 (12,)	

# 9.2.3.18A Special Burst Scheduling

The number of frames between special burst transmissions during DTX.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Special Burst Scheduling			Integer (1, 2,, 256)	Number of frames between special burst transmission during DTX

#### 9.2.3.19 TDD Channelisation Code

The Channelisation Code Number indicates which Channelisation Code is used for a given Physical Channel. In TDD the Channelisation Code is an Orthogonal Variable Spreading Factor code, that can have a spreading factor of 1, 2, 4, 8 or 16.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
TDD Channelisation Code			ENUMERAT	
			ED ((1/1), (2/1), (2/2),	
			(4/1), (4/4),	
			(8/1), (8/8), (16/1),	
			(16/16) , )	

# 9.2.3.19A TDD DPCH Offset

The Offset represents the phase information for the allocation of a group of dedicated physical channels. The first range is used when a starting offset is not required and the TDD Physical channel offset for each DPCH in the CCTrCH shall be directly determined from the TDD DPCH Offset. The second range is used when a starting offset is required. The TDD DPCH Offset shall map to the CFN and the TDD Physical Channel Offet for each DPCH in this CCTrCH shall calculated by TDD DPCH Offset *mod* Repetition period, see ref. [18].

IE/Group Name	Presence	Range	IE type and reference	Semantics description
TDD DPCH Offset			CHOICE	
			INTEGER	
			(063) or	
			INTEGER	
			(0255)	

# 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 s	Criticality	Assigned Criticality
TDD DL Code Information		1 <maxnoof DPCH&gt;</maxnoof 			_	
>DPCH ID	М		9.2.3.5		_	
>TDD Channelisation Code	M		9.2.3.19		_	

Range bound	Explanation
MaxnoOfDPCH	Maximum number of DPCH in one CCTrCH

# 9.2.3.20 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			INTEGER	
Offset			(063)	

# 9.2.3.21 TDD TPC DL step size

This parameter indicates step size for the DL power adjustment.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
TDD TPC Downlink step size			ENUMERAT	
			ED (1, 2,	
			3,)	

#### 9.2.3.21A TDD UL Code Information

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description s	Criticality	Assigned Criticality
TDD UL Code Information		1 <maxno OfDPCH &gt;</maxno 			-	
>DPCH ID	М		9.2.3.5		_	
>TDD Channelisation Code	M		9.2.3.19		_	

Range bound	Explanation
MaxnoOfDPCH	Maximum number of DPCH in one CCTrCH

# 9.2.3.22 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			ENUMERAT ED (Yes, No)	

# 9.2.3.23 Time Slot

The Time Slot represents the minimum time interval inside a Radio Frame that can be assigned to a Physical Channel.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Time Slot			INTEGER (014)	

### 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,	
			notActive,)	

# 9.2.3.26 Transmission Diversity Applied

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Transmission Diversity Applied			Boolean	

# 9.2.3.26A UL Timeslot ISCP

UL Timeslot ISCP is the measured interference in a uplink timeslot at the Node B, see ref. [5].

IE/Group Name	Presence	Range	IE type and reference	Semantics description
UL Timeslot ISCP			INTEGER (	According to mapping in [23].
			0127)	

# 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			ENUMERAT	
			ED	
			(SF_Variatio	
			n_supported,	
			SF_Variation	
			_NOT_supp	
			orted)	

# 9.2.3.26C UL Timeslot Information

The UL Timeslot Information IE provides information on the time slot allocation for an UL DPCH.

IE/Group Name	Presence	Range	IE type and reference	Semantics descriptions	Criticality	Assigned Criticality
UL Timeslot Information		1 <maxn oofULts &gt;</maxn 			_	
>Time Slot	M		9.2.3.23		_	
>Midamble Shift and Burst Type	М		9.2.3.7		_	
>TFCI Presence	М		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 s	Criticality	Assigned Criticality
UL Time Slot ISCP Info		1 <maxnooful ts&gt;</maxnooful 				
>Time Slot	М		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 (0255)	

# 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 s	Criticality	Assigned Criticality
USCH Information		1 to <maxnoof USCHs&gt;</maxnoof 			-	
>USCH ID	М		9.2.3.27		_	
>CCTrCH ID	М		9.2.3.3	UL CCTrCH in which the USCH is mapped	-	
>Transport Format Set	М		9.2.1.59	For USCH	_	
>Allocation/Retention Priority	М		9.2.1.1A		_	

Range bound	Explanation
MaxnoofUSCHs	Maximum number of USCH for one UE

# 9.2.3.29 USCH Information Response

The  $\mathit{USCH}$   $\mathit{Information}$   $\mathit{Response}$   $\mathit{IE}$  provides information for USCHs that have been established or modified.

IE/Group Name	Presence	Range	IE type and reference	Semantics description s	Criticality	Assigned Criticality
USCH Information Response		1 <maxnoof USCHs&gt;</maxnoof 			_	
>USCH ID	М		9.2.3.27		_	
>Binding ID	0		9.2.1.4		_	
>Transport Layer Address	0		9.2.1.63		-	

Range bound	Explanation
axnoof USCHs	aximum number of USCHs for one UE

# 9.3 Message and Information element abstract syntax (with ASN.1)

## 9.3.0 General

Subclause 9.3 presents the Abstract Syntax of 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

```
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,
                                     OPTIONAL,
    &Outcome
   &messageDiscriminator
                                     MessageDiscriminator,
   &procedureID
                                     ProcedureID
                                                    UNIQUE,
   &criticality
                                     Criticality
                                                     DEFAULT ignore
WITH SYNTAX {
   INITIATING MESSAGE
                                      &InitiatingMessage
    [SUCCESSFUL OUTCOME
                                      &SuccessfulOutcome]
```

```
&UnsuccessfulOutcomel
    [UNSUCCESSFUL OUTCOME
    [ OUTCOME
                                      &Outcome 1
   MESSAGE DISCRIMINATOR
                                      &messageDiscriminator
    PROCEDURE ID
                                      &procedureID
    [CRITICALITY
                                      &criticality]
     *****************
  Interface PDU Definition
NBAP-PDU ::= CHOICE {
   initiatingMessage
                           InitiatingMessage,
    succesfulOutcome
                           SuccessfulOutcome,
                           UnsuccessfulOutcome,
   unsuccesfulOutcome
                           Outcome,
   out.come
    . . .
InitiatingMessage ::= SEQUENCE
   procedureID
                          NBAP-ELEMENTARY-PROCEDURE.&procedureID ({NBAP-ELEMENTARY-PROCEDURES})),
                           NBAP-ELEMENTARY-PROCEDURE.&criticality ({NBAP-ELEMENTARY-PROCEDURES}{@procedureID}),
   criticality
                          NBAP-ELEMENTARY-PROCEDURE.&messageDiscriminator({NBAP-ELEMENTARY-PROCEDURES}{@procedureID}),
   messageDiscriminator
    transactionID
                           TransactionID.
    value
                           NBAP-ELEMENTARY-PROCEDURE.&InitiatingMessage({NBAP-ELEMENTARY-PROCEDURES}{@procedureID})
SuccessfulOutcome ::= SEOUENCE
                          NBAP-ELEMENTARY-PROCEDURE.&procedureID ({NBAP-ELEMENTARY-PROCEDURES}),
   procedureID
   criticality
                           NBAP-ELEMENTARY-PROCEDURE.&criticality ({NBAP-ELEMENTARY-PROCEDURES}{@procedureID}),
   messageDiscriminator
                          NBAP-ELEMENTARY-PROCEDURE.&messageDiscriminator({NBAP-ELEMENTARY-PROCEDURES}{@procedureID}),
    transactionID
                          TransactionID,
                          NBAP-ELEMENTARY-PROCEDURE. &SuccessfulOutcome({NBAP-ELEMENTARY-PROCEDURES}{@procedureID})
    value
UnsuccessfulOutcome ::= SEOUENCE
   procedureID
                           NBAP-ELEMENTARY-PROCEDURE.&procedureID ({NBAP-ELEMENTARY-PROCEDURES}),
    criticality
                           NBAP-ELEMENTARY-PROCEDURE.&criticality ({NBAP-ELEMENTARY-PROCEDURES}{@procedureID}),
                          NBAP-ELEMENTARY-PROCEDURE.&messageDiscriminator({NBAP-ELEMENTARY-PROCEDURES}{@procedureID}),
   messageDiscriminator
    transactionID
                           TransactionID.
    value
                           NBAP-ELEMENTARY-PROCEDURE: &UnsuccessfulOutcome({NBAP-ELEMENTARY-PROCEDURES}{@procedureID})
Outcome ::= SEQUENCE {
   procedureID
                           NBAP-ELEMENTARY-PROCEDURE.&procedureID
                                                                 ({NBAP-ELEMENTARY-PROCEDURES}),
                           NBAP-ELEMENTARY-PROCEDURE.&criticality ({NBAP-ELEMENTARY-PROCEDURES}{@procedureID}),
   criticality
   messageDiscriminator
                          NBAP-ELEMENTARY-PROCEDURE. & messageDiscriminator({NBAP-ELEMENTARY-PROCEDURES}{@procedureID}),
    transactionID
                           TransactionID,
                           NBAP-ELEMENTARY-PROCEDURE. &Outcome ({NBAP-ELEMENTARY-PROCEDURES}{@procedureID})
    value
```

```
-- Interface Elementary Procedure List
__ *********************
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 ::= {
                            CellSetupRequestFDD
    INITIATING MESSAGE
                            CellSetupResponse
    SUCCESSFUL OUTCOME
                            CellSetupFailure
    UNSUCCESSFUL OUTCOME
    MESSAGE DISCRIMINATOR
                            { procedureCode id-cellSetup, ddMode fdd }
    PROCEDURE ID
    CRITICALITY
                            reject
-- *** CellSetup (TDD) ***
cellSetupTDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE
                            CellSetupRequestTDD
                            CellSetupResponse
    SUCCESSFUL OUTCOME
                            CellSetupFailure
    UNSUCCESSFUL OUTCOME
   MESSAGE DISCRIMINATOR
                            common
    PROCEDURE ID
                            { procedureCode id-cellSetup, ddMode tdd }
    CRITICALITY
                            reject
-- *** CellReconfiguration(FDD) ***
cellReconfigurationFDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE
                            CellReconfigurationRequestFDD
                            CellReconfigurationResponse
    SUCCESSFUL OUTCOME
                            CellReconfigurationFailure
    UNSUCCESSFUL OUTCOME
    MESSAGE DISCRIMINATOR
                            common
    PROCEDURE ID
                            { procedureCode id-cellReconfiguration, ddMode fdd
    CRITICALITY
                            reject
-- *** CellReconfiguration(TDD) ***
cellReconfigurationTDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE
                            CellReconfigurationRequestTDD
                            CellReconfigurationResponse
    SUCCESSFUL OUTCOME
```

```
CellReconfigurationFailure
    UNSUCCESSFUL OUTCOME
    MESSAGE DISCRIMINATOR
    PROCEDURE ID
                            { procedureCode id-cellReconfiguration, ddMode tdd
    CRITICALITY
-- *** CellDeletion ***
cellDeletion NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE
                            CellDeletionRequest
    SUCCESSFUL OUTCOME
                            CellDeletionResponse
   MESSAGE DISCRIMINATOR
                            common
                            { procedureCode id-cellDeletion, ddMode common }
    PROCEDURE ID
    CRITICALITY
                            reject
-- *** CommonTransportChannelSetup (FDD) ***
commonTransportChannelSetupFDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE
                            CommonTransportChannelSetupRequestFDD
                            CommonTransportChannelSetupResponse
    SUCCESSFUL OUTCOME
                            CommonTransportChannelSetupFailure
    UNSUCCESSFUL OUTCOME
    MESSAGE DISCRIMINATOR
                            common
                            { procedureCode id-commonTransportChannelSetup, ddMode fdd }
    PROCEDURE ID
    CRITICALITY
                            reject
-- *** CommonTransportChannelSetup (TDD) ***
commonTransportChannelSetupTDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE
                            CommonTransportChannelSetupRequestTDD
    SUCCESSFUL OUTCOME
                            CommonTransportChannelSetupResponse
                            CommonTransportChannelSetupFailure
    UNSUCCESSFUL OUTCOME
    MESSAGE DISCRIMINATOR
                            { procedureCode id-commonTransportChannelSetup, ddMode tdd }
    PROCEDURE ID
    CRITICALITY
                            reject
-- *** CommonTransportChannelReconfigure (FDD) ***
commonTransportChannelReconfigureFDD NBAP-ELEMENTARY-PROCEDURE ::= {
                            CommonTransportChannelReconfigurationRequestFDD
    INITIATING MESSAGE
                            CommonTransportChannelReconfigurationResponse
    SUCCESSFUL OUTCOME
    UNSUCCESSFUL OUTCOME
                            CommonTransportChannelReconfigurationFailure
    MESSAGE DISCRIMINATOR
                            { procedureCode id-commonTransportChannelReconfigure, ddMode fdd }
    PROCEDURE ID
    CRITICALITY
                            reject
-- *** CommonTransportChannelReconfigure (TDD) ***
commonTransportChannelReconfigureTDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE
                            CommonTransportChannelReconfigurationRequestTDD
    SUCCESSFUL OUTCOME
                            CommonTransportChannelReconfigurationResponse
                            CommonTransportChannelReconfigurationFailure
    UNSUCCESSFUL OUTCOME
    MESSAGE DISCRIMINATOR
    PROCEDURE ID
                            { procedureCode id-commonTransportChannelReconfigure, ddMode tdd }
    CRITICALITY
                            reject
```

```
-- *** CommonTransportChannelDelete ***
commonTransportChannelDelete NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE
                            {\tt CommonTransportChannelDeletionRequest}
    SUCCESSFUL OUTCOME
                            CommonTransportChannelDeletionResponse
   MESSAGE DISCRIMINATOR
                            { procedureCode id-commonTransportChannelDelete, ddMode common }
    PROCEDURE ID
    CRITICALITY
                            reject
-- *** Audit ***
audit NBAP-ELEMENTARY-PROCEDURE ::= {
                            AuditRequest
    INITIATING MESSAGE
    SUCCESSFUL OUTCOME
                            AuditResponse
                            AuditFailure
    UNSUCCESSFUL OUTCOME
    MESSAGE DISCRIMINATOR
                            common
    PROCEDURE ID
                            { procedureCode id-audit, ddMode common }
    CRITICALITY
-- *** BlockResourceRequest ***
blockResource NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE
                            BlockResourceRequest
    SUCCESSFUL OUTCOME
                            BlockResourceResponse
    UNSUCCESSFUL OUTCOME
                            BlockResourceFailure
    MESSAGE DISCRIMINATOR
                            { procedureCode id-blockResource, ddMode common }
    PROCEDURE ID
    CRITICALITY
                            reject
-- *** RadioLinkSetup (FDD) ***
radioLinkSetupFDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE
                            RadioLinkSetupRequestFDD
                            RadioLinkSetupResponseFDD
    SUCCESSFUL OUTCOME
    UNSUCCESSFUL OUTCOME
                            RadioLinkSetupFailureFDD
   MESSAGE DISCRIMINATOR
                            common
    PROCEDURE ID
                            { procedureCode id-radioLinkSetup, ddMode fdd }
    CRITICALITY
                            reject
-- *** RadioLinkSetup (TDD) ***
radioLinkSetupTDD NBAP-ELEMENTARY-PROCEDURE ::= {
                            RadioLinkSetupRequestTDD
    INITIATING MESSAGE
    SUCCESSFUL OUTCOME
                            RadioLinkSetupResponseTDD
                            RadioLinkSetupFailureTDD
    UNSUCCESSFUL OUTCOME
    MESSAGE DISCRIMINATOR
                            common
    PROCEDURE ID
                            { procedureCode id-radioLinkSetup, ddMode tdd }
    CRITICALITY
                            reject
-- *** SystemInformationUpdate ***
systemInformationUpdate NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE
                            SystemInformationUpdateRequest
                            SystemInformationUpdateResponse
    SUCCESSFUL OUTCOME
```

```
SystemInformationUpdateFailure
    UNSUCCESSFUL OUTCOME
    MESSAGE DISCRIMINATOR
    PROCEDURE ID
                            { procedureCode id-systemInformationUpdate, ddMode common }
    CRITICALITY
-- *** 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
                            CommonMeasurementInitiationFailure
    UNSUCCESSFUL OUTCOME
    MESSAGE DISCRIMINATOR
                            { procedureCode id-commonMeasurementInitiation, ddMode common }
    PROCEDURE ID
    CRITICALITY
-- *** RadioLinkAddition (FDD) ***
radioLinkAdditionFDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE
                            RadioLinkAdditionRequestFDD
    SUCCESSFUL OUTCOME
                            RadioLinkAdditionResponseFDD
    UNSUCCESSFUL OUTCOME
                            RadioLinkAdditionFailureFDD
    MESSAGE DISCRIMINATOR
                            dedicated
                            { procedureCode id-radioLinkAddition, ddMode fdd }
    PROCEDURE ID
    CRITICALITY
-- *** RadioLinkAddition (TDD) ***
radioLinkAdditionTDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE
                            RadioLinkAdditionRequestTDD
                            RadioLinkAdditionResponseTDD
    SUCCESSFUL OUTCOME
                            RadioLinkAdditionFailureTDD
    UNSUCCESSFUL OUTCOME
    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
                            RadioLinkReconfigurationReady
    SUCCESSFUL OUTCOME
                            RadioLinkReconfigurationFailure
    UNSUCCESSFUL OUTCOME
    MESSAGE DISCRIMINATOR
                            dedicated
    PROCEDURE ID
                            { procedureCode id-synchronisedRadioLinkReconfigurationPreparation, ddMode fdd }
    CRITICALITY
                            reject
-- *** SynchronisedRadioLinkReconfigurationPreparation (TDD) ***
synchronisedRadioLinkReconfigurationPreparationTDD NBAP-ELEMENTARY-PROCEDURE ::= {
                            RadioLinkReconfigurationPrepareTDD
    INITIATING MESSAGE
    SUCCESSFUL OUTCOME
                            RadioLinkReconfigurationReady
                            RadioLinkReconfigurationFailure
    UNSUCCESSFUL OUTCOME
                            dedicated
    MESSAGE DISCRIMINATOR
                            { procedureCode id-synchronisedRadioLinkReconfigurationPreparation, ddMode tdd }
    PROCEDURE ID
    CRITICALITY
                            reject
-- *** UnSynchronisedRadioLinkReconfiguration (FDD) ***
unSynchronisedRadioLinkReconfigurationFDD NBAP-ELEMENTARY-PROCEDURE ::= {
                            RadioLinkReconfigurationRequestFDD
    INITIATING MESSAGE
                            RadioLinkReconfigurationResponse
    SUCCESSFUL OUTCOME
                            RadioLinkReconfigurationFailure
    UNSUCCESSFUL OUTCOME
    MESSAGE DISCRIMINATOR
                            dedicated
                            { procedureCode id-unSynchronisedRadioLinkReconfiguration, ddMode fdd }
    PROCEDURE ID
    CRITICALITY
-- *** UnSynchronisedRadioLinkReconfiguration (TDD) ***
unSynchronisedRadioLinkReconfigurationTDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE
                            RadioLinkReconfigurationRequestTDD
    SUCCESSFUL OUTCOME
                            RadioLinkReconfigurationResponse
    UNSUCCESSFUL OUTCOME
                            RadioLinkReconfigurationFailure
    MESSAGE DISCRIMINATOR
                            dedicated
                            { procedureCode id-unSynchronisedRadioLinkReconfiguration, ddMode tdd }
    PROCEDURE ID
    CRITICALITY
                            reject
-- *** DedicatedMeasurementInitiation ***
dedicatedMeasurementInitiation NBAP-ELEMENTARY-PROCEDURE ::= {
                            DedicatedMeasurementInitiationRequest
    INITIATING MESSAGE
    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
                           dedicated
    PROCEDURE ID
                        { procedureCode id-physicalSharedChannelReconfiguration, ddMode tdd }
    CRITICALITY
                        reject
-- Class 2
-- *** ResourceStatusIndication ***
resourceStatusIndication NBAP-ELEMENTARY-PROCEDURE ::= {
                            ResourceStatusIndication
    INITIATING MESSAGE
   MESSAGE DISCRIMINATOR
                           common
                            { procedureCode id-resourceStatusIndication, ddMode common }
    PROCEDURE ID
    CRITICALITY
-- *** 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
-- *** CommonMeasurementTermination ***
commonMeasurementTermination NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE
                            CommonMeasurementTerminationRequest
    MESSAGE DISCRIMINATOR
                            { procedureCode id-commonMeasurementTermination, ddMode common }
    PROCEDURE ID
    CRITICALITY
                            ignore
-- *** CommonMeasurementFailure ***
commonMeasurementFailure NBAP-ELEMENTARY-PROCEDURE ::= {
                            CommonMeasurementFailureIndication
    INITIATING MESSAGE
   MESSAGE DISCRIMINATOR common
    PROCEDURE ID
                            { procedureCode id-commonMeasurementFailure, ddMode common }
    CRITICALITY
                            ignore
-- *** SynchronisedRadioLinkReconfirurationCommit ***
synchronisedRadioLinkReconfigurationCommit NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE
                            RadioLinkReconfigurationCommit
                           dedicated
    MESSAGE DISCRIMINATOR
```

```
{ procedureCode id-synchronisedRadioLinkReconfigurationCommit, ddMode common }
    PROCEDURE ID
    CRITICALITY
                            ignore
-- *** SynchronisedRadioReconfigurationCancellation ***
synchronisedRadioLinkReconfigurationCancellation NBAP-ELEMENTARY-PROCEDURE ::= {
                            RadioLinkReconfigurationCancel
    INITIATING MESSAGE
    MESSAGE DISCRIMINATOR
                            dedicated
    PROCEDURE ID
                            { procedureCode id-synchronisedRadioLinkReconfigurationCancellation, ddMode common }
    CRITICALITY
-- *** RadioLinkFailure ***
radioLinkFailure NBAP-ELEMENTARY-PROCEDURE ::= {
                            RadioLinkFailureIndication
    INITIATING MESSAGE
    MESSAGE DISCRIMINATOR
                            dedicated
                            { procedureCode id-radioLinkFailure, ddMode common
    PROCEDURE ID
    CRITICALITY
-- *** 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 ::= {
                            DedicatedMeasurementReport
    INITIATING MESSAGE
    MESSAGE DISCRIMINATOR
                            dedicated
                            { procedureCode id-dedicatedMeasurementReport, ddMode common }
    PROCEDURE ID
    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 ::=
```

```
DedicatedMeasurementFailureIndication
    INITIATING MESSAGE
   MESSAGE DISCRIMINATOR
                            dedicated
    PROCEDURE ID
                            { procedureCode id-dedicatedMeasurementFailure, ddMode common }
    CRITICALITY
-- *** DLPowerControl (FDD only) ***
downlinkPowerControlFDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE
                            DL-PowerControlRequest
   MESSAGE DISCRIMINATOR
                            dedicated
                            { procedureCode id-downlinkPowerControl, ddMode fdd }
    PROCEDURE ID
    CRITICALITY
                            ignore
-- *** DLPowerTimeslotControl (TDD only) ***
downlinkPowerTimeslotControl NBAP-ELEMENTARY-PROCEDURE ::= {
                            DL-PowerTimeslotControlRequest
    INITIATING MESSAGE
                           dedicated
   MESSAGE DISCRIMINATOR
                            { procedureCode id-downlinkPowerTimeslotControl, ddMode tdd }
    PROCEDURE ID
    CRITICALITY
                            ignore
-- *** CompressedModeCommand (FDD only) ***
compressedModeCommand NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE
                            CompressedModeCommand
    MESSAGE DISCRIMINATOR
                            dedicated
                            { procedureCode id-compressedModeCommand, ddMode fdd }
    PROCEDURE ID
    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 ::= {
                            ErrorIndication
    INITIATING MESSAGE
   MESSAGE DISCRIMINATOR
                            dedicated
                            { procedureCode id-errorIndicationForDedicated, ddMode common }
    PROCEDURE ID
    CRITICALITY
                            ignore
-- *** ErrorIndication for Common procedures ***
errorIndicationForCommon NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE
                            ErrorIndication
   MESSAGE DISCRIMINATOR
                            { procedureCode id-errorIndicationForCommon, ddMode common }
    PROCEDURE ID
    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,
```

```
BlockSTTD-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,
IndicationType,
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,
OE-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-ReconfRgstFDD,
    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-Rgst,
id-CommonMeasurementObjectType-CM-Rsp,
id-CommonMeasurementType,
id-CommonPhysicalChannelID,
id-CommonPhysicalChannelType-CTCH-ReconfRgstFDD,
id-CommonPhysicalChannelType-CTCH-SetupRqstFDD,
id-CommonPhysicalChannelType-CTCH-SetupRgstTDD,
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-Rgst,
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-SetupRgstTDD,
id-DL-CCTrCH-InformationList-RL-AdditionRgstTDD,
id-DL-CCTrCH-InformationList-RL-SetupRgstTDD,
id-DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD,
id-DL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD,
id-DL-CCTrCH-InformationModifyList-RL-ReconfRgstTDD,
id-DL-DPCH-InformationAddListIE-RL-ReconfPrepTDD,
id-DL-DPCH-InformationItem-RL-AdditionRgstTDD,
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-ReconfRgstFDD,
id-DL-DPCH-Information-RL-SetupRgstFDD,
id-DL-ReferencePowerInformationItem-DL-PC-Rgst,
id-DLReferencePower,
id-DLReferencePowerList-DL-PC-Rgst,
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-ReconfRgstTDD,
id-FACH-ParametersList-CTCH-SetupRsp,
id-FACH-ParametersListIE-CTCH-ReconfRqstFDD,
id-FACH-ParametersListIE-CTCH-SetupRgstFDD,
id-FACH-ParametersListIE-CTCH-SetupRgstTDD,
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-SetupRgstTDD,
```

```
id-PCH-Parameters-CTCH-ReconfRqstTDD,
id-PCH-Parameters-CTCH-SetupRsp.
id-PCH-ParametersItem-CTCH-ReconfRgstFDD.
id-PCH-ParametersItem-CTCH-SetupRqstFDD,
id-PCH-ParametersItem-CTCH-SetupRgstTDD.
id-PCH-Information,
id-PCPCH-Information,
id-PICH-ParametersItem-CTCH-ReconfRgstFDD,
id-PDSCH-Information-AddListIE-PSCH-ReconfRqst,
id-PDSCH-Information-ModifyListIE-PSCH-ReconfRgst,
id-PDSCHSets-AddList-PSCH-ReconfRqst,
id-PDSCHSets-DeleteList-PSCH-ReconfRqst,
id-PDSCHSets-ModifyList-PSCH-ReconfRast.
id-PICH-Information.
id-PICH-Parameters-CTCH-ReconfRqstTDD,
id-PICH-ParametersItem-CTCH-SetupRgstTDD,
id-PowerAdjustmentType,
id-PRACH-Information,
id-PRACHConstant,
id-PRACH-ParametersItem-CTCH-SetupRgstTDD,
id-PRACH-ParametersListIE-CTCH-ReconfRgstFDD.
id-PrimaryCCPCH-Information-Cell-ReconfRqstFDD,
id-PrimaryCCPCH-Information-Cell-SetupRqstFDD,
id-PrimaryCPICH-Information-Cell-ReconfRgstFDD,
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-ReconfRgst,
id-PUSCHConstant,
id-PUSCHSets-AddList-PSCH-ReconfRqst,
id-PUSCHSets-DeleteList-PSCH-ReconfRast,
id-PUSCHSets-ModifyList-PSCH-ReconfRast,
id-RACH-Information,
id-RACH-Parameters-CTCH-SetupRsp,
id-RACH-ParametersItem-CTCH-SetupRgstFDD,
id-RACH-ParameterItem-CTCH-SetupRgstTDD,
id-ReportCharacteristics,
id-Reporting-Object-RL-FailureInd,
id-Reporting-Object-RL-RestoreInd,
id-ResetIndicator,
id-RL-InformationItem-DM-Rprt,
id-RL-InformationItem-DM-Rgst,
id-RL-InformationItem-DM-Rsp.
id-RL-InformationItem-RL-AdditionRqstFDD,
id-RL-informationItem-RL-DeletionRgst,
id-RL-InformationItem-RL-FailureInd,
id-RL-InformationItem-RL-PreemptRequiredInd,
id-RL-InformationItem-RL-ReconfPrepFDD,
id-RL-InformationItem-RL-ReconfRgstFDD,
id-RL-InformationItem-RL-RestoreInd,
```

```
id-RL-InformationItem-RL-SetupRqstFDD,
id-RL-InformationList-RL-AdditionRgstFDD.
id-RL-informationList-RL-DeletionRgst.
id-RL-InformationList-RL-PreemptRequiredInd,
id-RL-InformationList-RL-ReconfPrepFDD.
id-RL-InformationList-RL-ReconfRqstFDD,
id-RL-InformationList-RL-SetupRgstFDD,
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-AdditionRgstTDD,
id-RL-Information-RL-ReconfRgstTDD,
id-RL-Information-RL-ReconfPrepTDD,
id-RL-Information-RL-SetupRgstTDD,
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-ReconfRgstTDD,
id-Secondary-CCPCH-parameterListIE-CTCH-SetupRgstTDD,
id-Secondary-CCPCH-Parameters-CTCH-ReconfRqstTDD,
id-SecondaryCPICH-InformationItem-Cell-ReconfRgstFDD,
id-SecondaryCPICH-InformationItem-Cell-SetupRgstFDD,
id-SecondaryCPICH-InformationList-Cell-ReconfRqstFDD,
id-SecondaryCPICH-InformationList-Cell-SetupRqstFDD,
id-SecondarySCH-Information-Cell-ReconfRgstFDD,
id-SecondarySCH-Information-Cell-SetupRgstFDD,
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-ReconfRast,
id-Synchronisation-Configuration-Cell-SetupRgst,
id-SyncCase,
id-SyncCaseIndicatorItem-Cell-SetupRgstTDD-PSCH,
id-T-Cell,
id-TFCI2-Bearer-Information-RL-SetupRgstFDD,
id-TFCI2-BearerInformationResponse,
id-TFCI2-BearerSpecificInformation-RL-ReconfPrepFDD,
```

```
id-Transmission-Gap-Pattern-Sequence-Information,
id-TimeSlotConfigurationList-Cell-ReconfRastTDD.
id-TimeSlotConfigurationList-Cell-SetupRgstTDD.
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-ReconfRgstTDD,
id-UL-CCTrCH-InformationItem-RL-SetupRgstTDD.
id-UL-CCTrCH-InformationList-RL-AdditionRgstTDD,
id-UL-CCTrCH-InformationList-RL-SetupRgstTDD,
id-UL-CCTrCH-InformationModifyItem-RL-ReconfRgstTDD,
id-UL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD,
id-UL-CCTrCH-InformationModifyList-RL-ReconfRgstTDD,
id-UL-DPCH-InformationAddListIE-RL-ReconfPrepTDD,
id-UL-DPCH-InformationItem-RL-AdditionRgstTDD,
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-ReconfRgstFDD,
id-UL-DPCH-Information-RL-SetupRgstFDD,
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,
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-C-ID
    { ID
                                                            CRITICALITY
                                                                            reject
                                                                                       TYPE C-ID
                                                                                                                              PRESENCE
   mandatory } |
           id-ConfigurationGenerationID
    { ID
                                                            CRITICALITY
                                                                           reject
                                                                                       TYPE ConfigurationGenerationID
                                                                                                                                    PRESENCE
   mandatory }
           id-CommonPhysicalChannelType-CTCH-SetupRqstFDD
    { ID
                                                            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 OPTIONAL,
   dl-ScramblingCode
   -- This IE shall be present if the PCH parameters IE is not present
   fdd-DL-ChannelisationCodeNumber
                                       FDD-DL-ChannelisationCodeNumber,
                 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-CTCH-SetupRqstFDD
                                                                               OPTIONAL,
   pCH-Parameters
   iE-Extensions
                                       ProtocolExtensionContainer { { Secondary-CCPCHItem-CTCH-SetupRgstFDD-ExtIEs} }
                                                                                                                  OPTIONAL,
Secondary-CCPCHItem-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
   . . .
PowerOffsetInformation-CTCH-SetupRgstFDD ::= SEOUENCE {
   pO1-ForTFCI-Bits
                                       PowerOffset,
   pO3-ForPilotBits
                                       PowerOffset,
                                       ProtocolExtensionContainer { { PowerOffsetInformation-CTCH-SetupRqstFDD-ExtIEs} } OPTIONAL,
   iE-Extensions
   . . .
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 ::= {
   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
                                   OPTIONAL,
```

```
FACH-ParametersItem-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
PCH-Parameters-CTCH-SetupRqstFDD ::= ProtocolIE-Single-Container {{ PCH-ParametersIE-CTCH-SetupRqstFDD }}
PCH-ParametersIE-CTCH-SetupRgstFDD NBAP-PROTOCOL-IES ::= {
   PCH-ParametersItem-CTCH-SetupRqstFDD ::= SEQUENCE {
   commonTransportChannelID
                                    CommonTransportChannelID,
   transportFormatSet
                                    TransportFormatSet,
   toAWS
                                    ToAWS,
   t.oAWE
                                    TOAWE,
   pCH-Power
                                    DL-Power,
   pICH-Parameters
                                       PICH-Parameters-CTCH-SetupRqstFDD,
                                    ProtocolExtensionContainer { { PCH-ParametersItem-CTCH-SetupRqstFDD-ExtIEs} }
   iE-Extensions
PCH-ParametersItem-CTCH-SetupRgstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
PICH-Parameters-CTCH-SetupRgstFDD ::= SEQUENCE {
                                           CommonPhysicalChannelID,
   commonPhysicalChannelID
   fdd-dl-ChannelisationCodeNumber
                                           FDD-DL-ChannelisationCodeNumber,
   pICH-Power
                                           PICH-Power,
   pICH-Mode
                                           PICH-Mode,
   sTTD-Indicator
                                           STTD-Indicator,
                                           ProtocolExtensionContainer { { PICH-Parameters-CTCH-SetupRqstFDD-ExtIEs} } 
   iE-Extensions
                                                                                                                   OPTIONAL,
   . . .
PICH-Parameters-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
PRACH-CTCH-SetupRqstFDD ::= SEQUENCE {
   commonPhysicalChannelID
                                           CommonPhysicalChannelID,
   scramblingCodeNumber
                                       ScramblingCodeNumber,
   tFCS
                                           TFCS,
   preambleSignatures
                                           PreambleSignatures,
   allowedSlotFormatInformation
                                           AllowedSlotFormatInformationList-CTCH-SetupRgstFDD.
   rACH-SubChannelNumbers
                                           RACH-SubChannelNumbers,
   ul-punctureLimit
                                           PunctureLimit,
   preambleThreshold
                                           PreambleThreshold,
   rACH-Parameters
                                           RACH-Parameters-CTCH-SetupRqstFDD,
   aICH-Parameters
                                           AICH-Parameters-CTCH-SetupRgstFDD,
   iE-Extensions
                                           OPTIONAL,
   . . .
```

```
PRACHItem-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
AllowedSlotFormatInformationList-CTCH-SetupRqstFDD ::= SEQUENCE (SIZE (1.. maxNrOfSlotFormatsPRACH)) OF AllowedSlotFormatInformationItem-CTCH-
SetupRastFDD
AllowedSlotFormatInformationItem-CTCH-SetupRqstFDD ::= SEQUENCE {
   rACHSlotFormat
                                        RACH-SlotFormat,
                                        ProtocolExtensionContainer { { AllowedSlotFormatInformationItem-CTCH-SetupRqstFDD-ExtIEs} }
   iE-Extensions
   OPTIONAL,
AllowedSlotFormatInformationItem-CTCH-SetupRgstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
RACH-Parameters-CTCH-SetupRqstFDD ::= ProtocolIE-Single-Container {{ RACH-ParametersIE-CTCH-SetupRqstFDD }}
RACH-ParametersIE-CTCH-SetupRqstFDD NBAP-PROTOCOL-IES ::= {
   RACH-ParametersItem-CTCH-SetupRqstFDD ::= SEQUENCE {
   commonTransportChannelID
                                        CommonTransportChannelID,
   transportFormatSet
                                        TransportFormatSet,
                                        iE-Extensions
                                                                                                              OPTIONAL,
   . . .
RACH-ParametersItem-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
AICH-Parameters-CTCH-SetupRgstFDD ::= 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-ExtlEs NBAP-PROTOCOL-EXTENSION ::= {
PCPCH-CTCH-SetupRqstFDD ::= SEQUENCE
   cPCH-Parameters
                              CPCH-Parameters-CTCH-SetupRqstFDD,
   iE-Extensions
                              OPTIONAL,
```

```
PCPCHItem-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
CPCH-Parameters-CTCH-SetupRgstFDD ::= SEOUENCE {
    commonTransportChannelID
                                    CommonTransportChannelID,
    transportFormatSet
                                    TransportFormatSet,
    aPPreambleScramblingCode
                                    CPCHScramblingCodeNumber,
                                    CPCHScramblingCodeNumber,
    cDPreambleScramblingCode
    t.FCS
                                    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,
    pO3-ForPilotBits
                                    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-InformationList-CTCH-SetupRqstFDD
    vCAMMapping-Information
                                                                                         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,
                                    ProtocolExtensionContainer { { CPCH-Parameters-CTCH-SetupRqstFDD-ExtIEs} }
    iE-Extensions
                                                                                                                     OPTIONAL,
    . . .
CPCH-Parameters-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
PCPCHChannelInformationList-CTCH-SetupRgstFDD ::= SEQUENCE (SIZE (1..maxNrOfPCPCHs)) OF PCPCHChannelInformationItem-CTCH-SetupRgstFDD
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
    -- this IE shall be present if the Channel Assignment Indication IE is set to "CA Inactive" --
    iE-Extensions
                                        ProtocolExtensionContainer { { PCPCHChannelInformationItem-CTCH-SetupRqstFDD-ExtIEs} }
```

```
PCPCHChannelInformationItem-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
UCSM-Information-CTCH-SetupRgstFDD ::= SEQUENCE {
    minUL-ChannelisationCodeLength
                                        MinUL-ChannelisationCodeLength,
                                        NFmax,
    channelRequestParameters
                                        ChannelRequestParametersList-CTCH-SetupRqstFDD
                                                                                            OPTIONAL,
                                        ProtocolExtensionContainer { { UCSM-InformationItem-CTCH-SetupRqstFDD-ExtIEs} }
    iE-Extensions
                                                                                                                             OPTIONAL,
UCSM-InformationItem-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
ChannelRequestParametersList-CTCH-SetupRqstFDD ::= SEOUENCE (SIZE (1..maxAPSiqNum)) OF ChannelRequestParametersItem-CTCH-SetupRqstFDD
ChannelRequestParametersItem-CTCH-SetupRqstFDD ::= SEQUENCE {
    aPPreambleSignature
                                APPreambleSignature,
    aPSubChannelNumber
                                APSubChannelNumber
                                ProtocolExtensionContainer { { ChannelRequestParametersItem-CTCH-SetupRqstFDD-ExtIEs} }
    iE-Extensions
                                                                                                                             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,
                                        ProtocolExtensionContainer { { VCAMMapping-InformationItem-CTCH-SetupRgstFDD-ExtIEs} }
    iE-Extensions
                                                                                                                                   OPTIONAL,
VCAMMapping-InformationItem-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
SFRequestParametersList-CTCH-SetupRqstFDD ::= SEQUENCE (SIZE (1..maxAPSiqNum)) OF SFRequestParametersItem-CTCH-SetupRqstFDD
SFRequestParametersItem-CTCH-SetupRqstFDD ::= SEQUENCE {
    aPPreambleSignature
                                APPreambleSignature,
    aPSubChannelNumber
                                APSubChannelNumber
                                ProtocolExtensionContainer { { SFRequestParametersItem-CTCH-SetupRqstFDD-ExtIEs} }
                                                                                                                       OPTIONAL,
    iE-Extensions
    . . .
```

```
SFRequestParametersItem-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION::= {
AP-AICH-Parameters-CTCH-SetupRgstFDD ::= SEQUENCE {
   commonPhysicalChannelID
                                           CommonPhysicalChannelID,
   fdd-dl-ChannelisationCodeNumber
                                           FDD-DL-ChannelisationCodeNumber,
   aP-AICH-Power
                                           AICH-Power,
   cSICH-Power
                                           AICH-Power,
   sTTD-Indicator
                                           STTD-Indicator,
                                           ProtocolExtensionContainer { { AP-AICH-Parameters-CTCH-SetupRqstFDD-ExtIEs} }
   iE-Extensions
                                                                                                                      OPTIONAL,
   . . .
AP-AICH-Parameters-CTCH-SetupRgstFDD-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
                                           CDCA-ICH-Parameters-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
     ****************
  COMMON TRANSPORT CHANNEL SETUP REQUEST TDD
  ******************
CommonTransportChannelSetupRequestTDD ::= SEOUENCE
                                               {{CommonTransportChannelSetupRequestTDD-IEs}},
   protocolIEs
                         ProtocolIE-Container
   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-CommonPhysicalChannelType-CTCH-SetupRqstTDD
                                                                                    TYPE CommonPhysicalChannelType-CTCH-SetupRqstTDD
   { ID
                                                              CRITICALITY ignore
   PRESENCE
              mandatory },
CommonTransportChannelSetupRequestTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
```

```
CommonPhysicalChannelType-CTCH-SetupRqstTDD ::= CHOICE {
   secondary-CCPCH-parameters
                                             Secondary-CCPCH-CTCH-SetupRgstTDD,
   pRACH-parameters
                                             PRACH-CTCH-SetupRqstTDD,
Secondary-CCPCH-CTCH-SetupRqstTDD ::= SEQUENCE {
   sCCPCH-CCTrCH-ID
                                             CCTrCH-ID,
   tFCS
                                             TFCS,
   t.FCI-Coding
                                             TFCI-Coding
   punctureLimit
                                             PunctureLimit.
   secondaryCCPCH-parameterList
                                             Secondary-CCPCH-parameterList-CTCH-SetupRqstTDD,
   fACH-ParametersList
                                             FACH-ParametersList-CTCH-SetupRgstTDD
                                                                                      OPTIONAL,
   pCH-Parameters
                                             PCH-Parameters-CTCH-SetupRqstTDD
                                                                                      OPTIONAL,
   iE-Extensions
                                             ProtocolExtensionContainer {{Secondary-CCPCHItem-CTCH-SetupRgstTDD-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-SetupRgstTDD NBAP-PROTOCOL-IES ::= {
    mandatory }
Secondary-CCPCH-parameterListIE-CTCH-SetupRgstTDD ::= SEQUENCE (SIZE (1..maxNrOfSCCPCHs)) OF Secondary-CCPCH-parameterItem-CTCH-SetupRgstTDD
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,
                                             ProtocolExtensionContainer { { Secondary-CCPCH-parameterItem-CTCH-SetupRqstTDD-ExtIEs} }
   iE-Extensions
   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 ::= {
   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,
                                 TransportFormatSet,
   dl-TransportFormatSet
   toAWS
                                 ToAWS,
   toAWE
                                 TOAWE,
   iE-Extensions
                                 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 ::= {
   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,
                                 ProtocolExtensionContainer { { PCH-ParametersItem-CTCH-SetupRqstTDD-ExtIEs} }
   iE-Extensions
                                                                                                  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 ::= {
   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
                                                           OPTIONAL.
PICH-ParametersItem-CTCH-SetupRgstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
PRACH-CTCH-SetupRqstTDD ::= SEQUENCE {
   pRACH-Parameters-CTCH-SetupRgstTDD
                                       PRACH-Parameters-CTCH-SetupRgstTDD,
   iE-Extensions
                                       OPTIONAL.
PRACH-CTCH-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
PRACH-Parameters-CTCH-SetupRqstTDD ::= ProtocolIE-Single-Container {{ PRACH-ParametersIE-CTCH-SetupRqstTDD }}
PRACH-ParametersIE-CTCH-SetupRgstTDD NBAP-PROTOCOL-IES ::= {
   PRACH-ParametersItem-CTCH-SetupRgstTDD ::= SEQUENCE {
   commonPhysicalChannelID
                                       CommonPhysicalChannelID,
   t.FCS
                                       TFCS,
   timeslot
                                       TimeSlot,
   tdd-ChannelisationCode
                                       TDD-ChannelisationCode,
   maxPRACH-MidambleShifts
                                       MaxPRACH-MidambleShifts,
   pRACH-Midamble
                                       PRACH-Midamble,
   rACH
                                       RACH-Parameter-CTCH-SetupRgstTDD,
   iE-Extensions
                                       OPTIONAL,
PRACH-ParametersItem-CTCH-SetupRgstTDD-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-SetupRgstTDD ::= 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 ::= SEOUENCE {
   protocolIEs
                         ProtocolIE-Container
                                                {{CommonTransportChannelSetupResponse-IEs}},
   protocolExtensions
                         ProtocolExtensionContainer {{CommonTransportChannelSetupResponse-Extensions}}
                                                                                                      OPTIONAL,
CommonTransportChannelSetupResponse-IEs NBAP-PROTOCOL-IES ::= {
           id-FACH-ParametersList-CTCH-SetupRsp
                                                CRITICALITY ignore
                                                                      TYPE
                                                                              FACH-CommonTransportChannel-InformationResponse
                                                                                                                              PRESENCE
   optional
   { ID
                                                                      TYPE
                                                                              CommonTransportChannel-InformationResponse
          id-PCH-Parameters-CTCH-SetupRsp
                                                CRITICALITY ignore
                                                                                                                              PRESENCE
   optional
   { ID
          id-RACH-Parameters-CTCH-SetupRsp
                                                CRITICALITY ignore
                                                                      TYPE
                                                                              CommonTransportChannel-InformationResponse
                                                                                                                           PRESENCE
   optional
          id-CPCH-Parameters-CTCH-SetupRsp
                                                CRITICALITY ignore
                                                                                     CommonTransportChannel-InformationResponse
   { ID
                                                                              TYPE
   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 ::= SEOUENCE {
   protocolIEs
                         ProtocolIE-Container
                                                {{CommonTransportChannelSetupFailure-IEs}},
                         ProtocolExtensionContainer {{CommonTransportChannelSetupFailure-Extensions}}
   protocolExtensions
                                                                                                      OPTIONAL,
CommonTransportChannelSetupFailure-IEs NBAP-PROTOCOL-IES ::= {
     ID
          id-Cause
                                     CRITICALITY ignore
                                                           TYPE
                                                                                          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}},
                           ProtocolExtensionContainer {{CommonTransportChannelReconfigurationRequestFDD-Extensions}}
   protocolExtensions
                                                                                                                       OPTIONAL,
CommonTransportChannelReconfigurationRequestFDD-IEs NBAP-PROTOCOL-IES ::= {
           id-C-ID
                                                      CRITICALITY reject
                                                                              TYPE
                                                                                      C-ID
                                                                                                                          PRESENCE mandatory
     TD
           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,
                                   CPCHList-CTCH-ReconfRqstFDD,
   cPCH-parameters
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-ReconfRgstFDD ::= ProtocolIE-Single-Container {{ FACH-ParametersListIEs-CTCH-ReconfRgstFDD }}
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-ReconfRgstFDD ::= SEOUENCE (SIZE (1..maxFACHCell)) OF FACH-ParametersItem-CTCH-ReconfRgstFDD
FACH-ParametersItem-CTCH-ReconfRgstFDD ::= SEQUENCE {
   commonTransportChannelID
                                      CommonTransportChannelID,
                                                   OPTIONAL,
   maxFACH-Power
                                      DL-Power
   toAWS
                                     ToAWS
                                                   OPTIONAL,
   toAWE
                                      ToAWE
                                                   OPTIONAL,
   iE-Extensions
                                      ProtocolExtensionContainer
                                                              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 ::= {
   PCH-ParametersItem-CTCH-ReconfRqstFDD ::= SEQUENCE {
   commonTransportChannelID
                                      CommonTransportChannelID,
   pCH-Power
                                     DL-Power
                                                   OPTIONAL,
   t.oAWS
                                      TOAWS
                                                   OPTIONAL,
                                                   OPTIONAL,
   toAWE
                                      ToAWE
   iE-Extensions
                                      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,
                                      ProtocolExtensionContainer { { PICH-ParametersItem-CTCH-ReconfRgstFDD-ExtIEs} }
   iE-Extensions
PICH-ParametersItem-CTCH-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
PRACHList-CTCH-ReconfRqstFDD ::= SEQUENCE {
   pRACH-ParametersList-CTCH-ReconfRqstFDD
                                         PRACH-ParametersList-CTCH-ReconfRgstFDD 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 ::= {
   PRACH-ParametersListIE-CTCH-ReconfRgstFDD ::= SEQUENCE (SIZE (1..maxPRACHCell)) OF PRACH-ParametersItem-CTCH-ReconfRgstFDD
PRACH-ParametersItem-CTCH-ReconfRqstFDD ::= SEQUENCE {
   commonPhysicalChannelID
                                  CommonPhysicalChannelID,
   preambleSignatures
                                     PreambleSignatures
                                                          OPTIONAL,
   allowedSlotFormatInformation
                                     AllowedSlotFormatInformationList-CTCH-ReconfRqstFDD OPTIONAL,
   rACH-SubChannelNumbers
                                     RACH-SubChannelNumbers
                                                              OPTIONAL,
   iE-Extensions
                                     OPTIONAL,
   . . .
PRACH-ParametersItem-CTCH-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
AllowedSlotFormatInformationList-CTCH-ReconfRgstFDD ::= SEQUENCE (SIZE (1.. maxNrOfSlotFormatsPRACH)) OF AllowedSlotFormatInformationItem-CTCH-
ReconfRqstFDD
AllowedSlotFormatInformationItem-CTCH-ReconfRqstFDD ::= SEQUENCE {
   rACH-SlotFormat
                                     RACH-SlotFormat,
   iE-Extensions
                                     OPTIONAL,
AllowedSlotFormatInformationItem-CTCH-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
AICH-ParametersList-CTCH-ReconfRgstFDD ::= ProtocolIE-Single-Container {{ AICH-ParametersListIEs-CTCH-ReconfRgstFDD }}
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
                                                                    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
                                                 OPTIONAL.
CPCHListItem-CTCH-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
CPCH-ParametersList-CTCH-ReconfRqstFDD ::= ProtocolIE-Single-Container {{ CPCH-ParametersListIEs-CTCH-ReconfRqstFDD }}
CPCH-ParametersListIEs-CTCH-ReconfRgstFDD NBAP-PROTOCOL-IES ::= {
    { ID id-CPCH-ParametersListIE-CTCH-ReconfRqstFDD
                                                    CRITICALITY reject TYPE CPCH-ParametersListIE-CTCH-ReconfRqstFDD
                                                                                                                      PRESENCE mandatory }
CPCH-ParametersListIE-CTCH-ReconfRgstFDD ::= SEQUENCE (SIZE (1..maxNrOfCPCHs)) OF CPCH-ParametersItem-CTCH-ReconfRgstFDD
CPCH-ParametersItem-CTCH-ReconfRqstFDD ::= SEQUENCE {
    commonTransportChannelID
                                  CommonTransportChannelID,
    11L-STR
                                  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-ReconfRgstFDD ::= SEQUENCE (SIZE (1..maxNrOfCPCHs)) OF AP-AICH-ParametersItem-CTCH-ReconfRgstFDD
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 ::= {
   mandatory }
CDCA-ICH-ParametersListIE-CTCH-ReconfRqstFDD ::= SEOUENCE (SIZE (1..maxNrOfCPCHs)) OF CDCA-ICH-ParametersItem-CTCH-ReconfRqstFDD
CDCA-ICH-ParametersItem-CTCH-ReconfRqstFDD ::= SEQUENCE {
   commonPhysicalChannelID
                                  CommonPhysicalChannelID,
   cDCA-ICH-Power
                                      AICH-Power
                                                    OPTIONAL,
                                      ProtocolExtensionContainer { { CDCA-ICH-ParametersItemIE-CTCH-ReconfRqstFDD-ExtIEs} }
   iE-Extensions
                                                                                                                   OPTIONAL,
CDCA-ICH-ParametersItemIE-CTCH-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
-- COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST TDD
__ *********************
CommonTransportChannelReconfigurationRequestTDD ::= SEQUENCE {
   protocolIEs
                        ProtocolIE-Container
                                           {{CommonTransportChannelReconfigurationRequestTDD-IEs}},
                        ProtocolExtensionContainer {{CommonTransportChannelReconfigurationRequestTDD-Extensions}}
   protocolExtensions
CommonTransportChannelReconfigurationRequestTDD-IEs NBAP-PROTOCOL-IES ::= {
         id-C-ID
   { 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-ReconfRgstTDD
      PRESENCE optional }|
    ID id-PICH-Parameters-CTCH-ReconfRqstTDD
                                             CRITICALITY reject TYPE PICH-Parameters-CTCH-ReconfRqstTDD
                                                                                                         PRESENCE optional } |
     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-ReconfRgstTDD::= SEQUENCE
    cCTrCH-ID
                                  CCTrCH-ID,
   secondaryCCPCHList
                                  Secondary-CCPCHList-CTCH-ReconfRqstTDD
                                                                                 OPTIONAL,
   iE-Extensions
                                  ProtocolExtensionContainer { { Secondary-CCPCH-CTCH-ReconfRqstTDD-ExtIEs} } }
Secondary-CCPCH-CTCH-ReconfRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
Secondary-CCPCHList-CTCH-ReconfRgstTDD ::= ProtocolIE-Single-Container {{ Secondary-CCPCHListIEs-CTCH-ReconfRgstTDD }}
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,
                                      ProtocolExtensionContainer { { Secondary-CCPCHItem-CTCH-ReconfRgstTDD-ExtIEs} }
   iE-Extensions
                                                                                                                       OPTIONAL,
Secondary-CCPCHItem-CTCH-ReconfRgstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
PICH-Parameters-CTCH-ReconfRgstTDD ::= SEOUENCE {
                                      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-ReconfRgstTDD ::= SEQUENCE {
    commonTransportChannelID
                                  CommonTransportChannelID,
    toAWS
                                  ToAWS
                                                  OPTIONAL,
    t.oAWE
                                  ToAWE
                                                  OPTIONAL,
   iE-Extensions
                                  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
                                                                                                           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 ::=
                                        CRITICALITY
   { ID
          id-CriticalityDiagnostics
                                                                      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-C-ID
                                           CRITICALITY reject
                                                                  TYPE
                                                                                               PRESENCE
                                                                                                          mandatory}
     TD
          id-CommonPhysicalChannelID
                                           CRITICALITY reject
                                                                  TYPE
                                                                         CommonPhysicalChannelID
                                                                                                PRESENCE mandatory}
              id-ConfigurationGenerationID
                                                                             ConfigurationGenerationID PRESENCE mandatory },
                                               CRITICALITY reject
                                                                     TYPE
CommonTransportChannelDeletionRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  COMMON TRANSPORT CHANNEL DELETION RESPONSE
  CommonTransportChannelDeletionResponse ::= SEQUENCE {
       protocolIEs
                             ProtocolIE-Container
                                                   {{CommonTransportChannelDeletionResponse-IEs}},
                         ProtocolExtensionContainer {{CommonTransportChannelDeletionResponse-Extensions}}
   protocolExtensions
                                                                                                            OPTIONAL,
CommonTransportChannelDeletionResponse-IEs NBAP-PROTOCOL-IES ::= {
   { ID
          id-CriticalityDiagnostics
                                                                  TYPE
                                                                         CriticalityDiagnostics
                                                                                                  PRESENCE optional },
                                        CRITICALITY
CommonTransportChannelDeletionResponse-Extensions NBAP-PROTOCOL-EXTENSION ::= {
-- BLOCK RESOURCE REQUEST
```

```
__ **********************
BlockResourceRequest ::= SEOUENCE {
   protocolIEs
                       ProtocolIE-Container
                                                {{BlockResourceRequest-IEs}},
   protocolExtensions ProtocolExtensionContainer {{BlockResourceRequest-Extensions}}
                                                                                                OPTIONAL,
BlockResourceRequest-IEs NBAP-PROTOCOL-IES ::= {
    ID id-C-ID
                                                                                             PRESENCE mandatory } |
                                         CRITICALITY reject
                                                               TYPE
     TD
        id-BlockingPriorityIndicator
                                         CRITICALITY reject
                                                               TYPE
                                                                     BlockingPriorityIndicator
                                                                                               PRESENCE mandatory } |
                                                                                             PRESENCE conditional },
   { ID id-ShutdownTimer
                                         CRITICALITY reject
                                                               TYPE
                                                                      ShutdownTimer
   -- The IE shall be present if the Blocking Priority IndicatorIE indicates 'Normal Priority'--
BlockResourceRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  -- BLOCK RESOURCE RESPONSE
  *****************
BlockResourceResponse ::= SEOUENCE {
   protocolIEs
                           ProtocolIE-Container
                                                   {{BlockResourceResponse-IEs}},
                           ProtocolExtensionContainer {{BlockResourceResponse-Extensions}}
   protocolExtensions
                                                                                        OPTIONAL,
BlockResourceResponse-IEs NBAP-PROTOCOL-IES ::= {
          id-CriticalityDiagnostics
   { ID
                                   CRITICALITY
                                                               TYPE
                                                                     CriticalityDiagnostics
                                                                                             PRESENCE optional },
                                                    ignore
   . . .
BlockResourceResponse-Extensions NBAP-PROTOCOL-EXTENSION ::= {
-- BLOCK RESOURCE FAILURE
__ ********************
BlockResourceFailure ::= SEQUENCE {
   protocolIEs
                        ProtocolIE-Container
                                                {{BlockResourceFailure-IEs}},
                     ProtocolExtensionContainer {{BlockResourceFailure-Extensions}}
   protocolExtensions
                                                                                    OPTIONAL,
BlockResourceFailure-IEs NBAP-PROTOCOL-IES ::= {
```

```
ID
         id-Cause
                                  CRITICALITY
                                               ignore
                                                        TYPE
                                                                                 PRESENCE mandatory }
   { ID
         id-CriticalityDiagnostics
                                  CRITICALITY
                                               ignore
                                                        TYPE
                                                              CriticalityDiagnostics
                                                                                   PRESENCE optional },
   . . .
BlockResourceFailure-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  *****************
-- UNBLOCK RESOURCE INDICATION
  *******************
UnblockResourceIndication ::= SEOUENCE {
                                        {{UnblockResourceIndication-IEs}},
   protocolIEs
              ProtocolIE-Container
                   ProtocolExtensionContainer {{UnblockResourceIndication-Extensions}}
   protocolExtensions
                                                                              OPTIONAL,
   . . .
UnblockResourceIndication-IES NBAP-PROTOCOL-IES ::= {
                                           TYPE C-ID
   { ID
        id-C-ID
                 CRITICALITY
                                  ignore
                                                           PRESENCE
                                                                    mandatory},
   . . .
UnblockResourceIndication-Extensions NBAP-PROTOCOL-EXTENSION ::= {
   -- AUDIT REQUIRED INDICATION
  AuditRequiredIndication ::= SEQUENCE {
              ProtocolIE-Container
                                        {{AuditRequiredIndication-IEs}},
   protocolIEs
                     ProtocolExtensionContainer {{AuditRequiredIndication-Extensions}}
   protocolExtensions
                                                                              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 ::= SEOUENCE {
   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-Cell-InformationList-AuditRsp
                                                                                          Cell-InformationList-AuditRsp
                                                                                                                             PRESENCE
    { ID
                                                     CRITICALITY
                                                                    ignore
                                                                                   TYPE
    optional
    { ID
           id-CCP-InformationList-AuditRsp
                                                                                   TYPE
                                                                                          CCP-InformationList-AuditRsp
                                                                                                                           PRESENCE optional
                                                     CRITICALITY
                                                                    ignore
    -- 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
                                                                                   Cell-InformationItem-AuditRsp
                                                                                                                                optional }
                                                 CRITICALITY
                                                                           TYPE
                                                                                                                     PRESENCE
                                                                ignore
```

```
Cell-InformationItem-AuditRsp ::= SEQUENCE {
   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-AuditRsp
   bCH-Information
                                                                                 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,
                                        ProtocolExtensionContainer { { Cell-InformationItem-AuditRsp-ExtIEs} }
   iE-Extensions
                                                                                                             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 ::= {
    S-SCH-Information-AuditRsp ::= ProtocolIE-Single-Container {{ S-SCH-InformationIE-AuditRsp }}
S-SCH-InformationIE-AuditRsp NBAP-PROTOCOL-IES ::= {
    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 ::= {
    PRESENCE mandatory }
RACH-InformationList-AuditRsp ::= SEOUENCE (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 ::= {
    PRESENCE mandatory }
```

```
PCPCH-InformationList-AuditRsp ::= SEOUENCE (SIZE (1..maxPCPCHCell)) OF ProtocolIE-Single-Container {{ PCPCH-InformationItemIE-AuditRsp }}
PCPCH-InformationItemIE-AuditRsp NBAP-PROTOCOL-IES ::= {
   PRESENCE optional }
CPCH-InformationList-AuditRsp ::= SEQUENCE (SIZE (1..maxCPCHCell)) OF ProtocolIE-Single-Container {{ CPCH-InformationItemIE-AuditRsp }}
CPCH-InformationItemIE-AuditRsp NBAP-PROTOCOL-IES ::= {
    PRESENCE optional }
AP-AICH-InformationList-AuditRsp ::= SEOUENCE (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 ::= {
   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
                                                                      TYPE
                                                                             CCP-InformationItem-AuditRsp
                                                                                                              PRESENCE mandatory }
                                                        ignore
CCP-InformationItem-AuditRsp ::= SEQUENCE {
   communicationControlPortID
                                   CommunicationControlPortID,
   resourceOperationalState
                                   ResourceOperationalState,
   availabilityStatus
                                   AvailabilityStatus,
                                   ProtocolExtensionContainer {{ CCP-InformationItem-AuditRsp-ExtIEs }}
   iE-Extensions
                                                                                                   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-Local-Cell-InformationItem-AuditRsp
                                                             CRITICALITY
                                                                                             TYPE Local-Cell-InformationItem-AuditRsp
                                                                             ignore
                                                                                                                                          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
    commnonChannelsCapacityConsumptionLaw
                                                CommonChannelsCapacityConsumptionLaw,
    dedicatedChannelsCapacityConsumptionLaw
                                                DedicatedChannelsCapacityConsumptionLaw,
    maximumDL-PowerCapability
                                                MaximumDL-PowerCapability
                                                                                 OPTIONAL,
    minSpreadingFactor
                                                MinSpreadingFactor
                                                                                 OPTIONAL,
    minimumDL-PowerCapability
                                                MinimumDL-PowerCapability
                                                                                 OPTIONAL.
    local-Cell-Group-ID
                                                Local-Cell-ID
                                                                                 OPTIONAL.
    iE-Extensions
                                                ProtocolExtensionContainer {{ Local-Cell-InformationItem-AuditRsp-ExtIEs}}
                                                                                                                                 OPTIONAL,
Local-Cell-InformationItem-AuditRsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
                                             ::= SEQUENCE (SIZE (1..maxLocalCellinNodeB)) OF ProtocolIE-Single-Container {{ Local-Cell-Group-
Local-Cell-Group-InformationList-AuditRsp
InformationItemIE-AuditRsp }}
Local-Cell-Group-InformationItemIE-AuditRsp NBAP-PROTOCOL-IES ::= {
           id-Local-Cell-Group-InformationItem-AuditRsp
                                                                                                   TYPE Local-Cell-Group-InformationItem-AuditRsp
    { ID
                                                                     CRITICALITY
                                                                                     ignore
    PRESENCE
                mandatory}
Local-Cell-Group-InformationItem-AuditRsp ::= SEQUENCE {
    local-Cell-Group-ID
                                                Local-Cell-ID,
    dl-or-global-capacityCredit
                                                DL-or-Global-CapacityCredit,
                                                UL-CapacityCredit
    ul-capacityCredit
                                                                                         OPTIONAL,
    commnonChannelsCapacityConsumptionLaw
                                                CommonChannelsCapacityConsumptionLaw,
    dedicatedChannelsCapacityConsumptionLaw
                                                DedicatedChannelsCapacityConsumptionLaw,
    iE-Extensions
                                                ProtocolExtensionContainer {{ Local-Cell-Group-InformationItem-AuditRsp-ExtIEs}}
                                                                                                                                       OPTIONAL,
Local-Cell-Group-InformationItem-AuditRsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
-- 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 {
                                                  {{CommonMeasurementInitiationRequest-IEs}},
   protocolIEs
                          ProtocolIE-Container
   protocolExtensions
                          ProtocolExtensionContainer {{CommonMeasurementInitiationRequest-Extensions}}
                                                                                                           OPTIONAL.
CommonMeasurementInitiationRequest-IEs NBAP-PROTOCOL-IES ::= {
     ID
           id-MeasurementID
                                                          CRITICALITY reject
                                                                                      TYPE
                                                                                             Measurement.ID
                                                                                                                            PRESENCE mandatory
    { ID
           id-CommonMeasurementObjectType-CM-Rqst
                                                          CRITICALITY reject
                                                                                      TYPE
                                                                                              CommonMeasurementObjectType-CM-Rgst
                                                                                                                                     PRESENCE
    -- This IE represents both the Common Measurement Object Type IE and the choice based on the Common Measurement Object Type
    -- as described in the tabular message format in subclause 9.1.
           id-CommonMeasurementType
                                                          CRITICALITY reject
                                                                                      TYPE
                                                                                              CommonMeasurementType
                                                                                                                               PRESENCE
   mandatory } |
           id-MeasurementFilterCoefficient
                                                                                              MeasurementFilterCoefficient
                                                                                                                                  PRESENCE
    { ID
                                                          CRITICALITY reject
                                                                                      TYPE
    optional }|
          id-ReportCharacteristics
    { ID
                                                          CRITICALITY reject
                                                                                      TYPE
                                                                                              ReportCharacteristics
                                                                                                                               PRESENCE
   mandatory } |
           id-SFNReportingIndicator
                                                                                              FNReportingIndicator
    { ID
                                                          CRITICALITY reject
                                                                                      TYPE
                                                                                                                               PRESENCE
   mandatory
    { ID
           id-SFN
                                                          CRITICALITY reject
                                                                                      TYPE
                                                                                             SFN
                                                                                                                               PRESENCE optional
    . . .
CommonMeasurementInitiationRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {
CommonMeasurementObjectType-CM-Rgst ::= CHOICE {
   cell
                                   Cell-CM-Rqst,
   rACH
                                   RACH-CM-Rast,
   cPCH
                                   CPCH-CM-Rqst,
    . . .
```

```
Cell-CM-Rast ::= SEQUENCE {
   c-ID
                                  C-ID,
   timeSlot
                                   TimeSlot
                                              OPTIONAL,
                                   ProtocolExtensionContainer { { CellItem-CM-Rqst-ExtIEs} }
   iE-Extensions
                                                                                               OPTIONAL,
CellItem-CM-Rqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
RACH-CM-Rqst ::= SEQUENCE {
                                   C-ID,
   commonTransportChannelID
                                  CommonTransportChannelID,
   iE-Extensions
                                   OPTIONAL,
RACHItem-CM-Rqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
CPCH-CM-Rqst ::= SEQUENCE {
   c-ID
                                   C-ID,
    commonTransportChannelID
                                   CommonTransportChannelID,
    spreadingfactor
                                  MinUL-ChannelisationCodeLength
                                                                     OPTIONAL,
                                   ProtocolExtensionContainer { { CPCHItem-CM-Rqst-ExtIEs} }
   iE-Extensions
                                                                                               OPTIONAL,
CPCHItem-CM-Rqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  COMMON MEASUREMENT INITIATION RESPONSE
CommonMeasurementInitiationResponse ::= SEQUENCE {
   protocolIEs
                          ProtocolIE-Container
                                                  {{CommonMeasurementInitiationResponse-IEs}},
                          ProtocolExtensionContainer {{CommonMeasurementInitiationResponse-Extensions}}
   protocolExtensions
CommonMeasurementInitiationResponse-IEs NBAP-PROTOCOL-IES ::= {
           id-MeasurementID
                                                      CRITICALITY ignore
                                                                                 TYPE
                                                                                         MeasurementID
                                                                                                                         PRESENCE mandatory } |
                                                                                                                              PRESENCE optional
     ID
           id-CommonMeasurementObjectType-CM-Rsp
                                                      CRITICALITY ignore
                                                                                 TYPE
                                                                                         CommonMeasurementObjectType-CM-Rsp
     ID
           id-SFN
                                                                                 TYPE
                                                                                                                      PRESENCE optional } |
                                                      CRITICALITY ignore
     ID
           id-CriticalityDiagnostics
                                                                                         CriticalityDiagnostics
                                                                                                                           PRESENCE optional },
                                                      CRITICALITY ignore
                                                                                 TYPE
```

```
CommonMeasurementInitiationResponse-Extensions NBAP-PROTOCOL-EXTENSION ::= {
CommonMeasurementObjectType-CM-Rsp ::= CHOICE {
                              Cell-CM-Rsp,
   rACH
                               RACH-CM-Rsp,
   cPCH
                               CPCH-CM-Rsp,
    . . .
Cell-CM-Rsp ::= SEQUENCE {
   commonMeasurementValue
                                   CommonMeasurementValue,
                                   ProtocolExtensionContainer { { CellItem-CM-Rsp-ExtIEs} }
   iE-Extensions
                                                                                               OPTIONAL,
CellItem-CM-Rsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
RACH-CM-Rsp ::= SEQUENCE {
   commonMeasurementValue
                                   CommonMeasurementValue,
                                   ProtocolExtensionContainer { { RACHItem-CM-Rsp-ExtIEs} }
   iE-Extensions
                                                                                               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-MeasurementID
                                          CRITICALITY
                                                          ignore
                                                                         TYPE
                                                                                 MeasurementID
                                                                                                       PRESENCE mandatory
           id-Cause
                                          CRITICALITY
                                                          ignore
                                                                          TYPE
                                                                                  Cause
                                                                                                        PRESENCE mandatory
           id-CriticalityDiagnostics
                                                                                 CriticalityDiagnostics PRESENCE optional },
     ID
                                          CRITICALITY
                                                          ignore
                                                                          TYPE
CommonMeasurementInitiationFailure-Extensions NBAP-PROTOCOL-EXTENSION ::= {
-- COMMON MEASUREMENT REPORT
  ****************
CommonMeasurementReport ::= SEQUENCE {
   protocolIEs
                           ProtocolIE-Container
                                                  {{CommonMeasurementReport-IEs}},
                           ProtocolExtensionContainer {{CommonMeasurementReport-Extensions}}
   protocolExtensions
                                                                                               OPTIONAL,
CommonMeasurementReport-IEs NBAP-PROTOCOL-IES ::= {
           id-MeasurementID
                                                                                 TYPE
                                                                                                                         PRESENCE mandatory } |
                                                      CRITICALITY ignore
                                                                                         MeasurementID
    { ID
           id-CommonMeasurementObjectType-CM-Rprt
                                                      CRITICALITY ignore
                                                                                 TYPE
                                                                                         CommonMeasurementObjectType-CM-Rprt PRESENCE
   mandatory } |
    { ID
           id-SFN
                                                                                                                      PRESENCE optional },
                                                      CRITICALITY ignore
                                                                                 TYPE
                                                                                         SFN
    . . .
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 {
   \verb|commonMeasurementValueInformation| CommonMeasurementValueInformation, |
   iE-Extensions
                                ProtocolExtensionContainer {{ RACHItem-CM-Rprt-ExtIEs }}
                                                                                          OPTIONAL,
RACHItem-CM-Rprt-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
CPCH-CM-Rprt ::= SEQUENCE {
   commonMeasurementValueInformation CommonMeasurementValueInformation,
                                ProtocolExtensionContainer {{    CPCHItem-CM-Rprt-ExtIEs }}
   iE-Extensions
                                                                                          OPTIONAL,
CPCHItem-CM-Rprt-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
     *****************
-- COMMON MEASUREMENT TERMINATION REQUEST
__ *******************************
CommonMeasurementTerminationReguest ::= SEQUENCE {
                                              {{CommonMeasurementTerminationRequest-IEs}},
   protocolIEs
                        ProtocolIE-Container
                        ProtocolExtensionContainer {{CommonMeasurementTerminationRequest-Extensions}}
   protocolExtensions
CommonMeasurementTerminationRequest-IEs NBAP-PROTOCOL-IES ::= {
   { ID
          id-MeasurementID
                                   CRITICALITY
                                                  ignore
                                                                    TYPE
                                                                                             PRESENCE mandatory },
                                                                           MeasurementID
CommonMeasurementTerminationRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ****************
-- COMMON MEASUREMENT FAILURE INDICATION
  ******************
CommonMeasurementFailureIndication ::= SEQUENCE {
                                              {{CommonMeasurementFailureIndication-IEs}},
   protocolIEs
                        ProtocolIE-Container
   protocolExtensions
                            ProtocolExtensionContainer {{CommonMeasurementFailureIndication-Extensions}}
                                                                                                          OPTIONAL,
```

```
CommonMeasurementFailureIndication-IEs NBAP-PROTOCOL-IES ::= {
          id-Measurement.ID
                                     CRITICALITY ignore
                                                               TYPE
                                                                                           PRESENCE mandatory
                                                                      Measurement.ID
                                     CRITICALITY ignore
     ID
          id-Cause
                                                               TYPE
                                                                       Cause
                                                                                           PRESENCE mandatory
   . . .
CommonMeasurementFailureIndication-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ****************
-- CELL SETUP REQUEST FDD
  ****************
CellSetupRequestFDD ::= SEQUENCE {
   protocolIEs
                          ProtocolIE-Container
                                                {{CellSetupRequestFDD-IEs}},
                          ProtocolExtensionContainer {{CellSetupRequestFDD-Extensions}}
   protocolExtensions
                                                                                         OPTIONAL.
CellSetupRequestFDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-Local-Cell-ID
                                                               CRITICALITY
                                                                              reject
                                                                                           TYPE Local-Cell-ID
   PRESENCE
              mandatory }|
   { ID id-C-ID
                                                                                                                                  PRESENCE
                                                               CRITICALITY
                                                                              reject
                                                                                           TYPE C-ID
   mandatory }|
          id-ConfigurationGenerationID
   { ID
                                                               CRITICALITY
                                                                              reject
                                                                                           TYPE ConfigurationGenerationID
              mandatory }
   PRESENCE
   { ID
         id-T-Cell
                                                               CRITICALITY
                                                                              reject
                                                                                           TYPE T-Cell
   PRESENCE
              mandatory
          id-UARFCNforNu
                                                               CRITICALITY
                                                                              reject
                                                                                           TYPE UARFCN
   PRESENCE
              mandatory
          id-UARFCNforNd
   { ID
                                                               CRITICALITY
                                                                              reiect
                                                                                           TYPE UARFCN
   PRESENCE
              mandatory }|
         id-MaximumTransmissionPower
                                                               CRITICALITY
                                                                              reiect
                                                                                           TYPE MaximumTransmissionPower
              mandatory } |
   PRESENCE
         id-Closed-Loop-Timing-Adjustment-Mode
                                                                                           TYPE Closedlooptimingadjustmentmode
    { ID
                                                               CRITICALITY
                                                                              reject
   PRESENCE
              optional
          id-PrimaryScramblingCode
                                                                                           TYPE PrimaryScramblingCode
    { ID
                                                               CRITICALITY
                                                                              reject
   PRESENCE
              mandatory }
          id-Synchronisation-Configuration-Cell-SetupRqst
                                                                                           TYPE Synchronisation-Configuration-Cell-SetupRqst
                                                               CRITICALITY
                                                                              reject
           PRESENCE mandatory } |
          id-DL-TPC-Pattern01Count
                                                                                             TYPE DL-TPC-Pattern01Count
    { ID
                                                               CRITICALITY
                                                                              reject
   PRESENCE
              mandatory }|
          id-PrimarySCH-Information-Cell-SetupRqstFDD
                                                               CRITICALITY
                                                                              reject
                                                                                           TYPE PrimarySCH-Information-Cell-SetupRqstFDD
       PRESENCE
                  mandatory }|
          id-SecondarySCH-Information-Cell-SetupRqstFDD
                                                               CRITICALITY
                                                                              reject
                                                                                           TYPE SecondarySCH-Information-Cell-SetupRqstFDD
                  mandatory }|
       PRESENCE
          id-PrimaryCPICH-Information-Cell-SetupRqstFDD
                                                               CRITICALITY
                                                                              reject
                                                                                           TYPE PrimaryCPICH-Information-Cell-SetupRqstFDD
                  mandatory }
    { ID
          id-SecondaryCPICH-InformationList-Cell-SetupRqstFDD
                                                               CRITICALITY
                                                                              reject
                                                                                           TYPE SecondaryCPICH-InformationList-Cell-
                  PRESENCE
SetupRqstFDD
                             optional
                                        } |
```

```
id-PrimaryCCPCH-Information-Cell-SetupRqstFDD
                                                                                     reject
                                                                                                   TYPE PrimaryCCPCH-Information-Cell-SetupRqstFDD
                                                                    CRITICALITY
       PRESENCE
                    mandatory }
    { ID
           id-Limited-power-increase-information-Cell-SetupRgstFDD CRITICALITY
                                                                                     reject
                                                                                                   TYPE Limited-power-increase-information-Cell-
SetupRastFDD
                    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-SetupRgst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
PrimarySCH-Information-Cell-SetupRgstFDD ::= SEOUENCE
    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} }
    . . .
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} }
```

```
PrimaryCPICH-Information-Cell-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
SecondaryCPICH-InformationList-Cell-SetupRgstFDD ::= SEOUENCE (SIZE (1..maxSCPICHCell)) OF ProtocolIE-Single-Container {{ SecondaryCPICH-
InformationItemIE-Cell-SetupRqstFDD }}
SecondaryCPICH-InformationItemIE-Cell-SetupRqstFDD NBAP-PROTOCOL-IES ::= {
    { ID id-SecondaryCPICH-InformationItem-Cell-SetupRqstFDD
                                                                                              TYPE SecondaryCPICH-InformationItem-Cell-
                                                                 CRITICALITY
                                                                                 reiect
                   PRESENCE
SetupRqstFDD
                              mandatory}
SecondaryCPICH-InformationItem-Cell-SetupRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID
                                          CommonPhysicalChannelID,
   dl-ScramblingCode
                                          DL-ScramblingCode,
    fDD-DL-ChannelisationCodeNumber
                                          FDD-DL-ChannelisationCodeNumber,
    secondaryCPICH-Power
                                          DL-Power,
                                          TransmitDiversityIndicator,
    transmitDiversityIndicator
                                          ProtocolExtensionContainer { { SecondaryCPICH-InformationItem-Cell-SetupRqstFDD-ExtIEs} }
   iE-Extensions
    . . .
SecondaryCPICH-InformationItem-Cell-SetupRgstFDD-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
                                          OPTIONAL,
BCH-Information-Cell-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
Limited-power-increase-information-Cell-SetupRqstFDD ::= SEQUENCE {
   powerRaiseLimit
                                          PowerRaiseLimit,
   dLPowerAveragingWindowSize
                                          DLPowerAveragingWindowSize,
```

```
ProtocolExtensionContainer { { Limited-power-increase-information-Cell-SetupRqstFDD-ExtIEs} }
   iE-Extensions
   OPTIONAL.
   . . .
Limited-power-increase-information-Cell-SetupRgstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  **************
-- CELL SETUP REQUEST TDD
  ****************
CellSetupRequestTDD ::= SEQUENCE {
                          ProtocolIE-Container
                                               {{CellSetupRequestTDD-IEs}},
   protocolIEs
                          ProtocolExtensionContainer {{CellSetupRequestTDD-Extensions}}
   protocolExtensions
                                                                                          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
                                                                                      TYPE ConfigurationGenerationID
                                                            CRITICALITY
                                                                           reject
                                                                                                                                   PRESENCE
   mandatory } |
   { ID
          id-UARFCNforNt
                                                                CRITICALITY
                                                                               reject
                                                                                          TYPE UARFCN
                                                                                                                                   PRESENCE
   mandatory } |
          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-Synchronisation-Configuration-Cell-SetupRqst
                                                                                      TYPE Synchronisation-Configuration-Cell-SetupRqst
    { ID
                                                            CRITICALITY
                                                                           reject
   PRESENCE
              mandatory } |
   { ID
          id-DPCHConstant
                                                            CRITICALITY
                                                                           reject
                                                                                      TYPE ConstantValue
                                                                                                                                   PRESENCE
   mandatory } |
   { ID
          id-PUSCHConstant
                                                            CRITICALITY
                                                                           reject
                                                                                      TYPE ConstantValue
                                                                                                                                   PRESENCE
   mandatory }
   { ID
          id-PRACHConstant
                                                            CRITICALITY
                                                                           reiect
                                                                                      TYPE ConstantValue
                                                                                                                                   PRESENCE
   mandatory } |
   { ID
          id-TimingAdvanceApplied
                                                            CRITICALITY
                                                                           reject
                                                                                      TYPE TimingAdvanceApplied
                                                                                                                                   PRESENCE
   mandatory } |
   { ID
          id-SCH-Information-Cell-SetupRqstTDD
                                                                           reject
                                                                                      TYPE SCH-Information-Cell-SetupRqstTDD
                                                            CRITICALITY
   PRESENCE mandatory } |
         id-PCCPCH-Information-Cell-SetupRqstTDD
                                                            CRITICALITY
                                                                           reject
                                                                                      TYPE PCCPCH-Information-Cell-SetupRqstTDD
   PRESENCE mandatory } |
    { ID id-TimeSlotConfigurationList-Cell-SetupRqstTDD
                                                                                      TYPE TimeSlotConfigurationList-Cell-SetupRqstTDD
                                                            CRITICALITY
                                                                           reject
   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 ::= {
   PRESENCE
mandatory }
SyncCaseIndicatorItem-Cell-SetupRgstTDD-PSCH ::= CHOICE {
   case1
                                    Case1-Cell-SetupRqstTDD,
   case2
                                    Case2-Cell-SetupRgstTDD,
   . . .
Case1-Cell-SetupRqstTDD ::= SEQUENCE {
   timeSlot
   iE-Extensions
                                    ProtocolExtensionContainer { CaselItem-Cell-SetupRqstTDD-ExtIEs} }
                                                                                                      OPTIONAL,
CaselItem-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,
   blockSTTD-Indicator
                                       BlockSTTD-Indicator,
   iE-Extensions
                                       OPTIONAL,
   . . .
PCCPCH-Information-Cell-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
TimeSlotConfigurationList-Cell-SetupRqstTDD ::= SEOUENCE (SIZE (1..15)) OF TimeSlotConfigurationItem-Cell-SetupRqstTDD
TimeSlotConfigurationItem-Cell-SetupRgstTDD ::= SEQUENCE {
   timeSlot
                                       TimeSlot,
   timeSlotStatus
                                       TimeSlotStatus,
   timeSlotDirection
                                       TimeSlotDirection,
                                       ProtocolExtensionContainer { { TimeSlotConfigurationItem-Cell-SetupRqstTDD-ExtIEs} }
   iE-Extensions
                                                                                                                      OPTIONAL,
   . . .
TimeSlotConfigurationItem-Cell-SetupRgstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
-- CELL SETUP RESPONSE
  ****************
CellSetupResponse ::= SEQUENCE {
                                                  {{CellSetupResponse-IEs}},
   protocolIEs
                            ProtocolIE-Container
                            ProtocolExtensionContainer {{CellSetupResponse-Extensions}}
   protocolExtensions
                                                                                       OPTIONAL,
   . . .
CellSetupResponse-IEs NBAP-PROTOCOL-IES ::= {
          id-CriticalityDiagnostics
   { ID
                                       CRITICALITY
                                                     ignore
                                                                   TYPE
                                                                           CriticalityDiagnostics
                                                                                                 PRESENCE optional },
   . . .
CellSetupResponse-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  -- CELL SETUP FAILURE
```

```
**************
CellSetupFailure ::= SEOUENCE {
   protocolIEs
                         ProtocolIE-Container
                                              {{CellSetupFailure-IEs}},
                         ProtocolExtensionContainer {{CellSetupFailure-Extensions}}
   protocolExtensions
                                                                                      OPTIONAL,
CellSetupFailure-IEs NBAP-PROTOCOL-IES ::= {
    { ID
         id-Cause
                                           CRITICALITY
                                                         ignore
                                                                        TYPE
                                                                               Cause
                                                                                                  PRESENCE mandatory } |
         id-CriticalityDiagnostics
   { ID
                                           CRITICALITY
                                                          ignore
                                                                        TYPE
                                                                               CriticalityDiagnostics
                                                                                                        PRESENCE optional },
   . . .
CellSetupFailure-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    CELL RECONFIGURATION REQUEST FDD
__ *********************
CellReconfigurationRequestFDD ::= SEQUENCE {
                        ProtocolIE-Container {{CellReconfigurationRequestFDD-IEs}},
   protocolIEs
                        ProtocolExtensionContainer {{CellReconfigurationRequestFDD-Extensions}}
   protocolExtensions
                                                                                                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 ::= SEOUENCE {
    commonPhysicalChannelID
                                            CommonPhysicalChannelID,
   primarySCH-Power
                                            DL-Power,
                                            ProtocolExtensionContainer { { PrimarySCH-Information-Cell-ReconfRqstFDD-ExtIEs} }
   iE-Extensions
                                                                                                                                   OPTIONAL,
PrimarySCH-Information-Cell-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    . . .
SecondarySCH-Information-Cell-ReconfRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID
                                            CommonPhysicalChannelID,
    secondarySCH-Power
                                            DL-Power,
                                            ProtocolExtensionContainer { { SecondarySCH-Information-Cell-ReconfRqstFDD-ExtIEs} }
    iE-Extensions
                                                                                                                                      OPTIONAL,
    . . .
SecondarySCH-Information-Cell-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
PrimaryCPICH-Information-Cell-ReconfRqstFDD ::= SEQUENCE {
                                            CommonPhysicalChannelID,
    commonPhysicalChannelID
    primaryCPICH-Power
                                            PrimaryCPICH-Power,
                                            ProtocolExtensionContainer { { PrimaryCPICH-Information-Cell-ReconfRqstFDD-ExtIEs} }
    iE-Extensions
                                                                                                                                      OPTIONAL,
PrimaryCPICH-Information-Cell-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
SecondaryCPICH-InformationList-Cell-ReconfRgstFDD ::= 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
                                                                                                     TYPE SecondaryCPICH-InformationItem-Cell-
                                                                                        reject
                    PRESENCE
ReconfRastFDD
                                mandatory}
```

```
SecondaryCPICH-InformationItem-Cell-ReconfRgstFDD ::= SEQUENCE {
   commonPhysicalChannelID
                                           CommonPhysicalChannelID,
   secondaryCPICH-Power
                                           DL-Power,
   iE-Extensions
                                           ProtocolExtensionContainer { { SecondaryCPICH-InformationItem-Cell-ReconfRgstFDD-ExtIEs} }
   OPTIONAL,
   . . .
SecondaryCPICH-InformationItem-Cell-ReconfRqstFDD-ExtIES NBAP-PROTOCOL-EXTENSION ::= {
PrimaryCCPCH-Information-Cell-ReconfRqstFDD ::= SEQUENCE {
   bCH-information
                                       BCH-information-Cell-ReconfRgstFDD,
                                        ProtocolExtensionContainer { { PrimaryCCPCH-Information-Cell-ReconfRgstFDD-ExtIEs} }
   iE-Extensions
                                                                                                                         OPTIONAL,
PrimaryCCPCH-Information-Cell-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
BCH-information-Cell-ReconfRqstFDD ::= SEQUENCE {
   commonTransportChannelID
                                        CommonTransportChannelID,
   bCH-Power
                                        DL-Power,
   iE-Extensions
                                        OPTIONAL,
BCH-information-Cell-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  *****************
-- CELL RECONFIGURATION REQUEST TDD
        ***************
CellReconfigurationRequestTDD ::= SEQUENCE {
   protocolIEs
                                               {{CellReconfigurationRequestTDD-IEs}},
                         ProtocolIE-Container
                         ProtocolExtensionContainer {{CellReconfigurationRequestTDD-Extensions}}
   protocolExtensions
                                                                                              OPTIONAL,
   . . .
CellReconfigurationRequestTDD-IES NBAP-PROTOCOL-IES ::= {
   { ID
         id-C-ID
                                                          CRITICALITY
                                                                        reject
                                                                                   TYPE C-ID
                                                                                                                         PRESENCE
   mandatory } |
          id-ConfigurationGenerationID
                                                                                   TYPE ConfigurationGenerationID
   { ID
                                                          CRITICALITY
                                                                        reject
                                                                                                                               PRESENCE
   mandatory } |
         id-Synchronisation-Configuration-Cell-ReconfRqst
                                                                                   TYPE Synchronisation-Configuration-Cell-ReconfRqst
   { ID
                                                          CRITICALITY
                                                                         reject
   PRESENCE
              optional
```

```
id-TimingAdvanceApplied
                                                            CRITICALITY
                                                                            reject
                                                                                       TYPE TimingAdvanceApplied
                                                                                                                                 PRESENCE
    optional
    { ID id-SCH-Information-Cell-ReconfRgstTDD
                                                            CRITICALITY
                                                                           reject
                                                                                       TYPE SCH-Information-Cell-ReconfRqstTDD
    PRESENCE
              optional
                         } |
          id-PCCPCH-Information-Cell-ReconfRqstTDD
                                                            CRITICALITY
                                                                            reject
                                                                                       TYPE PCCPCH-Information-Cell-ReconfRgstTDD
    PRESENCE
              optional }|
   { ID
          id-MaximumTransmissionPower
                                                                                       TYPE MaximumTransmissionPower
                                                            CRITICALITY
                                                                            reject
                                                                                                                                    PRESENCE
    optional }|
    { ID
          id-DPCHConstant
                                                            CRITICALITY
                                                                           reject
                                                                                       TYPE ConstantValue
                                                                                                                                    PRESENCE
    optional
             } |
          id-PUSCHConstant
                                                                                       TYPE ConstantValue
    { ID
                                                            CRITICALITY
                                                                           reject
                                                                                                                                    PRESENCE
       optional }|
    { ID
          id-PRACHConstant
                                                            CRITICALITY
                                                                            reject
                                                                                       TYPE ConstantValue
                                                                                                                                    PRESENCE
    optional }|
    { ID
          id-TimeSlotConfigurationList-Cell-ReconfRgstTDD
                                                                                       TYPE TimeSlotConfigurationList-Cell-ReconfRgstTDD
                                                            CRITICALITY
                                                                            reject
    PRESENCE
              mandatory },
CellReconfigurationRequestTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
SCH-Information-Cell-ReconfRgstTDD ::= SEOUENCE {
    commonPhysicalChannelID
                                         CommonPhysicalChannelID,
    sCH-Power
                                         DL-Power,
                                         iE-Extensions
                                                                                                                     OPTIONAL,
PSCH-Information-Cell-ReconfRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
PCCPCH-Information-Cell-ReconfRgstTDD ::= SEOUENCE {
   commonPhysicalChannelID
                                         CommonPhysicalChannelID,
   pCCPCH-Power
                                         DL-Power,
                                         ProtocolExtensionContainer { { PCCPCH-Information-Cell-ReconfRqstTDD-ExtIEs} }
   iE-Extensions
                                                                                                                        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} }
```

```
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-CriticalityDiagnostics
                                                  ignore
                                                                      CriticalityDiagnostics
                                                                                            PRESENCE optional },
   . . .
CellReconfigurationResponse-Extensions NBAP-PROTOCOL-EXTENSION ::= {
   -- CELL RECONFIGURATION FAILURE
CellReconfigurationFailure ::= SEQUENCE {
                                           {{CellReconfigurationFailure-IEs}},
   protocolIEs
                       ProtocolIE-Container
                      ProtocolExtensionContainer {{CellReconfigurationFailure-Extensions}}
   protocolExtensions
                                                                                    OPTIONAL,
CellReconfigurationFailure-IEs NBAP-PROTOCOL-IES ::= {
         id-Cause
                                    CRITICALITY
                                                  ignore
                                                                TYPE
                                                                      Cause
                                                                                                      mandatory }|
         id-CriticalityDiagnostics
                                                                TYPE
                                                                      CriticalityDiagnostics
                                                                                              PRESENCE optional },
   { ID
                                    CRITICALITY
                                                  ignore
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-C-ID
                        CRITICALITY
                                                           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}},
                     ProtocolExtensionContainer {{ResourceStatusIndication-Extensions}} OPTIONAL,
   protocolExtensions
ResourceStatusIndication-IEs NBAP-PROTOCOL-IES ::= {
        id-IndicationType-ResourceStatusInd
   { ID
                                                 CRITICALITY
                                                               ignore
                                                                             TYPE
                                                                                    IndicationType-ResourceStatusInd
                                                                                                                     PRESENCE
   mandatory }
   -- This IE represents both the Indication Type IE and the choice based on the indication type as described in the tabular message format in
subclause 9.1.
```

```
ID
           id-Cause
                                                     CRITICALITY
                                                                                    TYPE
                                                                                                                                     optional
                                                                     ignore
                                                                                            Cause
                                                                                                                          PRESENCE
ResourceStatusIndication-Extensions NBAP-PROTOCOL-EXTENSION ::= {
IndicationType-ResourceStatusInd ::= CHOICE
   no-Failure
                                          No-Failure-ResourceStatusInd,
    serviceImpacting
                                          ServiceImpacting-ResourceStatusInd,
    . . .
No-Failure-ResourceStatusInd ::= SEOUENCE {
    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 ::= SEOUENCE(SIZE (1..maxLocalCellinNodeB)) OF ProtocolIE-Single-Container {{ Local-Cell-
InformationItemIE-ResourceStatusInd }}
Local-Cell-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
    PRESENCE
mandatory }
Local-Cell-InformationItem-ResourceStatusInd ::= SEOUENCE {
    local-CellID
                                              Local-Cell-ID,
    addorDeleteIndicator
                                              AddorDeleteIndicator,
    dl-or-global-capacityCredit
                                              DL-or-Global-CapacityCredit
                                                                            OPTIONAL,
    -- This IE shall be present if AddorDeleteIndicator IE is set to "add"
    ul-capacityCredit
                                              UL-CapacityCredit
                                                                     OPTIONAL,
    commnonChannelsCapacityConsumptionLaw
                                              CommonChannelsCapacityConsumptionLaw
                                                                                    OPTIONAL,
    -- This IE shall be present if AddorDeleteIndicator IE is set to "add
    dedicatedChannelsCapacityConsumptionLaw
                                              DedicatedChannelsCapacityConsumptionLaw
                                                                                        OPTIONAL,
    -- This IE shall be present if AddorDeleteIndicator IE is set to "add"
    maximumDL-PowerCapability
                                              MaximumDL-PowerCapability
                                                                            OPTIONAL,
    -- This IE shall be present if AddorDeleteIndicator IE is set to "add"
    minSpreadingFactor
                                              MinSpreadingFactor
                                                                                OPTIONAL,
    -- This IE shall be present if AddorDeleteIndicator IE is set to "add"
    minimumDL-PowerCapability
                                              MinimumDL-PowerCapability
                                                                            OPTIONAL,
    -- This IE shall be present if AddorDeleteIndicator IE is set to "add"
    local-Cell-Group-ID
                                              Local-Cell-ID
                                                                            OPTIONAL,
    iE-Extensions
                                              ProtocolExtensionContainer { { Local-Cell-InformationItem-ResourceStatusInd-ExtIEs} } OPTIONAL,
```

```
Local-Cell-InformationItem-ResourceStatusInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
Local-Cell-Group-InformationList-ResourceStatusInd ::= SEOUENCE(SIZE (1..maxLocalCellinNodeB)) OF ProtocolIE-Single-Container {{ Local-Cell-Group-
InformationItemIE-ResourceStatusInd }}
Local-Cell-Group-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
   PRESENCE mandatory }
Local-Cell-Group-InformationItem-ResourceStatusInd::= SEQUENCE {
   local-Cell-Group-ID
                                         Local-Cell-ID,
   dl-or-global-capacityCredit
                                         DL-or-Global-CapacityCredit,
   ul-capacityCredit
                                         UL-CapacityCredit
                                                             OPTIONAL,
   commnonChannelsCapacityConsumptionLaw
                                         CommonChannelsCapacityConsumptionLaw,
   dedicatedChannelsCapacityConsumptionLaw
                                         DedicatedChannelsCapacityConsumptionLaw,
                                         ProtocolExtensionContainer { { Local-Cell-Group-InformationItem-ResourceStatusInd-ExtIEs} }
   iE-Extensions
   OPTIONAL,
   . . .
Local-Cell-Group-InformationItem-ResourceStatusInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
ServiceImpacting-ResourceStatusInd ::= SEOUENCE {
   local-Cell-InformationList
                                     Local-Cell-InformationList2-ResourceStatusInd OPTIONAL,
                                     Local-Cell-Group-InformationList2-ResourceStatusInd OPTIONAL,
   local-Cell-Group-InformationList
   cCP-InformationList
                                     CCP-InformationList-ResourceStatusInd
                                                                              OPTIONAL,
   cell-InformationList
                                     Cell-InformationList-ResourceStatusInd
                                                                              OPTIONAL,
                                     iE-Extensions
                                                                                                             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 ::= {
   mandatory }
Local-Cell-InformationItem2-ResourceStatusInd ::= SEOUENCE {
   local-Cell-ID
                                     Local-Cell-ID,
   dl-or-global-capacityCredit
                                     DL-or-Global-CapacityCredit
                                                                 OPTIONAL,
   ul-capacityCredit
                                     UL-CapacityCredit
                                                                 OPTIONAL,
   commnonChannelsCapacityConsumptionLaw
                                         CommonChannelsCapacityConsumptionLaw
                                                                           OPTIONAL,
```

```
dedicatedChannelsCapacityConsumptionLaw
                                            DedicatedChannelsCapacityConsumptionLaw OPTIONAL,
   maximum-DL-PowerCapability
                                        MaximumDL-PowerCapability
                                                                      OPTIONAL,
   minSpreadingFactor
                                        MinSpreadingFactor
                                                                      OPTIONAL.
   minimumDL-PowerCapability
                                        MinimumDL-PowerCapability
                                                                      OPTIONAL,
   iE-Extensions
                                        ProtocolExtensionContainer { { Local-Cell-InformationItem2-ResourceStatusInd-ExtIEs} }
Local-Cell-InformationItem2-ResourceStatusInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
Local-Cell-Group-InformationList2-ResourceStatusInd ::= SEOUENCE(SIZE (1..maxLocalCellinNodeB)) OF ProtocolIE-Single-Container {{ Local-Cell-Group-
InformationItemIE2-ResourceStatusInd }}
Local-Cell-Group-InformationItemIE2-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
    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,
   commnonChannelsCapacityConsumptionLaw
                                            CommonChannelsCapacityConsumptionLaw
                                                                                 OPTIONAL,
   dedicatedChannelsCapacityConsumptionLaw
                                            DedicatedChannelsCapacityConsumptionLaw OPTIONAL,
                                        ProtocolExtensionContainer { { Local-Cell-Group-InformationItem2-ResourceStatusInd-ExtIEs} }
   iE-Extensions
   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 ::= {
    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 ::= {
    PRESENCE mandatory }
Cell-InformationItem-ResourceStatusInd ::= SEOUENCE {
                                         C-ID,
   resourceOperationalState
                                         ResourceOperationalState
                                                                                      OPTIONAL,
   availabilityStatus
                                         AvailabilityStatus
                                                                                      OPTIONAL,
   primary-SCH-Information
                                         P-SCH-Information-ResourceStatusInd
                                                                                      OPTIONAL,
   secondary-SCH-Information
                                         S-SCH-Information-ResourceStatusInd
                                                                                      OPTIONAL,
   primary-CPICH-Information
                                         P-CPICH-Information-ResourceStatusInd
                                                                                      OPTIONAL,
   secondary-CPICH-Information
                                         S-CPICH-InformationList-ResourceStatusInd
                                                                                      OPTIONAL,
   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,
   pCPCH-InformationList
                                         PCPCH-InformationList-ResourceStatusInd
                                                                                      OPTIONAL,
   cPCH-InformationList
                                         CPCH-InformationList-ResourceStatusInd
                                                                                      OPTIONAL,
   aP-AICH-InformationList
                                         AP-AICH-InformationList-ResourceStatusInd
                                                                                      OPTIONAL,
   cDCA-ICH-InformationList
                                         CDCA-ICH-InformationList-ResourceStatusInd
                                                                                      OPTIONAL,
   sCH-Information
                                         SCH-Information-ResourceStatusInd
                                                                                      OPTIONAL,
   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 ::= {
    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 ::= {
   S-CCPCH-InformationList-ResourceStatusInd ::= SEQUENCE (SIZE (1..maxSCCPCHCell)) OF ProtocolIE-Single-Container {{ S-CCPCH-InformationItemIE-
ResourceStatusInd }}
S-CCPCH-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
   PRESENCE mandatory }
PCH-Information-ResourceStatusInd ::= ProtocolIE-Single-Container {{ PCH-InformationIE-ResourceStatusInd }}
PCH-InformationIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
   PICH-Information-ResourceStatusInd ::= ProtocolIE-Single-Container {{ PICH-InformationIE-ResourceStatusInd }}
PICH-InformationIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
   PRESENCE mandatory }
FACH-InformationList-ResourceStatusInd ::= SEOUENCE (SIZE (1..maxFACHCell)) OF ProtocolIE-Single-Container {{ FACH-InformationItemIE-
ResourceStatusInd }}
FACH-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
   PRACH-InformationList-ResourceStatusInd ::= SEOUENCE (SIZE (1..maxPRACHCell)) OF ProtocolIE-Single-Container {{ PRACH-InformationItemIE-
ResourceStatusInd }}
PRACH-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
   PRESENCE mandatory }
```

```
RACH-InformationList-ResourceStatusInd ::= SEQUENCE (SIZE (1..maxPRACHCell)) OF ProtocolIE-Single-Container {{ RACH-InformationItemIE-
ResourceStatusInd }}
RACH-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
   AICH-InformationList-ResourceStatusInd ::= SEOUENCE (SIZE (1..maxPRACHCell)) OF ProtocolIE-Single-Container {{ AICH-InformationItemIE-
ResourceStatusInd }}
AICH-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
   PRESENCE mandatory }
PCPCH-InformationList-ResourceStatusInd ::= SEOUENCE (SIZE (1..maxPCPCHCell)) OF ProtocolIE-Single-Container {{ PCPCH-InformationItemIE-
ResourceStatusInd }}
PCPCH-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
   PRESENCE optional }
CPCH-InformationList-ResourceStatusInd ::= SEQUENCE (SIZE (1..maxCPCHCell)) OF ProtocolIE-Single-Container {{ CPCH-InformationItemIE-
ResourceStatusInd }}
CPCH-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
   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 ::= {
   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-C-ID
                                                                CRITICALITY reject
                                                                                        TYPE
                                                                                                 C-ID
                                                                                                                                   PRESENCE
mandatory
           } |
     ID
            id-BCCH-ModificationTime
                                                                CRITICALITY reject
                                                                                        TYPE
                                                                                                 BCCH-ModificationTime
                                                                                                                                   PRESENCE optional
           id-MIB-SB-SIB-InformationList-SystemInfoUpdateRqst
                                                                    CRITICALITY reject
                                                                                            TYPE MIB-SB-SIB-InformationList-SystemInfoUpdateRqst
     ID
    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,
                                        ProtocolExtensionContainer { { MIB-SB-SIB-InformationItem-SystemInfoUpdateRqst-ExtIEs} }
    iE-Extensions
                                                                                                                                      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-SystemInfoUpdate,
    segmentInformationList
    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 ::= {
   PRESENCE mandatory
SegmentInformationListIE-SystemInfoUpdate ::= SEQUENCE (SIZE (1..maxIBSEG)) OF SegmentInformationItem-SystemInfoUpdate
SegmentInformationItem-SystemInfoUpdate ::= SEQUENCE {
   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
                                                       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 ::= SEOUENCE {
   protocolIEs
                        ProtocolIE-Container
                                            {{SystemInformationUpdateResponse-IEs}},
                        ProtocolExtensionContainer {{SystemInformationUpdateResponse-Extensions}}
   protocolExtensions
                                                                                            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}},
                        ProtocolExtensionContainer {{SystemInformationUpdateFailure-Extensions}}
   protocolExtensions
                                                                                            OPTIONAL,
```

```
SystemInformationUpdateFailure-IEs NBAP-PROTOCOL-IES ::= {
     ID
           id-Cause
                                             CRITICALITY
                                                             ignore
                                                                            TYPE
                                                                                                         PRESENCE mandatory } |
                                                                                    Cause
     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}},
                          ProtocolExtensionContainer {{RadioLinkSetupRequestFDD-Extensions}}
   protocolExtensions
                                                                                                OPTIONAL,
RadioLinkSetupRequestFDD-IEs NBAP-PROTOCOL-IES ::= {
          id-CRNC-CommunicationContextID
    { ID
                                                         CRITICALITY reject
                                                                                        TYPE CRNC-CommunicationContextID
                                                                                                                                     PRESENCE
   mandatory } |
           id-UL-DPCH-Information-RL-SetupRqstFDD
                                                         CRITICALITY reject
                                                                                        TYPE UL-DPCH-Information-RL-SetupRgstFDD
    { ID
                                                                                                                                     PRESENCE
    mandatory }
                                                         CRITICALITY reject
    { ID
           id-DL-DPCH-Information-RL-SetupRqstFDD
                                                                                        TYPE DL-DPCH-Information-RL-SetupRgstFDD
                                                                                                                                     PRESENCE
    mandatory } |
           id-DCH-FDD-Information
                                                                                DCH-FDD-Information
                                                                                                         PRESENCE mandatory } |
     ID
                                          CRITICALITY reject
                                                                        TYPE
     ID
           id-DSCH-FDD-Information
                                          CRITICALITY reject
                                                                        TYPE
                                                                                DSCH-FDD-Information
                                                                                                         PRESENCE optional }
           id-TFCI2-Bearer-Information-RL-SetupRqstFDD
                                                                                        TYPE TFCI2-Bearer-Information-RL-SetupRqstFDD PRESENCE
     TD
                                                         CRITICALITY ignore
    optional
    { ID
          id-RL-InformationList-RL-SetupRqstFDD
                                                                                        TYPE RL-InformationList-RL-SetupRqstFDD
                                                         CRITICALITY notify
                                                                                                                                     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
  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,
    t.FCS
                                          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-SetupRgstFDD-ExtIEs} } OPTIONAL,
UL-DPCH-Information-RL-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
DL-DPCH-Information-RL-SetupRgstFDD ::= SEOUENCE {
    t.FCS
    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
    -- This IE shall be present if the DSCH Information IE is present --
    powerOffsetInformation
                                            PowerOffsetInformation-RL-SetupRgstFDD,
    fdd-TPC-DownlinkStepSize
                                            FDD-TPC-DownlinkStepSize,
    limitedPowerIncrease
                                            LimitedPowerIncrease,
    innerLoopDLPCStatus
                                            InnerLoopDLPCStatus,
    iE-Extensions
                                            ProtocolExtensionContainer { { DL-DPCH-Information-RL-SetupRgstFDD-ExtIEs} } OPTIONAL,
    . . .
DL-DPCH-Information-RL-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
PowerOffsetInformation-RL-SetupRqstFDD ::= SEQUENCE {
   pO1-ForTFCI-Bits
                                            PowerOffset,
                                            PowerOffset,
   pO2-ForTPC-Bits
   pO3-ForPilotBits
                                            PowerOffset,
    iE-Extensions
                                            ProtocolExtensionContainer { { PowerOffsetInformation-RL-SetupRgstFDD-ExtIEs} } OPTIONAL,
PowerOffsetInformation-RL-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    . . .
TFCI2-Bearer-Information-RL-SetupRqstFDD ::= SEQUENCE {
    toAWS
                                        ToAWS,
    toAWE
                                        ProtocolExtensionContainer { { TFCI2-Bearer-Information-RL-SetupRqstFDD-ExtIEs} }
    iE-Extensions
                                                                                                                              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-SetupRgstFDD }}
RL-InformationItemIE-RL-SetupRgstFDD NBAP-PROTOCOL-IES ::= {
         id-RL-InformationItem-RL-SetupRqstFDD
                                                       CRITICALITY
                                                                      notify
                                                                                     TYPE RL-InformationItem-RL-SetupRqstFDD
                                                                                                                              PRESENCE
   mandatory}
RL-InformationItem-RL-SetupRgstFDD ::= 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
RL-InformationItem-RL-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    *****************
-- RADIO LINK SETUP REQUEST TDD
__ ********************************
RadioLinkSetupRequestTDD ::= SEQUENCE {
                                               {{RadioLinkSetupRequestTDD-IEs}},
   protocolIEs
                         ProtocolIE-Container
                         ProtocolExtensionContainer {{RadioLinkSetupRequestTDD-Extensions}} OPTIONAL,
   protocolExtensions
RadioLinkSetupRequestTDD-IEs NBAP-PROTOCOL-IES ::= {
          id-CRNC-CommunicationContextID
   { ID
                                                           CRITICALITY reject
                                                                                     TYPE CRNC-CommunicationContextID
              mandatory }|
   PRESENCE
   { ID
         id-UL-CCTrCH-InformationList-RL-SetupRqstTDD
                                                           CRITICALITY notify
                                                                                     TYPE UL-CCTrCH-InformationList-RL-SetupRgstTDD
   PRESENCE
              optional
                         } |
```

```
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-DSCH-TDD-Information
                                            CRITICALITY reject
                                                                     TYPE
                                                                             DSCH-TDD-Information
                                                                                                       PRESENCE optional }
          id-USCH-Information
                                        CRITICALITY reject
                                                                  TYPE USCH-Information
                                                                                               PRESENCE optional } |
          id-RL-Information-RL-SetupRqstTDD
                                                          CRITICALITY reject
                                                                                    TYPE RL-Information-RL-SetupRgstTDD
     ID
    PRESENCE
              mandatory },
RadioLinkSetupRequestTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
UL-CCTrCH-InformationList-RL-SetupRqstTDD ::= SEQUENCE (SIZE(1..maxNrOfCCTrCHs)) OF
    UL-CCTrCH-InformationItemIE-RL-SetupRgstTDD NBAP-PROTOCOL-IES ::= {
          id-UL-CCTrCH-InformationItem-RL-SetupRgstTDD
                                                          CRITICALITY
                                                                         notify
                                                                                        TYPE UL-CCTrCH-InformationItem-RL-SetupRgstTDD
    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-SetupRgstTDD
                                                                             OPTIONAL,
                                        ProtocolExtensionContainer { { UL-CCTrCH-InformationItem-RL-SetupRqstTDD-ExtIEs} }
   iE-Extensions
                                                                                                                       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-SetupRgstTDD NBAP-PROTOCOL-IES ::= {
    { ID id-UL-DPCH-InformationList-RL-SetupRgstTDD
                                                 CRITICALITY notify TYPE UL-DPCH-InformationItem-RL-SetupRgstTDD
                                                                                                                  PRESENCE mandatory
UL-DPCH-InformationItem-RL-SetupRqstTDD ::= SEQUENCE {
   repetitionPeriod
                                        RepetitionPeriod,
   repetitionLength
                                        RepetitionLength,
   tdd-DPCHOffset
                                        TDD-DPCHOffset,
   uL-Timeslot-Information
                                    UL-Timeslot-Information,
                                        iE-Extensions
    . . .
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-SetupRgstTDD NBAP-PROTOCOL-IES ::= {
          id-DL-CCTrCH-InformationItem-RL-SetupRgstTDD
                                                                    CRITICALITY
                                                                                                  TYPE DL-CCTrCH-InformationItem-RL-SetupRgstTDD
                                                                                     notify
    PRESENCE
               mandatory}
DL-CCTrCH-InformationItem-RL-SetupRqstTDD ::= SEOUENCE {
    cCTrCH-ID
                                            CCTrCH-ID,
    tFCS
                                            TFCS,
    t.FCI-Coding
                                            TFCI-Coding.
    punctureLimit
                                            PunctureLimit.
    tdd-TPC-DownlinkStepSize
                                            TDD-TPC-DownlinkStepSize,
    cCTrCH-TPCList
                                            CCTrCH-TPCList-RL-SetupRgstTDD
                                                                                     OPTIONAL,
    dL-DPCH-Information
                                            DL-DPCH-Information-RL-SetupRgstTDD
                                                                                     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
                                            ProtocolExtensionContainer { { CCTrCH-TPCItem-RL-SetupRqstTDD-ExtIEs} }
    iE-Extensions
                                                                                                                       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} }
    . . .
DL-DPCH-InformationItem-RL-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
```

```
RL-Information-RL-SetupRgstTDD ::= SEQUENCE
                                         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} }
   . . .
RL-Information-RL-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
       ***************
-- RADIO LINK SETUP RESPONSE FDD
  RadioLinkSetupResponseFDD ::= SEQUENCE {
                                                {{RadioLinkSetupResponseFDD-IEs}},
   protocolIEs
                          ProtocolIE-Container
                          ProtocolExtensionContainer {{RadioLinkSetupResponseFDD-Extensions}}
   protocolExtensions
                                                                                              OPTIONAL,
RadioLinkSetupResponseFDD-IEs NBAP-PROTOCOL-IES ::= {
          id-CRNC-CommunicationContextID
                                                            CRITICALITY ignore
                                                                                      TYPE CRNC-CommunicationContextID
   PRESENCE mandatory }
   { ID
                                                            CRITICALITY ignore
          id-NodeB-CommunicationContextID
                                                                                      TYPE NodeB-CommunicationContextID
                                                                                                                                   PRESENCE
   mandatory } |
          id-CommunicationControlPortID
   { ID
                                                            CRITICALITY ignore
                                                                                      TYPE CommunicationControlPortID
                                                                                                                                   PRESENCE
   mandatory } |
    { ID
          id-RL-InformationResponseList-RL-SetupRspFDD
                                                            CRITICALITY ignore
                                                                                      TYPE RL-InformationResponseList-RL-SetupRspFDD
   PRESENCE
              mandatory } |
          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-RL-InformationResponseItem-RL-SetupRspFDD
                                                                                            TYPE RL-InformationResponseItem-RL-SetupRspFDD
                                                                 CRITICALITY
                                                                                 ignore
   PRESENCE
               mandatory}
RL-InformationResponseItem-RL-SetupRspFDD ::= SEQUENCE
                                                  RL-ID,
   rL-Set-ID
                                                  RL-Set-ID,
   received-total-wide-band-power
                                                                         Received-total-wide-band-power-Value,
   diversityIndication
                                  DiversityIndication-RL-SetupRspFDD,
    -- This IE represents both the Diversity Indication IE and the choice based on the diversity indication as described in
    -- the tabular message format in subclause 9.1.
   dSCH-InformationResponseList
                                                  DSCH-InformationResponseList-RL-SetupRspFDD OPTIONAL,
    sSDT-SupportIndicator
                                                  SSDT-SupportIndicator,
   iE-Extensions
                                                  ProtocolExtensionContainer { { RL-InformationResponseItem-RL-SetupRspFDD-ExtIEs} }
   OPTIONAL,
RL-InformationResponseItem-RL-SetupRspFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
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 ::= SEOUENCE
   dCH-InformationResponse
                                              DCH-InformationResponse,
   iE-Extensions
                                                  . . .
NonCombiningOrFirstRLItem-RL-SetupRspFDD-ExtlEs 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 {
                                               {{RadioLinkSetupResponseTDD-IEs}},
   protocolIEs
                         ProtocolIE-Container
   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
                                                                                        TYPE NodeB-CommunicationContextID
                                                          CRITICALITY
                                                                         ignore
   PRESENCE mandatory } |
         id-CommunicationControlPortID
                                                          CRITICALITY
                                                                         ignore
                                                                                              CommunicationControlPortID
   PRESENCE mandatory } |
          id-RL-InformationResponse-RL-SetupRspTDD
                                                          CRITICALITY
                                                                         ignore
                                                                                        TYPE RL-InformationResponse-RL-SetupRspTDD
   PRESENCE
              mandatory }|
   { ID
         id-CriticalityDiagnostics
                                                          CRITTCALTTY
                                                                         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-RL-SetupRspTDD
   dCH-InformationResponseList
                                                                                            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-InformationResponseListIEs-RL-SetupRspTDD NBAP-PROTOCOL-IES ::= {
    { ID id-DCH-InformationResponse CRITICALITY
                                               ignore
                                                                  DCH-InformationResponse PRESENCE mandatory }
DSCH-InformationResponseList-RL-SetupRspTDD ::= ProtocolIE-Single-Container {{ DSCH-InformationResponseListIEs-RL-SetupRspTDD }}
DSCH-InformationResponseListIEs-RL-SetupRspTDD NBAP-PROTOCOL-IES ::= {
```

```
PRESENCE mandatory }
USCH-InformationResponseList-RL-SetupRspTDD ::= ProtocolIE-Single-Container {{ USCH-InformationResponseListIEs-RL-SetupRspTDD }}
USCH-InformationResponseListIEs-RL-SetupRspTDD NBAP-PROTOCOL-IES ::= {
   PRESENCE mandatory }
  ****************
-- RADIO LINK SETUP FAILURE FDD
  RadioLinkSetupFailureFDD ::= SEOUENCE {
                                            {{RadioLinkSetupFailureFDD-IEs}},
   protocolIEs
                       ProtocolIE-Container
                       ProtocolExtensionContainer {{RadioLinkSetupFailureFDD-Extensions}} OPTIONAL,
   protocolExtensions
   . . .
RadioLinkSetupFailureFDD-IEs NBAP-PROTOCOL-IES ::= {
         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-CommunicationControlPortID
                                                                 CRITICALITY
                                                                              ignore
                                                                                           TYPE CommunicationControlPortID
                                        } |
                    PRESENCE
                              optional
   { ID
         id-CauseLevel-RL-SetupFailureFDD
                                                                 CRITICALITY
                                                                              ignore
                                                                                               CauseLevel-RL-SetupFailureFDD
   PRESENCE mandatory
                       } |
         id-CriticalityDiagnostics
   { ID
                                                                 CRITICALITY
                                                                              ignore
                                                                                           TYPE CriticalityDiagnostics
                    PRESENCE
                              optional
   . . .
RadioLinkSetupFailureFDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
CauseLevel-RL-SetupFailureFDD ::= CHOICE {
   generalCause
                    GeneralCauseList-RL-SetupFailureFDD,
                    RLSpecificCauseList-RL-SetupFailureFDD,
   rLSpecificCause
GeneralCauseList-RL-SetupFailureFDD ::= SEQUENCE
   iE-Extensions
                                         ProtocolExtensionContainer { GeneralCauseItem-RL-SetupFailureFDD-ExtIEs} }
   . . .
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,
                                                ProtocolExtensionContainer { { RLSpecificCauseItem-RL-SetupFailureFDD-ExtIEs} }
    iE-Extensions
                                                                                                                                   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-Unsuccessful-RL-InformationRespItem-RL-SetupFailureFDD
                                                                                                        TYPE Unsuccessful-RL-InformationRespItem-
                                                                            CRITICALITY
                                                                                             ignore
RL-SetupFailureFDD
                        PRESENCE
                                    mandatory}
Unsuccessful-RL-InformationRespItem-RL-SetupFailureFDD ::= SEQUENCE {
   rI.-ID
    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-Successful-RL-InformationRespItem-RL-SetupFailureFDD
                                                                            CRITICALITY
                                                                                             ignore
                                                                                                        TYPE Successful-RL-InformationRespItem-RL-
SetupFailureFDD
                    PRESENCE
                                mandatory}
Successful-RL-InformationRespItem-RL-SetupFailureFDD ::= SEQUENCE {
    rL-ID
                                                RL-ID,
    rL-Set-ID
                                                RL-Set-ID,
    received-total-wide-band-power
                                                                        Received-total-wide-band-power-Value,
    diversityIndication
                                                DiversityIndication-RL-SetupFailureFDD,
    -- This IE represents both the Diversity Indication IE and the choice based on the diversity indication as described in
    -- the tabular message format in subclause 9.1.
    dSCH-InformationResponseList
                                                DSCH-InformationRespList-RL-SetupFailureFDD
                                                                                                 OPTIONAL,
    tFCI2-BearerInformationResponse
                                                TFCI2-BearerInformationResponse
                                                                                     OPTIONAL,
    sSDT-SupportIndicator
                                                SSDT-SupportIndicator,
    iE-Extensions
                                                ProtocolExtensionContainer { { Successful-RL-InformationRespItem-RL-SetupFailureFDD-ExtIEs} }
    OPTIONAL,
    . . .
```

```
Successful-RL-InformationRespItem-RL-SetupFailureFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
DiversityIndication-RL-SetupFailureFDD ::= CHOICE {
   combining
                                          Combining-RL-SetupFailureFDD,
   nonCombiningOrFirstRL
                                       NonCombiningOrFirstRL-RL-SetupFailureFDD
Combining-RL-SetupFailureFDD ::= SEQUENCE {
   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 ::= {
    PRESENCE mandatory }
     ****************
-- RADIO LINK SETUP FAILURE TDD
  ******************
RadioLinkSetupFailureTDD ::= SEOUENCE {
   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-CauseLevel-RL-SetupFailureTDD
                                                                        CRITICALITY
                                                                                                     TYPE CauseLevel-RL-SetupFailureTDD
                                                                                       ignore
   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 ::= SEOUENCE {
                              ProtocolExtensionContainer { { GeneralCauseItem-RL-SetupFailureTDD-ExtIEs} }
   iE-Extensions
                                                                                                           OPTIONAL,
GeneralCauseItem-RL-SetupFailureTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
RLSpecificCauseList-RL-SetupFailureTDD ::= SEQUENCE {
   unsuccessful-RL-InformationRespItem-RL-SetupFailureTDD Unsuccessful-RL-InformationRespItem-RL-SetupFailureTDD,
                                                         iE-Extensions
   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-Unsuccessful-RL-InformationResp-RL-SetupFailureTDD
                                                                    CRITICALITY ignore
                                                                                                  Unsuccessful-RL-InformationResp-RL-
SetupFailureTDD
                  PRESENCE
                              mandatory }
Unsuccessful-RL-InformationResp-RL-SetupFailureTDD ::= SEQUENCE {
                                             RL-ID,
   rL-ID
   cause
                                             Cause,
                                             ProtocolExtensionContainer { { Unsuccessful-RL-InformationResp-RL-SetupFailureTDD-ExtIEs} }
   iE-Extensions
   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-NodeB-CommunicationContextID
                                                                                         NodeB-CommunicationContextID
                                                       CRITICALITY reject
                                                                                 TYPE
                                                                                                                               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
              mandatory },
   PRESENCE
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-RL-InformationItem-RL-AdditionRqstFDD
                                                           CRITICALITY
                                                                                         TYPE RL-InformationItem-RL-AdditionRqstFDD
                                                                          notify
   PRESENCE
              mandatory}
RL-InformationItem-RL-AdditionRgstFDD ::= 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
                                            OPTIONAL,
RL-InformationItem-RL-AdditionRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
```

```
*******************
-- RADIO LINK ADDITION REQUEST TDD
__ *********************
RadioLinkAdditionRequestTDD ::= SEOUENCE {
   protocolIEs
                         ProtocolIE-Container
                                                 {{RadioLinkAdditionRequestTDD-IEs}},
                         ProtocolExtensionContainer {{RadioLinkAdditionRequestTDD-Extensions}}
   protocolExtensions
                                                                                                  OPTIONAL,
RadioLinkAdditionRequestTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-NodeB-CommunicationContextID
                                                                CRITICALITY
                                                                               reject
                                                                                            TYPE NodeB-CommunicationContextID
    PRESENCE mandatory } |
          id-UL-CCTrCH-InformationList-RL-AdditionRgstTDD
                                                                CRITICALITY
                                                                               reject
                                                                                            TYPE UL-CCTrCH-InformationList-RL-AdditionRgstTDD
           PRESENCE
                      optional
          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-UL-DPCH-InformationItem-RL-AdditionRqstTDD
                                                                CRITICALITY
                                                                               notify
                                                                                            TYPE UL-DPCH-InformationItem-RL-AdditionRgstTDD
           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-AdditionRgstTDD-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-AdditionRgstTDD
                                              ProtocolExtensionContainer { { DL-CCTrCH-InformationItem-RL-AdditionRqstTDD-ExtIEs} }
   iE-Extensions
                                                                                                                                   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-DL-DPCH-InformationItem-RL-AdditionRgstTDD
    { ID
                                                                 CRITICALITY
                                                                                 notify
                                                                                              TYPE DL-DPCH-InformationItem-RL-AdditionRgstTDD
           PRESENCE
                      mandatory }
DL-DPCH-InformationItem-RL-AdditionRgstTDD ::= SEQUENCE {
   repetitionPeriod
                                          RepetitionPeriod,
   repetitionLength
                                          RepetitionLength,
   tdd-DPCHOffset
                                          TDD-DPCHOffset,
   dL-Timeslot-Information
                                      DL-Timeslot-Information,
   iE-Extensions
                                              OPTIONAL,
DL-DPCH-InformationItem-RL-AdditionRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
RL-Information-RL-AdditionRgstTDD ::= SEOUENCE {
   rI.-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,
   -- This IE represents both the Diversity Indication IE and the choice based on the diversity indication as described in
   -- the tabular message format in subclause 9.1.
   sSDT-SupportIndicator
                                                 SSDT-SupportIndicator,
                                                 ProtocolExtensionContainer { { RL-InformationResponseItem-RL-AdditionRspFDD-ExtIEs} }
   iE-Extensions
   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,
                                                 ProtocolExtensionContainer { { CombiningItem-RL-AdditionRspFDD-ExtIEs} }
   iE-Extensions
CombiningItem-RL-AdditionRspFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
Non-Combining-RL-AdditionRspFDD ::= SEQUENCE {
   dCH-InformationResponse
                                             DCH-InformationResponse,
                                                ProtocolExtensionContainer { { Non-CombiningItem-RL-AdditionRspFDD-ExtIEs} }
   iE-Extensions
                                                                                                                             OPTIONAL,
Non-CombiningItem-RL-AdditionRspFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::=
       ****************
-- RADIO LINK ADDITION RESPONSE TDD
  *****************
RadioLinkAdditionResponseTDD ::= SEQUENCE {
   protocolIEs
                         ProtocolIE-Container
                                                {{RadioLinkAdditionResponseTDD-IEs}},
                         ProtocolExtensionContainer {{RadioLinkAdditionResponseTDD-Extensions}}
   protocolExtensions
                                                                                                 OPTIONAL,
RadioLinkAdditionResponseTDD-IES NBAP-PROTOCOL-IES ::= {
          id-CRNC-CommunicationContextID
                                                                                      TYPE CRNC-CommunicationContextID
   { ID
                                                            CRITICALITY ignore
              mandatory }|
   PRESENCE
         id-RL-InformationResponse-RL-AdditionRspTDD
                                                                                      TYPE RL-InformationResponse-RL-AdditionRspTDD
                                                            CRITICALITY ignore
   PRESENCE mandatory } |
          id-CriticalityDiagnostics
                                                           CRITICALITY ignore
                                                                                      TYPE CriticalityDiagnostics
                                                                                                                                  PRESENCE
   optional },
   . . .
RadioLinkAdditionResponseTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
```

```
RL-InformationResponse-RL-AdditionRspTDD ::= SEQUENCE {
                                                RL-ID.
    uL-TimeSlot-ISCP-Info
                                                UL-TimeSlot-ISCP-Info,
    ul-PhysCH-SF-Variation
                                                UL-PhysCH-SF-Variation,
    dCH-Information
                                                DCH-Information-RL-AdditionRspTDD
                                                                                                 OPTIONAL,
    dSCH-InformationResponseList
                                                DSCH-InformationResponseList-RL-AdditionRspTDD
                                                                                                   OPTIONAL,
    uSCH-InformationResponseList
                                                USCH-InformationResponseList-RL-AdditionRspTDD
                                                                                                   OPTIONAL,
    iE-Extensions
                                                ProtocolExtensionContainer { { RL-InformationResponse-RL-AdditionRspTDD-ExtIEs} }
                                                                                                                                       OPTIONAL,
RL-InformationResponse-RL-AdditionRspTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
DCH-Information-RL-AdditionRspTDD ::= SEQUENCE {
    diversityIndication
                                        DiversityIndication-RL-AdditionRspTDD,
    -- This IE represents both the Diversity Indication IE and the choice based on the diversity indication as described in
    -- the tabular message format in subclause 9.1.
    iE-Extensions
                                    ProtocolExtensionContainer { { DCH-Information-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
    . . .
DCH-Information-RL-AdditionRspTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
DiversityIndication-RL-AdditionRspTDD ::= CHOICE {
    combining
                                                Combining-RL-AdditionRspTDD,
    non-Combining
                                                Non-Combining-RL-AdditionRspTDD
Combining-RL-AdditionRspTDD ::= SEQUENCE {
    rL-ID
                                                RL-ID,
    iE-Extensions
                                                ProtocolExtensionContainer { { CombiningItem-RL-AdditionRspTDD-ExtIEs} } }
                                                                                                                              OPTIONAL,
CombiningItem-RL-AdditionRspTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
Non-Combining-RL-AdditionRspTDD ::= SEQUENCE {
    dCH-InformationResponse
                                            DCH-InformationResponse,
    iE-Extensions
                                                ProtocolExtensionContainer { { Non-CombiningItem-RL-AdditionRspTDD-ExtIEs} } }
                                                                                                                                    OPTIONAL.
    . . .
Non-CombiningItem-RL-AdditionRspTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
DSCH-InformationResponseList-RL-AdditionRspTDD ::= ProtocolIE-Single-Container {{ DSCH-InformationResponseListIEs-RL-AdditionRspTDD }}
```

```
DSCH-InformationResponseListIEs-RL-AdditionRspTDD NBAP-PROTOCOL-IES ::= {
   PRESENCE mandatory }
USCH-InformationResponseList-RL-AdditionRspTDD ::= ProtocolIE-Single-Container {{ USCH-InformationResponseListIEs-RL-AdditionRspTDD }}
USCH-InformationResponseListIEs-RL-AdditionRspTDD NBAP-PROTOCOL-IES ::= {
    PRESENCE mandatory }
  *****************
-- RADIO LINK ADDITION FAILURE FDD
RadioLinkAdditionFailureFDD ::= SEQUENCE {
   protocolIEs
                         ProtocolIE-Container
                                               {{RadioLinkAdditionFailureFDD-IEs}},
                         ProtocolExtensionContainer {{RadioLinkAdditionFailureFDD-Extensions}}
   protocolExtensions
                                                                                             OPTIONAL,
RadioLinkAdditionFailureFDD-IES NBAP-PROTOCOL-IES ::= {
          id-CRNC-CommunicationContextID
                                               CRITICALITY
                                                             ignore
                                                                        TYPE
                                                                               CRNC-CommunicationContextID
                                                                                                                PRESENCE mandatory
          id-CauseLevel-RL-AdditionFailureFDD
                                                             ignore
                                                                               CauseLevel-RL-AdditionFailureFDD
                                                                                                                PRESENCE mandatory
                                               CRITICALITY
                                                                        TYPE
          id-CriticalityDiagnostics
                                                                               CriticalityDiagnostics
                                                                                                                PRESENCE optional
    ID
                                               CRITICALITY
                                                             ignore
                                                                        TYPE
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-Unsuccessful-RL-InformationRespItem-RL-AdditionFailureFDD
                                                                            CRITICALITY
                                                                                           ignore
                                                                                                     TYPE Unsuccessful-RL-
InformationRespItem-RL-AdditionFailureFDD PRESENCE
Unsuccessful-RL-InformationRespItem-RL-AdditionFailureFDD ::= SEQUENCE {
   rL-ID
                                             RL-ID,
   cause
                                             Cause,
   iE-Extensions
                                             OPTIONAL,
Unsuccessful-RL-InformationRespItem-RL-AdditionFailureFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
Successful-RL-InformationRespList-RL-AdditionFailureFDD ::= SEOUENCE (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
                                                                                                  TYPE Successful-RL-InformationRespItem-RL-
                                                                                       ignore
AdditionFailureFDD
                      PRESENCE
                                  mandatory }
Successful-RL-InformationRespItem-RL-AdditionFailureFDD ::= SEQUENCE {
   rL-Set-ID
                                             RL-Set-ID,
   received-total-wide-band-power
                                             Received-total-wide-band-power-Value,
   diversityIndication
                                             DiversityIndication-RL-AdditionFailureFDD,
    -- This IE represents both the Diversity Indication IE and the choice based on the diversity indication as described in
    -- the tabular message format in subclause 9.1.
    sSDT-SupportIndicator
                                             SSDT-SupportIndicator,
                                             ProtocolExtensionContainer { { Successful-RL-InformationRespItem-RL-AdditionFailureFDD-ExtIEs} }
   iE-Extensions
   OPTIONAL,
Successful-RL-InformationRespItem-RL-AdditionFailureFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
DiversityIndication-RL-AdditionFailureFDD ::= CHOICE {
                                  Combining-RL-AdditionFailureFDD,
   combining
```

```
non-Combining
                                  Non-Combining-RL-AdditionFailureFDD
Combining-RL-AdditionFailureFDD ::= SEQUENCE {
                                             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
               mandatory } |
   PRESENCE
          id-CauseLevel-RL-AdditionFailureTDD
                                                     CRITICALITY
                                                                    ignore
                                                                               TYPE
                                                                                       CauseLevel-RL-AdditionFailureTDD
    PRESENCE
               mandatory }
         id-CriticalityDiagnostics
    { ID
                                                    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
   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 {
                                                {{RadioLinkReconfigurationPrepareFDD-IEs}},
   protocolIEs
                         ProtocolIE-Container
   protocolExtensions
                          ProtocolExtensionContainer {{RadioLinkReconfigurationPrepareFDD-Extensions}}
                                                                                                      OPTIONAL,
```

```
RadioLinkReconfigurationPrepareFDD-IEs NBAP-PROTOCOL-IES ::= {
           id-NodeB-CommunicationContextID
                                                            CRITICALITY
                                                                            reject.
                                                                                            TYPE NodeB-CommunicationContextID
                                                                                                                                         PRESENCE
    mandatory }
    { ID
           id-UL-DPCH-Information-RL-ReconfPrepFDD
                                                                            reject
                                                                                            TYPE UL-DPCH-Information-RL-ReconfPrepFDD
                                                                                                                                            PRESENCE
                                                            CRITICALITY
    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 }
                                                                                                                       PRESENCE optional }
      TD
           id-DCHs-to-Add-FDD
                                                CRITICALITY
                                                                reject
                                                                                        DCH-FDD-Information
           id-DCH-DeleteList-RL-ReconfPrepFDD
                                                                                            TYPE DCH-DeleteList-RL-ReconfPrepFDD
     TD
                                                            CRITICALITY
                                                                            reject
                                                                                                                                            PRESENCE
    optional } |
    { ID
           id-DSCH-ModifyList-RL-ReconfPrepFDD
                                                            CRITICALITY
                                                                            reject
                                                                                            TYPE DSCH-ModifyList-RL-ReconfPrepFDD
                                                                                                                                            PRESENCE
    optional
     ID
           id-DSCHs-to-Add-FDD
                                                                                     DSCH-FDD-Information
                                            CRITICALITY
                                                            reject
                                                                            TYPE
                                                                                                                       PRESENCE optional }
           id-DSCH-DeleteList-RL-ReconfPrepFDD
                                                            CRITICALITY
                                                                            reject
                                                                                            TYPE DSCH-DeleteList-RL-ReconfPrepFDD
                                                                                                                                            PRESENCE
    optional
    { ID
           id-TFCI2-BearerSpecificInformation-RL-ReconfPrepFDD
                                                                                                 TYPE TFCI2-BearerSpecificInformation-RL-
                                                                    CRITICALITY
                                                                                     reject
ReconfPrepFDD
    PRESENCE optional }
           id-RL-InformationList-RL-ReconfPrepFDD
                                                            CRITTCALITY
                                                                            reject
                                                                                            TYPE RL-InformationList-RL-ReconfPrepFDD
                                                                                                                                            PRESENCE
    { 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
                                                                                         OPTIONAL,
                                                    UL-SIR
                                                                                         OPTIONAL,
    minUL-ChannelisationCodeLength
                                                    MinUL-ChannelisationCodeLength
    maxNrOfUL-DPDCHs
                                                    MaxNrOfUL-DPDCHs
                                                                                         OPTIONAL,
    -- This IE shall be present if minUL-ChannelisationCodeLength IE is set to 4
    ul-PunctureLimit
                                                    PunctureLimit
                                                                                         OPTIONAL,
    t.FCS
                                                    TFCS
                                                                OPTIONAL,
    ul-DPCCH-SlotFormat
                                                    UL-DPCCH-SlotFormat
                                                                                         OPTIONAL,
    diversityMode
                                                    DiversityMode
                                                                                         OPTIONAL,
    sSDT-CellIDLength
                                                    SSDT-CellID-Length
                                                                                         OPTIONAL,
                                                                                         OPTIONAL,
    s-FieldLength
                                                    S-FieldLength
    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
                                                                                         OPTIONAL,
    dl-DPCH-SlotFormat
                                                    DL-DPCH-SlotFormat
                                                                                         OPTIONAL,
```

```
tFCI-SignallingMode
                                                TFCI-SignallingMode
                                                                                  OPTIONAL,
   t.FCI-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,
                                                ProtocolExtensionContainer { { DL-DPCH-Information-RL-ReconfPrepFDD-ExtIEs} }
   iE-Extensions
                                                                                                                             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
                                                . . .
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
                                                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 {
   add0rModify
                         AddOrModify-TFCI2-RL-ReconfPrepFDD,
   delete
AddOrModify-TFCI2-RL-ReconfPrepFDD ::= SEQUENCE {
   toAWS
                                     ToAWS,
   toAWE
                                     TOAWE,
                                     ProtocolExtensionContainer { { AddOrModify-TFCI2-RL-ReconfPrepFDD-ExtIEs} }
   iE-Extensions
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 ::= SEOUENCE {
   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
                                                                                                                            OPTIONAL,
RL-InformationItem-RL-ReconfPrepFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
```

```
-- RADIO LINK RECONFIGURATION PREPARE TDD
  *****************
RadioLinkReconfigurationPrepareTDD ::= SEOUENCE {
   protocolIEs
                         ProtocolIE-Container
                                                 {{RadioLinkReconfigurationPrepareTDD-IEs}},
                          ProtocolExtensionContainer {{RadioLinkReconfigurationPrepareTDD-Extensions}}
   protocolExtensions
                                                                                                       OPTIONAL,
RadioLinkReconfigurationPrepareTDD-IEs NBAP-PROTOCOL-IES ::= {
          id-NodeB-CommunicationContextID
                                                                CRITICALITY
                                                                               reject
                                                                                          TYPE NodeB-CommunicationContextID
   PRESENCE mandatory }
   { ID id-UL-CCTrCH-InformationAddList-RL-ReconfPrepTDD
                                                                    CRITICALITY
                                                                                   reject
                                                                                            TYPE UL-CCTrCH-InformationAddList-RL-
                                 optional
ReconfPrepTDD
                      PRESENCE
    { ID id-UL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD
                                                                    CRITICALITY
                                                                                   reject
                                                                                            TYPE UL-CCTrCH-InformationModifyList-RL-
                                 optional
ReconfPrepTDD
                     PRESENCE
   { ID id-UL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD
                                                                                            TYPE UL-CCTrCH-InformationDeleteList-RL-
                                                                    CRITICALITY
                                                                                   reject
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
                                                                                            TYPE DL-CCTrCH-InformationModifyList-RL-
                                                                                   reject
ReconfPrepTDD
                     PRESENCE
                                 optional
   { ID id-DL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD
                                                                    CRITICALITY
                                                                                   reject
                                                                                            TYPE DL-CCTrCH-InformationDeleteList-RL-
ReconfPrepTDD PRESENCE
                                 optional
          id-TDD-DCHs-to-Modify
                                                                    reject
                                                                                      TDD-DCHs-to-Modify
                                                                                                                        PRESENCE optional
                                                    CRITICALITY
                                                                               TYPE
     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
                                                                                          TYPE DSCH-Information-ModifyList-RL-ReconfPrepTDD
                                                                CRITICALITY
                                                                               reject
   PRESENCE
              optional } |
          id-DSCHs-to-Add-TDD
                                     CRITICALITY
                                                                       DSCH-TDD-Information
    { ID
                                                                                                 PRESENCE
                                                                                                            optional } |
                                                                TYPE
    { ID
          id-DSCH-Information-DeleteList-RL-ReconfPrepTDD
                                                                CRITICALITY
                                                                               reiect
                                                                                          TYPE DSCH-Information-DeleteList-RL-ReconfPrepTDD
   PRESENCE
              optional
          id-USCH-Information-ModifyList-RL-ReconfPrepTDD
                                                                CRITICALITY
                                                                               reiect
                                                                                          TYPE USCH-Information-ModifyList-RL-ReconfPrepTDD
              optional
   PRESENCE
          id-USCH-Information-Add
                                                                           USCH-Information
    ID
                                         CRITICALITY
                                                        reject
                                                                   TYPE
                                                                                                 PRESENCE
                                                                                                            optional }
          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 ::= {
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 ::= {
    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,
                                              ProtocolExtensionContainer { { UL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD-ExtIEs} }
   iE-Extensions
   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 ::= {
   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,
                                          ProtocolExtensionContainer { { UL-DPCH-InformationModify-AddItem-RL-ReconfPrepTDD-ExtIEs} }
   iE-Extensions
   OPTIONAL,
   . . .
UL-DPCH-InformationModify-AddItem-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
UL-DPCH-InformationModifyList-RL-ReconfPrepTDD ::= ProtocolIE-Single-Container {{ UL-DPCH-InformationModifyListIEs-RL-ReconfPrepTDD
}}
UL-DPCH-InformationModify-ModifyListIEs-RL-ReconfPrepTDD NBAP-PROTOCOL-IES ::= {
   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
   iE-Extensions
                                      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,
    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 ::= SEOUENCE (SIZE (1..maxNrOfDPCHs)) OF UL-DPCH-InformationModify-DeleteItem-RL-
ReconfPrepTDD
UL-DPCH-InformationModify-DeleteItem-RL-ReconfPrepTDD ::= SEQUENCE {
    dPCH-ID
                                                DPCH-ID,
                                                ProtocolExtensionContainer { { UL-DPCH-InformationModify-DeleteItem-RL-ReconfPrepTDD-ExtIEs} }
   iE-Extensions
   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 ::= SEOUENCE {
    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.
   t.FCS
                                                TFCS,
   tFCI-Coding
                                                TFCI-Coding
   punctureLimit
                                                PunctureLimit,
   cCTrCH-TPCList
                                                CCTrCH-TPCAddList-RL-ReconfPrepTDD
                                                                                          OPTIONAL,
                                                DL-DPCH-InformationAddList-RL-ReconfPrepTDD OPTIONAL,
   dl-DPCH-InformationList
   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
                                                                                                                   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 ::= {
   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,
                                            ProtocolExtensionContainer { { DL-DPCH-InformationAddItem-RL-ReconfPrepTDD-ExtIEs} }
   iE-Extensions
                                                                                                                              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,
   t.FCS
                                             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-InformationModify-DeleteList-RL-ReconfPrepTDD OPTIONAL,
   dl-DPCH-InformationDeleteList
   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
                                    ::= SEOUENCE {
   cCTrCH-ID
                                      CCTrCH-ID,
                                      iE-Extensions
                                                                                                                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 ::= {
   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
   OPTIONAL,
DL-DPCH-InformationModify-AddItem-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
DL-DPCH-InformationModifyList-RL-ReconfPrepTDD ::= ProtocolIE-Single-Container {{ DL-DPCH-InformationModifyListIEs-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,
                                                ProtocolExtensionContainer { { DL-DPCH-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs} }
    iE-Extensions
   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,
    midambleShiftAndBurstTvpe
                                            MidambleShiftAndBurstType
                                                                                 OPTIONAL,
    tFCI-Presence
                                            TFCI-Presence
                                                                    OPTIONAL,
    dL-Code-InformationModify-ModifyList-RL-ReconfPrepTDD
                                                                         DL-Code-InformationModify-ModifyList-RL-ReconfPrepTDD
                                                                                                                                       OPTIONAL.
                                            ProtocolExtensionContainer { | DL-Timeslot-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs} }
    iE-Extensions
   OPTIONAL,
    . . .
DL-Timeslot-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
DL-Code-InformationModify-ModifyList-RL-ReconfPrepTDD ::= SEOUENCE (SIZE (0..maxNrOfDPCHs)) OF DL-Code-InformationModify-ModifyItem-RL-
ReconfPrepTDD
DL-Code-InformationModify-ModifyItem-RL-ReconfPrepTDD
                                                         ::= SEOUENCE
    dPCH-ID
                                            DPCH-ID,
    tdd-ChannelisationCode
                                            TDD-ChannelisationCode
                                            ProtocolExtensionContainer { { DL-Code-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs} }
    iE-Extensions
    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 ::= SEOUENCE {
                                              DPCH-ID.
                                              ProtocolExtensionContainer { { DL-DPCH-InformationModify-DeleteItem-RL-ReconfPrepTDD-ExtIEs} }
   iE-Extensions
   OPTIONAL,
    . . .
DL-DPCH-InformationModify-DeleteItem-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
DL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD ::= SEOUENCE (SIZE (1..maxNrOfCCTrCHs)) OF DL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD
DL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD ::= SEQUENCE {
   cCTrCH-ID
                                                  ProtocolExtensionContainer { { DL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD-ExtIEs} }
   iE-Extensions
   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
                                              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
                                                                     OPTIONAL,
    toAWE
    transportBearerRequestIndicator
                                              TransportBearerRequestIndicator,
```

```
ProtocolExtensionContainer { { DSCH-Information-ModifyItem-RL-ReconfPrepTDD-ExtIEs} }
   iE-Extensions
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
                                         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
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,
                                         ProtocolExtensionContainer { { USCH-Information-DeleteItem-RL-ReconfPrepTDD-ExtIEs} }
   iE-Extensions
                                                                                                                      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
                                                           OPTIONAL,
                                         DL-Power
   iE-Extensions
                                         OPTIONAL,
```

```
RL-Information-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
       ID id-InitDL-Power
                             CRITICALITY ignore
                                                                          PRESENCE optional },
-- RADIO LINK RECONFIGURATION READY
__ *********************
RadioLinkReconfigurationReady ::= SEQUENCE {
   protocolIEs
                         ProtocolIE-Container
                                                {{RadioLinkReconfigurationReady-IEs}},
                         ProtocolExtensionContainer {{RadioLinkReconfigurationReady-Extensions}}
   protocolExtensions
RadioLinkReconfigurationReady-IEs NBAP-PROTOCOL-IES ::= {
          id-CRNC-CommunicationContextID
                                                           CRITICALITY
                                                                                     TYPE CRNC-CommunicationContextID
                                                                           ignore
              mandatory } |
   PRESENCE
         id-RL-InformationResponseList-RL-ReconfReady
                                                           CRITICALITY
                                                                          ignore
                                                                                     TYPE RL-InformationResponseList-RL-ReconfReady
   PRESENCE optional
                         } |
          id-CriticalityDiagnostics
                                                           CRITICALITY
                                                                                     TYPE CriticalityDiagnostics
   { ID
                                                                          ignore
                                                                                                                                  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-RL-InformationResponseItem-RL-ReconfReady
                                                               CRITICALITY
                                                                              ignore
                                                                                           TYPE RL-InformationResponseItem-RL-ReconfReady
   PRESENCE
              mandatory}
RL-InformationResponseItem-RL-ReconfReady ::= SEQUENCE {
   dCH-InformationResponseList-RL-ReconfReady
                                                DCH-InformationResponseList-RL-ReconfReady OPTIONAL,
   dSCH-InformationResponseList-RL-ReconfReady
                                                DSCH-InformationResponseList-RL-ReconfReady OPTIONAL,
   uSCH-InformationResponseList-RL-ReconfReady
                                                USCH-InformationResponseList-RL-ReconfReady OPTIONAL,
   tFCI2-BearerInformationResponse
                                                TFCI2-BearerInformationResponse
                                                                                  OPTIONAL,
   iE-Extensions
                                                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 ::= {
   TYPE DCH-InformationResponse
                                                                              PRESENCE mandatory }
DSCH-InformationResponseList-RL-ReconfReady: = ProtocolIE-Single-Container {{ DSCH-InformationResponseListIEs-RL-ReconfReady }}
DSCH-InformationResponseListIEs-RL-ReconfReady NBAP-PROTOCOL-IES ::= {
   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 ::= SEOUENCE {
                                            {{RadioLinkReconfigurationFailure-IEs}},
   protocolIEs
                       ProtocolIE-Container
                       ProtocolExtensionContainer {{RadioLinkReconfigurationFailure-Extensions}}
   protocolExtensions
                                                                                           OPTIONAL,
RadioLinkReconfigurationFailure-IES NBAP-PROTOCOL-IES ::= {
   { ID
         id-CRNC-CommunicationContextID
                                                       CRITICALITY
                                                                     ignore
                                                                               TYPE CRNC-CommunicationContextID
   PRESENCE
             mandatory }
         id-CauseLevel-RL-ReconfFailure CRITICALITY
                                                   ignore
                                                              TYPE
                                                                     CauseLevel-RL-ReconfFailure
                                                                                                PRESENCE mandatory }
         id-CriticalityDiagnostics
    ID
                                                      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,
```

```
ProtocolExtensionContainer { { GeneralCauseItem-RL-ReconfFailure-ExtIEs} }
   iE-Extensions
                                                                                                               OPTIONAL,
GeneralCauseItem-RL-ReconfFailure-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
RLSpecificCauseList-RL-ReconfFailure ::= SEQUENCE {
   rL-ReconfigurationFailureList-RL-ReconfFailure
                                               RL-ReconfigurationFailureList-RL-ReconfFailure
                                                                                          OPTIONAL,
   iE-Extensions
                                               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-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
                                        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-NodeB-CommunicationContextID
    ID
                                                                           NodeB-CommunicationContextID
                                            CRITICALITY
                                                                    TYPE
                                                                                                       PRESENCE mandatory
                                                          ignore
    ID
          id-CFN
                                            CRITICALITY
                                                          ignore
                                                                    TYPE
                                                                                                  PRESENCE mandatory
```

```
id-Active-Pattern-Sequence-Information CRITICALITY
                                                                                Active-Pattern-Sequence-Information PRESENCE optional },
   { ID
                                                              ignore
RadioLinkReconfigurationCommit-Extensions NBAP-PROTOCOL-EXTENSION ::= {
        -- RADIO LINK RECONFIGURATION CANCEL
__ *********************
RadioLinkReconfigurationCancel ::= SEQUENCE
   protocolIEs
                         ProtocolIE-Container
                                               {{RadioLinkReconfigurationCancel-IEs}},
                         ProtocolExtensionContainer {{RadioLinkReconfigurationCancel-Extensions}}
   protocolExtensions
                                                                                                 OPTIONAL,
RadioLinkReconfigurationCancel-IEs NBAP-PROTOCOL-IES ::= {
          id-NodeB-CommunicationContextID
                                                                                NodeB-CommunicationContextID
                                                                                                                 PRESENCE mandatory
                                               CRITICALITY
                                                              ignore
                                                                        TYPE
RadioLinkReconfigurationCancel-Extensions NBAP-PROTOCOL-EXTENSION ::= {
      -- RADIO LINK RECONFIGURATION REQUEST FDD
__ *********************
RadioLinkReconfigurationRequestFDD ::= SEQUENCE {
   protocolIEs
                        ProtocolIE-Container
                                               {{RadioLinkReconfigurationRequestFDD-IEs}},
                         ProtocolExtensionContainer {{RadioLinkReconfigurationRequestFDD-Extensions}}
   protocolExtensions
                                                                                                   OPTIONAL,
RadioLinkReconfigurationRequestFDD-IES NBAP-PROTOCOL-IES ::= {
          id-NodeB-CommunicationContextID
                                                      CRITICALITY
                                                                                TYPE
                                                                                       NodeB-CommunicationContextID
                                                                                                                         PRESENCE
                                                                     reject
   mandatory } |
          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
                                                                     TYPE
                                                                            FDD-DCHs-to-Modify
                                                                                                      PRESENCE optional }
                                                          reject
     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-RL-InformationList-RL-ReconfRqstFDD
                                                      CRITICALITY
                                                                                       RL-InformationList-RL-ReconfRqstFDD
   { ID
                                                                     reject
                                                                                TYPE
                                                                                                                              PRESENCE
   optional
```

```
{ ID id-Transmission-Gap-Pattern-Sequence-Information CRITICALITY
                                                                                  Transmission-Gap-Pattern-Sequence-Information
                                                                 reject
PRESENCE optional },
   . . .
RadioLinkReconfigurationRequestFDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
UL-DPCH-Information-RL-ReconfRqstFDD ::= SEQUENCE {
   ul-TFCS
                                                          OPTIONAL,
   iE-Extensions
                                            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
                                            OPTIONAL,
DL-DPCH-Information-RL-ReconfRqstFDD-ExtlEs NBAP-PROTOCOL-EXTENSION ::= {
DCH-DeleteList-RL-ReconfRqstFDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-DeleteItem-RL-ReconfRqstFDD
DCH-DeleteItem-RL-ReconfRgstFDD ::= SEOUENCE {
   dCH-ID
   iE-Extensions
                                            OPTIONAL.
DCH-DeleteItem-RL-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
RL-InformationList-RL-ReconfRgstFDD ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container {{ RL-InformationItemIE-RL-ReconfRgstFDD}}
RL-InformationItemIE-RL-ReconfRqstFDD NBAP-PROTOCOL-IES ::= {
          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
                                                            OPTIONAL.
                                             DL-Power
   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".
                                             ProtocolExtensionContainer { { RL-InformationItem-RL-ReconfRqstFDD-ExtIEs} }
    iE-Extensions
                                                                                                                            OPTIONAL.
    . . .
RL-InformationItem-RL-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
   -- RADIO LINK RECONFIGURATION REQUEST TDD
  ****************
RadioLinkReconfigurationRequestTDD ::= SEQUENCE {
   protocolIEs
                          ProtocolIE-Container
                                                 {{RadioLinkReconfigurationRequestTDD-IEs}},
                          ProtocolExtensionContainer {{RadioLinkReconfigurationRequestTDD-Extensions}}
   protocolExtensions
                                                                                                        OPTIONAL.
RadioLinkReconfigurationRequestTDD-IEs NBAP-PROTOCOL-IES ::= {
           id-NodeB-CommunicationContextID
                                                                                             TYPE NodeB-CommunicationContextID
                                                                CRITICALITY
                                                                                reject
    PRESENCE
               mandatory } |
          id-UL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD
    { ID
                                                                    CRITICALITY
                                                                                    notify
                                                                                                TYPE UL-CCTrCH-InformationModifyList-RL-
ReconfRqstTDD
                   PRESENCE
                              optional
    { ID
          id-UL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD
                                                                    CRITICALITY
                                                                                    notify
                                                                                                    UL-CCTrCH-InformationDeleteList-RL-
                              optional
ReconfRqstTDD
                  PRESENCE
    { ID
          id-DL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD
                                                                    CRITICALITY
                                                                                   notify
                                                                                                TYPE DL-CCTrCH-InformationModifyList-RL-
                  PRESENCE
                              optional
ReconfRqstTDD
    { ID id-DL-CCTrCH-InformationDeleteList-RL-ReconfRgstTDD
                                                                    CRITICALITY
                                                                                    notify
                                                                                                TYPE DL-CCTrCH-InformationDeleteList-RL-
ReconfRastTDD
                  PRESENCE
                              optional
    { ID
         id-TDD-DCHs-to-Modify
                                                     CRITICALITY
                                                                    reject
                                                                                    TYPE
                                                                                           TDD-DCHs-to-Modify
                                                                                                                         PRESENCE optional }
       { ID
             id-DCHs-to-Add-TDD
                                                                                       TYPE DCH-TDD-Information
                                                         CRITICALITY
                                                                        reject
                                                                                                                            PRESENCE
    optional
          id-DCH-DeleteList-RL-ReconfRqstTDD
    { ID
                                                                CRITICALITY
                                                                                reject
                                                                                             TYPE DCH-DeleteList-RL-ReconfRqstTDD
    PRESENCE
               optional
                        } |
          id-RL-Information-RL-ReconfRqstTDD
    { ID
                                                            CRITICALITY
                                                                                           TYPE RL-Information-RL-ReconfRqstTDD
                                                                            ignore
    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-UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD
                                                                        CRITICALITY
                                                                                        notify
                                                                                                     TYPE UL-CCTrCH-InformationModifyItem-RL-
ReconfRastTDD
                    PRESENCE
                                mandatory}
UL-CCTrCH-InformationModifyItem-RL-ReconfRgstTDD ::= SEQUENCE {
    cCTrCH-ID
                                                    CCTrCH-ID,
    tFCS
                                                    TFCS
                                                                    OPTIONAL,
    punctureLimit
                                                    PunctureLimit
                                                                    OPTIONAL,
                                                    ProtocolExtensionContainer { { UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD-ExtIEs} }
    iE-Extensions
   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-ReconfRgstTDD}}
UL-CCTrCH-InformationDeleteItemIE-RL-ReconfRqstTDD NBAP-PROTOCOL-IES ::= {
          id-UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD
                                                                        CRITICALITY
                                                                                        notify
                                                                                                     TYPE UL-CCTrCH-InformationDeleteItem-RL-
ReconfRastTDD
                    PRESENCE
                                mandatory}
UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD ::= SEQUENCE {
    cCTrCH-ID
                                                    CCTrCH-ID,
                                                    ProtocolExtensionContainer { { UL-CCTrCH-InformationDeleteItem-RL-ReconfRgstTDD-ExtIEs} }
    iE-Extensions
    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-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,
                                                    ProtocolExtensionContainer { { DL-CCTrCH-InformationModifyItem-RL-ReconfRgstTDD-ExtIEs} }
    iE-Extensions
    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-ReconfRgstTDD}}
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-ReconfRgstTDD-ExtIEs} }
   OPTIONAL,
   . . .
DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
DCH-DeleteList-RL-ReconfRastTDD ::= SEOUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-DeleteItem-RL-ReconfRastTDD
DCH-DeleteItem-RL-ReconfRqstTDD ::= SEQUENCE {
   dCH-ID
   iE-Extensions
                                          OPTIONAL,
RL-Information-RL-ReconfRqstTDD ::= SEQUENCE {
                                       RL-ID,
   maxDL-Power
                                       DL-Power
                                                    OPTIONAL,
   minDL-Power
                                       DL-Power
                                                    OPTIONAL,
   iE-Extensions
                                       OPTIONAL,
RL-InformationItem-RL-ReconfRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ******************
-- RADIO LINK RECONFIGURATION RESPONSE
__ ********************************
RadioLinkReconfigurationResponse ::= SEQUENCE {
```

```
{{RadioLinkReconfigurationResponse-IEs}},
   protocolIEs
                         ProtocolIE-Container
   protocolExtensions
                         ProtocolExtensionContainer {{RadioLinkReconfigurationResponse-Extensions}}
                                                                                                 OPTIONAL.
RadioLinkReconfigurationResponse-IEs NBAP-PROTOCOL-IES ::= {
          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
                                                                             TYPE
   { ID
          id-CriticalityDiagnostics
                                                       CRITICALITY ignore
                                                                                    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-RL-InformationResponseItem-RL-ReconfRsp
                                                          CRITICALITY
                                                                         ignore
                                                                                        TYPE RL-InformationResponseItem-RL-ReconfRsp
   PRESENCE
              mandatory}
RL-InformationResponseItem-RL-ReconfRsp ::= SEOUENCE {
   dCH-InformationResponseList-RL-ReconfRsp
                                               DCH-InformationResponseList-RL-ReconfRsp
   iE-Extensions
                                            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 ::= {
    TYPE DCH-InformationResponse
                                                                                    PRESENCE mandatory }
-- RADIO LINK DELETION REQUEST
__ *********************************
RadioLinkDeletionRequest ::= SEQUENCE {
   protocolIEs
                         ProtocolIE-Container
                                               {{RadioLinkDeletionRequest-IEs}},
```

```
ProtocolExtensionContainer {{RadioLinkDeletionRequest-Extensions}} OPTIONAL,
   protocolExtensions
RadioLinkDeletionRequest-IEs NBAP-PROTOCOL-IES ::= {
         id-NodeB-CommunicationContextID
                                                                              TYPE NodeB-CommunicationContextID
                                                   CRITICALITY
                                                                 reject
                                                                                                                    PRESENCE
   mandatory
         id-CRNC-CommunicationContextID
                                                   CRITICALITY
                                                                 reject
                                                                                  TYPE CRNC-CommunicationContextID
                                                                                                                       PRESENCE
   mandatory } |
   { ID
         id-RL-informationList-RL-DeletionRgst
                                                   CRITICALITY
                                                                 notify
                                                                              TYPE RL-informationList-RL-DeletionRqst
                                                                                                                       PRESENCE
   mandatory
   . . .
RadioLinkDeletionRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {
RL-informationList-RL-DeletionRgst ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container {{RL-informationItemIE-RL-DeletionRgst}}
RL-informationItemIE-RL-DeletionRgst NBAP-PROTOCOL-IES ::= {
         id-RL-informationItem-RL-DeletionRqst
                                                   CRITICALITY
                                                                              TYPE RL-informationItem-RL-DeletionRqst
                                                                 notify
   PRESENCE
             mandatory}
RL-informationItem-RL-DeletionRqst ::= SEQUENCE
   rL-ID
   iE-Extensions
                                         OPTIONAL,
*****************
-- RADIO LINK DELETION RESPONSE
  RadioLinkDeletionResponse ::= SEQUENCE {
                                            {{RadioLinkDeletionResponse-IEs}},
   protocolIEs
                       ProtocolIE-Container
                       ProtocolExtensionContainer {{RadioLinkDeletionResponse-Extensions}}
   protocolExtensions
                                                                                      OPTIONAL,
RadioLinkDeletionResponse-IEs NBAP-PROTOCOL-IES ::= {
         id-CRNC-CommunicationContextID
                                                                        TYPE
                                                                              CRNC-CommunicationContextID
                                                                                                               PRESENCE
                                            CRITICALITY
                                                          ignore
   mandatory } |
                                                                              CriticalityDiagnostics
   { ID
         id-CriticalityDiagnostics
                                            CRITICALITY
                                                          ignore
                                                                       TYPE
                                                                                                             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
                                                                                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-Rast
                                              CRITICALITY ignore TYPE DL-ReferencePowerInformationList-DL-PC-Rgst 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'
                                                                                        PRESENCE conditional },
   { ID id-AdjustmentRatio
                                  CRITICALITY ignore TYPE ScaledAdjustmentRatio
    -- 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-Rgst ::= SEOUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container {{DL-
ReferencePowerInformationItemIE-DL-PC-Rgst }}
DL-ReferencePowerInformationItemIE-DL-PC-Rgst NBAP-PROTOCOL-IES ::= {
    { ID id-DL-ReferencePowerInformationItem-DL-PC-Rqst
                                                         CRITICALITY
                                                                                            DL-ReferencePowerInformationItem-DL-PC-Rqst
                                                                          ignore
   PRESENCE
               mandatory
DL-ReferencePowerInformationItem-DL-PC-Rqst ::= SEQUENCE {
                                          RL-ID,
   dl-ReferencePower
                                          DL-Power,
                                          ProtocolExtensionContainer { { DL-ReferencePowerInformationItem-DL-PC-Rqst-ExtIEs } }
   iE-Extensions
                                                                                                                                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}},
                        ProtocolExtensionContainer {{DL-PowerTimeslotControlRequest-Extensions}}
   protocolExtensions
                                                                                               OPTIONAL.
DL-PowerTimeslotControlRequest-IEs NBAP-PROTOCOL-IES ::= {
     ID id-NodeB-CommunicationContextID
                                              CRITICALITY ignore
                                                                              NodeB-CommunicationContextID
                                                                       TYPE
                                                                                                                 PRESENCE mandatory
     ID id-TimeslotISCPInfo
                                                                DL-TimeslotISCPInfo
                                                                                     PRESENCE mandatory },
                               CRITICALITY ignore
                                                         TYPE
DL-PowerTimeslotControlRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    -- DEDICATED MEASUREMENT INITIATION REQUEST
  *****************
DedicatedMeasurementInitiationRequest ::= SEQUENCE {
                                              {{DedicatedMeasurementInitiationRequest-IEs}},
   protocolIEs
                        ProtocolIE-Container
   protocolExtensions
                        ProtocolExtensionContainer {{DedicatedMeasurementInitiationRequest-Extensions}}
                                                                                                    OPTIONAL,
DedicatedMeasurementInitiationRequest-IES NBAP-PROTOCOL-IES ::= {
         id-NodeB-CommunicationContextID
                                                     CRITICALITY
                                                                   reject
                                                                              TYPE
                                                                                     NodeB-CommunicationContextID
                                                                                                                       PRESENCE
   mandatory } |
   { ID
          id-MeasurementID
                                                     CRITICALITY
                                                                              TYPE
                                                                                     MeasurementID
                                                                                                                    PRESENCE
                                                                   reject
   mandatory } |
   { ID
          id-DedicatedMeasurementObjectType-DM-Rqst
                                                     CRITICALITY
                                                                   reject
                                                                              TYPE
                                                                                     DedicatedMeasurementObjectType-DM-Rqst
                                                                                                                            PRESENCE
   mandatory }
   -- This IE represents both the Dedicated Measurement Object Type IE and the choice based on the Dedicated Measurement Object Type
   -- as described in the tabular message format in subclause 9.1.
          id-DedicatedMeasurementType
   { ID
                                                     CRITICALITY
                                                                   reject
                                                                              TYPE
                                                                                     DedicatedMeasurementType
                                                                                                                       PRESENCE
   mandatory } |
         id-MeasurementFilterCoefficient
                                                     CRITICALITY
                                                                   reject
                                                                              TYPE
                                                                                     MeasurementFilterCoefficient
                                                                                                                         PRESENCE
   optional } |
```

PRESENCE

PRESENCE

PRESENCE

```
id-ReportCharacteristics
                                                                                      ReportCharacteristics
   { ID
                                                      CRITICALITY
                                                                    reject
                                                                               TYPE
   mandatory } |
   { ID
          id-CFNReportingIndicator
                                                      CRITICALITY
                                                                    reject.
                                                                               TYPE
                                                                                      FNReportingIndicator
   mandatory } |
   { ID
          id-CFN
                                                      CRITICALITY
                                                                    reject
                                                                               TYPE
          } ,
optional
DedicatedMeasurementInitiationRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {
DedicatedMeasurementObjectType-DM-Rqst ::= CHOICE {
                            RL-DM-Rast,
   rLS
                            RL-Set-DM-Rgst,
   all-RL
                            AllRL-DM-Rgst,
   all-RLS
                            AllRL-Set-DM-Rgst,
   . . .
RL-DM-Rqst ::= SEQUENCE {
   rL-InformationList
                                   RL-InformationList-DM-Rqst,
                                   iE-Extensions
                                                                                          OPTIONAL,
RLItem-DM-Rgst-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 ::= {
   PRESENCE mandatory }
RL-InformationItem-DM-Rgst ::= SEOUENCE {
       rL-ID
                                   RL-ID,
       dPCH-ID
                                    DPCH-ID
                                   ProtocolExtensionContainer { { RL-InformationItem-DM-Rqst-ExtIEs } }
       iE-Extensions
                                                                                                     OPTIONAL,
RL-InformationItem-DM-Rgst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
RL-Set-DM-Rqst ::= SEQUENCE {
   rL-Set-InformationList-DM-Rgst
                                       RL-Set-InformationList-DM-Rgst,
                                       ProtocolExtensionContainer { { RL-SetItem-DM-Rqst-ExtIEs } }
   iE-Extensions
                                                                                                  OPTIONAL,
   . . .
```

```
RL-SetItem-DM-Rqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
RL-Set-InformationList-DM-Rgst
                                          ::= SEQUENCE (SIZE(1..maxNrOfRLSets)) OF RL-Set-InformationItem-DM-Rqst
RL-Set-InformationItem-DM-Rqst ::= SEQUENCE {
   rL-Set-ID
   iE-Extensions
                                 ProtocolExtensionContainer { { RL-Set-InformationItem-DM-Rqst-ExtIEs} } OPTIONAL,
RL-Set-InformationItem-DM-Rqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
AllRL-DM-Rgst ::= NULL
AllRL-Set-DM-Rgst ::= NULL
__ ********************
-- DEDICATED MEASUREMENT INITIATION RESPONSE
  *****************
DedicatedMeasurementInitiationResponse ::= SEQUENCE {
                                               {{DedicatedMeasurementInitiationResponse-IEs}},
                         ProtocolIE-Container
   protocolIEs
   protocolExtensions
                          ProtocolExtensionContainer {{DedicatedMeasurementInitiationResponse-Extensions}} OPTIONAL,
   . . .
DedicatedMeasurementInitiationResponse-IES NBAP-PROTOCOL-IES ::= {
        id-CRNC-CommunicationContextID
                                                        CRITICALITY
                                                                       ignore
                                                                                  TYPE
                                                                                          CRNC-CommunicationContextID
                                                                                                                               PRESENCE
   mandatory } |
   { ID id-MeasurementID
                                                        CRITICALITY
                                                                       ignore
                                                                                  TYPE
                                                                                         MeasurementID
                                                                                                                          PRESENCE
   mandatory } |
          id-DedicatedMeasurementObjectType-DM-Rsp
                                                                                          DedicatedMeasurementObjectType-DM-Rsp
   { ID
                                                        CRITICALITY
                                                                       ignore
                                                                                  TYPE
                                                                                                                               PRESENCE
   optional } |
         id-CriticalityDiagnostics
                                                                                         CriticalityDiagnostics
   { ID
                                                        CRITICALITY
                                                                       ignore
                                                                                  TYPE
                                                                                                                             PRESENCE
   optional },
   . . .
DedicatedMeasurementInitiationResponse-Extensions NBAP-PROTOCOL-EXTENSION ::= {
DedicatedMeasurementObjectType-DM-Rsp ::= CHOICE {
   rL
                             RL-DM-Rsp,
   rLS
                             RL-Set-DM-Rsp,
   all-RL
                             RL-DM-Rsp,
   all-RLS
                             RL-Set-DM-Rsp,
```

```
. . .
RL-DM-Rsp ::= SEQUENCE {
   rL-InformationList-DM-Rsp
                                    RL-InformationList-DM-Rsp,
                                    ProtocolExtensionContainer { { RLItem-DM-Rsp-ExtIEs } } OPTIONAL,
   iE-Extensions
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 ::= {
   PRESENCE mandatory }
RL-InformationItem-DM-Rsp ::= SEQUENCE {
   rI.-ID
                                    RL-ID,
   dPCH-ID
                                    DPCH-ID
                                                  OPTIONAL,
   dedicatedMeasurementValue
                                    DedicatedMeasurementValue,
                                                  OPTIONAL,
   iE-Extensions
                                    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,
                                               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-CRNC-CommunicationContextID
                                                CRITICALITY
                                                               ignore
                                                                              TYPE
                                                                                     CRNC-CommunicationContextID
                                                                                                                   PRESENCE mandatory
     ID
           id-MeasurementID
                                                                              TYPE
                                                                                                              PRESENCE mandatory }
                                                CRITICALITY
                                                               ignore
                                                                                     MeasurementID
                                                                                                           PRESENCE mandatory }
     ID
          id-Cause
                                                CRITICALITY
                                                               ignore
                                                                              TYPE
                                                                                     Cause
                                                                                                                 PRESENCE optional },
     ID
          id-CriticalityDiagnostics
                                                CRITICALITY
                                                               ignore
                                                                              TYPE
                                                                                     CriticalityDiagnostics
DedicatedMeasurementInitiationFailure-Extensions NBAP-PROTOCOL-EXTENSION ::= {
-- DEDICATED MEASUREMENT REPORT
  ******************
DedicatedMeasurementReport ::= SEQUENCE {
                       ProtocolIE-Container
                                                {{DedicatedMeasurementReport-IEs}},
   protocolIEs
   protocolExtensions
                       ProtocolExtensionContainer {{DedicatedMeasurementReport-Extensions}}
                                                                                             OPTIONAL,
DedicatedMeasurementReport-IEs NBAP-PROTOCOL-IES ::= {
          id-CRNC-CommunicationContextID
    { ID
                                                           CRITICALITY
                                                                          ignore
                                                                                     TYPE CRNC-CommunicationContextID
                                                                                                                                 PRESENCE
   mandatory }
   { ID
          id-MeasurementID
                                                           CRITICALITY
                                                                          ignore
                                                                                     TYPE MeasurementID
                                                                                                                           PRESENCE
   mandatory } |
          id-DedicatedMeasurementObjectType-DM-Rprt
                                                           CRITICALITY
                                                                          ignore
                                                                                     TYPE DedicatedMeasurementObjectType-DM-Rprt
                                                                                                                                 PRESENCE
   mandatory } ,
DedicatedMeasurementReport-Extensions NBAP-PROTOCOL-EXTENSION ::= {
```

```
DedicatedMeasurementObjectType-DM-Rprt ::= CHOICE {
                                 RL-DM-Rprt,
   rLS
                                 RL-Set-DM-Rprt,
   all-RL
                                 RL-DM-Rprt,
   all-RLS
                                 RL-Set-DM-Rprt,
RL-DM-Rprt ::= SEQUENCE {
   rL-InformationList-DM-Rprt
                                 RL-InformationList-DM-Rprt,
   iE-Extensions
                                 ProtocolExtensionContainer { { RLItem-DM-Rprt-ExtIEs } }
                                                                                    OPTIONAL,
RLItem-DM-Rprt-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
RL-InformationList-DM-Rprt ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container {{ RL-InformationItemIE-DM-Rprt }}
RL-InformationItemIE-DM-Rprt NBAP-PROTOCOL-IES ::= {
   PRESENCE mandatory }
RL-InformationItem-DM-Rprt ::= SEOUENCE {
   rL-ID
                              RL-ID,
   dPCH-ID
                              DPCH-ID
                                        OPTIONAL,
   dedicatedMeasurementValueInformation DedicatedMeasurementValueInformation,
                              ProtocolExtensionContainer { { RL-InformationItem-DM-Rprt-ExtIEs } }
   iE-Extensions
                                                                                            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
                                 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 ::= {
   PRESENCE mandatory
```

```
RL-Set-InformationItem-DM-Rprt ::= SEQUENCE {
                                  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
                          ProtocolIE-Container
                                                  {{DedicatedMeasurementTerminationRequest-IEs}},
   protocolIEs
   protocolExtensions
                          ProtocolExtensionContainer {{DedicatedMeasurementTerminationRequest-Extensions}}
                                                                                                           OPTIONAL,
    . . .
DedicatedMeasurementTerminationRequest-IES NBAP-PROTOCOL-IES ::= {
    { ID
           id-NodeB-CommunicationContextID
                                                                                       NodeB-CommunicationContextID
                                                                                                                      PRESENCE mandatory
                                                 CRITICALITY
                                                                 ignore
                                                                                TYPE
   { ID
           id-MeasurementID
                                                 CRITICALITY
                                                                 ignore
                                                                                TYPE
                                                                                       Measurement.ID
                                                                                                                    PRESENCE mandatory },
    . . .
DedicatedMeasurementTerminationRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  DEDICATED MEASUREMENT FAILURE INDICATION
        DedicatedMeasurementFailureIndication ::= SEQUENCE {
                                                 {{DedicatedMeasurementFailureIndication-IEs}},
   protocolIEs
                          ProtocolIE-Container
                          ProtocolExtensionContainer {{DedicatedMeasurementFailureIndication-Extensions}}
   protocolExtensions
                                                                                                           OPTIONAL,
    . . .
DedicatedMeasurementFailureIndication-IEs NBAP-PROTOCOL-IES ::= {
           id-CRNC-CommunicationContextID
                                                                        TYPE
                                                                                CRNC-CommunicationContextID
                                                                                                              PRESENCE mandatory
                                             CRITICALITY
                                                             ignore
     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 {
                                              {{RadioLinkFailureIndication-IEs}},
   protocolIEs
                        ProtocolIE-Container
                        ProtocolExtensionContainer {{RadioLinkFailureIndication-Extensions}}
   protocolExtensions
                                                                                         OPTIONAL.
RadioLinkFailureIndication-IEs NBAP-PROTOCOL-IES ::= {
          id-CRNC-CommunicationContextID
                                                 CRITICALITY
                                                                              TYPE
                                                                                     CRNC-CommunicationContextID
                                                               ignore
                                                                                                                      PRESENCE
   mandatory }
   { ID
         id-Reporting-Object-RL-FailureInd
                                                                ignore
                                                                                     Reporting-Object-RL-FailureInd
                                                 CRITICALITY
                                                                              TYPE
                                                                                                                   PRESENCE
   mandatory } ,
   . . .
RadioLinkFailureIndication-Extensions NBAP-PROTOCOL-EXTENSION ::= {
Reporting-Object-RL-FailureInd ::= CHOICE {
                        RL-RL-FailureInd,
   rL-Set
                        RL-Set-RL-FailureInd,
   cCTrCH
                        CCTrCH-RL-FailureInd
RL-RL-FailureInd ::= SEQUENCE {
   rL-InformationList-RL-FailureInd
                                       RL-InformationList-RL-FailureInd,
   iE-Extensions
                                       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
   iE-Extensions
                                         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
                                     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
                        iE-Extensions
RL-Set-InformationItem-RL-FailureInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
CCTrCH-RL-FailureInd ::= SEOUENCE {
                                         RL-ID,
   cCTrCH-InformationList-RL-FailureInd
                                         CCTrCH-InformationList-RL-FailureInd,
                                     ProtocolExtensionContainer { { CCTrCHItem-RL-FailureInd-ExtIEs } }
   iE-Extensions
                                                                                                   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
                                                                              TYPE CCTrCH-InformationItem-RL-FailureInd
                                                                 ignore
   PRESENCE mandatory}
```

```
CCTrCH-InformationItem-RL-FailureInd ::= SEQUENCE {
   cCTrCH-ID
                                      CCTrCH-ID,
   cause
                                      Cause.
                                      iE-Extensions
                                                                                                         OPTIONAL,
CCTrCH-InformationItem-RL-FailureInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  -- RADIO LINK PREEMPTION REQUIRED INDICATION
__ *********************
RadioLinkPreemptionRequiredIndication ::= SEQUENCE {
   protocolIEs
                            ProtocolIE-Container
                                                   {{RadioLinkPreemptionRequiredIndication-IEs}},
                            ProtocolExtensionContainer {{RadioLinkPreemptionRequiredIndication-Extensions}}
   protocolExtensions
                                                                                                            OPTIONAL,
RadioLinkPreemptionRequiredIndication-IEs NBAP-PROTOCOL-IES ::= {
   { ID id-CRNC-CommunicationContextID
                                                CRITICALITY
                                                             ignore
                                                                          TYPE CRNC-CommunicationContextID
                                                                                                              PRESENCE
   mandatory
   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
   iE-Extensions
                         ProtocolExtensionContainer { {RL-InformationItem-RL-PreemptRequiredInd-ExtIEs} } OPTIONAL,
RL-InformationItem-RL-PreemptRequiredInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
```

```
-- RADIO LINK RESTORE INDICATION
__ **********************
RadioLinkRestoreIndication ::= SEOUENCE {
   protocolIEs
                        ProtocolIE-Container
                                               {{RadioLinkRestoreIndication-IEs}},
                        ProtocolExtensionContainer {{RadioLinkRestoreIndication-Extensions}}
   protocolExtensions
                                                                                                OPTIONAL,
RadioLinkRestoreIndication-IEs NBAP-PROTOCOL-IES ::= {
          id-CRNC-CommunicationContextID
                                                      CRITICALITY
                                                                     ignore
                                                                                     TYPE
                                                                                            CRNC-CommunicationContextID
                                                                                                                                PRESENCE
   mandatory } |
   { ID id-Reporting-Object-RL-RestoreInd
                                                     CRITICALITY
                                                                     ignore
                                                                                     TYPE
                                                                                            Reporting-Object-RL-RestoreInd
                                                                                                                             PRESENCE
   mandatory },
    . . .
RadioLinkRestoreIndication-Extensions NBAP-PROTOCOL-EXTENSION ::= {
Reporting-Object-RL-RestoreInd ::= CHOICE {
   rL
                          RL-RL-RestoreInd,
   rL-Set
                          RL-Set-RL-RestoreInd,
   cCTrCH
                          CCTrCH-RL-RestoreInd
RL-RL-RestoreInd ::= SEQUENCE {
   rL-InformationList-RL-RestoreInd
                                          RL-InformationList-RL-RestoreInd,
                                          ProtocolExtensionContainer { { RLItem-RL-RestoreInd-ExtIEs } } OPTIONAL,
   iE-Extensions
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 {
                                          ProtocolExtensionContainer { { RL-InformationItem-RL-RestoreInd-ExtIEs } } OPTIONAL,
   iE-Extensions
```

```
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
                                      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 ::= {
   TYPE RL-Set-InformationItem-RL-RestoreInd PRESENCE mandatory }
RL-Set-InformationItem-RL-RestoreInd ::= SEQUENCE {
   rL-Set-ID
                       RL-Set-ID,
                       ProtocolExtensionContainer { { RL-Set-InformationItem-RL-RestoreInd-ExtIEs} } OPTIONAL,
   iE-Extensions
RL-Set-InformationItem-RL-RestoreInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
CCTrCH-RL-RestoreInd ::= SEQUENCE {
                                         RL-ID,
   cCTrCH-InformationList-RL-RestoreInd
                                         CCTrCH-InformationList-RL-RestoreInd,
                                      ProtocolExtensionContainer { { CCTrCHItem-RL-RestoreInd-ExtIEs } }
   iE-Extensions
                                                                                                    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
```

```
CCTrCH-InformationItem-RL-RestoreInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  -- COMPRESSED MODE COMMAND FDD
  CompressedModeCommand ::= SEQUENCE {
   protocolIEs
                       ProtocolIE-Container
                                            {{CompressedModeCommand-IEs}},
                       ProtocolExtensionContainer {{CompressedModeCommand-Extensions}}
   protocolExtensions
                                                                                              OPTIONAL,
CompressedModeCommand-IEs NBAP-PROTOCOL-IES ::= {
   { ID
         id-NodeB-CommunicationContextID
                                                                             NodeB-CommunicationContextID
                                            CRITICALITY
                                                             ignore
                                                                       TYPE
                                                                                                              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 {
                                           {{ErrorIndication-IEs}},
   protocolIEs
                       ProtocolIE-Container
                       ProtocolExtensionContainer {{ErrorIndication-Extensions}}
   protocolExtensions
                                                                             OPTIONAL,
ErrorIndication-IES NBAP-PROTOCOL-IES ::= {
         id-CRNC-CommunicationContextID
                                        CRITICALITY
                                                      ignore
                                                                   TYPE
                                                                          CRNC-CommunicationContextID
                                                                                                      PRESENCE optional }
         id-NodeB-CommunicationContextID
                                        CRITICALITY
                                                      ignore
                                                                   TYPE
                                                                          NodeB-CommunicationContextID
                                                                                                      PRESENCE optional }
```

```
ID
          id-Cause
                                           CRITICALITY
                                                                         TYPE
                                                                                                         PRESENCE optional } |
                                                          ignore
                                                                                Cause
     ID
          id-CriticalityDiagnostics
                                           CRITICALITY
                                                          ignore
                                                                         TYPE
                                                                                CriticalityDiagnostics
                                                                                                              PRESENCE optional },
   . . .
ErrorIndication-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ****************
-- PRIVATE MESSAGE
  *******************
PrivateMessage ::= SEQUENCE {
                  PrivateIE-Container {{PrivateMessage-IEs}},
   privateIEs
PrivateMessage-IEs NBAP-PRIVATE-IES ::= {
     ****************
-- PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST TDD
__ *******************
PhysicalSharedChannelReconfigurationRequestTDD ::= SEQUENCE {
                     ProtocolIE-Container {{PhysicalSharedChannelReconfigurationRequestTDD-IEs}},
   protocolIEs
   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
                                                   CRITICALITY
          id-PDSCHSets-AddList-PSCH-ReconfRqst
                                                                 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-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-Information-AddList-PSCH-ReconfRqst,
    pDSCH-InformationList
    iE-Extensions
                                                ProtocolExtensionContainer { {PDSCHSets-AddItem-PSCH-ReconfRqst-ExtIEs} } }
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-ReconfRgst
                                                                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 ::= SEOUENCE (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-ReconfRgst
                                                            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..maxNrOfULTSs)) OF DL-Code-InformationAddItem-PSCH-ReconfRqst
DL-Code-InformationAddItem-PSCH-ReconfRgst ::= SEQUENCE {
   pDSCH-ID
                                          PDSCH-ID.
    tdd-ChannelisationCode
                                          TDD-ChannelisationCode.
                                          ProtocolExtensionContainer { { DL-Code-InformationAddItem-PSCH-ReconfRqst-ExtIEs} }
   iE-Extensions
                                                                                                                              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
                                       ::= SEOUENCE {
   pDSCHSet-ID
                                              PDSCHSet-ID,
   pDSCH-InformationList
                                              PDSCH-Information-ModifyList-PSCH-ReconfRqst,
                                              ProtocolExtensionContainer { {PDSCHSets-ModifyItem-PSCH-ReconfRqst-ExtIEs} }
   iE-Extensions
PDSCHSets-ModifyItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    . . .
PDSCH-Information-ModifyList-PSCH-ReconfRgst ::= ProtocolIE-Single-Container {{ PDSCH-Information-ModifyListIEs-PSCH-ReconfRgst }}
PDSCH-Information-ModifyListIEs-PSCH-ReconfRqst NBAP-PROTOCOL-IES ::= {
    PDSCH-Information-ModifyItem-PSCH-ReconfRqst
                                                                                 TYPE
    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
   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
   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
    tdd-ChannelisationCode
                                         TDD-ChannelisationCode,
   iE-Extensions
                                         ProtocolExtensionContainer { { DL-Code-InformationModifyItem-PSCH-ReconfRqst-ExtIEs} }
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
                                             ProtocolExtensionContainer { {PDSCHSets-DeleteItem-PSCH-ReconfRqst-ExtIEs} }
   iE-Extensions
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
                                 ::= SEOUENCE {
   pUSCHSet-ID
                                             PUSCHSet-ID,
   pUSCH-InformationList
                                             PUSCH-Information-AddList-PSCH-ReconfRgst,
   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,
                                              ProtocolExtensionContainer { { PUSCH-Information-AddItem-PSCH-ReconfRqst-ExtIEs} }
   iE-Extensions
                                                                                                                                 OPTIONAL,
       . . .
PUSCH-Information-AddItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
UL-Timeslot-InformationAddList-PSCH-ReconfRgst ::= SEOUENCE (SIZE (1..maxNrOfULTSs)) OF UL-Timeslot-InformationAddItem-PSCH-ReconfRgst
UL-Timeslot-InformationAddItem-PSCH-ReconfRqst ::= SEOUENCE {
   timeSlot
                                          TimeSlot,
   midambleShiftAndBurstType
                                          MidambleShiftAndBurstType,
   tFCI-Presence
                                          TFCI-Presence,
   uL-Code-InformationAddList-PSCH-ReconfRqst
                                                          UL-Code-InformationAddList-PSCH-ReconfRgst,
   iE-Extensions
                                          ProtocolExtensionContainer { { UL-Timeslot-InformationAddItem-PSCH-ReconfRqst-ExtIEs} }
                                                                                                                                    OPTIONAL,
UL-Timeslot-InformationAddItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
UL-Code-InformationAddList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfPDSCHs)) OF UL-Code-InformationAddItem-PSCH-ReconfRqst
UL-Code-InformationAddItem-PSCH-ReconfRqst ::= SEQUENCE {
   pUSCH-ID
                                          PUSCH-ID.
    tdd-ChannelisationCode
                                          TDD-ChannelisationCode,
                                          ProtocolExtensionContainer { { UL-Code-InformationAddItem-PSCH-ReconfRqst-ExtIEs} }
   iE-Extensions
                                                                                                                              OPTIONAL,
    . . .
UL-Code-InformationAddItem-PSCH-ReconfRgst-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
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 ::= {
    TYPE
                                                                                      PUSCH-Information-ModifyItem-PSCH-ReconfRqst
   PRESENCE
              mandatory}
PUSCH-Information-ModifyItem-PSCH-ReconfRgst ::= SEOUENCE {
   repetitionPeriod
                                         RepetitionPeriod
                                                                           OPTIONAL,
   repetitionLength
                                         RepetitionLength
                                                                           OPTIONAL,
   tdd-PhysicalChannelOffset
                                         TDD-PhysicalChannelOffset
                                                                          OPTIONAL,
   uL-Timeslot-InformationModifyList-PSCH-ReconfRqst
                                                               UL-Timeslot-InformationModifyList-PSCH-ReconfRqst
   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 OPTIONAL.
   tFCI-Presence
   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
                                      ::= SEOUENCE {
   pUSCHSet-ID
                                            PUSCHSet-ID,
   iE-Extensions
```

```
PUSCHSets-DeleteItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ******************
-- PHYSICAL SHARED CHANNEL RECONFIGURATION RESPONSE TDD
  *****************
PhysicalSharedChannelReconfigurationResponseTDD ::= SEQUENCE {
                    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 {
                   ProtocolIE-Container {{PhysicalSharedChannelReconfigurationFailureTDD-IEs}},
   protocolExtensions ProtocolExtensionContainer {{PhysicalSharedChannelReconfigurationFailureTDD-Extensions}}
                                                                                                              OPTIONAL,
PhysicalSharedChannelReconfigurationFailureTDD-IEs NBAP-PROTOCOL-IES ::= {
         ID
         id-CriticalityDiagnostics
                                    CRITICALITY ignore
                                                         TYPE
                                                               CriticalityDiagnostics PRESENCE optional },
   . . .
PhysicalSharedChannelReconfigurationFailureTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
CauseLevel-PSCH-ReconfFailureTDD ::= CHOICE {
                       GeneralCauseList-PSCH-ReconfFailureTDD,
   generalCause
   setSpecificCause
                       SetSpecificCauseList-PSCH-ReconfFailureTDD,
```

```
GeneralCauseList-PSCH-ReconfFailureTDD ::= SEQUENCE {
                               ProtocolExtensionContainer { GeneralCauseItem-PSCH-ReconfFailureTDD-ExtIEs} }
    iE-Extensions
                                                                                                                   OPTIONAL,
GeneralCauseItem-PSCH-ReconfFailureTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
SetSpecificCauseList-PSCH-ReconfFailureTDD ::= SEQUENCE {
    unsuccessful-PDSCHSetList-PSCH-ReconfFailureTDD Unsuccessful-PDSCHSetList-PSCH-ReconfFailureTDD
    unsuccessful-PUSCHSetList-PSCH-ReconfFailureTDD Unsuccessful-PUSCHSetList-PSCH-ReconfFailureTDD
                                                                                                       OPTIONAL,
                                                    ProtocolExtensionContainer { { SetSpecificCauseItem-PSCH-ReconfFailureTDD-ExtIEs} }
   iE-Extensions
   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-Unsuccessful-PDSCHSetItem-PSCH-ReconfFailureTDD CRITICALITY ignore TYPE Unsuccessful-PDSCHSetItem-PSCH-ReconfFailureTDDPRESENCE
mandatory}
Unsuccessful-PDSCHSetItem-PSCH-ReconfFailureTDD ::= SEQUENCE {
   pDSCHSet-ID
                           PDSCHSet-ID,
    cause
    iE-Extensions
                           ProtocolExtensionContainer { {Unsuccessful-PDSCHSetItem-PSCH-ReconfFailureTDD-ExtIEs} } OPTIONAL,
Unsuccessful-PDSCHSetItem-PSCH-ReconfFailureTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
Unsuccessful-PUSCHSetList-PSCH-ReconfFailureTDD ::= SEOUENCE (SIZE (0.. maxNrOfPUSCHSets)) OF ProtocolIE-Single-Container {{ Unsuccessful-
PUSCHSetItemIE-PSCH-ReconfFailureTDD }}
Unsuccessful-PUSCHSetItemIE-PSCH-ReconfFailureTDD NBAP-PROTOCOL-IES ::= {
          id-Unsuccessful-PUSCHSetItem-PSCH-ReconfFailureTDD CRITICALITY ignore TYPE Unsuccessful-PUSCHSetItem-PSCH-ReconfFailureTDDPRESENCE
mandatory}
Unsuccessful-PUSCHSetItem-PSCH-ReconfFailureTDD ::= SEQUENCE {
   pUSCHSet-ID
                           PUSCHSet-ID,
```

```
iE-Extensions
                            ProtocolExtensionContainer { {Unsuccessful-PUSCHSetItem-PSCH-ReconfFailureTDD-ExtIEs} }
                                                                                                                         OPTIONAL,
Unsuccessful-PUSCHSetItem-PSCH-ReconfFailureTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
-- RESET REQUEST
ResetRequest ::= SEQUENCE {
                                                     {{ResetRequest-IEs}},
    protocolIEs
                            ProtocolIE-Container
                            ProtocolExtensionContainer {{ResetRequest-Extensions}}
    protocolExtensions
                                                                                         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} }
    . . .
```

```
CommunicationContextItem-Reset-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
CommunicationContextInfoItemIE-Reset }}
CommunicationContextInfoItemIE-Reset NBAP-PROTOCOL-IES ::= {
   {ID id-CommunicationContextInfoItem-Reset
                                               CRITICALITY reject
                                                                     TYPE CommunicationContextInfoItem-Reset
                                                                                                            PRESENCE mandatory }
CommunicationContextInfoItem-Reset ::= SEOUENCE {
   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}},
                         ProtocolExtensionContainer {{ResetResponse-Extensions}}
   protocolExtensions
                                                                                       OPTIONAL,
ResetResponse-IEs NBAP-PROTOCOL-IES ::= {
   {ID id-CriticalityDiagnostics
                                    CRITICALITY
                                                                     CriticalityDiagnostics
                                                                                              PRESENCE optional },
                                                   ignore
ResetResponse-Extensions NBAP-PROTOCOL-EXTENSION ::= {
END
```

## 9.3.4 Information Elements Definitions

```
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;
__ ______
Acknowledged-PCPCH-access-preambles ::= INTEGER (0..15,...)
Acknowledged-PRACH-preambles-Value ::= INTEGER(0..240,...)
-- The number of L1 acknowledged random access tries per every 20 ms period.
```

```
AddorDeleteIndicator ::= ENUMERATED {
    add.
    delete
Active-Pattern-Sequence-Information ::= SEOUENCE {
    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 {
    ν0,
    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,
   . . .
-- ------
-- -----
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.
BlockSTTD-Indicator ::= ENUMERATED {
   active,
   inactive
-- ------
Cause ::= CHOICE {
   radioNetwork
                        CauseRadioNetwork,
   transport
                    CauseTransport,
```

```
CauseProtocol,
    protocol
   misc
                            CauseMisc.
    . . .
CauseMisc ::= ENUMERATED {
    control-processing-overload,
    hardware-failure,
    oam-intervention.
    not-enough-user-plane-processing-resources,
    unspecified,
    . . .
CauseProtocol ::= ENUMERATED {
    transfer-syntax-error,
    abstract-syntax-error-reject,
    abstract-syntax-error-ignore-and-notify,
    message-not-compatible-with-receiver-state,
    semantic-error,
    unspecified,
    abstract-syntax-error-falsely-constructed-message,
CauseRadioNetwork ::= ENUMERATED {
    unknown-C-ID,
    cell-not-available,
    power-level-not-supported,
    dl-radio-resources-not-available,
    ul-radio-resources-not-available,
    rl-already-ActivatedOrAlocated,
    nodeB-Resources-unavailable,
    measurement-not-supported-for-the-object,
    combining-resources-not-available,
    requested-configuration-not-supported,
    synchronisation-failure,
    priority-transport-channel-established,
    sIB-Origination-in-Node-B-not-Supported,
    requested-tx-diversity-mode-not-supported,
    unspecified,
    bCCH-scheduling-error,
    measurement-temporarily-not-available,
    invalid-CM-settings,
    reconfiguration-CFN-not-elapsed,
    number-of-DL-codes-not-supported,
    s-cipch-not-supported,
    combining-not-supported,
    ul-sf-not-supported,
    dl-SF-not-supported,
    common-transport-channel-type-not-supported,
    dedicated-transport-channel-type-not-supported,
    downlink-shared-channel-type-not-supported,
    uplink-shared-channel-type-not-supported,
```

```
cm-not-supported,
    tx-diversity-no-longer-supported,
    unknown-Local-Cell-ID,
    number-of-UL-codes-not-supported
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
                                                                                                         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::= SEOUENCE {
    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,
```

```
ProtocolExtensionContainer { { Common-PhysicalChannel-Status-Information-ExtIEs} }
    iE-Extensions
                                                                                                                                 OPTIONAL,
Common-PhysicalChannel-Status-Information-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
CommonTransportChannelID ::= INTEGER (0..255)
Common-TransportChannel-Status-Information ::= SEQUENCE {
    commonTransportChannelID
                                        CommonTransportChannelID,
    resourceOperationalState
                                        ResourceOperationalState,
    availabilityStatus
                                        AvailabilityStatus,
    iE-Extensions
                                        ProtocolExtensionContainer { { Common-TransportChannel-Status-Information-ExtIEs} }
Common-TransportChannel-Status-Information-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
CommunicationControlPortID ::= INTEGER (0..65535)
Compressed-Mode-Deactivation-Flag::= ENUMERATED {
    deactivate,
    maintain-Active
-- on=deactivate
ConfigurationGenerationID ::= INTEGER (0..255)
-- Value '0' means "No configuration"
ConstantValue ::= INTEGER (-10..10,...)
-- -10 dB - +10 dB
-- unit dB
-- step 1 dB
CPCH-Allowed-Total-Rate ::= ENUMERATED {
    v15,
    v30,
    v60,
    v120,
    v240,
    v480,
    v960,
    v1920,
    v2880,
    v3840,
    v4800,
    v5760,
    . . .
```

```
CPCHScramblingCodeNumber ::= INTEGER (0..79)
CPCH-UL-DPCCH-SlotFormat ::= INTEGER (0..2,...)
CriticalityDiagnostics ::= SEQUENCE {
   procedureID
                                                   OPTIONAL,
                             ProcedureID
   triggeringMessage
                             TriggeringMessage
                                                      OPTIONAL,
   procedureCriticality
                             Criticality
                                                   OPTIONAL,
                             TransactionID
   transactionID
                                                      OPTIONAL,
   ProtocolExtensionContainer { {CriticalityDiagnostics-ExtIEs} }
   iE-Extensions
                                                                                         OPTIONAL,
   . . .
CriticalityDiagnostics-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
CriticalityDiagnostics-IE-List ::= SEQUENCE (SIZE (1..maxNrOfErrors)) OF
   SEQUENCE {
       iECriticality
                         Criticality,
                         ProtocolIE-ID,
       iE-ID
       repetitionNumber
                         RepetitionNumber0
                                               OPTIONAL,
                         ProtocolExtensionContainer { {CriticalityDiagnostics-IE-List-ExtIEs} }
       iE-Extensions
                                                                                              OPTIONAL,
       . . .
CriticalityDiagnostics-IE-List-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
       ID id-MessageStructure
                                                      EXTENSION MessageStructure
                                                                                    PRESENCE optional } |
                                CRITICALITY ignore
       ID id-TypeOfError
                                                                                    PRESENCE mandatory },
                                CRITICALITY ignore
                                                      EXTENSION TypeOfError
MessageStructure ::= SEQUENCE (SIZE (1..maxNrOfLevels)) OF
   SEOUENCE {
       iE-ID
                             ProtocolIE-ID,
       repetitionNumber
                             RepetitionNumber1
                                                   OPTIONAL,
                             ProtocolExtensionContainer { {MessageStructure-ExtIEs} } OPTIONAL,
       iE-Extensions
       . . .
MessageStructure-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
   . . .
CRNC-CommunicationContextID ::= INTEGER (0..1048575)
-- ------
-- ------
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,
                                      ProtocolExtensionContainer { { DCH-FDD-InformationItem-ExtIEs} } OPTIONAL,
   iE-Extensions
DCH-FDD-InformationItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
DCH-Specific-FDD-InformationList ::= SEOUENCE (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
                                      OE-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
                                                                                                                        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
                                           OE-Selector
                                                                          OPTIONAL,
    -- This IE shall be present if this DCH is part of a set of Coordinated DCHs
                                           iE-Extensions
                                                                                                           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
                       ::= SEOUENCE
   ul-FP-Mode
                                       UL-FP-Mode
                                                       OPTIONAL,
   toAWS
                                       ToAWS
                                                       OPTIONAL,
    toAWE
                                       TOAWE
                                                      OPTIONAL,
    transportBearerRequestIndicator
                                       TransportBearerRequestIndicator,
                                       DCH-ModifySpecificInformation-FDD,
    dCH-SpecificInformationList
   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
                                                                                                                   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
                                                    OPTIONAL,
                                     UL-FP-Mode
   t.oAWS
                                     TOAWS
                                                    OPTIONAL.
                                     TOAWE
                                                    OPTIONAL,
   t.oAWE
   transportBearerRequestIndicator
                                     TransportBearerRequestIndicator,
   dCH-SpecificInformationList
                                     DCH-ModifySpecificInformation-TDD,
                                     ProtocolExtensionContainer { { TDD-DCHs-to-ModifyItem-ExtIEs} }
   iE-Extensions
                                                                                                     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 OPTIONAL,
   allocationRetentionPriority
   frameHandlingPriority
                                                FrameHandlingPriority
                                                                          OPTIONAL,
   iE-Extensions
                                                OPTIONAL,
DCH-ModifySpecificItem-TDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::=
DedicatedChannelsCapacityConsumptionLaw ::= SEQUENCE ( SIZE(1..maxNrOfSF) ) OF
   SEOUENCE {
       dl-Cost-1
                      INTEGER (0..65535),
       dl-Cost-2
                      INTEGER (0..65535),
       ul-Cost-1
                      INTEGER (0..65535),
       ul-Cost-2
                      INTEGER (0..65535),
                         ProtocolExtensionContainer { { DedicatedChannelsCapacityConsumptionLaw-ExtIEs } }
       iE-Extensions
                                                                                                        OPTIONAL,
DedicatedChannelsCapacityConsumptionLaw-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
```

```
DedicatedMeasurementType ::= ENUMERATED {
    sir.
    sir-error,
    transmitted-code-power,
    rx-timing-deviation,
    round-trip-time,
DedicatedMeasurementValue ::= CHOICE {
    sIR-Value
                                    SIR-Value,
    sIR-ErrorValue
                                    SIR-Error-Value,
    transmittedCodePowerValue
                                        Transmitted-Code-Power-Value,
                                        RSCP-Value,
    rxTimingDeviationValue
                                        Rx-Timing-Deviation-Value,
                                        Round-Trip-Time-Value,
    roundTripTime
    . . .
DedicatedMeasurementValueInformation ::= CHOICE {
    measurementAvailable
                                DedicatedMeasurementAvailable,
                                DedicatedMeasurementnotAvailable
    measurementnotAvailable
DedicatedMeasurementAvailable::= SEQUENCE {
    dedicatedmeasurementValue
                                    DedicatedMeasurementValue,
    cFN
                                                                 OPTIONAL,
    ie-Extensions
                                     ProtocolExtensionContainer { { DedicatedMeasurementAvailableItem-ExtIEs} }
                                                                                                                     OPTIONAL,
DedicatedMeasurementAvailableItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    . . .
DedicatedMeasurementnotAvailable ::= NULL
Detected-PCPCH-access-preambles ::= INTEGER (0..240,...)
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-model,
    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,
                                            ProtocolExtensionContainer { { DL-Timeslot-InformationItem-ExtIEs} }
    iE-Extensions
DL-Timeslot-InformationItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
DL-FrameType ::= ENUMERATED {
    typeA,
    typeB,
    . . .
DL-or-Global-CapacityCredit ::= INTEGER (0..65535)
DL-Power ::= INTEGER (-350..150)
-- DL-Power = power * 10
-- If Power <=-35 DL-Power shall be set to -350
-- if Power >=15 DL-Power shall be set to 150
-- Unit dB, Range -35dB .. +15dB, Step +0.1dB
DLPowerAveragingWindowSize ::= INTEGER (1..60)
DL-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
                             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
                                                                                                                   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
                                    ProtocolExtensionContainer { { DSCH-FDD-InformationItem-ExtIEs} }
   iE-Extensions
                                                                                                   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 ::= {
-- -----
-- -----
End-Of-Audit-Sequence-Indicator ::= ENUMERATED {
    end-of-audit-sequence,
   not-end-of-audit-sequence
-- ------
-- -----
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
                                        ProtocolExtensionContainer { { FDD-DL-CodeInformationItem-ExtIEs} } OPTIONAL,
   iE-Extensions
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-sizel,
   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)
-- -----
GapLength
                 ::= INTEGER (1..14)
-- Unit slot
GapDuration
                  ::= INTEGER (1..144,...)
-- Unit frame
-- -----
-- -----
-- -----
-- -----
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
IndicationType ::= ENUMERATED {
  noFailure,
  serviceImpacting,
  . . .
InnerLoopDLPCStatus ::= ENUMERATED {
  active,
  inactive
-- ------
-- ------
-- ------
```

```
Local-Cell-ID ::= INTEGER (0..268435455)
-- -----
MaximumDL-PowerCapability ::= INTEGER(0..500)
-- Unit dBm, Range OdBm .. 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)
MidambleConfigurationBurstType1And3 ::=
                                           ENUMERATED {v4, v8, v16}
MidambleConfigurationBurstType2 ::=
                                       ENUMERATED {v3, v6}
MidambleShiftAndBurstType ::=
                                   CHOICE {
    type1
                                       SEQUENCE {
       midambleConfigurationBurstType1And3 MidambleConfigurationBurstType1And3,
       midambleAllocationMode
                                           CHOICE {
           defaultMidamble
                                               NULL,
           commonMidamble
                                               NULL,
           ueSpecificMidamble
                                               MidambleShiftLong,
                                       SEQUENCE {
       midambleConfigurationBurstType2
                                           MidambleConfigurationBurstType2,
       midambleAllocationMode
                                           CHOICE {
           defaultMidamble
                                               NULL,
           commonMidamble
                                               NULL,
           ueSpecificMidamble
                                               MidambleShiftShort,
            . . .
       },
                                       SEQUENCE
   type3
       midamble Configuration Burst Type 1 And 3 Midamble Configuration Burst Type 1 And 3,
```

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```
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
-- ------
NEOT ::= INTEGER (0..8)
NFmax ::= INTEGER (1..64,...)
N-INSYNC-IND ::= INTEGER (1..256)
```

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```
N-OUTSYNC-IND ::= INTEGER (1..256)
NodeB-CommunicationContextID ::= INTEGER (0..1048575)
NStartMessage ::= INTEGER (1..8)
-- -----
-- -----
__ ______
-- ------
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,
                                       PDSCH-CodeMapping-PDSCH-CodeInformationList,
      explicit
       . . . ,
      replace
                                   PDSCH-CodeMapping-ReplacedPDSCH-CodeInformationList
                                       ProtocolExtensionContainer { { PDSCH-CodeMapping-ExtIEs} }
   iE-Extensions
                                                                                              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
   SEOUENCE
       spreadingFactor
                                  PDSCH-CodeMapping-SpreadingFactor,
       multi-CodeInfo
                                  PDSCH-Multi-CodeInfo,
       start-CodeNumber
                                      PDSCH-CodeMapping-CodeNumberComp,
       stop-CodeNumber
                                  PDSCH-CodeMapping-CodeNumberComp,
       iE-Extensions
                                      OPTIONAL,
    . . .
PDSCH-CodeMapping-PDSCH-CodeMappingInformationList-ExtlEs NBAP-PROTOCOL-EXTENSION ::= {
PDSCH-CodeMapping-DSCH-MappingInformationList ::= SEOUENCE (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
   SEOUENCE
       tfci-Field2
                                 TFCS-MaxTFCI-field2-Value,
       spreadingFactor
                                 PDSCH-CodeMapping-SpreadingFactor,
       multi-CodeInfo
                                 PDSCH-Multi-CodeInfo,
       codeNumber
                                 PDSCH-CodeMapping-CodeNumberComp,
                                 iE-Extensions
                                                                                                                           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)
-- -----
```

```
QE-Selector ::= ENUMERATED {
   selected,
   non-selected
-- -----
-- -----
RACH-SlotFormat ::= ENUMERATED {
   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
```

```
periodic
                            ReportCharacteristicsType-ReportPeriodicity,
    event.-a
                        ReportCharacteristicsType-EventA,
    event.-b
                        ReportCharacteristicsType-EventB,
                        ReportCharacteristicsType-EventC,
    event.-c
                        ReportCharacteristicsType-EventD,
    event.-d
                        ReportCharacteristicsType-EventE,
    event-e
    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
                                     ProtocolExtensionContainer { { ReportCharacteristicsType-EventB-ExtIEs} }
    iE-Extensions
                                                                                                                   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 {
                                    ReportCharacteristicsType-MeasurementIncreaseDecreaseThreshold,
    measurementDecreaseThreshold
    measurementChangeTime
                                    ReportCharacteristicsType-ScaledMeasurementChangeTime,
    iE-Extensions
                                     ProtocolExtensionContainer { { ReportCharacteristicsType-EventD-ExtIEs} } 
ReportCharacteristicsType-EventD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    . . .
```

```
ReportCharacteristicsType-EventE ::= SEQUENCE {
    measurementThreshold1
                                    ReportCharacteristicsType-MeasurementThreshold,
    measurement.Threshold2
                                    ReportCharacteristicsType-MeasurementThreshold
                                                                                                  OPTIONAL.
    measurementHysteresisTime
                                    ReportCharacteristicsType-ScaledMeasurementHysteresisTime
                                                                                                 OPTIONAL,
    reportPeriodicity
                                     ReportCharacteristicsType-ReportPeriodicity
                                                                                                  OPTIONAL.
                                     ProtocolExtensionContainer { { ReportCharacteristicsType-EventE-ExtIEs} }
    iE-Extensions
                                                                                                                  OPTIONAL,
ReportCharacteristicsType-EventE-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
ReportCharacteristicsType-EventF ::= SEQUENCE {
    measurement.Threshold1
                                     ReportCharacteristicsType-MeasurementThreshold,
    measurement.Threshold2
                                    ReportCharacteristicsType-MeasurementThreshold
                                                                                                  OPTIONAL,
    measurementHysteresisTime
                                    ReportCharacteristicsType-ScaledMeasurementHysteresisTime
                                                                                                 OPTIONAL,
    reportPeriodicity
                                    ReportCharacteristicsType-ReportPeriodicity
                                                                                                  OPTIONAL,
                                     ProtocolExtensionContainer { { ReportCharacteristicsType-EventF-ExtIEs} }
    iE-Extensions
                                                                                                                  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,
    ackowledged-prach-preambles
                                        Acknowledged-PRACH-preambles-Value,
    uL-TimeslotISCP
                                    UL-TimeslotISCP-Value-IncrDecrThres,
                                SIR-Value-IncrDecrThres,
    sir
    sir-error
                                SIR-Error-Value-IncrDecrThres,
                                    Transmitted-Code-Power-Value-IncrDecrThres,
    transmitted-code-power
    rscp
                                    RSCP-Value-IncrDecrThres,
    round-trip-time
                                    Round-Trip-Time-IncrDecrThres,
    acknowledged-PCPCH-access-preambles
                                            Acknowledged-PCPCH-access-preambles,
    detected-PCPCH-access-preambles
                                            Detected-PCPCH-access-preambles,
ReportCharacteristicsType-MeasurementThreshold ::= CHOICE
    received-total-wide-band-power
                                                             Received-total-wide-band-power-Value,
    transmitted-carrier-power
                                    Transmitted-Carrier-Power-Value,
    ackowledged-prach-preambles
                                        Acknowledged-PRACH-preambles-Value,
    uL-TimeslotISCP
                                    UL-TimeslotISCP-Value,
    sir
                                SIR-Value,
    sir-error
                                SIR-Error-Value,
    transmitted-code-power
                                     Transmitted-Code-Power-Value,
    rscp
                                    RSCP-Value,
    rx-timing-deviation
                                    Rx-Timing-Deviation-Value,
    round-trip-time
                                    Round-Trip-Time-Value,
    acknowledged-PCPCH-access-preambles
                                            Acknowledged-PCPCH-access-preambles,
                                            Detected-PCPCH-access-preambles,
    detected-PCPCH-access-preambles
```

```
ReportCharacteristicsType-ScaledMeasurementChangeTime ::= CHOICE {
                      MeasurementChangeTime-Scaledmsec,
   msec
    . . .
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 {
                      ReportPeriodicity-Scaledmsec,
   msec
   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
CommonTransportChannel-InformationResponse ::= SEQUENCE
    commonTransportChannelID
                                      CommonTransportChannelID,
   bindingID
                                      BindingID
                                                             OPTIONAL,
    transportLayerAddress
                                      TransportLayerAddress OPTIONAL,
   iE-Extensions
                                      OPTIONAL,
    . . .
CommonTransportChannel-InformationResponse-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
LimitedPowerIncrease ::= ENUMERATED {
   used,
   not-used
```

```
RL-ID ::= INTEGER (0..31)
RL-Set-ID
                      ::= INTEGER (0..31)
Round-Trip-Time-IncrDecrThres ::= INTEGER(0..32766)
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)
-- ------
AdjustmentPeriod
                    ::= INTEGER(1..256)
-- Unit Frame
                             ::= INTEGER(0..100)
ScaledAdjustmentRatio
-- AdjustmentRatio = ScaledAdjustmentRatio / 100
                         ::= INTEGER(1..10)
MaxAdjustmentStep
-- 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)
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-Cell ::= ENUMERATED {
   v1,
   v2,
   v3,
   v4,
   ν5,
   v6,
   v7,
   v8,
   v9
T-RLFAILURE ::= INTEGER (0..255)
-- Unit seconds, Range Os .. 25.5s, Step 0.1s
TDD-ChannelisationCode ::= ENUMERATED {
   chCodeldiv1,
   chCode2div1,
   chCode2div2,
   chCode4div1,
   chCode4div2,
   chCode4div3,
   chCode4div4,
   chCode8div1,
   chCode8div2,
   chCode8div3,
   chCode8div4,
   chCode8div5,
   chCode8div6,
   chCode8div7,
   chCode8div8,
   chCodel6div1,
   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} }
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 --
                              TFCI-SignallingMode-LengthOfTFCI2
   lengthOfTFCI2
                                                                         OPTIONAL,
    -- This IE shall be present if the split type is logical --
   iE-Extensions
                              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} }
TFCI2-BearerInformationResponse-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
                    ::= INTEGER (0|15..269)
TGD
-- 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,
                                ProtocolExtensionContainer { {Transmission-Gap-Pattern-Sequence-Information-ExtIEs} } OPTIONAL,
        iE-Extensions
        . . .
Transmission-Gap-Pattern-Sequence-Information-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
TransmissionGapPatternSequenceCodeInformation ::= ENUMERATED{
  code-change,
  nocode-change
Transmitted-Carrier-Power-Value ::= INTEGER(0..100)
-- According to mapping in [4]/[5]
Transmitted-Code-Power-Value ::= INTEGER (0..127)
-- According to mapping in [4]/[5]
Transmitted-Code-Power-Value-IncrDecrThres ::= INTEGER (0..112,...)
TransmissionDiversityApplied ::= BOOLEAN
-- true: applied, false: not applied
TransmitDiversityIndicator ::= ENUMERATED {
    active,
    inactive
```

```
TFCS ::= SEOUENCE {
    tFCSvalues
                                CHOICE {
       no-Split-in-TFCI
                                    TFCS-TFCSList,
        split-in-TFCI
                                    SEQUENCE {
                                                TFCS-DCHList,
            transportFormatCombination-DCH
                                                CHOICE {
            signallingMethod
                tFCI-Range
                                                TFCS-MapingOnDSCHList,
                explicit
                                                    TFCS-DSCHList,
                . . .
                                                ProtocolExtensionContainer { { Split-in-TFCI-ExtIEs } }
            iE-Extensions
                                                                                                           OPTIONAL,
                        ProtocolExtensionContainer { { TFCS-ExtIEs} }
    iE-Extensions
                                                                            OPTIONAL,
Split-in-TFCI-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
TFCS-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
TFCS-TFCSList ::= SEQUENCE (SIZE (1..maxNrOfTFCs)) OF
    SEQUENCE {
        cTFC
                            TFCS-CTFC,
       tFC-Beta
                       TransportFormatCombination-Beta
                                                            OPTIONAL,
       iE-Extensions
                            ProtocolExtensionContainer { { TFCS-TFCSList-ExtIEs} }
                                                                                         OPTIONAL,
TFCS-TFCSList-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
TFCS-CTFC ::= CHOICE {
    ctfc2bit
                                        INTEGER (0..3),
    ctfc4bit
                                        INTEGER (0..15),
    ctfc6bit
                                        INTEGER (0..63),
    ctfc8bit
                                        INTEGER (0..255),
    ctfc12bit
                                        INTEGER (0..4095),
    ctfc16bit
                                        INTEGER (0..65535),
    ctfcmaxbit
                                        INTEGER (0..maxCTFC)
TFCS-DCHList ::= SEQUENCE (SIZE (1..maxNrOfTFCI1Combs)) OF
    SEQUENCE {
        cTFC
                            TFCS-CTFC,
                            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,
                                  ProtocolExtensionContainer { { TFCS-MapingOnDSCHList-ExtIEs} }
       iE-Extensions
                                                                                                   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
                                  OPTIONAL,
    . . .
TFCS-DSCHList-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
TransportBearerRequestIndicator ::= ENUMERATED {
   bearerRequested,
   bearerNotRequested,
   . . .
TransportFormatSet ::= SEQUENCE {
   dynamicParts
                          TransportFormatSet-DynamicPartList,
                          TransportFormatSet-Semi-staticPart,
   semi-staticPart
                          ProtocolExtensionContainer { { TransportFormatSet-ExtIEs} }
   iE-Extensions
                                                                                            OPTIONAL,
TransportFormatSet-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
TransportFormatSet-DynamicPartList ::= SEOUENCE (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
```

```
TransportFormatSet-ModeDP,
       mode
       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
   SEOUENCE {
       transmissionTimeInterval
                                      TransportFormatSet-TransmissionTimeIntervalDynamic,
   iE-Extensions
                                      OPTIONAL.
TransmissionTimeIntervalInformation-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
TransportFormatSet-Semi-staticPart ::= SEQUENCE {
   transmissionTimeInterval
                                      TransportFormatSet-TransmissionTimeIntervalSemiStatic,
   channelCoding
                                   TransportFormatSet-ChannelCodingType,
   codingRate
                                  TransportFormatSet-CodingRate
                                                                             OPTIONAL,
    -- This IE shall be present if the Type of channel coding IE is set to 'convolutional' or 'turbo'
   rateMatcingAttribute
                                  TransportFormatSet-RateMatchingAttribute,
    cRC-Size
                                   TransportFormatSet-CRC-Size,
                                  TransportFormatSet-ModeSSP
   mode
   iE-Extensions
                                   ProtocolExtensionContainer { { TransportFormatSet-Semi-staticPart-ExtIEs} }
                                                                                                               OPTIONAL,
TransportFormatSet-Semi-staticPart-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
TransportFormatSet-ChannelCodingType ::= ENUMERATED {
   no-coding,
   convolutional-coding,
    turbo-coding,
    . . .
```

```
TransportFormatSet-CodingRate ::= ENUMERATED {
    half,
    third.
TransportFormatSet-CRC-Size ::= ENUMERATED {
    v8,
    v12,
    v16,
    v24,
    . . .
TransportFormatSet-ModeDP ::= CHOICE {
                        TDD-TransportFormatSet-ModeDP,
    notApplicable
                                NULL,
    . . .
TransportFormatSet-ModeSSP ::= CHOICE {
                    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,
   . . .
-- ------
-- ------
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 ::= SEOUENCE {
    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
```

```
ProtocolExtensionContainer { { USCH-InformationItem-ExtIEs} }
                                                                         OPTIONAL,
  iE-Extensions
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)
-- -----
__ ______
__ ______
-- -----
-- -----
-- -----
__ ______
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
__ *********************
                        INTEGER ::= 65535
maxPrivateIEs
maxProtocolExtensions
                      INTEGER ::= 65535
                        INTEGER ::= 65535
maxProtocolIEs
__ *********************
-- Common Data Types
__ ********************
            ::= ENUMERATED { reject, ignore, notify }
Criticality
MessageDiscriminator ::= ENUMERATED { common, dedicated }
            ::= ENUMERATED { optional, conditional, mandatory }
Presence
PrivateIE-ID ::= CHOICE {
  local
                 INTEGER (0..maxPrivateIEs),
   global
                 OBJECT IDENTIFIER
ProcedureCode ::= INTEGER (0..255)
ProcedureID
            ::= SEQUENCE {
   procedureCode
                     ProcedureCode,
   ddMode
                     ENUMERATED { tdd, fdd, common, ... }
ProtocolExtensionID ::= INTEGER (0..maxProtocolExtensions)
ProtocolIE-ID := INTEGER (0..maxProtocolIEs)
```

#### 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
                                                      ProcedureCode ::= 20
id-downlinkPowerControl
id-downlinkPowerTimeslotControl
                                                      ProcedureCode ::= 38
id-errorIndicationForCommon
                                                      ProcedureCode ::= 35
id-errorIndicationForDedicated
                                                      ProcedureCode ::= 21
id-physicalSharedChannelReconfiguration
                                                      ProcedureCode ::= 37
                                                      ProcedureCode ::= 36
id-privateMessageForCommon
id-privateMessageForDedicated
                                                      ProcedureCode ::= 22
id-radioLinkAddition
                                                      ProcedureCode ::= 23
id-radioLinkDeletion
                                                      ProcedureCode ::= 24
                                                      ProcedureCode ::= 25
id-radioLinkFailure
                                                      ProcedureCode ::= 39
id-radioLinkPreemption
id-radioLinkRestoration
                                                      ProcedureCode ::= 26
id-radioLinkSetup
                                                      ProcedureCode ::= 27
id-reset
                                                      ProcedureCode ::= 13
                                                      ProcedureCode ::= 28
id-resourceStatusIndication
                                                      ProcedureCode ::= 29
id-synchronisedRadioLinkReconfigurationCancellation
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
                           INTEGER ::= 8
maxNrOfSCCPCHs
maxNrOfCPCHs
                           INTEGER ::= 16
maxNrOfPCPCHs
                           INTEGER ::= 64
maxNrOfDCHs
                           INTEGER ::= 128
maxNrOfDSCHs
                           INTEGER ::= 32
maxNrOfFACHs
                           INTEGER ::= 8
maxNrOfCCTrCHs
                           INTEGER ::= 16
maxNrOfPDSCHs
                           INTEGER ::= 256
maxNrOfPUSCHs
                           INTEGER ::= 256
                           INTEGER ::= 256
maxNrOfPDSCHSets
                           INTEGER ::= 256
maxNrOfPUSCHSets
maxNrOfULTSs
                           INTEGER ::= 15
maxNrOfUSCHs
                           INTEGER ::= 32
maxAPSiqNum
                           INTEGER ::= 16
```

```
INTEGER ::= 8
maxNrOfSlotFormatsPRACH
maxCellinNodeB
                           INTEGER ::= 256
maxCCPinNodeB
                           INTEGER ::= 256
maxCPCHCell
                           INTEGER ::= maxNrOfCPCHs
maxCTFC
                           INTEGER ::= 16777215
                           INTEGER ::= maxCellinNodeB
maxLocalCellinNodeB
maxNoofLen
                           INTEGER ::= 7
maxRACHCell
                           INTEGER ::= maxPRACHCell
maxPRACHCell
                           INTEGER ::= 16
                           INTEGER ::= 64
maxPCPCHCell
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
                           INTEGER ::= 256
maxNrOfTFCIGroups
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-Rgst
                                                                  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-AdditionRgstTDD	ProtocolIE-ID ::= 73
id-DL-CCTrCH-InformationList-RL-SetupRgstTDD	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-ReconfigstFDD	ProtocolIE-ID ::= 82
id-DL-DPCH-Information-RL-SetupRqstFDD	ProtocolIE-ID ::= 83
id-DL-ReferencePowerInformationItem-DL-PC-Rgst	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 ::= 91 ProtocolIE-ID ::= 93
id-DSCHs-to-Add-TDD	ProtocoliE-ID ::= 95 ProtocolIE-ID ::= 96
id-DSCHs-to-Add-1DD id-DSCH-Information-DeleteList-RL-ReconfPrepTDD	ProtocoliE-ID ::= 98 ProtocoliE-ID ::= 98
id-DSCH-Information-Defeteblist-RL-ReconfPrepTDD	
<u> </u>	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-InformationItem-ResourceStatusInd	
id-Local-Cell-InformationList-AuditRsp	ProtocolIE-ID ::= 127 ProtocolIE-ID ::= 128
	ProtocoliE-ID ::= 129
id-AdjustmentPeriod	
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-ReconfRgstTDD	ProtocolIE-ID ::= 183
id-SCH-Information-Cell-SetupRgstTDD	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
Ta later ratameterrem eron becapitable	1100000111 10 197

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-AdditionRgstTDD	ProtocolIE-ID ::= 285
id-UL-CCTrCH-InformationList-RL-SetupRqstTDD	ProtocolIE-ID ::= 288
id-UL-DPCH-InformationItem-RL-AdditionRgstTDD	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-ReconfigstFDD	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-ReconfRgstTDD	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
<del>_</del>	
id-UL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 398 ProtocolIE-ID ::= 399
id-UL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD	
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

#### 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,
   ProtocolExtensionID,
   ProtocolIE-ID
FROM NBAP-CommonDataTypes;
__ ********************************
-- Class Definition for Protocol IEs
__ **********************
NBAP-PROTOCOL-IES ::= CLASS {
         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 {
            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 {
         ProtocolExtensionID
                               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 {
      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 {
         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 {
             NBAP-PRIVATE-IES.&id
   ({IEsSetParam}),
   criticality
                    NBAP-PRIVATE-IES.&criticality
   ({IEsSetParam}{@id}),
             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].

#### 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.

# 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:

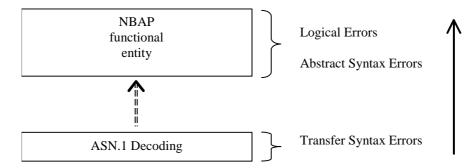


Figure 38: Protocol Errors in NBAP.

## 10.2 Transfer Syntax Error

A Transfer Syntax Error occurs when the receiver is not able to decode the received physical message. Transfer syntax errors are always detected in the process of ASN.1 decoding. If a Transfer Syntax Error occurs, the receiver should initiate Error Indication procedure with appropriate cause value for the Transfer Syntax protocol error.

Examples for Transfer Syntax Errors are:

- Violation of value ranges in ASN.1 definition of messages. e.g.: If an IE has a defined value range of 0 to 10 (ASN.1: INTEGER (0..10)), and 12 will be received, then this will be treated as a transfer syntax error.
- Violation in list element constraints. e.g.: If a list is defined as containing 1 to 10 elements, and 12 elements will be received, than this case will be handled as a transfer syntax error.
- Missing mandatory elements in ASN.1 SEQUENCE definitions (as sent by the originator of the message).
- Wrong order of elements in ASN.1 SEQUENCE definitions (as sent by the originator of the message).

## 10.3 Abstract Syntax Error

#### 10.3.1 General

An Abstract Syntax Error occurs when the receiving functional NBAP entity:

- 1. receives IEs or IE groups that cannot be understood (unknown id);
- 2. receives IEs for which the logical range is violated (e.g.: ASN.1 definition: 0 to 15, the logical range is 0 to 10 (values 11 to 15 are undefined), and 12 will be received; this case will be handled as an abstract syntax error using criticality information sent by the originator of the message);
- 3. does not receive IEs or IE groups but according to the specified presence of the concerning object, the IEs or IE groups should have been present in the received message;
- 4. receives IEs or IE groups that are defined to be part of that message in wrong order or with too many occurrences of the same IE or IE group;
- 5. receives IEs or IE groups but according to the conditional presence of the concerning object and the specified condition, the IEs or IE groups should not have been present in the received message.

Cases 1 and 2 (not comprehended IE/IE group) are handled based on received Criticality information. Case 3 (missing IE/IE group) is handled based on Criticality information and Presence information for the missing IE/IE group specified in the version of the specification used by the receiver. Case 4 (IEs or IE groups in wrong order or with too many occurrences) and Case 5 (erroneously present conditional IEs or IE groups) result in rejecting the procedure.

If an Abstract Syntax Error occurs, the receiver shall read the remaining message and shall then for each detected Abstract Syntax Error that belong to cases 1-3 act according to the Criticality Information and Presence Information for the IE/IE group due to which Abstract Syntax Error occurred in accordance with subclauses 10.3.4 and 10.3.5. The handling of cases 4 and 5 is specified in subclause 10.3.6.

## 10.3.2 Criticality Information

In the NBAP messages there is criticality information set for individual IEs and/or IE groups. This criticality information instructs the receiver how to act when receiving an IE or an IE group that is not comprehended, i.e. the entire item (IE or IE group) which is not (fully or partially) comprehended shall be treated in accordance with its own criticality information as specified in subclause 10.3.4.

In addition, the criticality information is used in case of the missing IE/IE group abstract syntax error (see subclause 10.3.5).

The receiving node shall take different actions depending on the value of the Criticality Information. The three possible values of the Criticality Information for an IE/IE group are:

- Reject IE
- Ignore IE and Notify Sender
- Ignore IE

The following rules restrict when a receiving entity may consider an IE, an IE group or an EP not comprehended (not implemented), and when action based on criticality information is applicable:

- 1. IE or IE group: When one new or modified IE or IE group is implemented for one EP from a standard version, then other new or modified IEs or IE groups specified for that EP in that standard version shall be considered comprehended by the receiving entity (some may still remain unsupported).
  - Note that this restriction is applicable to a sending entity for constructing messages.
- 2. EP: The comprehension of different EPs within a standard version or between different standard versions is not mandated. Any EP that is not supported may be considered not comprehended, even if another EP from that standard version is comprehended, and action based on criticality shall be applied.

When the criticality information cannot even be decoded in a not comprehended IE or IE group, the Error Indication procedure shall be initiated with an appropriate cause value.

#### 10.3.3 Presence Information

For many IEs/IE groups which are optional according to the ASN.1 transfer syntax, NBAP specifies separately if the presence of these IEs/IE groups is optional or mandatory with respect to RNS application by means of the presence field of the concerning object of class NBAP-PROTOCOL-IES, NBAP-PROTOCOL-IES-PAIR, NBAP-PROTOCOL-EXTENSION or NBAP-PRIVATE-IES.

The presence field of the indicated classes supports three values:

- 1. Optional;
- 2. Conditional;
- 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 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 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 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 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.

## 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 "not used", 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 "not used", 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 "not used" 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 preemption 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 "not used", 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 "not used", 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 "not used" 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 preemption 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 "not used", 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 "not used", 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 preemption" 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  $T_{\text{Preempt}}$  timer and complete the procedure that triggered the pre-emption process in accordance with the "Successful Operation" subclause of the procedure.

If the T<sub>Preempt</sub> 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.

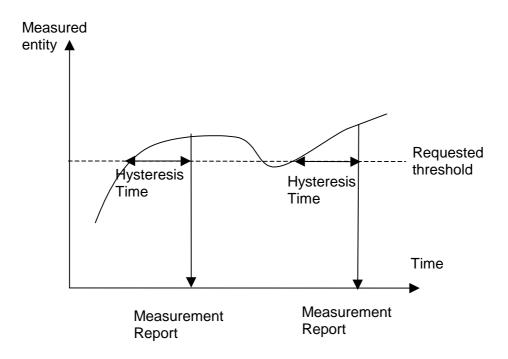


Figure B.1: Event A reporting with Hysteresis Time specified

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.

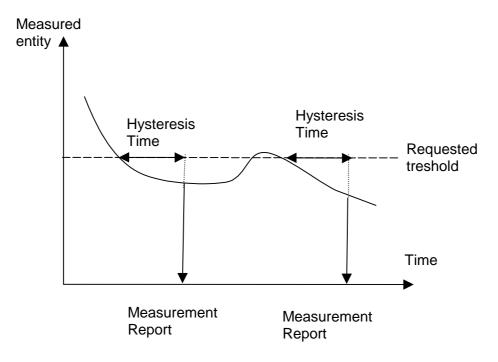


Figure B.2: Event B reporting with Hysteresis Time specified

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.

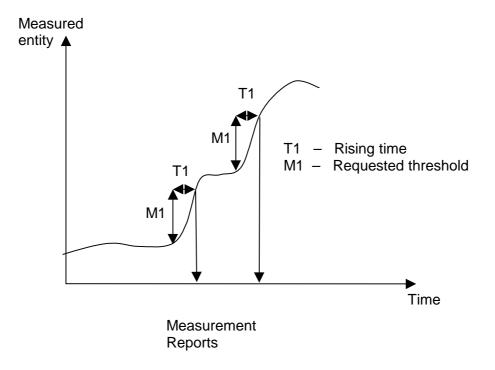


Figure B.3: Event C reporting

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.

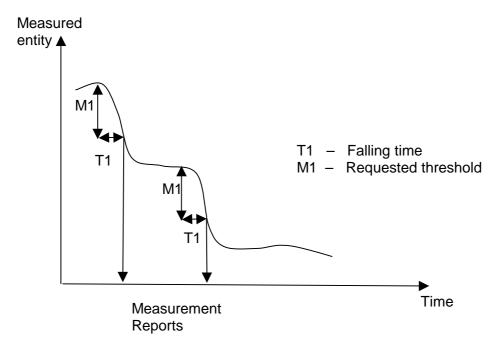


Figure B.4: Event D reporting

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.

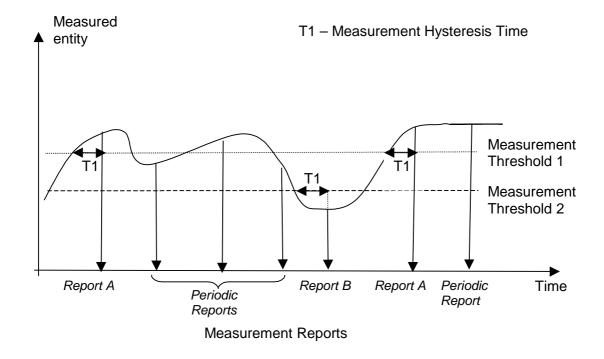
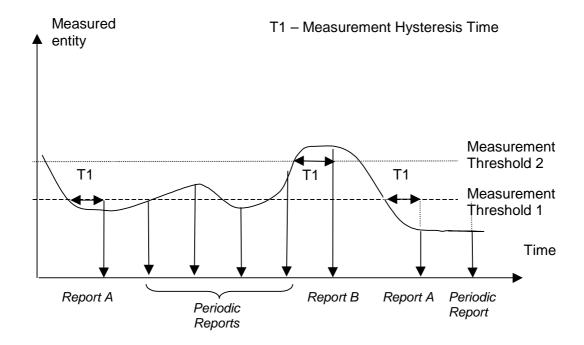


Figure B.5: Event E reporting with Hysteresis Time specified and Periodic Reporting requested

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.



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

Measurement Reports

## 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 referenc e	Semantics description	Criticality	Assigned Criticality
Message Type	М		-		YES	reject
Transaction ID	М				_	
Α	M				YES	reject
В	М				YES	reject
>E		1 <maxe></maxe>			EACH	ignore
>>F		1 <maxf></maxf>			-	
>>>G		03,			EACH	ignore
>>H		1 <maxh></maxh>			EACH	ignore
>>>G		03,			EACH	ignore and notify
>>G	M				YES	reject
>>J		1 <maxj></maxj>			-	
>>>G		03,			EACH	reject
С	M				YES	reject
>K		1 <maxk></maxk>			EACH	ignore and notify
>>L		1 <maxl></maxl>			-	
>>>M	0				-	
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.

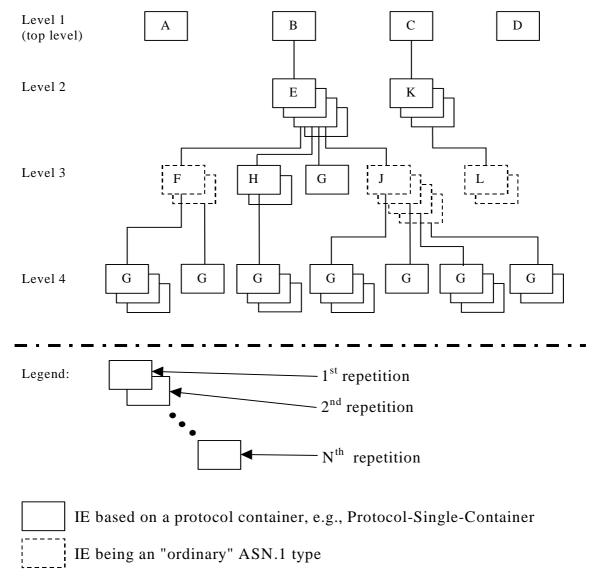
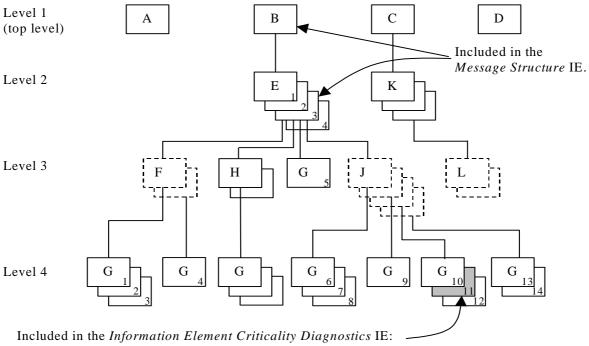


Figure C.1: Example of content of a received NBAP message based on the EXAMPLE MESSAGE

### C.3 Content of Criticality Diagnostics

#### C.3.1 Example 1



- a) IE ID IE
- b) Repetition Number IE

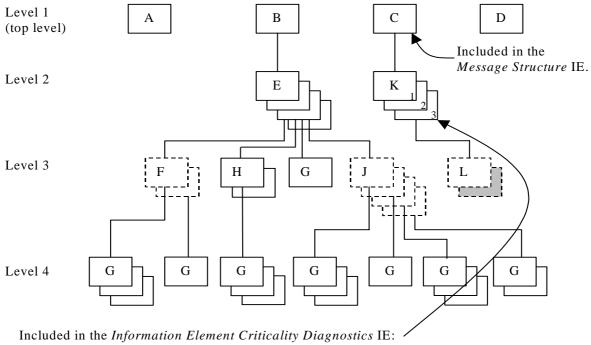
Figure C.2: Example of a received NBAP message containing a not comprehended IE

If there is an error within the instance marked as grey in the IE G in the IE J shown in the figure C.2 above, this will be reported within the *Information Element Criticality Diagnostics* IE within the *Criticality Diagnostics* IE as follows:

IE name	Value	Comment
IE Criticality	reject	Criticality for IE on the reported level, i.e. level 4.
IE ID	id-G	IE ID from the reported level, i.e. level 4.
Repetition	11	Repetition number on the reported level, i.e. level 4.
Number		(Since the IE E (level 2) is the lowest level included in the Message Structure IE this is
		the eleventh occurrence of IE G within the IE E (level 2).
Type of Error	not	
	underst	
	ood	
Message Structi	ıre, first rep	etition
>IE ID	id-B	IE ID from level 1.
Message Structi	ire, second	repetition
>IE ID	id-E	IE ID from the lowest level above the reported level, i.e. level 2.
>Repetition	3	Repetition number from the lowest level above the reported level, i.e. level 2.
Number		

- 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



- a) IE ID IE
- b) Repetition Number IE

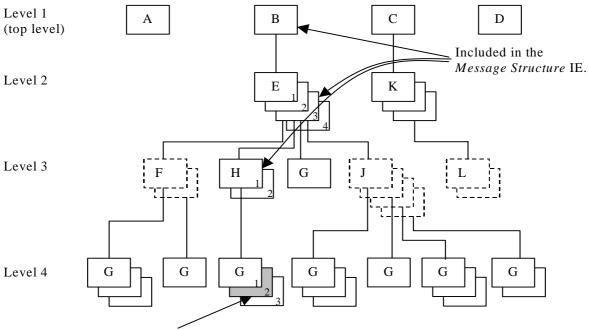
Figure C.3: Example of a received NBAP message containing a not comprehended IE

If there is an error within the second instance (marked as grey) in the sequence (IE L in the tabular format) on level 3 below IE K in the structure shown in the figure C.3 above, this will be reported within the *Information Element Criticality Diagnostics* IE within the *Criticality Diagnostics* IE as follows:

IE name	Value	Comment
IE Criticality	ignore	Criticality for IE on the reported level, i.e. level 2.
	and	
	notify	
IE ID	id-K	IE ID from the reported level, i.e. level 2.
Repetition	3	Repetition number on the reported level, i.e. level 2.
Number		
Type of Error	not	
	underst	
	ood	
Message Structu	re, first repe	etition
>IE ID	id-C	IE ID from the lowest level above the reported level, i.e. level 1.

Note 4. The IE L on level 3 cannot be reported individually included in the *Message Structure* IE since it has no criticality of its own.

#### C.3.3 Example 3



Included in the Information Element Criticality Diagnostics IE:

- a) IE ID IE
- b) Repetition Number IE

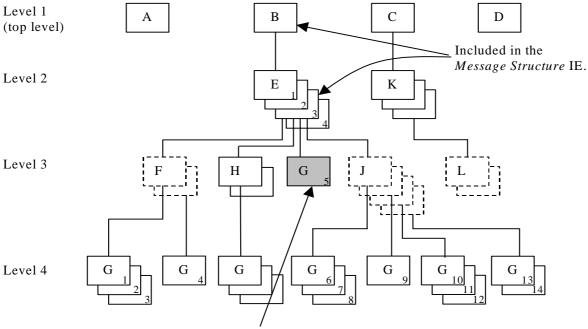
Figure C.4: Example of a received NBAP message containing a not comprehended IE

If there is an error within the instance marked as grey in the IE G in the IE H shown in the figure C.4 above, this will be reported within the *Information Element Criticality Diagnostics* IE within the *Criticality Diagnostics* IE as follows:

IE name	Value	Comment		
IE Criticality	reject	Criticality for IE on the reported level, i.e. level 4.		
IE ID	id-G	IE ID from the reported level, i.e. level 4.		
Repetition	2	Repetition number on the reported level, i.e. level 4.		
Number				
Type of Error	not			
	underst			
	ood			
Message Structur	e, first repe	etition		
>IE ID	id-B	IE ID from level 1.		
Message Structur	e, second	repetition		
>IE ID	id-E	IE ID from level 2.		
>Repetition	3	Repetition number from level 2.		
Number				
Message Structure, third repetition				
>IE ID	id-H	IE ID from the lowest level above the reported level, i.e. level 3.		
>Repetition	1	Repetition number from the lowest level above the reported level, i.e. level 3.		
Number				

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

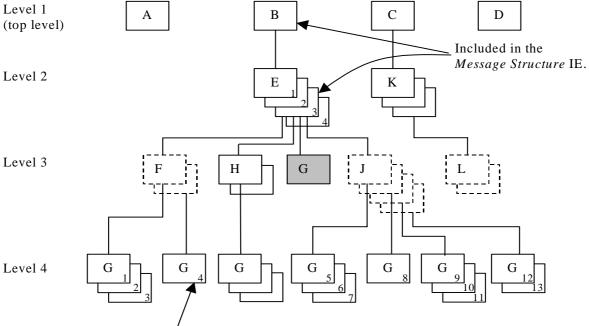
Figure C.5: Example of a received NBAP message containing a not comprehended IE

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	5	Repetition number on the reported level, i.e. level 3.
Number		(Since the IE E (level 2) is the lowest level included in the Message Structure IE this is
		the fifth occurrence of IE G within the IE E (level 2).
Type of Error	not	
	underst	
	ood	
Message Structur	e, first repe	etition
>IE ID	id-B	IE ID from level 1.
Message Structur	e, second	repetition
>IE ID	id-E	IE ID from the lowest level above the reported level, i.e. level 2.
>Repetition	3	Repetition number from the lowest level above the reported level, i.e. level 2.
Number		

Note 6. The repetition number of the reported IE indicates the number of repetitions of IE G received up to the detected erroneous repetition, counting all occurrences of the IE G below the same instance of the previous level with assigned criticality (instance 3 of IE E on level 2).

#### C.3.5 Example 5



Included in the Information Element Criticality Diagnostics IE:

- a) IE ID IE
- b) Repetition Number IE

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

If the instance marked as grey in the IE G in the IE E shown in the figure C.6 above, is missing this will be reported within the *Information Element Criticality Diagnostics* IE within the *Criticality Diagnostics* IE as follows:

IE name	Value	Comment
IE Criticality	reject	Criticality for IE on the reported level, i.e. level 3.
IE ID	id-G	IE ID from the reported level, i.e. level 3.
Repetition Number	4	Repetition number up to the missing IE on the reported level, i.e. level 3. (Since the IE E (level 2) is the lowest level included in the <i>Message Structure</i> IE there have been four occurrences of IE G within the IE E (level 2) up to the missing occurrence.
Type of Error	missing	
Message Structur	e, first repe	etition
>IE ID	id-B	IE ID from level 1.
Message Structur	e, 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-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-List,
   h
                    H-List,
    g
                    G-List1,
                    J-List,
    iE-Extensions ProtocolExtensionContainer { {E-ExtIEs} } OPTIONAL,
}
E-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
F-List ::= SEQUENCE (SIZE (1..maxF)) OF F
F ::= SEQUENCE {
                     G-List2 OPTIONAL.
    iE-Extensions ProtocolExtensionContainer { {F-ExtIEs} } OPTIONAL,
         NBAP-PROTOCOL-EXTENSION ::= {
F-ExtIEs
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 ::= {
    H ::= SEQUENCE {
                    G-List3 OPTIONAL,
                                     ProtocolExtensionContainer { {H-ExtIEs} } OPTIONAL,
    iE-Extensions
H-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
```

```
G-List3 ::= SEQUENCE (SIZE (1..3, ...)) OF ProtocolIE-Single-Container \{ \{G3\text{-}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 ::= {
    J-List ::= SEQUENCE (SIZE (1..maxJ)) OF J
J ::= SEQUENCE {
                   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-List,
    \begin{tabular}{ll} \hline iE-ExtensionS & ProtocolExtensionContainer $\{ \ \{K-ExtIEs\} \ \}$ & OPTIONAL, \\ \hline \end{tabular}
K-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
L-List ::= SEQUENCE (SIZE (1..maxL)) OF L
L ::= SEQUENCE {
                   M OPTIONAL,
   iE-Extensions ProtocolExtensionContainer { {L-ExtIEs} } OPTIONAL,
L-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
ExampleMessage-Extensions NBAP-PROTOCOL-EXTENSION ::= {
```

# Annex D (informative): Change history

				Chang	e history
TSG RAN#	Version	CR	Tdoc RAN	New	Subject/Comment
				Version	·
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- 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,	RP-010383	3.6.0	Approved at TSG RAN #12
RAN_12	3.5.0	407 411, 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, 449, 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

## History

Document history				
V3.0.0	January 2000	Publication		
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