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*Technical Specification*

## **Universal Mobile Telecommunications System (UMTS); UTRAN Iub interface NBAP signalling (3GPP TS 25.433 version 4.11.0 Release 4)**

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## Foreword

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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.



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# 1 Scope

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

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# 2 References

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

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

- [1] 3GPP TS 25.401: "UTRAN Overall Description".
- [2] 3GPP TS 25.426: "UTRAN Iur and Iub Interface Data Transport & Transport Signalling for DCH Data Streams".
- [3] CCITT Recommendation X.731 (01/92): "Information Technology – Open Systems Interconnection – Systems Management: State Management function".
- [4] 3GPP TS 25.215: "Physical layer – Measurements (FDD)".
- [5] 3GPP TS 25.225: "Physical layer – Measurements (TDD)".
- [6] 3GPP TS 25.430: "UTRAN Iub General Aspect and Principle".
- [7] 3GPP TS 25.211: "Physical channels and mapping of transport channels onto physical channels (FDD)".
- [8] 3GPP TS 25.212: "Multiplexing and channel coding (FDD)".
- [9] 3GPP TS 25.213: "Spreading and modulation (FDD)".
- [10] 3GPP TS 25.214: "Physical layer procedures (FDD)".
- [11] ITU-T Recommendation X.691, (12/97) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)".
- [12] ITU-T Recommendation X.680, (12/97) "Information Technology - Abstract Syntax Notation One (ASN.1): Specification of basic notation".
- [13] ITU-T Recommendation X.681, (12/97) "Information Technology - Abstract Syntax Notation One (ASN.1): Information object specification".
- [14] 3GPP TS 25.104: "UTRA (BS) FDD; Radio Transmission and Reception".
- [15] 3GPP TS 25.105: "UTRA (BS) TDD; Radio Transmission and Reception".
- [16] 3GPP TS 25.427: "UTRAN Iur/Iub Interface User Plane Protocol for DCH Data Stream".
- [17] 3GPP TS 25.402: "Synchronisation in UTRAN Stage2".
- [18] 3GPP TS 25.331: "RRC Protocol Specification".

- [19] 3GPP TS 25.221: "Physical channels and mapping of transport channels onto physical channels[TDD]".
- [20] 3GPP TS 25.223: "Spreading and modulation (TDD)".
- [21] 3GPP TS 25.224: "Physical Layer Procedures (TDD)".
- [22] 3GPP TS 25.133: "Requirements for support of Radio Resource management (FDD)".
- [23] 3GPP TS 25.123: "Requirements for support of Radio Resource management (TDD)".
- [24] 3GPP TS 25.435: "UTRAN Iub Interface: User Plane Protocols for Common Transport Channel Data Streams".
- [25] 3GPP TS 25.302: "Services Provided by the Physical Layer".
- [26] 3GPP TR 25.921: "Guidelines and Principles for Protocol Description and Error Handling".
- [27] ICD-GPS-200: "Navstar GPS Space Segment/Navigation User Interface".
- [28] RTCM-SC104: "RTCM Recommended Standards for Differential GNSS Service (v.2.2)".

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## 3 Definitions, Symbols and Abbreviations

### 3.1 Definitions

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

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

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

An EP consists of an initiating message and possibly a response message.

Two kinds of EPs are used:

- **Class 1:** Elementary Procedures with response (success or failure).
- **Class 2:** Elementary Procedures without response.

For **Class 1** EPs, the types of responses can be as follows:

Successful

- A signalling message explicitly indicates that the elementary procedure has been successfully completed with the receipt of the response.

Unsuccessful

- A signalling message explicitly indicates that the EP failed.

**Class 2** EPs are considered always successful.

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

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

either of the procedures Synchronised Radio Link Reconfiguration Commit or Synchronised Radio Link Reconfiguration Cancellation has been completed.

## 3.2 Symbols

Void.

## 3.3 Abbreviations

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

A-GPS	Assisted GPS
AICH	Acquisition Indicator Channel
AP-AICH	Access Preamble Acquisition Indicator Channel
ASN.1	Abstract Syntax Notation One
BCCH	Broadcast Control Channel
CCPCH	Common Control Physical Channel
CFN	Connection Frame Number
CM	Compressed Mode
CPCH	Common Packet Channel
CPICH	Common Pilot Channel
CRNC	Controlling Radio Network Controller
CSICH	CPCH Status Indicator Channel
DCH	Dedicated Channel
DGPS	Differential GPS
DL	Downlink
DPCCH	Dedicated Physical Control Channel
DPCH	Dedicated Physical Channel
DPDCH	Dedicated Physical Data Channel
DSCH	Downlink Shared Channel
FACH	Forward Access Channel
FDD	Frequency Division Duplex
FP	Frame Protocol
GPS	Global Positioning System
IPDL	Idle Periods in the DownLink
ISCP	Interference Signal Code Power
L1	Layer 1
L2	Layer 2
MIB	Master Information Block
NBAP	Node B Application Part
O&M	Operation and Maintenance
PCCPCH	Primary Common Control Physical Channel
PCH	Paging Channel
PCPCH	Physical Common Packet Channel
PDSCH	Physical Downlink Shared Channel
PICH	Paging Indication Channel
PUSCH	Physical Uplink Shared Channel
RACH	Random Access Channel
RL	Radio Link
RLS	Radio Link Set
RNC	Radio Network Controller
RRC	Radio Resource Control
SB	Scheduling Block
SCCPCH	Secondary Common Control Physical Channel
SCH	Synchronisation Channel
SCTD	Space Code Transmit Diversity
SIB	System Information Block
SRNC	Serving Radio Network Controller

SSDT	Site Selection Diversity Transmission
STTD	Space Time Transmit Diversity
TDD	Time Division Duplex
TFC	Transport Format Combination
TFCI	Transport Format Combination Indicator
TFCS	Transport Format Combination Set
TFS	Transport Format Set
TPC	Transmit Power Control
TSTD	Time Switched Transmit Diversity
UARFCN	UTRA Absolute Radio Frequency Channel Number
UE	User Equipment
UL	Uplink
UMTS	Universal Mobile Telecommunications System
USCH	Uplink Shared Channel
UTRA	Universal Terrestrial Radio Access
UTRAN	Universal Terrestrial Radio Access Network

---

## 4 General

### 4.1 Procedure Specification Principles

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

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

- The procedure text discriminates between:

- 1) Functionality which "shall" be executed

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

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

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

- Any required inclusion of an optional IE in a response message is explicitly indicated in the procedure text. If the procedure text does not explicitly indicate that an optional IE shall be included in a response message, the optional IE shall not be included. For requirements on including *Criticality Diagnostics* IE, see section 10. For examples on how to use the *Criticality Diagnostics* IE, see Annex C.

### 4.2 Forwards and Backwards Compatibility

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

## 4.3 Specification Notations

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

- [FDD] This tagging of a word indicates that the word preceding the tag "[FDD]" applies only to FDD. This tagging of a heading indicates that the heading preceding the tag "[FDD]" and the section following the heading applies only to FDD.
- [TDD] This tagging of a word indicates that the word preceding the tag "[TDD]" applies only to TDD, including 3.84Mcps TDD and 1.28Mcps TDD. This tagging of a heading indicates that the heading preceding the tag "[TDD]" and the section following the heading applies only to TDD, including 3.84Mcps TDD and 1.28Mcps TDD.
- [3.84Mcps TDD] This tagging of a word indicates that the word preceding the tag "[3.84Mcps TDD]" applies only to 3.84Mcps TDD. This tagging of a heading indicates that the heading preceding the tag "[3.84Mcps TDD]" and the section following the heading applies only to 3.84Mcps TDD.
- [1.28Mcps TDD] This tagging of a word indicates that the word preceding the tag "[1.28Mcps TDD]" applies only to 1.28Mcps TDD. This tagging of a heading indicates that the heading preceding the tag "[1.28Mcps TDD]" and the section following the heading applies only to 1.28Mcps TDD.
- [FDD - ...] This tagging indicates that the enclosed text following the "[FDD - " applies only to FDD. Multiple sequential paragraphs applying only to FDD are enclosed separately to enable insertion of TDD specific (or common) paragraphs between the FDD specific paragraphs.
- [TDD - ...] This tagging indicates that the enclosed text following the "[TDD - " applies only to TDD, including 3.84Mcps TDD and 1.28Mcps TDD. Multiple sequential paragraphs applying only to TDD are enclosed separately to enable insertion of FDD specific (or common) paragraphs between the TDD specific paragraphs.
- [3.84Mcps TDD - ...] This tagging indicates that the enclosed text following the "[3.84Mcps TDD - " applies only to 3.84Mcps TDD. Multiple sequential paragraphs applying only to 1.28Mcps TDD are enclosed separately to enable insertion of FDD and TDD specific (or common) paragraphs between the 3.84Mcps TDD specific paragraphs.
- [1.28Mcps TDD - ...] This tagging indicates that the enclosed text following the "[1.28Mcps TDD - " applies only to 1.28Mcps TDD. Multiple sequential paragraphs applying only to 1.28Mcps TDD are enclosed separately to enable insertion of FDD and TDD specific (or common) paragraphs between the 1.28Mcps TDD specific paragraphs.
- Procedure When referring to an elementary procedure in the specification the Procedure Name is written with the first letters in each word in upper case characters followed by the word "procedure", e.g. Radio Link Setup procedure.
- Message When referring to a message in the specification the MESSAGE NAME is written with all letters in upper case characters followed by the word "message", e.g. RADIO LINK SETUP REQUEST message.
- IE When referring to an information element (IE) in the specification the *Information Element Name* is written with the first letters in each word in upper case characters and all letters in Italic font followed by the abbreviation "IE", e.g. *Transport Format Set* IE.
- Value of an IE When referring to the value of an information element (IE) in the specification the "Value" is written as it is specified in subclause 9.2 enclosed by quotation marks, e.g. "Abstract Syntax Error (Reject)" or "SSDT Active in the UE".

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## 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.

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## 6 Services Expected from Signalling Transport

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

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## 7 Functions of NBAP

The NBAP protocol provides the following functions:

- Cell Configuration Management. This function gives the CRNC the possibility to manage the cell configuration information in a Node B.
- Common Transport Channel Management. This function gives the CRNC the possibility to manage the configuration of Common Transport Channels in a Node B.
- System Information Management. This function gives the CRNC the ability to manage the scheduling of System Information to be broadcast in a cell.
- Resource Event Management. This function gives the Node B the ability to inform the CRNC about the status of Node B resources.
- Configuration Alignment. This function gives the CRNC and the Node B the possibility to verify and enforce that both nodes have the same information on the configuration of the radio resources.
- Measurements on Common Resources. This function allows the CRNC to initiate measurements on common resources in the Node B. The function also allows the Node B to report the result of the measurements.
- Radio Link Management. This function allows the CRNC to manage radio links using dedicated resources in a Node B.
- Radio Link Supervision. This function allows the CRNC to report failures and restorations of a Radio Link.
- Compressed Mode Control [FDD]. This function allows the CRNC to control the usage of compressed mode in a Node B.
- Measurements on Dedicated Resources. This function allows the CRNC to initiate measurements on dedicated resources in the Node B. The function also allows the Node B to report the result of the measurements.
- DL Power Drifting Correction [FDD]. This function allows the CRNC to adjust the DL power level of one or more Radio Links in order to avoid DL power drifting between the Radio Links.
- Reporting of General Error Situations. This function allows reporting of general error situations, for which function specific error messages have not been defined.
- Physical Shared Channel Management [TDD]. This function allows the CRNC to manage physical resources in the Node B belonging to Shared Channels (USCH/DSCH).
- DL Power Timeslot Correction [TDD]. This function enables the Node B to apply an individual offset to the transmission power in each timeslot according to the downlink interference level at the UE.
- Cell Synchronisation [3.84Mcps TDD]. This function allows the synchronisation of cells or Node Bs via the air interface.

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

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

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

Function	Elementary Procedure(s)
Cell Configuration Management	a) Cell Setup b) Cell Reconfiguration c) Cell Deletion
Common Transport Channel Management	a) Common Transport Channel Setup b) Common Transport Channel Reconfiguration c) Common Transport Channel Deletion
System Information Management	System Information Update
Resource Event Management	a) Block Resource b) Unblock Resource c) Resource Status Indication
Configuration Alignment	a) Audit Required b) Audit c) Reset
Measurements on Common Resources	a) Common Measurement Initiation b) Common Measurement Reporting c) Common Measurement Termination d) Common Measurement Failure
Radio Link Management.	a) Radio Link Setup b) Radio Link Addition c) Radio Link Deletion d) Unsynchronised Radio Link Reconfiguration e) Synchronised Radio Link Reconfiguration Preparation f) Synchronised Radio Link Reconfiguration Commit g) Synchronised Radio Link Reconfiguration Cancellation h) Radio Link Pre-emption
Radio Link Supervision.	a) Radio Link Failure b) Radio Link Restoration
Compressed Mode Control [FDD]	a) Radio Link Setup b) Radio Link Addition c) Compressed Mode Command d) Unsynchronised Radio Link Reconfiguration e) Synchronised Radio Link Reconfiguration Preparation f) Synchronised Radio Link Reconfiguration Commit g) Synchronised Radio Link Reconfiguration Cancellation
Measurements on Dedicated Resources	a) Dedicated Measurement Initiation b) Dedicated Measurement Reporting c) Dedicated Measurement Termination d) Dedicated Measurement Failure
DL Power Drifting Correction [FDD]	Downlink Power Control
Reporting of General Error Situations	Error Indication
Physical Shared Channel Management [TDD]	Physical Shared Channel Reconfiguration
DL Power Timeslot Correction [TDD]	Downlink Power Timeslot Control
Cell Synchronisation [3.84Mcps TDD]	a) Cell Synchronisation Initiation b) Cell Synchronisation Reconfiguration c) Cell Synchronisation Reporting d) Cell Synchronisation Termination e) Cell Synchronisation Failure f) Cell Synchronisation Adjustment
Information Exchange	a) Information Exchange Initiation b) Information Reporting c) Information Exchange Termination d) Information Exchange Failure



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## 8 NBAP Procedures

### 8.1 Elementary Procedures

NBAP procedures are divided into common procedures and dedicated procedures.

- NBAP common procedures are procedures that request initiation of a Node B Communication Context for a specific UE in Node B or are not related to a specific UE. NBAP common procedures also incorporate logical O&M [1] procedures.
- NBAP dedicated procedures are procedures that are related to a specific Node B Communication Context in Node B. This Node B Communication Context is identified by a Node B Communication Context identity.

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

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

Table 2: Class 1

Elementary Procedure	Message	Successful Outcome	Unsuccessful Outcome
		Response message	Response message
Cell Setup	CELL SETUP REQUEST	CELL SETUP RESPONSE	CELL SETUP FAILURE
Cell Reconfiguration	CELL RECONFIGURATION REQUEST	CELL RECONFIGURATION RESPONSE	CELL RECONFIGURATION FAILURE
Cell Deletion	CELL DELETION REQUEST	CELL DELETION RESPONSE	
Common Transport Channel Setup	COMMON TRANSPORT CHANNEL SETUP REQUEST	COMMON TRANSPORT CHANNEL SETUP RESPONSE	COMMON TRANSPORT CHANNEL SETUP FAILURE
Common Transport Channel Reconfiguration	COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST	COMMON TRANSPORT CHANNEL RECONFIGURATION RESPONSE	COMMON TRANSPORT CHANNEL RECONFIGURATION FAILURE
Common Transport Channel Deletion	COMMON TRANSPORT CHANNEL DELETION REQUEST	COMMON TRANSPORT CHANNEL DELETION RESPONSE	
Physical Shared Channel Reconfigure [TDD]	PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST	PHYSICAL SHARED CHANNEL RECONFIGURATION RESPONSE	PHYSICAL SHARED CHANNEL RECONFIGURATION FAILURE
Audit	AUDIT REQUEST	AUDIT RESPONSE	AUDIT FAILURE
Block Resource	BLOCK RESOURCE REQUEST	BLOCK RESOURCE RESPONSE	BLOCK RESOURCE FAILURE
Radio Link Setup	RADIO LINK SETUP REQUEST	RADIO LINK SETUP RESPONSE	RADIO LINK SETUP FAILURE
System Information Update	SYSTEM INFORMATION UPDATE REQUEST	SYSTEM INFORMATION UPDATE RESPONSE	SYSTEM INFORMATION UPDATE FAILURE
Common Measurement Initiation	COMMON MEASUREMENT INITIATION REQUEST	COMMON MEASUREMENT INITIATION RESPONSE	COMMON MEASUREMENT INITIATION FAILURE
Radio Link Addition	RADIO LINK ADDITION REQUEST	RADIO LINK ADDITION RESPONSE	RADIO LINK ADDITION FAILURE
Radio Link Deletion	RADIO LINK DELETION REQUEST	RADIO LINK DELETION RESPONSE	
Synchronised Radio Link Reconfiguration Preparation	RADIO LINK RECONFIGURATION PREPARE	RADIO LINK RECONFIGURATION READY	RADIO LINK RECONFIGURATION FAILURE
Unsynchronised Radio Link Reconfiguration	RADIO LINK RECONFIGURATION REQUEST	RADIO LINK RECONFIGURATION RESPONSE	RADIO LINK RECONFIGURATION FAILURE
Dedicated Measurement Initiation	DEDICATED MEASUREMENT INITIATION REQUEST	DEDICATED MEASUREMENT INITIATION RESPONSE	DEDICATED MEASUREMENT INITIATION FAILURE
Reset	RESET REQUEST	RESET RESPONSE	
Cell Synchronisation Initiation [3.84Mcps TDD]	CELL SYNCHRONISATION INITIATION REQUEST	CELL SYNCHRONISATION INITIATION RESPONSE	CELL SYNCHRONISATION INITIATION FAILURE
Cell Synchronisation Reconfiguration [3.84 Mcps TDD]	CELL SYNCHRONISATION RECONFIGURATION REQUEST	CELL SYNCHRONISATION RECONFIGURATION RESPONSE	CELL SYNCHRONISATION RECONFIGURATION FAILURE
Cell Synchronisation Adjustment [3.84Mcps TDD]	CELL SYNCHRONISATION ADJUSTMENT REQUEST	CELL SYNCHRONISATION ADJUSTMENT RESPONSE	CELL SYNCHRONISATION ADJUSTMENT FAILURE
Information Exchange Initiation	INFORMATION EXCHANGE INITIATION REQUEST	INFORMATION EXCHANGE INITIATION RESPONSE	INFORMATION EXCHANGE INITIATION FAILURE

Table 3: Class 2

Elementary Procedure	Message
Resource Status Indication	RESOURCE STATUS INDICATION
Audit Required	AUDIT REQUIRED INDICATION
Common Measurement Reporting	COMMON MEASUREMENT REPORT
Common Measurement Termination	COMMON MEASUREMENT TERMINATION REQUEST
Common Measurement Failure	COMMON MEASUREMENT FAILURE INDICATION
Synchronised Radio Link Reconfiguration Commit	RADIO LINK RECONFIGURATION COMMIT
Synchronised Radio Link Reconfiguration Cancellation	RADIO LINK RECONFIGURATION CANCEL
Radio Link Failure	RADIO LINK FAILURE INDICATION
Radio Link Restoration	RADIO LINK RESTORE INDICATION
Dedicated Measurement Reporting	DEDICATED MEASUREMENT REPORT
Dedicated Measurement Termination	DEDICATED MEASUREMENT TERMINATION REQUEST
Dedicated Measurement Failure	DEDICATED MEASUREMENT FAILURE INDICATION
Downlink Power Control [FDD]	DL POWER CONTROL REQUEST
Compressed Mode Command [FDD]	COMPRESSED MODE COMMAND
Unblock Resource	UNBLOCK RESOURCE INDICATION
Error Indication	ERROR INDICATION
Downlink Power Timeslot Control [TDD]	DL POWER TIMESLOT CONTROL REQUEST
Radio Link Pre-emption	RADIO LINK PREEMPTION REQUIRED INDICATION
Cell Synchronisation Reporting [3.84Mcps TDD]	CELL SYNCHRONISATION REPORT
Cell Synchronisation Termination [3.84Mcps TDD]	CELL SYNCHRONISATION TERMINATION REQUEST
Cell Synchronisation Failure [3.84Mcps TDD]	CELL SYNCHRONISATION FAILURE INDICATION
Information Reporting	INFORMATION REPORT
Information Exchange Termination	INFORMATION EXCHANGE TERMINATION REQUEST
Information Exchange Failure	INFORMATION EXCHANGE FAILURE INDICATION

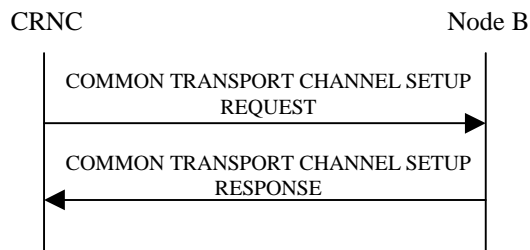
## 8.2 NBAP Common Procedures

### 8.2.1 Common Transport Channel Setup

#### 8.2.1.1 General

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

### 8.2.1.2 Successful Operation



**Figure 1: Common Transport Channel Setup procedure, Successful Operation**

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

One message can configure only one of the following combinations:

- [FDD - one Secondary CCPCH, and FACHs, PCH and PICH related to that Secondary CCPCH], or
- [TDD - one CCTrCH consisting of Secondary CCPCHs and FACHs, PCH with the corresponding PICH related to that group of Secondary CCPCHs], or
- one [1.28Mcps TDD – or more] PRACH, one RACH and one AICH [FDD] and one FPACH[1.28Mcps TDD] related to that PRACH.
- [FDD-PCPCHs, one CPCH, one AP\_AICH and one CD/CA-ICH related to that group of PCPCHs.]

#### Secondary CCPCH:

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

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

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

If the COMMON TRANSPORT CHANNEL SETUP REQUEST message contains the *FACH Parameters* IE, the Node B shall configure and activate the indicated FACH(s) according to the COMMON TRANSPORT CHANNEL SETUP REQUEST message.

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

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

#### PRACH:

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

#### [1.28Mcps TDD – FPACH]:

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

#### [FDD-PCPCHs]:

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

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

If the COMMON TRANSPORT CHANNEL SETUP REQUEST message includes *CD Sub Channel Numbers* IE, the Node B may use only the given CD Sub Channels on CD/CA-ICH. Otherwise, the Node B may use all the CD Sub Channels on CD/CA-ICH.

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

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

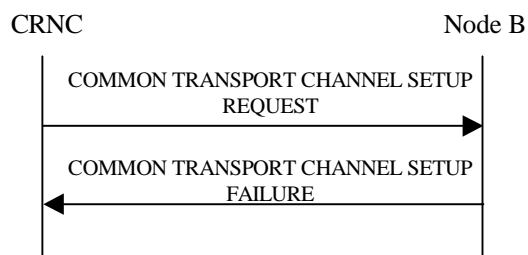
If the COMMON TRANSPORT CHANNEL SETUP REQUEST message includes *AP Sub Channel Number* IE in *SF Request Parameters* IE, the Node B shall use only these AP sub channel number to distinguish the requested Spreading Factors. Otherwise all AP subchannel numbers are used to distinguish the configured Spreading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

#### General:

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

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

### 8.2.1.3 Unsuccessful Operation



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

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

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

Typical cause values are as follows:

#### Radio Network Layer Cause

- Cell not available
- Power level not supported

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

#### Transport Layer Cause

- Transport Resources Unavailable

#### Miscellaneous Cause

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

### 8.2.1.4 Abnormal Conditions

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

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

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

[1.28Mcps TDD – If the *Common Transport Channel ID* IE, and the *Transport Format Set* IE are not equal for each RACH configured in PRACH, the Node B shall regard the Common Transport Channel Setup procedure as having failed and the Node B shall send the COMMON TRANSPORT CHANNEL SETUP FAILURE message to the CRNC.]

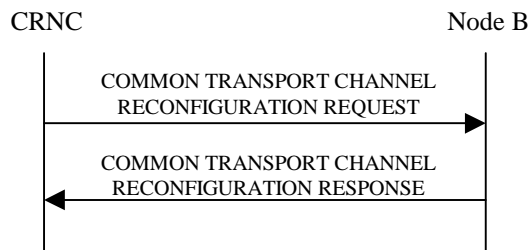
If the state is already Enabled or Disabled [6] for at least one channel in the COMMON TRANSPORT CHANNEL SETUP REQUEST message which is received, the Node B shall reject the configuration of all channels with the *Cause* IE set to "Message not compatible with receiver state".

## 8.2.2 Common Transport Channel Reconfiguration

### 8.2.2.1 General

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

### 8.2.2.2 Successful Operation



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

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

One message can configure only one of the following combinations:

- [FDD – FACHs, one PCH and/or one PICH related to one Secondary CCPCH], or
- [TDD – one CCTrCH consisting of Secondary CCPCHs and FACHs, PCH with the corresponding PICH related to that group of Secondary CCPCHs], or
- one RACH and/or one AICH[FDD] ) and/or one FPACH[1.28Mcps TDD] related to one PRACH, or
- [FDD – one CPCH and/or one AP-AICH and/or one CD/CA-ICH related to one CPCH].

#### SCCPCH:

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

#### FACH:

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

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

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

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

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

#### PCH:

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

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

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

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

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

#### PICH:

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

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

**[FDD – PRACH]:**

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

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

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

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

**[FDD – AICH]:**

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

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

**[FDD – CPCH]:**

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

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

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

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

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

**[FDD – AP-AICH]:**

If the *AP-AICH Parameters* IE is present, the Node B shall reconfigure the indicated AP-AICH.

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

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

**[FDD-CD/CA-ICH]:**

If the *CD/CA-ICH Parameters* IE is present, the Node B shall reconfigure the indicated CD/CA-ICH.

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

**[1.28Mcps TDD - FPACH]:**

If the *FPACH Parameters* IE is included, the Node B shall reconfigure the indicated FPACH.

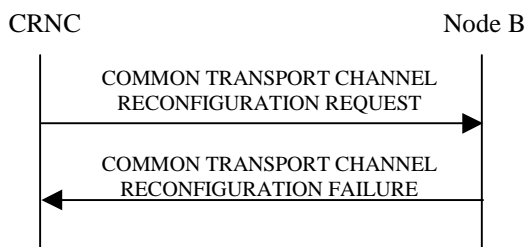
If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes the *Max FPACH Power* IE, the Node B shall reconfigure the power that the FPACH shall use.



**General:**

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

### 8.2.2.3 Unsuccessful Operation



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

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

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

Typical cause values are as follows:

#### Radio Network Layer Cause

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

#### Transport Layer Cause

- Transport Resources Unavailable

#### Miscellaneous Cause

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

### 8.2.2.4 Abnormal Conditions

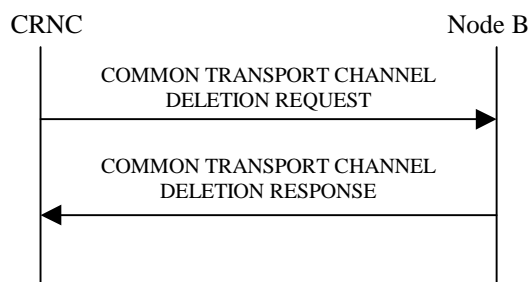
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## 8.2.3 Common Transport Channel Deletion

### 8.2.3.1 General

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

### 8.2.3.2 Successful Operation



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

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

#### Secondary CCPCH:

If the *Common Physical Channel ID* IE contained in the COMMON TRANSPORT CHANNEL DELETION REQUEST message indicates a Secondary CCPCH, the Node B shall delete the indicated channel and the FACHs and PCH supported by that Secondary CCPCH. If there is a PCH that is deleted, the PICH associated with that PCH shall also be deleted.

#### PRACH:

If the *Common Physical Channel ID* IE contained in the COMMON TRANSPORT CHANNEL DELETION REQUEST message indicates a PRACH, the Node B shall delete the indicated channel and the RACH supported by the PRACH. [FDD - The AICH associated with the RACH shall also be deleted.]

#### [FDD – PCPCHs]:

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

#### General:

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

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

### 8.2.3.3 Unsuccessful Operation

-

### 8.2.3.4 Abnormal Conditions

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

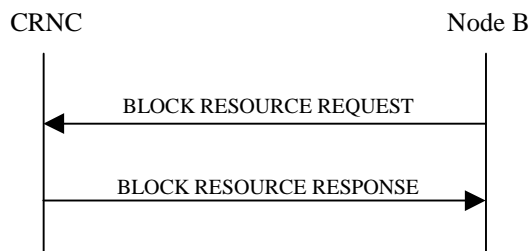
## 8.2.4 Block Resource

### 8.2.4.1 General

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

The logical resource that can be blocked is a cell.

### 8.2.4.2 Successful Operation



**Figure 6: Block Resource procedure, Successful Operation**

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

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

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

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

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

If the resources are successfully blocked, the CRNC shall respond with a BLOCK RESOURCE RESPONSE message. Upon reception of the BLOCK RESOURCE RESPONSE message, the Node B may disable [3.84Mcps TDD - SCH], [FDD - the Primary SCH, the Secondary SCH, the Primary CPICH, if present the Secondary CPICH(s)], [1.28Mcps TDD – DwPCH] and the Primary CCPCH. The other logical resources in the cell shall be considered as blocked.

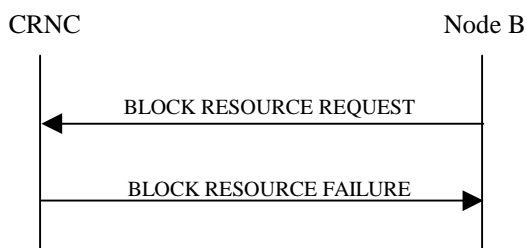
Reconfiguration of logical resources and change of System Information can be done, even when the logical resources are blocked.

#### **Interactions with the Unblock Resource procedure:**

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

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

### 8.2.4.3 Unsuccessful Operation



**Figure 7: Block Resource procedure, Unsuccessful Operation**

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

Typical cause values are as follows:

#### Miscellaneous Cause

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

#### Radio Network Layer Cause

- Priority transport channel established

### 8.2.4.4 Abnormal Conditions

-

## 8.2.5 Unblock Resource

### 8.2.5.1 General

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

The logical resource that can be unblocked is a cell.

### 8.2.5.2 Successful Operation



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

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

INDICATION message. Upon reception of the UNBLOCK RESOURCE INDICATION message, the CRNC may permit the use of the logical resources.

All physical channels and transport channels associated to the cell that is unblocked are also unblocked.

### 8.2.5.3 Abnormal Conditions

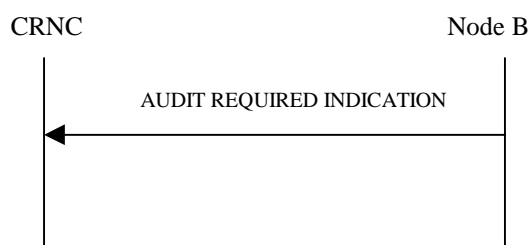
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## 8.2.6 Audit Required

### 8.2.6.1 General

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

### 8.2.6.2 Successful Operation



**Figure 9: Audit Required procedure, Successful Operation**

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

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

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

### 8.2.6.3 Abnormal Conditions

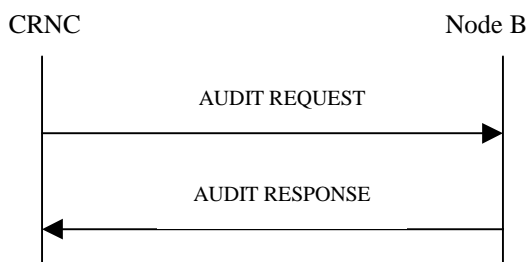
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## 8.2.7 Audit

### 8.2.7.1 General

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

### 8.2.7.2 Successful Operation



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

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

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

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

#### Information Provided In One Audit Sequence.

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

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

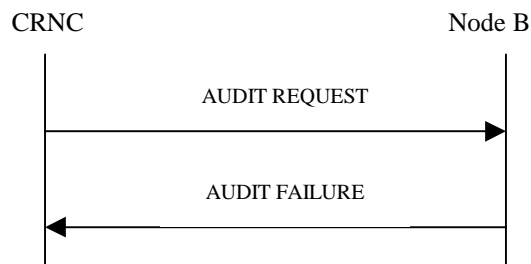
If the Node B internal resources are pooled for a group of cells, the Node B shall include one *Local Cell Group Information* IE containing the Node B internal resource capacity and the consumption laws per group of cells. If the *UL Capacity Credit* IE is not present in the *Local Cell Group Information*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

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

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 cannot perform an audit of the configuration and status of the logical resources, it shall send an AUDIT FAILURE message with the *Cause* IE set to an appropriate value.

### 8.2.7.4 Abnormal Conditions

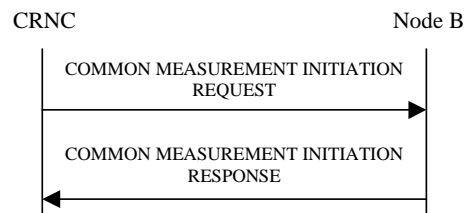
If the Node B receives the AUDIT REQUEST message with the *Start of Audit Sequence* IE set to "not start of audit sequence" and there is no ongoing audit sequence, the Node B shall send the AUDIT FAILURE message with the appropriate cause value.

## 8.2.8 Common Measurement Initiation

### 8.2.8.1 General

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

### 8.2.8.2 Successful Operation



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

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

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

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

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

If the *Common Measurement Type* IE is not set to "SFN-SFN Observed Time Difference" and the *SFN Reporting Indicator* IE is set to "FN Reporting Required", the *SFN* IE shall be included in the COMMON MEASUREMENT REPORT message or in the COMMON MEASUREMENT RESPONSE message, the latter only in the case the *Report*

*Characteristics* IE is set to "On Demand". The reported SFN shall be the SFN at the time when the measurement value was reported by the layer 3 filter, referred to as point C in the measurement model [25]. If the *Common Measurement Type* IE is set to "SFN-SFN Observed Time Difference" and the *SFN Reporting Indicator* IE is ignored.

### Common measurement type

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

### Report characteristics

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

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

If the *Report Characteristics* IE is set to "Periodic", the Node B shall periodically initiate a Common Measurement Reporting procedure for this measurement, with the requested report frequency. If the *Common Measurement Type* IE is set to "SFN-SFN Observed Time Difference", all the available measurement results shall be reported in the *Successful Neighbouring Cell SFN-SFN Observed Time Difference Measurement Information* IE in the *SFN-SFN Measurement Value Information* IE and the Node B shall indicate in the *Unsuccessful Neighbouring Cell SFN-SFN Observed Time Difference Measurement Information* IE all the remaining neighbouring cells with no measurement result available in the Common Measurement Reporting procedure. If the *SFN* IE is provided, it indicates the frame for which the first measurement value of a periodic reporting shall be provided. The provided measurement value shall be the one reported by the layer 3 filter, referred to as point C in the measurement model [25].

If the *Report Characteristics* IE is set to "Event A", the Node B shall initiate the Common Measurement Reporting procedure when the measured entity rises above the requested threshold and stays there for the requested hysteresis time. If the *Measurement Hysteresis Time* IE is not included, the Node B shall use the value zero for the hysteresis time.

If the *Report Characteristics* IE is set to "Event B", the Node B shall initiate the Common Measurement Reporting procedure when the measured entity falls below the requested threshold and stays there for the requested hysteresis time. If the *Measurement Hysteresis Time* IE is not included, the Node B shall use the value zero for the hysteresis time.

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

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

If the *Report Characteristics* IE is set to "Event E", the Node B shall initiate the Common Measurement Reporting procedure when the measured entity rises above the 'Measurement Threshold 1' and stays there for the 'Measurement Hysteresis Time' (Report A). When the conditions for Report A are met and the *Report Periodicity* IE is provided, the Node B shall initiate the Common Measurement Reporting procedure periodically. If the conditions for Report A have been met and the measured entity falls below the 'Measurement Threshold 2' and stays there for the 'Measurement Hysteresis Time', the Node B shall initiate the Common Measurement Reporting procedure (Report B) as well as terminating any corresponding periodic reporting. If the *Measurement Threshold 2* IE is not present, the Node B shall use the value of the *Measurement Threshold 1* IE instead. If the *Measurement Hysteresis Time* IE is not included, the Node B shall use the value zero as hysteresis times for both Report A and Report B.

If the *Report Characteristics* IE is set to "Event F", the Node B shall initiate the Common Measurement Reporting procedure when the measured entity falls below the 'Measurement Threshold 1' and stays there for the 'Measurement Hysteresis Time' (Report A). When the conditions for Report A are met and the *Report Periodicity* IE is provided the Node B shall also initiate the Common Measurement Reporting procedure periodically. If the conditions for Report A have been met and the measured entity rises above the 'Measurement Threshold 2' and stays there for the 'Measurement Hysteresis Time', the Node B shall initiate the Common Measurement Reporting procedure (Report B) as well as terminating any corresponding periodic reporting. If the *Measurement Threshold 2* IE is not present, the Node B shall



use the value of the *Measurement Threshold 1* IE instead. If the *Measurement Hysteresis Time* IE is not included, the Node B shall use the value zero as hysteresis times for both Report A and Report B.

If the *Report Characteristics* IE is set to "On Modification" and if the *SFN* IE is not provided, the Node B shall report the result of the requested measurement immediately. If the *SFN* IE is provided, it indicates the frame for which the measurement value shall be provided. The provided measurement value shall be the one reported by the layer 3 filter, referred to as point C in the measurement model [25]. Then, the Node B shall initiate the Common Measurement Reporting procedure in accordance to the following conditions:

1. If the *Common Measurement Type* IE is set to "UTRAN GPS Timing of Cell Frames for UE Positioning":
  - If the  $T_{UTRAN-GPS}$  *Change Limit* IE is included in the  $T_{UTRAN-GPS}$  *Measurement Threshold Information* IE, the Node B shall each time a new measurement result is received after point C in the measurement model [25], calculate the change of  $T_{UTRAN-GPS}$  value ( $F_n$ ). The Node B shall initiate the Common Measurement Reporting procedure and set  $n$  equal to zero when the absolute value of  $F_n$  rises above the threshold indicated by the  $T_{UTRAN-GPS}$  *Change Limit* IE. The change of  $T_{UTRAN-GPS}$  value ( $F_n$ ) is calculated according to the following:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

The  $T_{\text{UTRAN-GPS}}$  Drift Rate is determined by the Node B in an implementation-dependent way after point B in the measurement model [26].

2. If the *Common Measurement Type* IE is set to "SFN-SFN Observed Time Difference":

- If the *SFN-SFN Change Limit* IE is included in the *SFN-SFN Measurement Threshold Information* IE, the Node B shall each time a new measurement result is received after point C in the measurement model [25], calculate the change of SFN-SFN value ( $F_n$ ). The Node B shall initiate the Common Measurement Reporting procedure in order to report the particular SFN-SFN measurement which has triggered the event and set  $n$  equal to zero when  $F_n$  rises above the threshold indicated by the *SFN-SFN Change Limit* IE. The change of the SFN-SFN value is calculated according to the following:

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

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

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

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

$a$  is the last reported SFN-SFN.

$M_n$  is the latest measurement result received after point C in the measurement model [25], measured at SFN <sub>$n$</sub> .

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

- If the *Predicted SFN-SFN Deviation Limit* IE is included in the *SFN-SFN Measurement Threshold Information* IE, the Node B shall each time a new measurement result is received after point C in the measurement model [25], update the  $P_n$  and  $F_n$ . The Node B shall initiate the Common Measurement Reporting procedure in order to report the particular SFN-SFN measurement which has triggered the event and set  $n$  equal to zero when the  $F_n$  rises above the threshold indicated by the *Predicted SFN-SFN Deviation Limit* IE. The  $P_n$  and  $F_n$  are calculated according to the following:

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

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

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

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

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

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

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

$b$  is the last reported SFN-SFN value.

$abs$  denotes the absolute value.

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

$M_n$  is the latest measurement result received after point C in the measurement model [25], measured at [TDD - the Time Slot TS <sub>$n$</sub>  of] the Frame SFN <sub>$n$</sub> .

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

The SFN-SFN Drift Rate is determined by the Node B in an implementation-dependent way after point B in the measurement model [26].

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

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

#### Higher layer filtering

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

The averaging shall be performed according to the following formula.

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

The variables in the formula are defined as follows:

$F_n$  is the updated filtered measurement result

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

$M_n$  is the latest received measurement result from physical layer measurements, the unit used for  $M_n$  is the same unit as the reported unit in the COMMON MEASUREMENT INITIATION RESPONSE, COMMON MEASUREMENT REPORT messages or the unit used in the event evaluation (i.e. same unit as for  $F_n$ )

$a = 1/2^{(k/2)}$ , where  $k$  is the parameter received in the *Measurement Filter Coefficient* IE. If the *Measurement Filter Coefficient* IE is not present,  $a$  shall be set to 1 (no filtering)

In order to initialise the averaging filter,  $F_0$  is set to  $M_1$  when the first measurement result from the physical layer measurement is received.

#### Common measurement accuracy

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

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

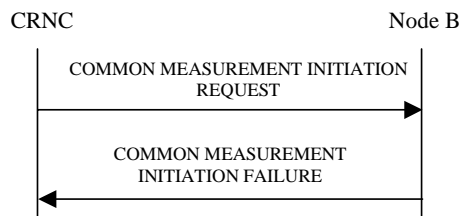
#### Response message

If the Node B was able to initiate the measurement requested by the CRNC, it shall respond with the COMMON MEASUREMENT INITIATION RESPONSE message sent over the Node B Control Port. The message shall include the same Measurement ID that was used in the measurement request. Only in the case where the *Report Characteristics* IE is set to "On Demand" or "On Modification", the COMMON MEASUREMENT INITIATION RESPONSE message shall contain the measurement result and also the *Common Measurement Achieved Accuracy* IE if the *Common Measurement Type* IE is set to "UTRAN GPS Timing of Cell Frames for UE Positioning".

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

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

### 8.2.8.3 Unsuccessful Operation



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

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

Typical cause values are as follows:

#### Radio Network Layer Cause

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

### 8.2.8.4 Abnormal Conditions

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

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

If the COMMON MEASUREMENT INITIATION REQUEST message contains the *SFN-SFN Measurement Threshold Information* IE (in the *Measurement Threshold* IE contained in the *Report Characteristics* IE) and it does not contain at least one IE, the Node B shall reject the procedure using the COMMON MEASUREMENT INITIATION FAILURE message.

If the COMMON MEASUREMENT INITIATION REQUEST message contains the  $T_{UTRAN-GPS}$  *Measurement Threshold Information* IE (in the *Measurement Threshold* IE contained in the *Report Characteristics* IE) and it does not contain at least one IE, the Node B shall reject the procedure using the COMMON MEASUREMENT INITIATION FAILURE message.

If the *Common Measurement Type* IE is set to "SFN-SFN Observed Time Difference", but the *Neighbouring Cell Measurement Information* IE is not received in the COMMON MEASUREMENT INITIATION REQUEST message, the Node B shall regard the Common Measurement Initiation procedure as failed.

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

The allowed combinations of the Common Measurement Type and Report Characteristics Type are shown in the table below marked with "X". For not allowed combinations, the Node B shall regard the Common Measurement Initiation procedure as failed.

**Table 4: Allowed Common Measurement Type and Report Characteristics Type combinations**

Common Measurement Type	Report Characteristics Type								
	On Demand	Periodic	Event A	Event B	Event C	Event D	Event E	Event F	On Modification
Received Total Wide Band Power	X	X	X	X	X	X	X	X	
Transmitted Carrier Power	X	X	X	X	X	X	X	X	
Acknowledged PRACH Preambles	X	X	X	X	X	X	X	X	
UL Timeslot ISCP	X	X	X	X	X	X	X	X	
Acknowledged PCPCH Access Preambles	X	X	X	X	X	X	X	X	
Detected PCPCH Access Preambles	X	X	X	X	X	X	X	X	
UTRAN GPS Timing of Cell Frames for UE Positioning	X	X							X
SFN-SFN Observed Time Difference	X	X							X

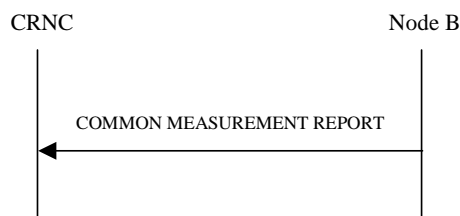
If the *SFN* IE is included in the COMMON MEASUREMENT INITIATION REQUEST message and the *Report Characteristics* IE is other than "Periodic", "On Demand" or "On Modification", the Node B shall regard the Common Measurement Initiation procedure as failed.

## 8.2.9 Common Measurement Reporting

### 8.2.9.1 General

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

### 8.2.9.2 Successful Operation



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

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

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

If the achieved measurement accuracy does not fulfil the given accuracy requirement (see ref.[22] and [23]), the *Common Measurement Value Information* IE shall indicate Measurement not Available.

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

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

### 8.2.9.3 Abnormal Conditions

-

## 8.2.10 Common Measurement Termination

### 8.2.10.1 General

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

### 8.2.10.2 Successful Operation



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

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

Upon reception, the Node B shall terminate reporting of common measurements corresponding to the received *Measurement ID* IE.

### 8.2.10.3 Abnormal Conditions

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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

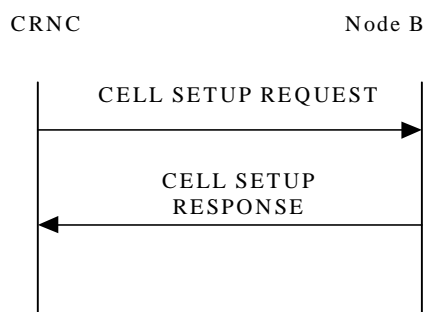
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## 8.2.12 Cell Setup

### 8.2.12.1 General

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

### 8.2.12.2 Successful Operation



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

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

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

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

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

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

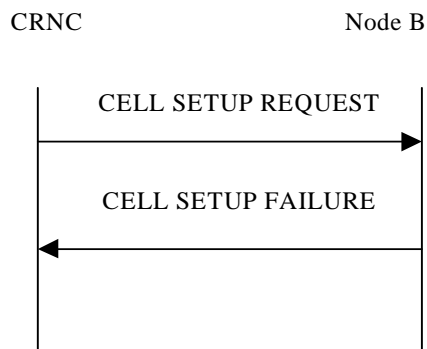
[FDD – If the *IPDL Parameter Information* IE is included in the CELL SETUP REQUEST message, the parameters defining IPDL shall be stored in the Node B and applied according to the *IPDL Indicator* IE value. If the *Burst Mode Parameters* IE is included in the *IPDL FDD Information* IE, the IPDL shall be operated in burst mode according to ref [10].]

[3.84Mcps TDD - If the *IPDL Parameter Information* IE containing *IPDL TDD parameters* IE is included in the CELL SETUP REQUEST message, the parameters defining IPDL in 3.84Mcps TDD mode shall be stored in the Node B and applied according to the *IPDL Indicator* IE value. If the *Burst Mode Parameters* IE is included in the *IPDL TDD Information* IE, the IPDL shall be operated in burst mode according to ref [21].]

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

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

### 8.2.12.3 Unsuccessful Operation



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

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

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

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

Typical cause values are as follows:

#### Radio Network Layer Cause

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

#### Miscellaneous Cause

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

### 8.2.12.4 Abnormal Conditions

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

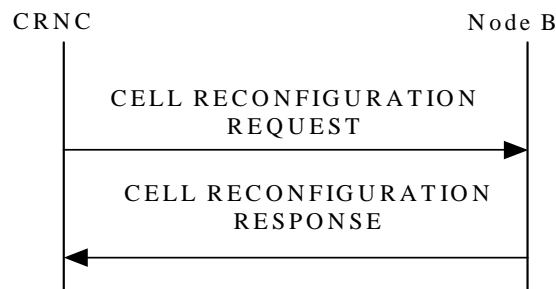


## 8.2.13 Cell Reconfiguration

### 8.2.13.1 General

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

### 8.2.13.2 Successful Operation



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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

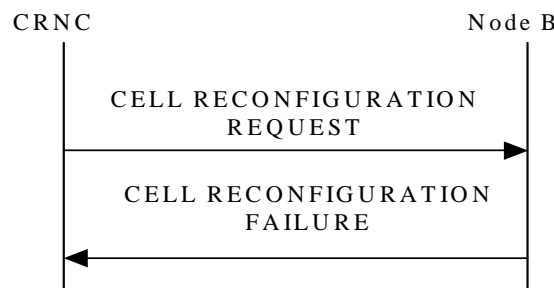
[3.84Mcps TDD - If the CELL RECONFIGURATION REQUEST message includes the *IPDL Parameter Information* IE with the *IPDL Indicator* IE set to the value "Active", the Node B shall apply the IPDL in that cell according to the latest received downloaded parameters defined by the *IPDL TDD Parameters* IE.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

If the CELL RECONFIGURATION REQUEST message includes the *IPDL Parameter Information* IE with the *IPDL Indicator* IE set to the value "Inactive", the Node B shall deactivate the ongoing IPDL.

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

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

### 8.2.13.3 Unsuccessful Operation



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

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

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

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

Typical cause values are as follows:

### Radio Network Layer Cause

- Power level not supported
- Node B Resources unavailable
- IPDL not supported

### Miscellaneous Cause

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

## 8.2.13.4 Abnormal Conditions

If the *IPDL Indicator* IE set to the value "Active" is included in the CELL RECONFIGURATION REQUEST message and there is active IPDL ongoing in the Node B, the Node B shall respond with the CELL RECONFIGURATION FAILURE message with the cause value "IPDL already activated".]

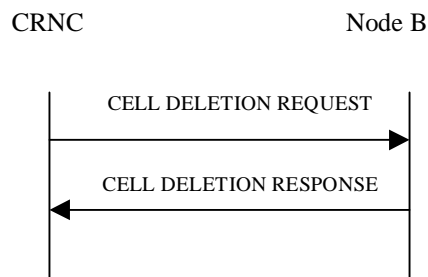
If the *IPDL Indicator* IE set to the value "Active" is included in the CELL RECONFIGURATION REQUEST message and there is no IPDL stored in the Node B defining the IPDL, the Node B shall respond with the CELL RECONFIGURATION FAILURE message with the cause value "IPDL parameters not available".]

## 8.2.14 Cell Deletion

### 8.2.14.1 General

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

### 8.2.14.2 Successful Operation



**Figure 20: Cell Deletion procedure, Successful Operation**

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

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

### 8.2.14.3 Unsuccessful Operation

-

### 8.2.14.4 Abnormal Conditions

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

## 8.2.15 Resource Status Indication

### 8.2.15.1 General

This procedure is used in the following cases:

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

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

### 8.2.15.2 Successful Operation



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

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

#### Local Cell Becomes Existing:

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

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

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

#### Local Cell Deletion:

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

#### Capability Change of a Local Cell:

When the capabilities of a Local Cell change at the Node B, the Node B shall report the new capability by sending a RESOURCE STATUS INDICATION message containing a "Service Impacting" Indication and the *Local Cell ID IE*.

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

If the maximum DL power capability of the Local Cell has changed, the new capability shall be indicated in the *Maximum DL Power Capability IE*.

If the DL capability for supporting the minimum spreading factor has changed, the new capability shall be indicated in the *Minimum Spreading Factor IE*.

[TDD - If the availability of the Reference clock connected to a Local Cell has changed, the new availability condition shall be indicated in the *Reference Clock Availability IE*.]

The *Cause IE* in the RESOURCE STATUS INDICATION message shall be set to the appropriate value. If the internal resource capabilities of the Local Cell are affected, it shall be reported in the following way:

- If the internal resource capabilities of the Local Cell are modelled as shared resources between Uplink and Downlink, the new capacity shall be reported in the *DL or Global Capacity Credit IE*.
- If the internal resource capabilities of the Local Cell are modelled independently in the Uplink and Downlink direction, then the *DL or Global Capacity Credit IE* and the *UL Capacity Credit IE* shall be present in the RESOURCE STATUS INDICATION.

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

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

#### Capability Change of a Cell:

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

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

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

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

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

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

When the resource operational state of a Communication Control Port has changed, the Node B shall report the new resource operational state by sending a RESOURCE STATUS INDICATION message containing a "Service

Impacting" Indication and the *Communication Control Port ID* IE. The *Cause* IE in the RESOURCE STATUS INDICATION message shall be set to the appropriate value.

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

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

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

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

#### General:

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

### 8.2.15.3 Abnormal Conditions

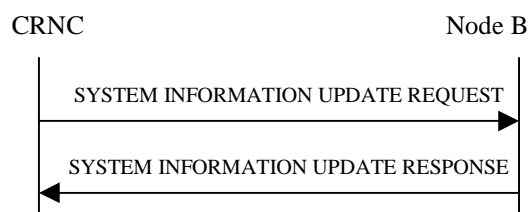
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## 8.2.16 System Information Update

### 8.2.16.1 General

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

### 8.2.16.2 Successful Operation



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

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

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

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

**Information Block addition**

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

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

$$- \text{SFN mod IB\_SG\_REP} = \text{IB\_SG\_POS}$$

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

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

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

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

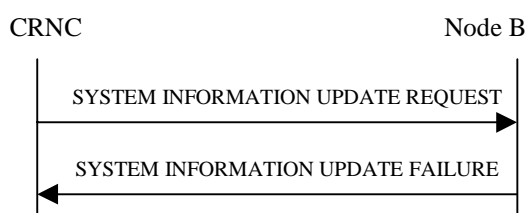
**Information Block deletion**

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

**Information Block update**

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

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

**8.2.16.3 Unsuccessful Operation**

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

If the Node B is unable to update the physical channel scheduling cycle according to all the parameters given in the SYSTEM INFORMATION UPDATE REQUEST message, it shall respond with a SYSTEM INFORMATION UPDATE FAILURE message with an appropriate cause value.

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

Typical cause values are:

### Radio Network Layer Cause

- SIB Origination in Node B not Supported

### Miscellaneous Cause

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

## 8.2.16.4 Abnormal Conditions

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

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

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

## 8.2.17 Radio Link Setup

### 8.2.17.1 General

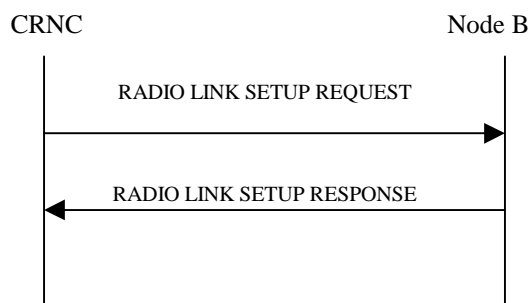
This procedure is used for establishing the necessary resources for a new Node B Communication Context in the Node B.

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

[TDD – The Radio Link Setup procedure is used to establish one radio link including one or more transport channels. The transport channels can be a mix of DCHs, DSCHs, and USCHs, including also combinations where one or more transport channel types are not present.]



## 8.2.17.2 Successful Operation



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

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

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

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

### Transport Channels Handling:

#### DCH(s):

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

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

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

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

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

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

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

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

[FDD – The *Diversity Control Field* IE indicates for each RL (except the first RL in the message) whether the Node B shall combine the concerned RL or not.

- If the *Diversity Control Field* IE is set to "May", the Node B shall decide for either of the alternatives.
- If the *Diversity Control Field* IE is set to "Must", the Node B shall combine the RL with one of the other RL.
- If the *Diversity Control Field* IE is set to "Must not", the Node B shall not combine the RL with any other existing RL.

Diversity combining is applied to Dedicated Transport Channels (DCH), i.e. it is not applied to the DSCHs. When a new RL is to be combined, the Node B shall choose which RL(s) to combine it with.]

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

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

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

In the case of a set of co-ordinated DCHs, the *Binding ID* IE and the *Transport Layer Address* IE shall be included in the RADIO LINK SETUP RESPONSE for only one of the DCHs in the set of co-ordinated DCHs.

#### **DSCH(s):**

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

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

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

#### **[TDD – USCH(s):**

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

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

### **Physical Channels Handling:**

#### **[FDD – Compressed Mode]:**

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

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

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

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

**[FDD – DL Code Information]:**

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

**[TDD – PDSCH RL ID]:**

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

**General:**

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

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

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

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

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

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

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

**Radio Link Handling:**

**[FDD – Transmit Diversity]:**

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

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

[FDD – The Node B shall start the DL transmission using the initial DL power specified in the message on each DL DPCH of the RL until either UL synchronisation on the Uu interface is achieved for the RLS or Power Balancing is activated. No inner loop power control or balancing shall be performed during this period. The DL power shall then vary according to the inner loop power control (see ref.[10], subclause 5.2.1.2) 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  $\delta P_{curr}$ , as described in ref.[10] subclause 5.2.1.3, shall be added to the maximum DL power for the associated compressed frame.]

[FDD - If the *DPC Mode* IE is present in the RADIO LINK SETUP REQUEST message, the Node B shall apply the DPC mode indicated in the message and be prepared that the DPC mode may be changed during the life time of the RL. If the *DPC Mode* IE is not present in the RADIO LINK SETUP REQUEST message, DPC mode 0 shall be applied (see ref. [10]).]

[TDD – The Node B shall start the DL transmission using the initial DL power specified in the message on each DL DPCH and on each Time Slot of the RL until the UL synchronisation on the Uu interface is achieved for the RL. No inner loop power control shall be performed during this period. The DL power shall then vary according to the inner loop power control (see ref.[22], subclause 4.2.3.3), but shall always be kept within the maximum and minimum limit specified in the RADIO LINK SETUP REQUEST message.]

[TDD – If the [3.84Mcps TDD - *DL Time Slot ISCP Info* IE] or [1.28Mcps TDD - *DL Timeslot ISCP LCR* IE] is present, the Node B shall use the indicated value when deciding the initial DL TX Power for each timeslot as specified in [21], i.e. it shall reduce the DL TX power in those downlink timeslots of the radio link where the interference is low, and increase the DL TX power in those timeslots where the interference is high, while keeping the total downlink power in the radio link unchanged].

[FDD – If the received *Inner Loop DL PC Status* IE is set to "Active", the Node B shall activate the inner loop DL power control for all RLs. If *Inner Loop DL PC Status* IE is set to "Inactive", the Node B shall deactivate the inner loop DL power control for all RLs according to ref. [10].]

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

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

#### **General:**

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

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

[FDD - If the RADIO LINK SETUP REQUEST message includes the *SSDT Cell Identity for EDSCHPC* IE, the Node B shall activate enhanced DSCH power control, if supported, using the *SSDT Cell Identity For EDSCHPC* IE and *SSDT Cell Identity Length* IE as well as *Enhanced DSCH PC* IE in accordance with ref. [10] subclause 5.2.2. If the RADIO LINK SETUP REQUEST message includes both *SSDT Cell Identity* IE and *SSDT Cell Identity For EDSCHPC* IE, then the Node B shall ignore the value in *SSDT Cell Identity For EDSCHPC* IE]

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

#### **[FDD – Radio Link Set Handling]:**

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

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

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

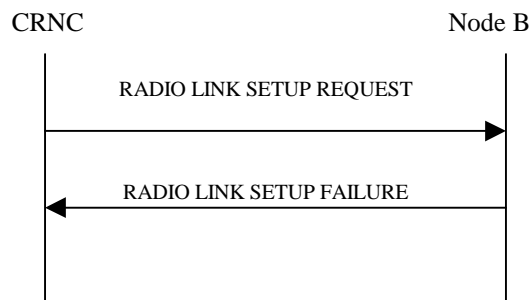
[FDD – The UL out-of-sync algorithm defined in [10] shall, for each of the established RL Set(s), use the maximum value of the parameters *N\_OUTSYNC\_IND* and *T\_RLFAILURE* that are configured in the cells supporting the radio links of the RL Set. The UL in-sync algorithm defined in [10] shall, for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

#### Response Message:

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

After sending the RADIO LINK SETUP RESPONSE message, the Node B shall continuously attempt to obtain UL synchronisation on the Uu interface. [FDD – The Node B shall start transmission on the DL DPDCH(s) of the new RL as specified in [16].] [TDD – The Node B shall start transmission on the new RL immediately as specified in [16].]

### 8.2.17.3 Unsuccessful Operation



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

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

[FDD – If some radio links were established successfully, the Node B shall indicate this in the RADIO LINK SETUP FAILURE message in the same way as in the RADIO LINK SETUP RESPONSE message. In this case, the Node B shall include the *Communication Control Port Id* IE in the RADIO LINK SETUP FAILURE message.]

Typical cause values are as follows:

#### Radio Network Layer Cause

- Combining not supported
- Combining Resources not available
- Requested Tx Diversity Mode not supported
- Number of DL codes not supported
- Number of UL codes not supported
- UL SF not supported

- DL SF not supported
- Dedicated Transport Channel Type not supported
- Downlink Shared Channel Type not supported
- Uplink Shared Channel Type not supported
- CM not supported
- DPC mode change not supported

#### Transport Layer Cause

- Transport Resources Unavailable

#### Miscellaneous Cause

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

### 8.2.17.4 Abnormal Conditions

[FDD – If the RADIO LINK SETUP REQUEST message contains the *Active Pattern Sequence Information* IE, but the *Transmission Gap Pattern Sequence Information* IE is not present, then the Node B shall reject the procedure using the RADIO LINK SETUP FAILURE message.]

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

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

## 8.2.18 Physical Shared Channel Reconfiguration [TDD]

### 8.2.18.1 General

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

- Adding new PDSCH Sets and/or PUSCH Sets,
- Modifying these, and
- Deleting them.

### 8.2.18.2 Successful Operation

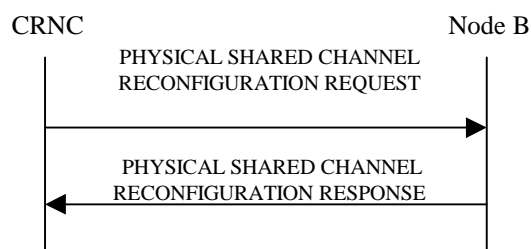


Figure 26: Physical Shared Channel Reconfiguration: Successful Operation

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

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

#### PDSCH/PUSCH Addition

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

#### PDSCH/PUSCH Modification

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

#### PDSCH/PUSCH Deletion

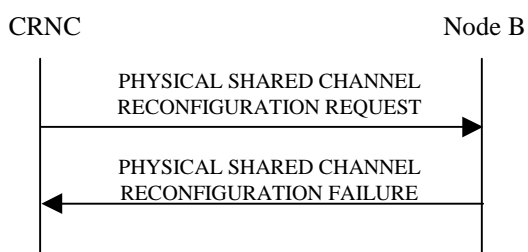
If the PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST message includes any PDSCH sets or PUSCH sets to be deleted, the Node B shall delete these sets from its PDSCH/PUSCH configuration.

In the successful case, the Node B shall add, modify and delete the PDSCH Sets and PUSCH Sets in the Common Transport Channel data base, as requested in the PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST message, and shall make these available to all the current and future DSCH and USCH transport channels. The Node B shall respond with the PHYSICAL SHARED CHANNEL RECONFIGURATION RESPONSE message.

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

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

### 8.2.18.3 Unsuccessful Operation



**Figure 27: Physical Shared Channel Reconfiguration procedure: Unsuccessful Operation**

If the Node B is not able to support all parts of the configuration, it shall reject the configuration of all the channels in the PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST message. The *Cause* IE shall be set to an appropriate value either a single general cause value or PDSCH and PUSCH set specific cause values for each set that caused a failure within the *Unsuccessful Shared DL Channel Set* IE for PDSCH sets or *Unsuccessful Shared UL Channel Set* IE for PUSCH sets.

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

Typical cause values are as follows:

#### Radio Network Layer Cause

- Cell not available
- Node B Resources unavailable

### Transport Layer Cause

- Transport Resources Unavailable

### Miscellaneous Cause

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

## 8.2.18.4 Abnormal Conditions

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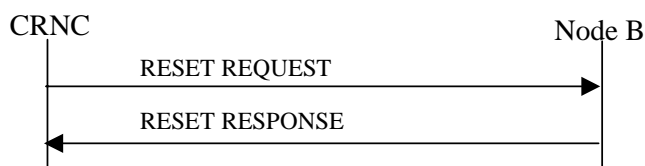
## 8.2.19 Reset

### 8.2.19.1 General

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

### 8.2.19.2 Successful Operation

#### 8.2.19.2.1 Reset Initiated by the CRNC



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

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

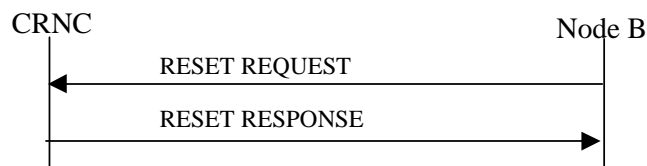
If the *Reset Indicator* IE is set to "Communication Context", the Node B shall remove all the indicated Node B Communication Contexts (typically identified by a *Node B Communication Context ID* IE) and all the radio resources allocated for these Node B Communication Contexts. The Node B shall also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

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

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



### 8.2.19.2.2 Reset Initiated by the Node B



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

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

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

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

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

### 8.2.19.3 Unsuccessful Operation

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### 8.2.19.4 Abnormal Conditions

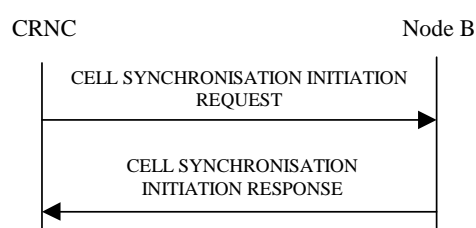
If the RESET REQUEST message is received any ongoing procedure related to a CRNC Communication Context in the CRNC or Node B Communication Context in the Node B indicated (explicitly or implicitly) in the message shall be aborted.

## 8.2.20 Cell Synchronisation Initiation [3.84Mcps TDD]

### 8.2.20.1 General

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

### 8.2.20.2 Successful Operation



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

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

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

#### Cell Sync Burst Transmission Initiation

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

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

#### Cell Sync Burst Measurement characteristics

When the Cell Sync Burst Measurement Initiation Information is present, the Node B shall initiate measurements on the indicated cell synchronisation burst.

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

#### Synchronisation Report characteristics

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

If the *Synchronisation Report Characteristics Type* IE is set to "Frequency Acquisition completed", the Node B shall signal completion of frequency acquisition to the RNC when locking is completed.

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

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

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

#### Response message

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

### 8.2.20.3 Unsuccessful Operation

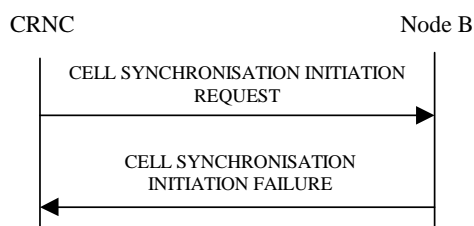


Figure 27D Cell Synchronisation Initiation procedure, Unsuccessful Operation

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

Typical cause values are as follows:

#### Radio Network Layer Cause

- Cell Synchronisation not supported
- Power level not supported
- Measurement Temporarily not Available
- Frequency Acquisition not supported

#### Miscellaneous Cause

- O&M Intervention
- HW failure

### 8.2.20.4 Abnormal Conditions

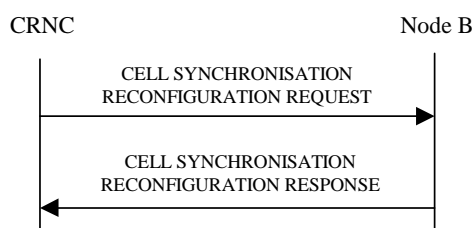
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## 8.2.21 Cell Synchronisation Reconfiguration [3.84Mcps TDD]

### 8.2.21.1 General

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

### 8.2.21.2 Successful Operation



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

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

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

### Cell Sync Burst Schedule

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

Cycle length:  $4096 / \text{value of } \textit{Number Of Cycles Per SFN Period IE}$

Repetition period:  $\text{Cycle length} / \text{value of } \textit{Number Of Repetitions Per Cycle Period IE}$

Cell Sync Frame number is calculated by:

$$\text{SFN} = \text{floor}((k-1) * \text{Cycle length} + (i-1) * \text{Repetition period})$$

$$k = \{1, 2, 4, .. \text{Number of cycle per SFN period}\}$$

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

### Cell Sync Burst Transmission Reconfiguration

When the Cell Sync Burst Transmission Reconfiguration Information is present, the Node B shall reconfigure the transmission of the cell synchronisation burst according to the parameters given in the CELL SYNCHRONISATION RECONFIGURATION REQUEST message.

If the CELL SYNCHRONISATION RECONFIGURATION REQUEST message includes the *Cell Sync Burst Code IE*, the Node B shall reconfigure the synchronisation code in the cell according to the *Cell Sync Burst Code IE* value.

If the CELL SYNCHRONISATION RECONFIGURATION REQUEST message includes the *Cell Sync Burst Code shift IE*, the Node B shall reconfigure the synchronisation code shift in the cell according to the *Cell Sync Burst Code shift IE* value.

If the CELL SYNCHRONISATION RECONFIGURATION REQUEST message includes the *DL Transmission Power IE*, the Node B shall reconfigure the DL transmission power of the cell sync burst in the cell according to the *DL Transmission Power IE* value.

### Cell Sync Burst Measurement Reconfiguration

When the Cell Sync Burst Measurement Reconfiguration Information is present, the Node B shall reconfigure the cell synchronisation burst measurements according the parameters given in the message.

If the CELL SYNCHRONISATION RECONFIGURATION REQUEST message includes the Cell Sync Burst Measurement Information the measurements shall apply on the individual cell synchronisation bursts on the requested Sync Frame number.

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

### Synchronisation Report characteristics

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

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

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

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

If the *Synchronisation Report Characteristics Type IE* is set to "Threshold exceeding", the Node B shall report the result of the cell synchronisation burst measurement when the cell synchronisation burst timing rises or falls more than the requested threshold value compared to the arrival time in synchronised state which is represented by the *Cell Sync Burst Arrival Time IE*.

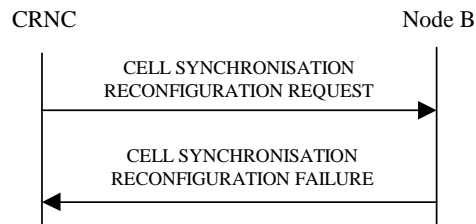
If the *Cell Sync Burst Arrival Time IE* is included in the *Cell Sync Burst Information IE* of the *Synchronisation Report Characteristics IE*, it indicates to the Node B the reference time at which the reception of the cell synchronisation burst of a neighbouring cell is expected.

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

#### Response message

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

### 8.2.21.3 Unsuccessful Operation



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

If the Node B cannot reconfigure the requested transmission or measurement on cell synchronisation burst, the CELL SYNCHRONISATION RECONFIGURATION FAILURE message shall be sent to the CRNC. The message shall include the *Cause* IE set to an appropriate value.

Typical cause values are as follows:

#### Radio Network Layer Cause

- Cell Synchronisation not supported
- Power level not supported
- Measurement Temporarily not Available

#### Miscellaneous Cause

- O&M Intervention
- HW failure

### 8.2.21.4 Abnormal Conditions

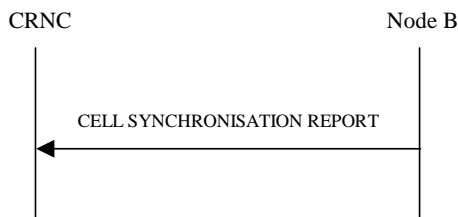
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## 8.2.22 Cell Synchronisation Reporting [3.84Mcps TDD]

### 8.2.22.1 General

This procedure is used by a Node B to report the result of cell synchronisation burst measurements requested by the CRNC with the Cell Synchronisation Initiation or Cell Synchronisation Reconfiguration procedure.

### 8.2.22.2 Successful Operation



**Figure 27G Cell Synchronisation Reporting procedure, Successful Operation**

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

In the steady state phase when several cell synchronisation bursts shall be measured per Sync Frame number, the sequence of the reported measured values shall be the same as defined in the Cell Synchronisation Reconfiguration procedure.

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

### 8.2.22.3 Abnormal Conditions

-

## 8.2.23 Cell Synchronisation Termination [3.84Mcps TDD]

### 8.2.23.1 General

This procedure is used by the CRNC to terminate a cell synchronisation burst transmission or measurement previously requested by the Cell Synchronisation Initiation procedure or Cell Synchronisation Reconfiguration procedure.

### 8.2.23.2 Successful Operation



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

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

Upon reception, the Node B shall terminate transmission of cell synchronisation bursts or reporting of cell synchronisation burst measurements corresponding to the CSB Transmission Id or CSB Measurement Id.

### 8.2.23.3 Abnormal Conditions

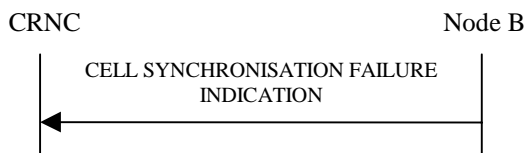
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## 8.2.24 Cell Synchronisation Failure [3.84Mcps TDD]

### 8.2.24.1 General

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

### 8.2.24.2 Successful Operation



**Figure 27I Cell Synchronisation Failure procedure, Successful Operation**

This procedure is initiated with a CELL SYNCHRONISATION FAILURE INDICATION message, sent from the Node B to the CRNC using the Node B Control Port, to inform the CRNC that a previously requested transmission or measurement on cell synchronisation bursts can no longer be supported.

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

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

### 8.2.24.3 Abnormal Conditions

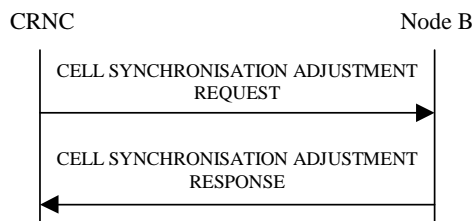
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## 8.2.25 Cell Synchronisation Adjustment [3.84Mcps TDD]

### 8.2.25.1 General

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

### 8.2.25.2 Successful Operation



**Figure 27J Cell Synchronisation Adjustment, Successful Operation**

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

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

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

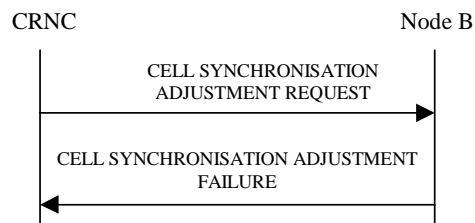
If the CELL SYNCHRONISATION ADJUSTMENT REQUEST message includes the *Timing Adjustment value* IE the Node B shall apply the timing adjustment in the cell according to the *Timing Adjustment value* IE value.

If the CELL SYNCHRONISATION ADJUSTMENT REQUEST message includes the *DL Transmission Power* IE, the Node B shall apply the transmission power of the cell synchronisation burst according to the *DL Transmission Power* IE value.

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

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

### 8.2.25.3 Unsuccessful Operation



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

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

Typical cause values are as follows:

#### Radio Network Layer Cause

- Cell Synchronisation Adjustment not supported
- Power level not supported

#### Miscellaneous Cause

- O&M Intervention
- HW failure

### 8.2.25.4 Abnormal Conditions

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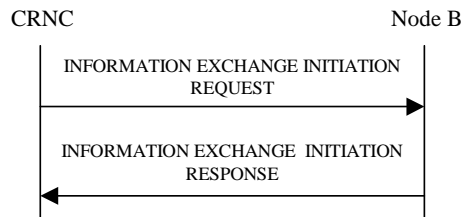
## 8.2.26 Information Exchange Initiation

### 8.2.26.1 General

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



## 8.2.26.2 Successful Operation



**Figure 27L: Information Exchange Initiation procedure, Successful Operation**

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

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

### Information Report Characteristics

The *Information Report Characteristics* IE indicates how the reporting of the information shall be performed.

If the *Information Report Characteristics* IE is set to "On Demand", the Node B shall report the requested information immediately.

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

If the *Information Report Characteristics* IE is set to "On Modification", the Node B shall immediately report the requested information if available. If the requested information is not available at the moment of receiving the INFORMATION EXCHANGE INITIATION REQUEST message, but expected to become available after some acquisition time, the Node B shall initiate the Information Reporting procedure when the requested information becomes available. The Node B shall then initiate the Information Reporting procedure in accordance to the following conditions related to the *Information Type* IE:

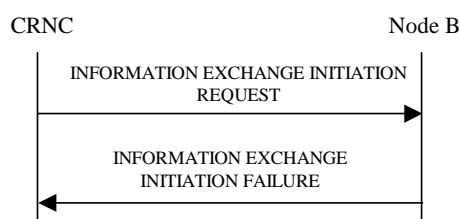
- 1) If the *Information Type Item* IE is set to "DGPS Corrections", the Node B shall initiate the Information Reporting procedure when either the PRC has drifted from the previously reported value more than the threshold indicated in the *PRC Deviation* IE or a change has occurred in the IODE.
- 2) If the *Information Type Item* IE is set to "GPS Information" and the *GPS Information Item* IE includes "GPS Navigation Model & Time Recovery", the Node B shall initiate the Information Reporting procedure for this specific GPS Information Item when a change has occurred regarding either the IODC or the list of visible satellites, identified by the *SatID* IEs.
- 3) If the *Information Type Item* IE is set to "GPS Information" and the *GPS Information Item* IE includes "GPS Ionospheric Model", the Node B shall initiate the Information Reporting procedure for this specific GPS Information Item when any change has occurred.
- 4) If the *Information Type Item* IE is set to "GPS Information" and the *GPS Information Item* IE includes "GPS UTC Model", the Node B shall initiate the Information Reporting procedure for this specific GPS Information Item when a change has occurred in the  $t_{ot}$  or  $WN_t$  parameter.
- 5) If the *Information Type Item* IE is set to "GPS Information" and the *GPS Information Item* IE includes "GPS Almanac", the Node B shall initiate the Information Reporting procedure for this specific GPS Information Item when a change in the  $t_{oa}$  or  $WN_a$  parameter has occurred.
- 6) If the *Information Type Item* IE is set to "GPS Information" and the *GPS Information Item* IE includes "GPS Real-Time Integrity", the Node B shall initiate the Information Reporting procedure for this specific GPS Information Item when any change has occurred.
- 7) If any of the above *Information Type* IEs becomes temporarily unavailable, the Node B shall initiate the Information Reporting procedure for this specific Information Item by indicating "Information Not Available" in

the *Requested Data Value Information* IE. If the Information becomes available again, the Node B shall initiate the Information Reporting procedure for this specific Information.

### Response message

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

## 8.2.26.3 Unsuccessful Operation



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

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

If the requested information provision cannot be initiated, the Node B shall send the INFORMATION EXCHANGE INITIATION FAILURE message over the Node B Control Port. The message shall include the same Information Exchange ID that was used in the INFORMATION EXCHANGE INITIATION REQUEST message and the *Cause* IE set to an appropriate value.

Typical cause values are as follows:

### Radio Network Layer Cause

- Information temporarily not available.
- Information Provision not supported for the object.

## 8.2.26.4 Abnormal Conditions

If the *Information Report Characteristics* IE is set to "On Modification", and the *Information Type Item* IE is set to "DGPS Corrections", but the *Information Threshold* IE is not received in the INFORMATION EXCHANGE INITIATION REQUEST message, the Node B shall regard the Information Exchange Initiation procedure as failed.

## 8.2.27 Information Reporting

### 8.2.27.1 General

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

### 8.2.27.2 Successful Operation



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

If the requested information reporting criteria are met, the Node B shall initiate the Information Reporting procedure. The INFORMATION REPORT message shall use the Node B Control Port. Unless specified below, the meaning of the parameters are given in other specifications.

The *Information Exchange ID* IE shall be set to the Information Exchange ID provided by the CRNC when initiating the Information Exchange with the Information Exchange Initiation procedure.

The *Requested Data Value* IE shall include at least one IE containing the data to be reported.

### 8.2.27.3 Abnormal Conditions

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## 8.2.28 Information Exchange Termination

### 8.2.28.1 General

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

### 8.2.28.2 Successful Operation



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

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

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

### 8.2.28.3 Abnormal Conditions

-

## 8.2.29 Information Exchange Failure

### 8.2.29.1 General

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

### 8.2.29.2 Successful Operation



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

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

## 8.3 NBAP Dedicated Procedures

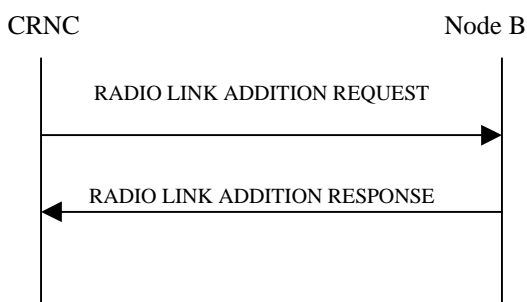
### 8.3.1 Radio Link Addition

#### 8.3.1.1 General

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

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

#### 8.3.1.2 Successful Operation



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

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

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

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

**Physical Channels Handling:**

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

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

**[FDD – Compressed Mode]:**

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

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

**[FDD – DL Code Information]:**

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

**[TDD – CCTrCH Handling]:**

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

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

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

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

**Radio Link Handling:****Diversity Combination Control:**

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

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

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

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

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

In the case of a set of co-ordinated DCHs, the *Binding ID IE* and the *Transport Layer Address IE* shall be included for only one of the DCHs in a set of coordinated DCHs.

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

**[FDD – Transmit Diversity]:**

[FDD – If the *Transmit Diversity Indicator IE* is included in the RADIO LINK ADDITION REQUEST message, the Node B shall activate/deactivate the Transmit Diversity for each new Radio Link in accordance with the *Transmit Diversity Indicator IE* and the already known diversity mode.]

**DL Power Control:**

[FDD – If the RADIO LINK ADDITION REQUEST message includes the *Initial DL Transmission Power IE*, the Node B shall apply the given power to the transmission on each DL DPCH of the RL when starting transmission until either UL synchronisation on the Uu interface is achieved for the RLS or Power Balancing is activated. If no *Initial DL Transmission Power IE* is included, the Node B shall use any transmission power level currently used on already existing RLs for this Node B Communication Context. No inner loop power control or balancing shall be performed during this period. The DL power shall then vary according to the inner loop power control (see ref.[10], subclause 5.2.1.2) with DPC MODE currently configured for the relevant Node B Communication Context and the downlink power control procedure (see subclause 8.3.7).]

[TDD – If the RADIO LINK ADDITION REQUEST message includes the [3.84Mcps TDD - *Initial DL Transmission Power IE*] [1.28Mcps TDD – *DL Time Slot ISCP Info LCR IE*], the Node B shall apply the given power to the transmission on each DL DPCH and on each Time Slot of the RL when starting transmission until the UL synchronisation on the Uu interface is achieved for the RL. If no *Initial DL Transmission Power IE* is included, the Node B shall use any transmission power level currently used on already existing RLs for this Node B Communication Context. No inner loop power control shall be performed during this period. The DL power shall then vary according to the inner loop power control (see ref.[22], subclause 4.2.3.3).]

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

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

[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].

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

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

**General:**

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

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

#### [FDD – Radio Link Set Handling]:

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

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

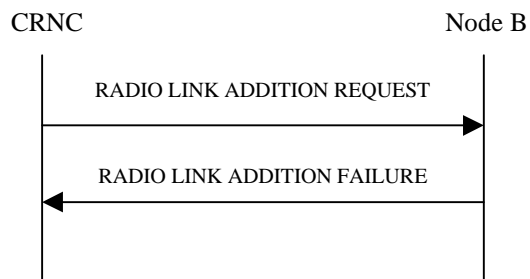
[FDD – After addition of the new RL(s), the UL out-of-sync algorithm defined in [10] shall, for each of the previously existing and newly established RL Set(s), use the maximum value of the parameters *N\_OUTSYNC\_IND* and *T\_RLFAILURE* that are configured in the cells supporting the radio links of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

#### Response Message:

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

After sending the RADIO LINK ADDITION RESPONSE message, the Node B shall continuously attempt to obtain UL synchronisation on the Uu interface. [FDD – The Node B shall start transmission on the DL DPDCH(s) of the new RL as specified in [16].] [TDD – The Node B shall start transmission on the new RL immediately as specified in [16].]

### 8.3.1.3 Unsuccessful Operation



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

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

[FDD - If some RL(s) were established successfully, the Node B shall indicate this in the RADIO LINK ADDITION FAILURE message in the same way as in the RADIO LINK ADDITION RESPONSE message.]

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

Typical cause values are as follows:

#### Radio Network Layer Cause

- Combining not supported
- Combining Resources not available

- Requested Tx Diversity Mode not supported
- UL SF not supported
- DL SF not supported
- Reconfiguration CFN not elapsed
- CM not supported
- [FDD – DPC Mode change not supported]

#### Transport Layer Cause

- Transport Resources Unavailable

#### Miscellaneous Cause

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

#### 8.3.1.4 Abnormal conditions

[FDD – If the RADIO LINK ADDITION REQUEST message contains the *Compressed Mode Deactivation Flag* IE with the value "Deactivate" when compressed mode is active for the existing RL(s), and at least one of the new RL is added in a cell that has the same UARFCN (both UL and DL) of at least one cell with an already existing RL, the Node B shall regard the Radio Link Addition procedure as failed and shall respond with a RADIO LINK ADDITION FAILURE message with the cause value "Invalid CM settings".]

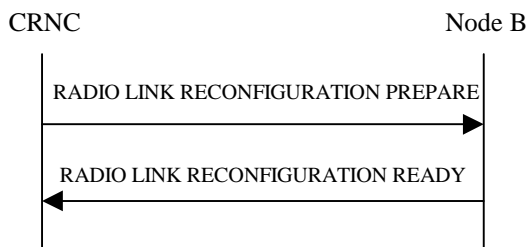
### 8.3.2 Synchronised Radio Link Reconfiguration Preparation

#### 8.3.2.1 General

The Synchronised Radio Link Reconfiguration Preparation procedure is used to prepare a new configuration of Radio Link(s) related to one Node B Communication Context.

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

#### 8.3.2.2 Successful Operation



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

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

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



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

#### **DCH Modification:**

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

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

#### **DCH Addition:**

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

- If the *DCHs to Add* IE includes multiple *DCH Specific Info* IEs, the Node B shall treat the DCHs in the *DCHs to Add* IE as a set of co-ordinated DCHs. The Node B shall include these DCHs in the new configuration only if it can include all of them in the new configuration.
- [FDD – For DCHs which do not belong to a set of co-ordinated DCHs with the *QE-Selector* IE set to "selected", the Transport channel BER from that DCH shall be the base for the QE in the UL data frames. If no Transport channel BER is available for the selected DCH, the Physical channel BER shall be used for the QE, ref. [16]. If the *QE-Selector* IE is set to "non-selected", the Physical channel BER shall be used for the QE in the UL data frames, ref. [16].]
- For a set of co-ordinated DCHs, the Transport channel BER from the DCH with the *QE-Selector* IE set to "selected" shall be used for the QE in the UL data frames, ref. [16]. [FDD – If no Transport channel BER is available for the selected DCH, the Physical channel BER shall be used for the QE, ref. [16]. If all DCHs have the *QE-Selector* IE set to "non-selected", the Physical channel BER shall be used for the QE, ref. [16].]
- The Node B should store the *Frame Handling Priority* IE received for a DCH to be added in the new configuration. The received Frame Handling Priority should be used when prioritising between different frames

in the downlink on the Uu interface in congestion situations within the Node B once the new configuration has been activated.

- The Node B shall use the included *UL FP Mode* IE for a DCH or a set of co-ordinated DCHs to be added as the new FP Mode in the Uplink of the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- The Node B shall use the included *ToAWS* IE for a DCH or a set of co-ordinated DCHs to be added as the new Time of Arrival Window Start Point in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- The Node B shall use the included *ToAWE* IE for a DCH or a set of co-ordinated DCHs to be added as the new Time of Arrival Window End Point in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- [TDD – The Node B shall apply the *CCTrCH ID* IE (for the DL) in the Downlink of this DCH in the new configuration.]
- [TDD – The Node B shall apply the *CCTrCH ID* IE (for the UL) in the Uplink of this DCH in the new configuration.]

#### **DCH Deletion:**

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

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

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

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

- [FDD – If the *UL DPCH Information* IE includes the *Uplink Scrambling Code* IE, the Node B shall apply this Uplink Scrambling Code to the new configuration.]
- [FDD – If the *UL DPCH Information* IE includes the *Min UL Channelisation Code Length* IE, the Node B shall apply the value in the new configuration. The Node B shall apply the contents of the *Max Number of UL DPCHs* IE (if it is included) in the new configuration.]
- [FDD – If the *UL DPCH Information* IE includes the *UL SIR Target* IE, the Node B shall use the value for the UL inner loop power control when the new configuration is being used.]
- [FDD – If the *UL DPCH Information* IE includes the *Puncture Limit* IE, the Node B shall apply the value in the uplink of the new configuration.]
- [FDD – The Node B shall use the *TFCS* IE for the UL (if present) when reserving resources for the uplink of the new configuration. The Node B shall apply the new TFCS in the Uplink of the new configuration.]
- [FDD – If the *UL DPCH Information* IE includes the *UL DPCCH Slot Format* IE, the Node B shall set the new Uplink DPCCH Structure to the new configuration.]
- [FDD - If the *UL DPCH Information* IE includes the *Diversity Mode* IE, the Node B shall apply diversity according to the given value.]
- [FDD – If the *UL DPCH Information* IE includes an *SSDT Cell Identity Length* IE and/or an *S-Field Length* IE, the Node B shall apply the values in the new configuration.]

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

- [FDD – The Node B shall use the *TFCS* IE for the DL (if it is present) when reserving resources for the downlink of the new configuration. The Node B shall apply the new TFCS in the Downlink of the new configuration.]

- [FDD – If the *DL DPCH Information* IE includes the *TFCI Signalling Mode* IE or the *TFCI Presence* IE, the Node B shall use the information when building TFCIs in the new configuration.]
- [FDD – If the *DL DPCH Information* IE includes the *DL DPCH Slot Format* IE, the Node B shall set the new Downlink DPCH Structure to the new configuration.]
- [FDD – If the *DL DPCH Information* IE includes the *Multiplexing Position* IE, the Node B shall apply the indicated multiplexing type in the new configuration.]
- [FDD – If the *DL DPCH Information* IE includes the *Limited Power Increase* IE set to "Used", the Node B shall, if supported, use Limited Power Increase according to ref. [10] subclause 5.2.1 for the inner loop DL power control in the new configuration.]
- [FDD – If the *DL DPCH Information* IE includes the *Limited Power Increase* IE set to "Not Used", the Node B shall not use Limited Power Increase for the inner loop DL power control in the new configuration.]
- [FDD – If the *DL DPCH Information* IE includes the *PDSCH Code Mapping* IE, then the Node B shall apply the defined mapping between TFCI values and PDSCH channelisation codes.]
- [FDD – If the *DL DPCH Information* IE includes the *PDSCH RL ID* IE, then the Node B shall infer that the PDSCH for the specified user will be transmitted on the defined radio link.]

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

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

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

- [TDD – If the IE includes any of the *TFCS* IE, *TFCI coding* IE or *Puncture Limit* IE, the Node B shall apply these as the new values, otherwise the old values specified for this CCTrCH are still applicable.]
- [TDD – If the IE includes any *UL DPCH To Add* IE or *DL DPCH To Add* IE, the Node B shall include this DPCH in the new configuration.]
- [TDD – If the IE includes any *UL DPCH To Delete* IE or *DL DPCH To Delete* IE, the Node B shall remove this DPCH in the new configuration.]
- [TDD – If the IE includes any *UL DPCH To Modify* IE or *DL DPCH To Modify* IE and includes any of the *Repetition Period* IE, *Repetition Length* IE or *TDD DPCH Offset* IE, or the message includes UL/DL Timeslot Information and includes any of the [3.84Mcps TDD - *Midamble Shift And Burst Type* IE], [1.28Mcps TDD - *Midamble Shift LCR* IE], or *TFCI Presence* IE or the message includes UL/DL Code information and includes [3.84Mcps TDD - *TDD Channelisation Code* IE], [1.28Mcps TDD - *TDD Channelisation Code LCR* IE] , [1.28Mcps TDD - *TDD UL DPCH Time Slot Format LCR* IE or *TDD DL DPCH Time Slot Format LCR* IE], the Node B shall apply these specified information elements as the new values, otherwise the old values specified for this DPCH configuration are still applicable.]
- [1.28Mcps TDD – If the *UL CCTrCH To Modify* IE includes the *UL SIR Target* IE, the Node B shall use the value for the UL inner loop power control according [19] and [21] when the new configuration is being used.]
- [1.28Mcps TDD - If the *UL CCTrCH to Modify* IE includes the *TDD TPC UL Step Size* IE, the Node B shall apply this value to the uplink TPC step size in the new configuration.]
- [TDD - If the *DL CCTrCH to Modify* IE includes the *TDD TPC DL Step Size* IE, the Node B shall apply this value to the downlink TPC step size in the new configuration.]

#### [TDD – UL/DL CCTrCH Addition]

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

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

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

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

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

#### [TDD – UL/DL CCTrCH Deletion]

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

#### DSCH Addition/Modification/Deletion:

If the RADIO LINK RECONFIGURATION PREPARE message includes any *DSCH To Add*, *DSCH To Modify* or *DSCH To Delete* IE, then the Node B shall use this information to add/modify/delete the indicated DSCH channels to/from the radio link, in the same way as the DCH info is used to add/modify/release DCHs.

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

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

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

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

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

- [FDD - If the *Enhanced DSCH PC Indicator* IE is included and set to "Enhanced DSCH PC Active in the UE ", the Node B shall activate enhanced DSCH power control in accordance with ref. [10] subclause 5.2.2, if supported, using either:]
  - [FDD - the *SSDT Cell Identity for EDSCHPC* IE in the *RL Information* IE, if the *SSDT Cell Identity* IE is not included in the *RL Information* IE or]
  - [FDD - the *SSDT Cell Identity* IE in the *RL Information* IE, if both the *SSDT Cell Identity* IE and the *SSDT Cell Identity for EDSCHPC* IE are included in the *RL Information* IE.]

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

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

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

- [TDD – If the RADIO LINK RECONFIGURATION PREPARE message includes USCH information for the USCHs to be added/modified/deleted then the Node B shall use this information to add/modify/delete the indicated USCH channels to/from the radio link, in the same way as the DCH info is used to add/modify/release DCHs.]
- [TDD – The Node B shall include in the RADIO LINK RECONFIGURATION READY message both the *Transport Layer Address* IE and the *Binding ID* IE for the transport bearer to be established for each USCH.]

**RL Information:**

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

- [FDD – When more than one DL DPDCH are assigned per RL, the segmented physical channel shall be mapped on to DL DPDCHs according to [8]. When  $p$  number of DL DPDCHs are assigned to each RL, the first pair of DL Scrambling Code and FDD DL Channelisation Code Number corresponds to "*PhCH number 1*", the second to "*PhCH number 2*", and so on until the  $p$ th to "*PhCH number p*".]
- [FDD – If the *RL Information* IE includes the *SSDT Indication* IE set to "SSDT Active in the UE", the Node B may activate SSDT using the *SSDT Cell Identity* IE in the new configuration.]
- [FDD – If the *RL Information* IE includes the *SSDT Indication* IE set to "SSDT not Active in the UE", the Node B shall deactivate SSDT in the new configuration.]
- [FDD – If the *RL Information* IE includes a *DL Code Information* IE, the Node B shall apply the values in the new configuration.]
- [FDD – If the *RL Information* IE contains the *Transmission Gap Pattern Sequence Code Information* IE in the *DL Code Information* IE for any of the allocated DL Channelisation Codes, the Node B shall apply the alternate scrambling code as indicated whenever the downlink compressed mode method SF/2 is active in the new configuration.]
- If the *RL Information* IE includes the *Maximum DL Power* and/or the *Minimum DL Power* IEs, the Node B shall apply the values in the new configuration. [FDD - During compressed mode, the  $\delta P_{curr}$  as described in ref.[10] subclause 5.2.1.3, shall be added to the maximum DL power for the associated compressed frame.]
- [TDD – If the *RL Information* IE includes the *Initial DL Transmission Power* IE, the Node B shall apply the given power to the transmission on each DPCH of the CCTrCH when starting transmission on a new CCTrCH until the UL synchronisation on the Uu interface is achieved for the CCTrCH. If no *Initial DL Transmission Power* IE is included with a new CCTrCH, the Node B shall use any transmission power level currently used on already existing CCTrCHs when starting transmission for a new CCTrCH. No inner loop power control shall be performed during this period. The DL power shall then vary according to the inner loop power control (see ref.[22], subclause 4.2.3.3).]
- [1.28Mcps TDD - If the RADIO LINK RECONFIGURATION PREPARE message contains the *Uplink Synchronisation Parameters LCR* IE, the Node B shall use the indicated values of *Uplink Synchronisation Step Size* IE and *Uplink Synchronisation Frequency* IE when evaluating the timing of the UL synchronisation.]

**[TDD - PDSCH RL ID]**

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

**General**

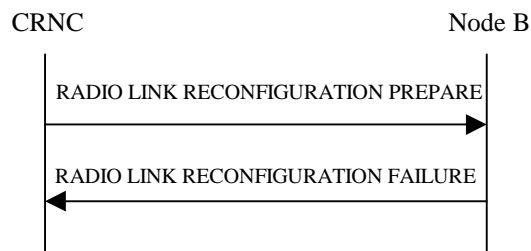
If the requested modifications are allowed by the Node B and the Node B has successfully reserved the required resources for the new configuration of the Radio Link(s), it shall respond to the CRNC with the RADIO LINK RECONFIGURATION READY message. When this procedure has been completed successfully there exists a Prepared Reconfiguration, as defined in subclause 3.1.

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

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

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

### 8.3.2.3 Unsuccessful Operation



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

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

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

Typical cause values are as follows:

#### Radio Network Layer Cause

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

#### Transport Layer Cause

- Transport Resources Unavailable

#### Miscellaneous Cause

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

### 8.3.2.4 Abnormal Conditions

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

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

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

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

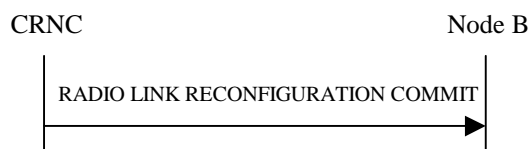
## 8.3.3 Synchronised Radio Link Reconfiguration Commit

### 8.3.3.1 General

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

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

### 8.3.3.2 Successful Operation



**Figure 32: Synchronised Radio Link Reconfiguration Commit procedure, Successful Operation**

The Node B shall switch to the new configuration previously prepared by the Synchronised Radio Link Reconfiguration Preparation procedure at the next coming CFN with a value equal to the value requested by the CRNC in the *CFN* IE when receiving the RADIO LINK RECONFIGURATION COMMIT message from the CRNC.

[FDD – If the *Active Pattern Sequence Information* IE is included in the RADIO LINK RECONFIGURATION COMMIT message, the *CM Configuration Change CFN* IE in the *Active Pattern Sequence Information* IE shall be ignored by the Node B.]

When this procedure has been completed the Prepared Reconfiguration does not exist any more, see subclause 3.1.

In the case of a transport channel modification for which a new transport bearer was requested and established, the switch to the new transport bearer shall also take place at the indicated CFN. The detailed frame protocol handling during transport bearer replacement is described in [16], subclause 5.10.1 and in [24], subclause 5.8.2.

[FDD – If the RADIO LINK RECONFIGURATION COMMIT includes the *Active Pattern Sequence Information* IE, the Node B shall deactivate all the ongoing Transmission Gap Pattern Sequences at the *CFN* IE. From that moment on, all Transmission Gap Pattern Sequences included in *Transmission Gap Pattern Sequence Status* IE repetitions shall be started when the indicated *TGCFN* IE elapses. The *CFN* IE and *TGCFN* IE for each sequence refer to the next coming CFN with that value. If the values of the *CFN* IE and the *TGCFN* IE are equal, the concerned Transmission Gap Pattern Sequence shall be started immediately at the CFN with a value equal to the value received in the *CFN* IE.]

### 8.3.3.3 Abnormal Conditions

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

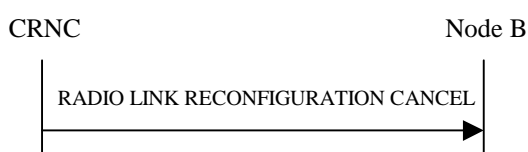
## 8.3.4 Synchronised Radio Link Reconfiguration Cancellation

### 8.3.4.1 General

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

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

### 8.3.4.2 Successful Operation



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

When receiving the RADIO LINK RECONFIGURATION CANCEL message from the CRNC, the Node B shall release the new configuration ([FDD - including the new Transmission Gap Pattern Sequence parameters (if existing)]) previously prepared by the Synchronised Radio Link Reconfiguration Preparation procedure and continue using the old configuration. When this procedure has been completed the Prepared Reconfiguration does not exist any more, see subclause 3.1.

### 8.3.4.3 Abnormal Conditions

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## 8.3.5 Unsynchronised Radio Link Reconfiguration

### 8.3.5.1 General

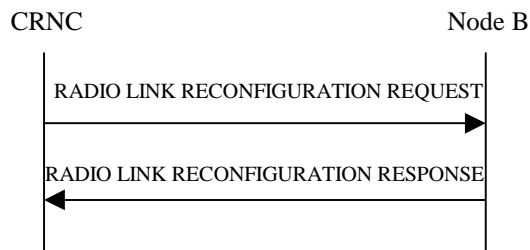
The Unsynchronised Radio Link Reconfiguration procedure is used to reconfigure Radio Link(s) related to one UE-UTRAN connection within a Node B.

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

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



### 8.3.5.2 Successful Operation



**Figure 34: Unsynchronised Radio Link Reconfiguration Procedure, Successful Operation**

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

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

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

#### **DCH Modification:**

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

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

#### **DCH Addition:**

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

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

#### **DCH Deletion:**

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

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

#### **[FDD - Physical Channel Modification:]**

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

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

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

- [FDD – If the *DL DPCH Information* IE includes on the *TFCS* IE for the DL, the Node B shall apply the new TFCS in the Downlink of the new configuration.]

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

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

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

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

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

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

#### [TDD – UL/DL CCTrCH Deletion]

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

#### RL Information:

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

- If the *RL Information* IE includes the *Maximum DL Power* IE, the Node B shall apply this value to the new configuration and not transmit with a higher power on any Downlink DPCH of the Radio Link once the new configuration is being used. [FDD - During compressed mode, the  $\delta P_{curr}$ , as described in ref.[10] subclause 5.2.1.3, shall be added to the maximum DL power for the associated compressed frame.]
- If the *RL Information* IE includes the *Minimum DL Power* IE, the Node B shall apply this value to the new configuration and never transmit with a lower power on any Downlink Channelisation Code of the Radio Link once the new configuration is being used.
- [FDD – If the *RL Information* IE contains the *Transmission Gap Pattern Sequence Code Information* IE in the *DL Code Information* IE for any of the allocated DL Channelisation Codes, the Node B shall apply the alternate scrambling code as indicated whenever the downlink compressed mode method SF/2 is active in the new configuration.]
- [1.28Mcps TDD - If the RADIO LINK RECONFIGURATION REQUEST message contains the *Uplink Synchronisation Parameters LCR* IE, the Node B shall use the indicated values of *Uplink Synchronisation Stepsize* IE and *Uplink Synchronisation Frequency* IE when evaluating the timing of the UL synchronisation.]

#### General

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

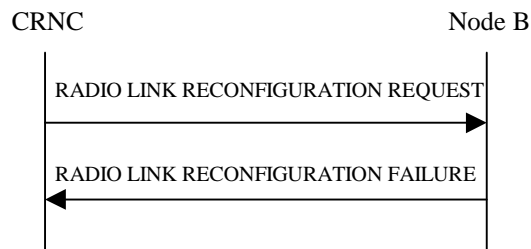
The Node B shall include in the RADIO LINK RECONFIGURATION RESPONSE message the *Transport Layer Address* IE and the *Binding ID* IE for any Transport Channel being added or any Transport Channel being modified for

which a new transport bearer was requested with the *Transport Bearer Request Indicator* IE. The detailed frame protocol handling during transport bearer replacement is described in [16], subclause 5.10.1.

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

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

### 8.3.5.3 Unsuccessful Operation



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

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

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

Typical cause values are as follows:

#### Radio Network Layer Cause

- CM not supported

#### Transport Layer Cause

- Transport Resources Unavailable

#### Miscellaneous Cause

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

### 8.3.5.4 Abnormal Conditions

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

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

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

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

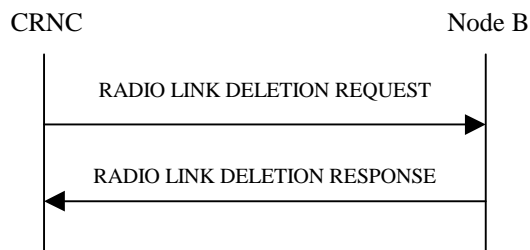
## 8.3.6 Radio Link Deletion

### 8.3.6.1 General

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

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

### 8.3.6.2 Successful Operation



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

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

Upon receipt of this message, the Node B shall delete the radio link(s) identified by the *RL ID* IE, *Node B Communication ID* IE and *CRNC Communication ID* IE and release all associated resources and respond to the CRNC with a RADIO LINK DELETION RESPONSE message. [FDD – Resources associated with the TFCI2 bearer shall be released only if all the RLs in the Node B Communication Context are deleted].

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

### 8.3.6.3 Unsuccessful Operation

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### 8.3.6.4 Abnormal Conditions

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

## 8.3.7 Downlink Power Control [FDD]

### 8.3.7.1 General

The purpose of this procedure is to balance the DL transmission powers of one or more Radio Links used for the related UE-UTRAN connection within the Node B. The Downlink Power Control procedure may be initiated by the CRNC at any time when the Node B Communication Context exists, irrespective of other ongoing CRNC initiated dedicated

NBAP procedures towards this Node B Communication Context. The only exception occurs when the CRNC has requested the deletion of the last RL via this Node B, in which case the Downlink Power Control procedure shall no longer be initiated.

### 8.3.7.2 Successful Operation



**Figure 37: Downlink Power Control procedure, Successful Operation**

The procedure is initiated by the CRNC sending a DL POWER CONTROL REQUEST message to the Node B using the Communication Control Port assigned to the concerned Node B Communication Context.

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

If the value of the *Power Adjustment Type* IE is "Common", the Power Balancing Adjustment Type of the Node B Communication Context shall be set to "Common". As long as the Power Balancing Adjustment Type of the Node B Communication Context is set to "Common", the Node B shall perform the power adjustment (see below) for all existing and future radio links associated with the context identified by the *Node B Communication Context ID* IE and use a common DL reference power level.

If the value of the *Power Adjustment Type* IE is "Individual", the Power Balancing Adjustment Type of the Node B Communication Context shall be set to "Individual". The Node B shall perform the power adjustment (see below) for all radio links addressed in the message using the given DL Reference Powers per RL. If the Power Balancing Adjustment Type of the Node B Communication Context was set to "Common" before this message was received, power balancing on all radio links not addressed by the DL POWER CONTROL REQUEST message shall remain to be executed in accordance with the existing power balancing parameters which are now considered RL individual parameters. Power balancing will not be started on future radio links without a specific request.

If the value of the *Power Adjustment Type* IE is "None", the Power Balancing Adjustment Type of the Node B Communication Context shall be set to "None" and the Node B shall suspend on going power adjustments for all radio links for the Node B Communication Context.

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

#### Power Adjustment

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

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

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

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

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

### 8.3.7.3 Abnormal Conditions

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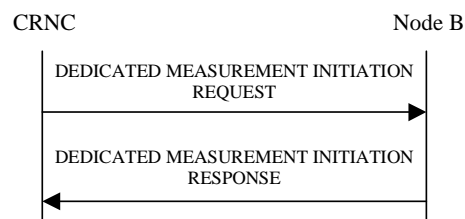
## 8.3.8 Dedicated Measurement Initiation

### 8.3.8.1 General

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

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

### 8.3.8.2 Successful Operation



**Figure 38: Dedicated Measurement Initiation procedure, Successful Operation**

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

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

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

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

If the *Node B Communication Context ID* IE equals the reserved value "All NBCC", the measurement shall be initiated only for those Node B Communication Contexts handling a mode (FDD, 3.84Mcps TDD or 1.28Mcps TDD) for which the concerned measurement is specified in [4] and [5].

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

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

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

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

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

[TDD – If the *DPCH ID* IE is provided within the RL Information, the measurement request shall apply for the requested physical channel individually. If no *DPCH ID* IE and no *PUSCH Information* IE is provided within the RL Information, the measurement request shall apply for one existing physical channel per CCTrCH in each used time slot of the Radio Link, provided the measurement type is applicable to this physical channel.]

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

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

### Report characteristics

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

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

If the *Report Characteristics* IE is set to "Periodic", the Node B shall periodically initiate the Dedicated Measurement Report procedure for this measurement, with the requested report frequency. If the *CFN* IE is provided, it indicates the frame for which the first measurement value of a periodic reporting shall be provided. The provided measurement value shall be the one reported by the layer 3 filter, referred to as point C in the measurement model [25].

If the *Report Characteristics* IE is set to "Event A", the Node B shall initiate the Dedicated Measurement Reporting procedure when the measured entity rises above the requested threshold and stays there for the requested hysteresis time. If the *Measurement Hysteresis Time* IE is not included, the Node B shall use the value zero for the hysteresis time.

If the *Report Characteristics* IE is set to "Event B", the Node B shall initiate the Dedicated Measurement Reporting procedure when the measured entity falls below the requested threshold and stays there for the requested hysteresis time. If the *Measurement Hysteresis Time* IE is not included, the Node B shall use the value zero for the hysteresis time.

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

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

If the *Report Characteristics* IE is set to "Event E", the Node B shall initiate the Dedicated Measurement Reporting procedure when the measured entity rises above the 'Measurement Threshold 1' and stays there for the 'Measurement Hysteresis Time' (Report A). When the conditions for Report A are met and the *Report Periodicity* IE is provided, the Node B shall also initiate the Dedicated Measurement Reporting procedure periodically. If the conditions for Report A have been met and the measured entity falls below the 'Measurement Threshold 2' and stays there for the 'Measurement Hysteresis Time', the Node B shall initiate the Dedicated Measurement Reporting procedure (Report B) as well as terminating any corresponding periodic reporting. If the *Measurement Threshold 2* IE is not present, the Node B shall use the value of the *Measurement Threshold 1* IE instead. If the *Measurement Hysteresis Time* IE is not included, the Node B shall use the value zero as hysteresis times for both Report A and Report B.

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



terminating any corresponding periodic reporting. If the *Measurement Threshold 2* IE is not present, the Node B shall use the value of the *Measurement Threshold 1* IE instead. If the *Measurement Hysteresis Time* IE is not included, the Node B shall use the value zero as hysteresis times for both Report A and Report B.

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

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

#### Higher layer filtering

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

The averaging shall be performed according to the following formula.

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

The variables in the formula are defined as follows

$F_n$  is the updated filtered measurement result

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

$M_n$  is the latest received measurement result from physical layer measurements, the unit used for  $M_n$  is the same unit as the reported unit in the DEDICATED MEASUREMENT INITIATION RESPONSE, DEDICATED MEASUREMENT REPORT messages or the unit used in the event evaluation (i.e. same unit as for  $F_n$ )

$a = 1/2^{(k/2)}$ , where  $k$  is the parameter received in the *Measurement Filter Coefficient* IE. If the *Measurement Filter Coefficient* IE is not present,  $a$  shall be set to 1 (no filtering)

In order to initialise the averaging filter,  $F_0$  is set to  $M_1$  when the first measurement result from the physical layer measurement is received.

#### Response message

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

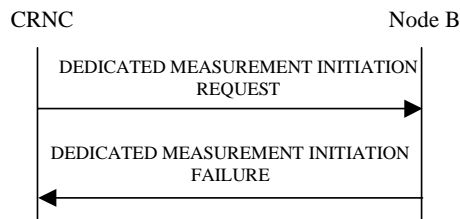
Only in the case where the *Report Characteristics* IE is set to "On Demand", the DEDICATED MEASUREMENT INITIATION RESPONSE message shall contain the measurement result. In this case, also the *Dedicated Measurement Object* IE shall be included if it was included in the request message.

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

#### Interaction with Reset Procedure

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

### 8.3.8.3 Unsuccessful Operation



**Figure 39: Dedicated Measurement Initiation procedure: Unsuccessful Operation**

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

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

Typical cause values are as follows:

**Radio Network Layer cause**

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

**Miscellaneous Cause**

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

### 8.3.8.4 Abnormal Conditions

The allowed combinations of the Dedicated Measurement Type and Report Characteristics Type are shown in the table below marked with "X". For not allowed combinations, the Node B shall regard the Dedicated Measurement Initiation procedure as failed.

**Table 4: Allowed Dedicated Measurement Type and Report Characteristics Type combinations**

Dedicated Measurement Type	Report Characteristics Type								
	On Demand	Periodic	Event A	Event B	Event C	Event D	Event E	Event F	On Modification
SIR	X	X	X	X	X	X	X	X	
SIR Error	X	X	X	X	X	X	X	X	
Transmitted Code Power	X	X	X	X	X	X	X	X	
RSCP	X	X	X	X	X	X	X	X	
Rx Timing Deviation	X	X	X	X			X	X	
Round Trip Time	X	X	X	X	X	X	X	X	
Rx Timing Deviation LCR	X	X	X	X			X	X	

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

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

## 8.3.9 Dedicated Measurement Reporting

### 8.3.9.1 General

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

### 8.3.9.2 Successful Operation



**Figure 40: Dedicated Measurement Reporting procedure, Successful Operation**

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

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

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

### 8.3.9.3 Abnormal Conditions

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## 8.3.10 Dedicated Measurement Termination

### 8.3.10.1 General

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

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

### 8.3.10.2 Successful Operation



**Figure 41: Dedicated Measurement Termination procedure, Successful Operation**

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

Upon reception, the Node B shall terminate reporting of dedicated measurements corresponding to the received *Measurement ID* IE.

### 8.3.10.3 Abnormal Conditions

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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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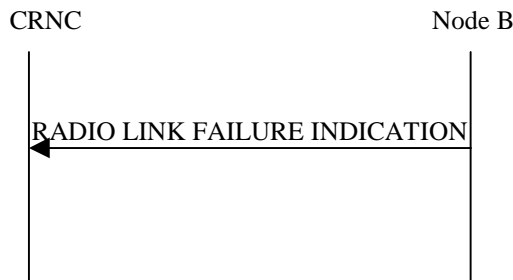
## 8.3.12 Radio Link Failure

### 8.3.12.1 General

This procedure is used by the Node B to indicate a failure in one or more Radio Links [FDD - or Radio Link Sets][TDD or CCTrCHs within a Radio Link].

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

### 8.3.12.2 Successful Operation



**Figure 43: Radio Link Failure procedure, Successful Operation**

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

If the failure concerns one or more individual Radio Links, the Node B shall indicate the affected Radio Link(s) using the *RL Information IE*. [FDD - The Node B shall indicate the affected Radio Link Set(s) using the *RL Set Information IE*.] [TDD – If the failure concerns only the failure of one or more CCTrCHs within a radio link, the Node B shall indicate the affected CCTrCHs using the *CCTrCH ID IE*.]

When the Radio Link Failure procedure is used to notify the loss of UL synchronisation of a [FDD – Radio Link Set] [TDD – Radio Link or CCTrCHs within a Radio Link] on the Uu interface, the RADIO LINK FAILURE INDICATION message shall be sent, with the *Cause IE* set to "Synchronisation Failure", when indicated by the UL out-of-sync algorithm defined in [10] and [21]. [FDD – The algorithms in [10] shall use the maximum value of the parameters *N\_OUTSYNC\_IND* and *T\_RLFailure*, and the minimum value of the parameters *N\_INSYNC\_IND*, that are configured in the cells supporting the radio links of the RL Set.]

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

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

Typical cause values are:

#### Radio Network Layer Causes:

- Synchronisation Failure
- Invalid CM settings

**Transport Layer Causes:**

- Transport Resources Unavailable

**Miscellaneous Causes:**

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

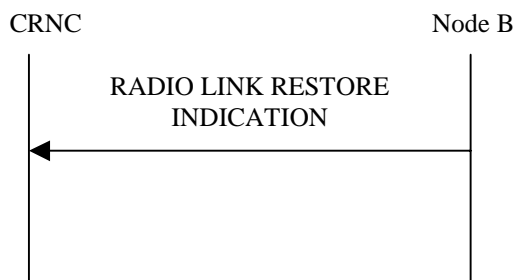
**8.3.12.3 Abnormal Conditions**

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**8.3.13 Radio Link Restoration****8.3.13.1 General**

This procedure is used by the Node B to notify the achievement and re-achievement of uplink synchronisation of one or more [FDD - Radio Link Sets][TDD – Radio Links or CCTrCHs within a Radio Link] on the Uu interface.

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

**8.3.13.2 Successful Operation**

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

The Node B shall send the RADIO LINK RESTORE INDICATION message to the CRNC when indicated by the UL synchronisation detection algorithm defined in ref. [10] and [21]. [FDD – The algorithm in ref. [10] shall use the minimum value of the parameters N\_INSYNC\_IND that are configured in the cells supporting the radio links of the RL Set.] The message shall use the Communication Control Port assigned to the concerned Node B Communication Context.

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

**8.3.13.3 Abnormal Condition**

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## 8.3.14 Compressed Mode Command [FDD]

### 8.3.14.1 General

The Compressed Mode Command procedure is used to activate or deactivate the compressed mode in the Node B for one Node B Communication Context.

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

### 8.3.14.2 Successful Operation



**Figure 47: Compressed Mode Command procedure, Successful Operation**

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

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

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

### 8.3.14.3 Abnormal Conditions

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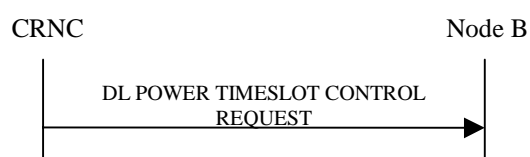
## 8.3.15 Downlink Power Timeslot Control [TDD]

### 8.3.15.1 General

The purpose of this procedure is to enable the Node B to use the indicated DL Timeslot ISCP values when deciding the DL TX Power for each timeslot.

The Downlink Power Timeslot Control procedure can be initiated by the CRNC at any time when the Node B Communication Context exists, irrespective of other ongoing CRNC initiated dedicated NBAP procedures towards this Node B Communication Context. The only exception occurs when the CRNC has requested the deletion of the last RL via this Node B, in which case the Downlink Power Timeslot Control procedure shall no longer be initiated.

### 8.3.15.2 Successful Operation



**Figure 47A: Downlink Power Timeslot Control procedure, Successful Operation**

The procedure is initiated by the CRNC sending a DL POWER TIMESLOT CONTROL REQUEST message to the Node B using the Communication Control Port assigned to the concerned Node B Communication Context.

Upon reception, the Node B shall use the indicated DL Timeslot ISCP value when deciding the DL TX Power for each timeslot as specified in ref. [21], i.e. it shall reduce the DL TX power in those downlink timeslots of the radio link where the interference is low, and increase the DL TX power in those timeslots where the interference is high, while keeping the total downlink power in the radio link unchanged.

### 8.3.15.3 Abnormal Conditions

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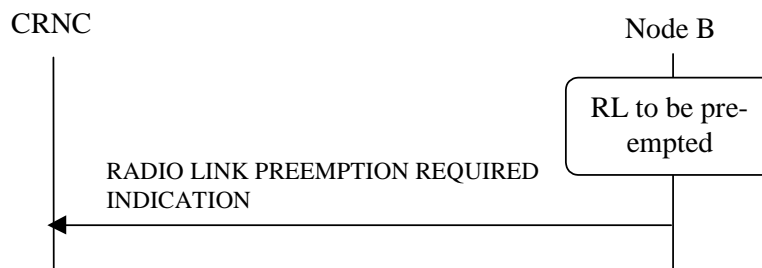
## 8.3.16 Radio Link Pre-emption

### 8.3.16.1 General

This procedure is started by the Node B when resources need to be freed.

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

### 8.3.16.2 Successful Operation



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

When the Node B detects that one or more Radio Links should be pre-empted (see Annex A), it shall send the RADIO LINK PREEMPTION REQUIRED INDICATION message to the CRNC using the Communication Control Port assigned to the concerned Node B Communication Context.

If all Radio Links for a CRNC Communication Context ID should be pre-empted, the *RL Information IE* shall be omitted. If one or several but not all Radio Links should be pre-empted for a CRNC Communication Context, the Radio Links that should be pre-empted shall be indicated in the *RL Information IE*. The Radio Link(s) that should be pre-empted should be deleted by the CRNC.

### 8.3.16.3 Abnormal Conditions

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## 8.4 Error Handling Procedures

### 8.4.1 Error Indication

#### 8.4.1.1 General

The Error Indication procedure is initiated by a node in order to report detected errors in one incoming message, provided they cannot be reported by an appropriate response message.



### 8.4.1.2 Successful Operation

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

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

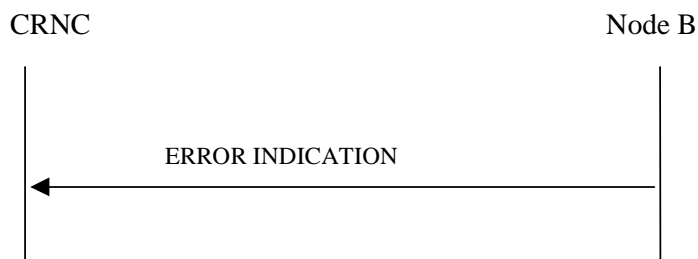
- When the ERROR INDICATION message is sent from a Node B to its CRNC, the *CRNC Communication Context ID IE* shall be included in the message if the corresponding Node B Communication Context, addressed by the *Node B Communication Context ID IE* which was received in the message triggering the Error Indication procedure, exists;
- When the ERROR INDICATION message is sent from a CRNC to a Node B, the *Node B Communication Context ID IE* shall be included in the message if the corresponding CRNC Communication Context, addressed by the *CRNC Communication Context ID IE* which was received in the message triggering the Error Indication procedure, exists;
- When the message triggering the Error Indication procedure is received in the Node B and there is no Node B Communication Context as indicated by the *Node B Communication Context ID IE*, the Node B shall include the unknown *Node B Communication Context ID IE* from the received message in the ERROR INDICATION message, unless another handling is specified in the procedure text for the affected procedure.
- When the message triggering the Error Indication procedure is received in the CRNC and there is no CRNC Communication Context as indicated by the *CRNC Communication Context ID IE*, the CRNC shall include the unknown *CRNC Communication Context ID IE* from the received message in the ERROR INDICATION message, unless another handling is specified in the procedure text for the affected procedure.

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

Typical cause values for the ERROR INDICATION message are:

#### Protocol Causes:

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



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

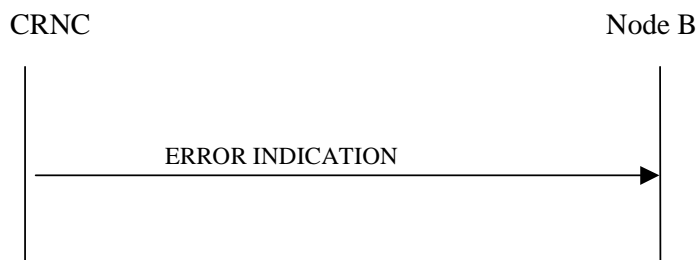


Figure 50: Error Indication procedure (CRNC to Node B), Successful Operation

### 8.4.1.3 Abnormal Conditions

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## 9 Elements for NBAP communication

### 9.1 Message Functional Definition and Contents

#### 9.1.1 General

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

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

#### 9.1.2 Message Contents

##### 9.1.2.1 Presence

An information element can be of the following types:

<b>M</b>	IEs marked as Mandatory (M) shall always be included in the message.
<b>O</b>	IEs marked as Optional (O) may or may not be included in the message.
<b>C</b>	IEs marked as Conditional (C) shall be included in a message only if the condition is satisfied. Otherwise the IE shall not be included.

In case of an Information Element group, the group is preceded by a name for the info group (in bold). It is also indicated how many times a group may be repeated in the message and whether the group is conditional. The presence field of the Information Elements inside one group defines if the Information Element is mandatory, optional or conditional if the group is present.

##### 9.1.2.2 Criticality

Each Information Element or Group of Information Elements may have a criticality information applied to it. Following cases are possible:

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

### 9.1.2.3 Range

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

### 9.1.2.4 Assigned Criticality

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

## 9.1.3 COMMON TRANSPORT CHANNEL SETUP REQUEST

### 9.1.3.1 FDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
C-ID	M		9.2.1.9		YES	reject
Configuration Generation ID	M		9.2.1.16		YES	reject
CHOICE <i>Common Physical Channel To Be Configured</i>	M				YES	ignore
>Secondary CCPCH					–	
>>Secondary CCPCH		1			–	
>>>Common Physical Channel ID	M		9.2.1.13		–	
>>>FDD SCCPCH Offset	M		9.2.2.15	Corresponds to [7]: S-CCPCH,k	–	
>>>DL Scrambling Code	C-PCH		9.2.2.13		–	
>>>FDD DL Channelisation Code Number	M		9.2.2.14		–	
>>>TFCS	M		9.2.1.58	For the DL.	–	
>>>Secondary CCPCH Slot Format	M		9.2.2.43		–	
>>>TFCI Presence	C-SlotFormat		9.2.1.57	Refer to TS [7]	–	
>>>Multiplexing Position	M		9.2.2.23		–	
>>>Power Offset Information		1			–	
>>>>PO1	M		Power Offset 9.2.2.29	Power offset for the TFCI bits	–	
>>>>PO3	M		Power Offset 9.2.2.29	Power offset for the pilot bits	–	
>>>STTD Indicator	M		9.2.2.48		–	
>>>FACH Parameters		0..<maxno ofFACHs>			GLOBAL	reject
>>>>Common Transport Channel ID	M		9.2.1.14		–	
>>>>Transport Format Set	M		9.2.1.59	For the DL.	–	
>>>>ToAWS	M		9.2.1.61		–	
>>>>ToAWE	M		9.2.1.60		–	
>>>>Max FACH Power	M		DL Power 9.2.1.21	Maximum allowed power on the FACH.	–	
>>>PCH Parameters		0..1			YES	reject
>>>>Common Transport Channel ID	M		9.2.1.14		–	
>>>>Transport Format Set	M		9.2.1.59	For the DL.	–	
>>>>ToAWS	M		9.2.1.61		–	
>>>>ToAWE	M		9.2.1.60		–	

>>>>PCH Power	M		DL Power 9.2.1.21		–	
<b>&gt;&gt;&gt;&gt;PICH Parameters</b>		1			–	
>>>>Common Physical Channel ID	M		9.2.1.13		–	
>>>>FDD DL Channelisation Code Number	M		9.2.2.14		–	
>>>>PICH Power	M		9.2.1.49A		–	
>>>>PICH Mode	M		9.2.2.26	Number of PI per frame	–	
>>>>STTD Indicator	M		9.2.2.48		–	
>PRACH					–	
<b>&gt;&gt;PRACH</b>		1			–	
>>>Common Physical Channel ID	M		9.2.1.13		–	
>>>Scrambling Code Number	M		9.2.2.42		–	
>>>TFCS	M		9.2.1.58	For the UL.	–	
>>>Preamble Signatures	M		9.2.2.31		–	
<b>&gt;&gt;&gt;Allowed Slot Format Information</b>		1..<maxno ofSlotFormatsPRACH>			–	
>>>>RACH Slot Format	M		9.2.2.37		–	
>>>RACH Sub Channel Numbers	M		9.2.2.38		–	
>>>Puncture Limit	M		9.2.1.50	For the UL	–	
>>>Preamble Threshold	M		9.2.2.32		–	
<b>&gt;&gt;&gt;RACH Parameters</b>		1			YES	reject
>>>>Common Transport Channel ID	M		9.2.1.14		–	
>>>>Transport Format Set	M		9.2.1.59	For the UL.	–	
<b>&gt;&gt;&gt;AICH Parameters</b>		1			–	
>>>>Common Physical Channel ID	M		9.2.1.13		–	
>>>>AICH Transmission Timing	M		9.2.2.1		–	
>>>>FDD DL Channelisation Code Number	M		9.2.2.14		–	
>>>>AICH Power	M		9.2.2.D		–	
>>>>STTD Indicator	M		9.2.2.48		–	
>PCPCHs					–	
<b>&gt;&gt;CPCH Parameters</b>		1			–	
>>>Common Transport Channel ID	M		9.2.1.14		–	
>>>Transport Format Set	M		9.2.1.59	For the UL.	–	
>>>AP Preamble Scrambling Code	M		CPCH Scrambling Code Number		–	

			9.2.2.4B			
>>>CD Preamble Scrambling Code	M		CPCH Scrambling Code Number 9.2.2.4B		–	
>>>TFCS	M		9.2.1.58	For the UL	–	
>>>CD Signatures	O		Preamble Signatures 9.2.2.31	Note: When not present, all CD signatures are to be used.	–	
>>>CD Sub Channel Numbers	O		9.2.2.1C		–	
>>>Puncture Limit	M		9.2.1.50	For the UL	–	
>>>CPCH UL DPCCH Slot Format	M		9.2.2.4C	For UL CPCH message control part	–	
>>>UL SIR	M		9.2.1.67A		–	
>>>Initial DL Transmission Power	M		DL Power 9.2.1.21		–	
>>>Maximum DL Power	M		DL Power 9.2.1.21		–	
>>>Minimum DL Power	M		DL Power 9.2.1.21		–	
>>>PO2	M		Power Offset 9.2.2.29	Power offset for the TPC bits relative to the pilot bits.	–	
>>>FDD TPC DL Step Size	M		9.2.2.16		–	
>>>N_Start_Message	M		9.2.2.23C		–	
>>>N_EOT	M		9.2.2.23A		–	
>>>Channel Assignment Indication	M		9.2.2.1D		–	
>>>CPCH Allowed Total Rate	M		9.2.2.4A		–	
>>> <b>PCPCH Channel Information</b>		<i>1..&lt;maxno of PCPCHs &gt;</i>			–	
>>>>Common Physical Channel ID	M		9.2.1.13		–	
>>>>CPCH Scrambling Code Number	M		9.2.2.4B	For UL PCPCH	–	
>>>>DL Scrambling Code	M		9.2.2.13	For DL CPCH message part	–	
>>>>FDD DL Channelisation Code Number	M		9.2.2.14	For DL CPCH message part	–	
>>>>PCP Length	M		9.2.2.24A		–	
>>>> <b>UCSM Information</b>	C-NCA	<i>1</i>			–	
>>>>>Min UL Channelisation Code Length	M		9.2.2.22		–	
>>>>>NF_max	M		9.2.2.23B		–	
>>>>> <b>Channel Request</b>		<i>0..&lt;maxA PSigNum&gt;</i>			–	

Parameters						
>>>>>AP Preamble Signature	M		9.2.2.1A		–	
>>>>>AP Sub Channel Number	O		9.2.2.1B		–	
>>>VCAM Mapping Information	C-CA	1..<maxno ofLen>		Refer to TS [18]	–	
>>>>Min UL Channelisation Code Length	M		9.2.2.22		–	
>>>>NF_max	M		9.2.2.23B		–	
>>>>Max Number of PCPCHs	M		9.2.2.20A		–	
>>>>SF Request Parameters		1..<maxA PSigNum>			–	
>>>>>AP Preamble Signature	M		9.2.2.1A		–	
>>>>>AP Sub Channel Number	O		9.2.2.1B		–	
>>>>AP-AICH Parameters		1			–	
>>>>>Common Physical Channel ID	M		9.2.1.13		–	
>>>>>FDD DL Channelisation Code Number	M		9.2.2.14		–	
>>>>>AP-AICH Power	M		AICH Power 9.2.2.D		–	
>>>>>CSICH Power	M		AICH Power 9.2.2.D	For CSICH bits at end of AP-AICH slot	–	
>>>>>STTD Indicator	M		9.2.2.48		–	
>>>>CD/CA-ICH Parameters		1			–	
>>>>>Common Physical Channel ID	M		9.2.1.13		–	
>>>>>FDD DL Channelisation Code Number	M		9.2.2.14		–	
>>>>>CD/CA-ICH Power	M		AICH Power 9.2.2.D		–	
>>>>>STTD Indicator	M		9.2.2.48		–	

Condition	Explanation
SlotFormat	The IE shall be present if the <i>Secondary CCPCH Slot Format</i> IE is set to any of the values from 8 to 17.
CA	The IE shall be present if the <i>Channel Assignment Indication</i> IE is set to 'CA Active'.
NCA	The IE shall be present if the <i>Channel Assignment Indication</i> IE is set to 'CA Inactive'.
PCH	The IE shall be present if the <i>PCH Parameters</i> IE is not present.

<b>Range Bound</b>	<b>Explanation</b>
<i>maxnoofFACHs</i>	Maximum number of FACHs that can be defined on a Secondary CCPCH
<i>maxnoofPCPCHs</i>	Maximum number of PCPCHs for a CPCH
<i>maxnoofLen</i>	Maximum number of Min UL Channelisation Code Length
<i>maxnoofSlotFormatsPRACH</i>	Maximum number of SF for a PRACH
<i>maxAPSigNum</i>	Maximum number of AP Signatures



## 9.1.3.2 TDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
C-ID	M		9.2.1.9		YES	reject
Configuration Generation ID	M		9.2.1.16		YES	reject
CHOICE <i>Common Physical Channel To Be Configured</i>	M				YES	ignore
> <i>Secondary CCPCHs</i>					–	
>>SCCPCH CCTrCH ID	M		CCTrCH ID 9.2.3.3	For DL CCTrCH supporting one or several Secondary CCPCHs	–	
>>TFCS	M		9.2.1.58	For DL CCTrCH supporting one or several Secondary CCPCHs	–	
>>TFCI Coding	M		9.2.3.22		–	
>>Puncture Limit	M		9.2.1.50		–	
>>CHOICE <i>HCR or LCR</i>	M			See note 1 below	–	
>>>3.84Mcps <i>TDD</i>					–	
>>>>Secondary CCPCH		1..<maxno ofSCCPC Hs>			GLOBAL	reject
>>>>Common Physical Channel ID	M		9.2.1.13		–	
>>>>TDD Channelisation Code	M		9.2.3.19		–	
>>>>Time Slot	M		9.2.3.23		–	
>>>>Midamble Shift And Burst Type	M		9.2.3.7		–	
>>>>TDD Physical Channel Offset	M		9.2.3.20		–	
>>>>Repetition Period	M		9.2.3.16		–	
>>>>Repetition Length	M		9.2.3.15		–	
>>>>SCCPCH Power	M		DL Power 9.2.1.21		–	
>>>1.28Mcps <i>TDD</i>					–	
>>>>Secondary CCPCH LCR		1..<maxno ofSCCPC HsLCR>			GLOBAL	reject
>>>>Common Physical Channel ID	M		9.2.1.13		–	
>>>>TDD Channelisation Code LCR	M		9.2.3.19a		–	
>>>>Time Slot	M		9.2.3.24A		–	

LCR						
>>>>Midamble Shift LCR	M		9.2.3.7A		–	
>>>>TDD Physical Channel Offset	M		9.2.3.20		–	
>>>>Repetition Period	M		9.2.3.16		–	
>>>>Repetition Length	M		9.2.3.15		–	
>>>>SCCPCH Power	M		DL Power 9.2.1.21		–	
>>>> SCCPCH Time Slot Format LCR	M		TDD DL DPCH Time Slot Format LCR 9.2.3.19D		–	
<b>&gt;&gt;FACH Parameters</b>		<i>0..&lt;maxno ofFACHs&gt;</i>			GLOBAL	reject
>>>Common Transport Channel ID	M		9.2.1.14		–	
>>>FACH CCTrCH ID	M		CCTrCH ID 9.2.3.3		–	
>>>Transport Format Set	M		9.2.1.59	For the DL.	–	
>>>ToAWS	M		9.2.1.61		–	
>>>ToAWE	M		9.2.1.60		–	
>>>Max FACH Power	O		DL Power 9.2.1.21	Applicable to 1.28Mcps TDD only	YES	reject
<b>&gt;&gt;PCH Parameters</b>		<i>0..1</i>			YES	reject
>>>Common Transport Channel ID	M		9.2.1.14		–	
>>>PCH CCTrCH ID	M		CCTrCH ID 9.2.3.3		–	
>>>Transport Format Set	M		9.2.1.59	For the DL.	–	
>>>ToAWS	M		9.2.1.61		–	
>>>ToAWE	M		9.2.1.60		–	
>>>CHOICE <i>HCR or LCR</i>	M			See note 1 below	–	
>>>>3.84Mcps TDD					–	
<b>&gt;&gt;&gt;&gt;PICH Parameters</b>		<i>1</i>			YES	reject
>>>>>Common Physical Channel ID	M		9.2.1.13		–	
>>>>>TDD Channelisation Code	M		9.2.3.19		–	
>>>>>Time Slot	M		9.2.3.23		–	
>>>>>Midamble Shift And Burst Type	M		9.2.3.7		–	
>>>>>TDD Physical Channel Offset	M		9.2.3.20		–	
>>>>>Repetition Period	M		9.2.3.16		–	

>>>>>Repetition Length	M		9.2.3.15		–	
>>>>>Paging Indicator Length	M		9.2.3.8		–	
>>>>>PICH Power	M		9.2.1.49A		–	
>>>>1.28Mcps TDD					–	
>>>>>PICH Parameters LCR		1			YES	reject
>>>>>Common Physical Channel ID	M		9.2.1.13		–	
>>>>>TDD Channelisation Code LCR	M		9.2.3.19a		–	
>>>>>Time Slot LCR	M		9.2.3.24A		–	
>>>>>Midamble Shift LCR	M		9.2.3.7A		–	
>>>>>TDD Physical Channel Offset	M		9.2.3.20		–	
>>>>>Repetition Period	M		9.2.3.16		–	
>>>>>Repetition Length	M		9.2.3.15		–	
>>>>>Paging Indicator Length	M		9.2.3.8		–	
>>>>>PICH Power	M		9.2.1.49A		–	
>>>>>Second TDD Channelisation Code LCR	M		TDD Channelisation Code LCR 9.2.3.19a		–	
>>>PCH Power	O		DL Power 9.2.1.21	Applicable to 1.28Mcps TDD only	YES	reject
>PRACH					–	
>>CHOICE HCR or LCR	M			See note 1 below	–	
>>>3.84Mcps TDD					–	
>>>>>PRACH		1			YES	reject
>>>>>Common Physical Channel ID	M		9.2.1.13		–	
>>>>>TFCS	M		9.2.1.58		–	
>>>>>Time Slot	M		9.2.3.23		–	
>>>>>TDD Channelisation Code	M		9.2.3.19		–	
>>>>>Max PRACH Midamble Shifts	M		9.2.3.6		–	
>>>>>PRACH Midamble	M		9.2.3.14		–	
>>>>>RACH		1			YES	reject
>>>>>Common Transport Channel ID	M		9.2.1.14		–	
>>>>>Transport	M		9.2.1.59	For the UL	–	

Format Set						
>>>1.28Mcps TDD						
>>>>PRACH LCR		1..<maxno ofPRACHLCRs>			GLOBAL	reject
>>>>>Common Physical Channel ID	M		9.2.1.13		–	
>>>>>TFCS	M		9.2.1.58		–	
>>>>>Time Slot LCR	M		9.2.3.24A		–	
>>>>>TDD Channelisation Code LCR	M		9.2.3.19a		–	
>>>>>Midamble Shift LCR	M		9.2.3.7A		–	
>>>>>RACH		1			YES	reject
>>>>>>Common Transport Channel ID	M		9.2.1.14		–	
>>>>>>Transport Format Set	M		9.2.1.59	For the UL	–	
>>FPACH		0..1		Mandatory for 1.28Mcps TDD. Not Applicable to 3.84Mcps TDD.	YES	reject
>>>Common Physical Channel ID	M		9.2.1.13		–	
>>>TDD Channelisation Code LCR	M		9.2.3.19a		–	
>>>Time Slot LCR	M		9.2.3.24A		–	
>>>Midamble Shift LCR	M		9.2.3.7A		–	
>>>Max FPACH Power	M		9.2.3.5E		–	

Note 1: This information element is a simplified representation of the ASN.1. The choice is in reality performed through the use of ProtocolIE-Single-Container within the ASN.1.

Range Bound	Explanation
<i>maxnoofSCCPCHs</i>	Maximum number of Secondary CCPCHs per CCTrCH for 3.84Mcps TDD
<i>maxnoofSCCPCHsLCR</i>	Maximum number of Secondary CCPCHs per CCTrCH for 1.28Mcps TDD
<i>maxnoofCCTrCHs</i>	Maximum number of CCTrCHs that can be defined in a cell
<i>maxnoofFACHs</i>	Maximum number of FACHs that can be defined on a Secondary CCPCH
<i>maxnoofPRACHLCRs</i>	Maximum number of PRACHs LCR that can be defined on a RACH for 1.28Mcps TDD

## 9.1.4 COMMON TRANSPORT CHANNEL SETUP RESPONSE

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
<b>FACH Parameters Info</b>		<i>0..&lt;maxno ofFACHs&gt;</i>		The FACH Parameters may be combined with PCH Parameters	GLOBAL	ignore
>FACH Parameters	M		Common Transport Channel Information Response 9.2.1.14A		–	
PCH Parameters	O		Common Transport Channel Information Response 9.2.1.14A	The PCH Parameters may be combined with FACH Parameters	YES	ignore
RACH Parameters	O		Common Transport Channel Information Response 9.2.1.14A	The RACH Parameters shall not be combined with FACH Parameters or PCH Parameters	YES	ignore
CPCH Parameters	O		Common Transport Channel Information Response 9.2.1.14A	The CPCH Parameters shall not be combined with FACH Parameters or PCH Parameters or RACH Parameters	YES	ignore
Criticality Diagnostics	O		9.2.1.17		YES	ignore

Range Bound	Explanation
<i>maxnoofFACHs</i>	Maximum number of FACHs that can be defined on a Secondary CCPCH[FDD] / a group of Secondary CCPCHs [TDD]

## 9.1.5 COMMON TRANSPORT CHANNEL SETUP FAILURE

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	–
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	–
Cause	M		9.2.1.6		YES	ignore
Criticality Diagnostics	O		9.2.1.17		YES	ignore

## 9.1.6 COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST

### 9.1.6.1 FDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
C-ID	M		9.2.1.9		YES	reject
Configuration Generation ID	M		9.2.1.16		YES	reject
CHOICE <i>Common Physical Channel To Be Configured</i>	M				YES	reject
>Secondary CCPCCH					–	
>>FACH Parameters		0..<maxFA CHCell>			GLOBAL	reject
>>>Common Transport Channel ID	M		9.2.1.14		–	
>>>Max FACH Power	O		DL Power 9.2.1.21	Maximum allowed power on the FACH.	–	
>>>ToAWS	O		9.2.1.61		–	
>>>ToAWE	O		9.2.1.60		–	
>>PCH Parameters		0..1			YES	reject
>>>Common Transport Channel ID	M		9.2.1.14		–	
>>>PCH Power	O		DL Power 9.2.1.21	Power to be used on the PCH.	–	
>>>ToAWS	O		9.2.1.61		–	
>>>ToAWE	O		9.2.1.60		–	
>>PICH Parameters		0..1			YES	reject
>>>Common Physical Channel ID	M		9.2.1.13		–	
>>>PICH Power	O		9.2.1.49A		–	
>PRACH					–	
>>PRACH Parameters		0..<maxP RACHCell >			GLOBAL	reject
>>>Common Physical Channel ID	M		9.2.1.13		–	
>>>Preamble Signatures	O		9.2.2.31		–	
>>>Allowed Slot Format Information		0..<maxno ofSlotForm atsPRACH >			–	
>>>>RACH Slot Format	M		9.2.2.37		–	
>>>RACH Sub Channel Numbers	O		9.2.2.38		–	
>>AICH Parameters		0..<maxP RACHCell >			GLOBAL	reject
>>>Common Physical	M		9.2.1.13		–	

Channel ID						
>>>AICH Power	O		9.2.2.D		–	
>CPCH					–	
>>CPCH Parameters		0..<maxno ofCPCHs>			GLOBAL	reject
>>>Common Transport Channel ID	M		9.2.1.14		–	
>>>UL SIR	O		9.2.1.67A		–	
>>>Initial DL Transmission Power	O		DL Power 9.2.1.21		–	
>>>Maximum DL Power	O		DL Power 9.2.1.21		–	
>>>Minimum DL Power	O		DL Power 9.2.1.21		–	
>>AP-AICH Parameters		0..<maxno ofCPCHs>			GLOBAL	reject
>>>Common Physical Channel ID	M		9.2.1.13		–	
>>>AP-AICH Power	O		AICH Power 9.2.2.D		–	
>>>CSICH Power	O		AICH Power 9.2.2.D	For CSICH bits at end of AP-AICH slot	–	
>>CD/CA-ICH Parameters		0..<maxno ofCPCHs>			GLOBAL	reject
>>>Common Physical Channel ID	M		9.2.1.13		–	
>>>CD/CA-ICH Power	O		AICH Power 9.2.2.D		–	

Range Bound	Explanation
<i>maxFACHCell</i>	Maximum number of FACHs that can be defined in a Cell
<i>maxnoofCPCHs</i>	Maximum number of CPCHs that can be defined in a Cell
<i>maxPRACHCell</i>	Maximum number of PRACHs and AICHs that can be defined in a Cell
<i>maxnoofSlotFormatsPRACH</i>	Maximum number of SF for a PRACH

### 9.1.6.2 TDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
C-ID	M		9.2.1.9		YES	reject
Configuration Generation ID	M		9.2.1.16		YES	reject
<b>Secondary CCPCH Parameters</b>		0..1			YES	reject



>CCTrCH ID	M		9.2.3.3	For DL CCTrCH supporting one or several Secondary CCPCHs	–	
>Secondary CCPCHs To Be Configured		<i>0..&lt;maxno ofSCCPCHs&gt;</i>			GLOBAL	reject
>>Common Physical Channel ID	M		9.2.1.13		–	
>>SCCPCH Power	O		DL power 9.2.1.21		–	
<b>PICH Parameters</b>		<i>0..1</i>			YES	reject
>Common Physical Channel ID	M		9.2.1.13		–	
>PICH Power	O		9.2.1.49A		–	
<b>FACH Parameters</b>		<i>0..&lt;maxno ofFACHs&gt;</i>			GLOBAL	reject
>Common Transport Channel ID	M		9.2.1.14		–	
>ToAWS	O		9.2.1.61		–	
>ToAWE	O		9.2.1.60		–	
>Max FACH Power	O		DL Power 9.2.1.21	Applicable to 1.28Mcps TDD only	YES	reject
<b>PCH Parameters</b>		<i>0..1</i>			YES	reject
>Common Transport Channel ID	M		9.2.1.14		–	
>ToAWS	O		9.2.1.61		–	
>ToAWE	O		9.2.1.60		–	
>PCH Power	O		DL Power 9.2.1.21	Applicable to 1.28Mcps TDD only	YES	reject
<b>FPACH Parameters</b>		<i>0..1</i>		Mandatory for 1.28Mcps TDD. Not Applicable to 3.84Mcps TDD.	YES	reject
>Common Physical Channel ID	M		9.2.1.13		–	
>Max FPACH Power	O		9.2.3.5E		–	

Range Bound	Explanation
<i>maxnoofSCCPCHs</i>	Maximum number of SCCPCHs that can be repeated in a Cell
<i>maxnoofFACHs</i>	Maximum number of FACHs that can be repeated in a Cell

### 9.1.7 COMMON TRANSPORT CHANNEL RECONFIGURATION RESPONSE

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Criticality Diagnostics	O		9.2.1.17		YES	ignore

## 9.1.8 COMMON TRANSPORT CHANNEL RECONFIGURATION FAILURE

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Cause	M		9.2.1.6		YES	ignore
Criticality Diagnostics	O		9.2.1.17		YES	ignore

## 9.1.9 COMMON TRANSPORT CHANNEL DELETION REQUEST

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
C-ID	M		9.2.1.9		YES	reject
Common Physical Channel ID	M		9.2.1.13	Indicates the Common Physical Channel for which the Common Transport Channels (together with the Common Physical Channel) shall be deleted.	YES	reject
Configuration Generation ID	M		9.2.1.16		YES	reject

## 9.1.10 COMMON TRANSPORT CHANNEL DELETION RESPONSE

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Criticality Diagnostics	O		9.2.1.17		YES	ignore

### 9.1.11 BLOCK RESOURCE REQUEST

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
C-ID	M		9.2.1.9		YES	reject
Blocking Priority Indicator	M		9.2.1.5		YES	reject
Shutdown Timer	C-BlockNormal		9.2.1.56		YES	reject

Condition	Explanation
BlockNormal	The IE shall be present if the <i>Blocking Priority Indicator</i> IE indicates 'Normal Priority'.

### 9.1.12 BLOCK RESOURCE RESPONSE

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Criticality Diagnostics	O		9.2.1.17		YES	ignore

### 9.1.13 BLOCK RESOURCE FAILURE

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Cause	M		9.2.1.6		YES	ignore
Criticality Diagnostics	O		9.2.1.17		YES	ignore

### 9.1.14 UNBLOCK RESOURCE INDICATION

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	ignore
Transaction ID	M		9.2.1.62		–	
C-ID	M		9.2.1.9		YES	ignore

### 9.1.15 AUDIT REQUIRED INDICATION

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	ignore
Transaction ID	M		9.2.1.62		–	

### 9.1.16 AUDIT REQUEST

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Start Of Audit Sequence Indicator	M		9.2.1.56B		YES	reject

## 9.1.17 AUDIT RESPONSE

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
End Of Audit Sequence Indicator	M		9.2.1.29A		YES	ignore
<b>Cell Information</b>		<i>0..&lt;maxCellsInNodeB&gt;</i>			EACH	ignore
>C-ID	M		9.2.1.9		–	
>Configuration Generation ID	M		9.2.1.16		–	
>Resource Operational State	M		9.2.1.52		–	
>Availability Status	M		9.2.1.2		–	
>Local Cell ID	M		9.2.1.38	The local cell that the cell is configured on	–	
>Primary SCH Information	O		Common Physical Channel Status Information 9.2.1.13A		YES	ignore
>Secondary SCH Information	O		Common Physical Channel Status Information 9.2.1.13A		YES	ignore
>Primary CPICH Information	O		Common Physical Channel Status Information 9.2.1.13A		YES	ignore
<b>&gt;Secondary CPICH Information</b>		<i>0..&lt;maxSCPICHCell&gt;</i>			EACH	ignore
>>Secondary CPICH Individual Information	M		Common Physical Channel Status Information 9.2.1.13A		–	
>Primary CCPCH Information	O		Common Physical Channel Status Information 9.2.1.13A		YES	ignore
>BCH Information	O		Common Transport Channel Status Information 9.2.1.14B		YES	ignore
<b>&gt;Secondary CCPCH</b>		<i>0..&lt;maxS&gt;</i>			EACH	ignore

Information		<i>CCPCH<sub>e</sub></i> <i>II</i> >				
>>Secondary CCPCH Individual Information	M		Common Physical Channel Status Information 9.2.1.13A		–	
>PCH Information	O		Common Transport Channel Status Information 9.2.1.14B		YES	ignore
>PICH Information	O		Common Physical Channel Status Information 9.2.1.13A		YES	ignore
<b>&gt;FACH Information</b>		<i>0..&lt;maxFA</i> <i>CHCell</i> >			EACH	ignore
>>FACH Individual Information	M		Common Transport Channel Status Information 9.2.1.14B		–	
<b>&gt;PRACH Information</b>		<i>0..&lt;maxP</i> <i>RACHCell</i> <i>&gt;</i>			EACH	ignore
>>PRACH Individual Information	M		Common Physical Channel Status Information 9.2.1.13A		–	
<b>&gt;RACH Information</b>		<i>0..&lt;maxR</i> <i>ACHCell</i> >			EACH	ignore
>>RACH Individual Information	M		Common Transport Channel Status Information 9.2.1.14B		–	
<b>&gt;AICH Information</b>		<i>0..&lt;maxP</i> <i>RACHCell</i> <i>&gt;</i>			EACH	ignore
>>AICH Individual Information	M		Common Physical Channel Status Information 9.2.1.13A		–	
<b>&gt;PCPCH Information</b>		<i>0..&lt;maxP</i> <i>CPCHCell</i> <i>&gt;</i>			EACH	ignore
>>PCPCH Individual Information	M		Common Physical Channel		–	

			Status Information 9.2.1.13A			
<b>&gt;CPCH Information</b>		<i>0..&lt;maxC PCHCell&gt;</i>			EACH	ignore
>>CPCH Individual Information	M		Common Transport Channel Status Information 9.2.1.14B		–	
<b>&gt;AP-AICH Information</b>		<i>0..&lt;maxC PCHCell&gt;</i>			EACH	ignore
>>AP-AICH Individual Information	M		Common Physical Channel Status Information 9.2.1.13A		–	
<b>&gt;CD/CA-ICH Information</b>		<i>0..&lt;maxC PCHCell&gt;</i>			EACH	ignore
>>CD/CA-ICH Individual Information	M		Common Physical Channel Status Information 9.2.1.13A		–	
>SCH Information	O		Common Physical Channel Status Information 9.2.1.13A	TDD Sync Channel	YES	ignore
<b>&gt;FPACH Information</b>		<i>0..&lt;maxFP ACHCell&gt;</i>		Applicable to 1.28Mcps TDD only	EACH	ignore
>>FPACH Individual Information	M		Common Physical Channel Status Information 9.2.1.13A		–	
>DwPCH Information	O		Common Physical Channel Status Information 9.2.1.13A	Applicable to 1.28Mcps TDD only	YES	ignore
<b>Communication Control Port Information</b>		<i>0..&lt;maxC CPinNode B&gt;</i>			EACH	ignore
>Communication Control Port ID	M		9.2.1.15		–	
>Resource Operational State	M		9.2.1.52		–	
>Availability Status	M		9.2.1.2		–	
<b>Local Cell Information</b>		<i>0..&lt;maxLocalCellinNodeB&gt;</i>			EACH	ignore

>Local Cell ID	M		9.2.1.38		–	
>DL or Global Capacity Credit	M		9.2.1.20B		–	
>UL Capacity Credit	O		9.2.1.65A		–	
>Common Channels Capacity Consumption Law	M		9.2.1.9A		–	
>Dedicated Channels Capacity Consumption Law	M		9.2.1.20A		–	
>Maximum DL Power Capability	O		9.2.1.39		–	
>Minimum Spreading Factor	O		9.2.1.47		–	
>Minimum DL Power Capability	O		9.2.1.46A		–	
>Local Cell Group ID	O		9.2.1.37A		–	
>Reference Clock Availability	O		9.2.3.14A	TDD only	YES	ignore
<b>Local Cell Group Information</b>		<i>0..&lt;maxLocalCellinNodeB&gt;</i>			EACH	ignore
>Local Cell Group ID	M		9.2.1.37A		–	
>DL or Global Capacity Credit	M		9.2.1.20B		–	
>UL Capacity Credit	O		9.2.1.65A		–	
>Common Channels Capacity Consumption Law	M		9.2.1.9A		–	
>Dedicated Channels Capacity Consumption Law	M		9.2.1.20A		–	
Criticality Diagnostics	O		9.2.1.17		YES	ignore

Range Bound	Explanation
<i>maxCellinNodeB</i>	Maximum number of Cells that can be configured in Node B
<i>maxCCPinNodeB</i>	Maximum number of Communication Control Ports that can exist in the Node B
<i>maxCPCHCell</i>	Maximum number of CPCHs that can be defined in a Cell
<i>maxLocalCellinNodeB</i>	Maximum number of Local Cells that can exist in the Node B
<i>maxPCPCHCell</i>	Maximum number of PCPCHs that can be defined in a Cell
<i>maxSCPICHCell</i>	Maximum number of Secondary CPICHs that can be defined in a Cell.
<i>maxSCCPCHCell</i>	Maximum number of Secondary CCPCHs that can be defined in a Cell.
<i>maxFACHCell</i>	Maximum number of FACHs that can be defined in a Cell
<i>maxPRACHCell</i>	Maximum number of PRACHs that can be defined in a Cell
<i>maxRACHCell</i>	Maximum number of RACHs that can be defined in a Cell
<i>maxFPACHCell</i>	Maximum number of FPACHs that can be defined in a Cell

## 9.1.17A AUDIT FAILURE

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Cause	M		9.2.1.6		YES	ignore
Criticality diagnostics	O		9.2.1.17		YES	ignore



## 9.1.18 COMMON MEASUREMENT INITIATION REQUEST

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Measurement ID	M		9.2.1.42		YES	reject
CHOICE <i>Common Measurement Object Type</i>	M				YES	reject
>Cell					–	
>>C-ID	M		9.2.1.9		–	
>>Time Slot	O		9.2.3.23	Applicable to 3.84Mcps TDD only	–	
>>Time Slot LCR	O		9.2.3.24A	Applicable to 1.28Mcps TDD only	YES	reject
>>Neighbouring Cell Measurement Information		0..<maxno MeasNCells>			GLOBAL	ignore
>>>CHOICE Neighbouring Cell Measurement Information					–	–
>>>>Neighbouring FDD Cell Measurement Information				FDD only	–	–
>>>> Neighbouring FDD Cell Measurement Information	M		9.2.1.47C		–	–
>>>>Neighbouring TDD Cell Measurement Information				Applicable to 3.84Mcps TDD only	–	–
>>>> Neighbouring TDD Cell Measurement Information	M		9.2.1.47D		–	–
>RACH				FDD only	–	
>>C-ID	M		9.2.1.9		–	
>>Common Transport Channel ID	M		9.2.1.14		–	
>CPCH				FDD only	–	
>>C-ID	M		9.2.1.9		–	
>>Common Transport Channel ID	M		9.2.1.14		–	
>>Spreading Factor	O		Minimum UL Channelisation Code Length 9.2.2.22		–	
Common Measurement Type	M		9.2.1.11		YES	reject
Measurement Filter Coefficient	O		9.2.1.41		YES	reject
Report Characteristics	M		9.2.1.51		YES	reject
SFN Reporting Indicator	M		FN Reporting Indicator 9.2.1.29B		YES	reject
SFN	O		9.2.1.53A		YES	reject
Common Measurement	O		9.2.1.9B		YES	reject

Accuracy						
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Range Bound	Explanation
<i>maxnoMeasNCells</i>	Maximum number of neighbouring cells that can be measured on.

### 9.1.19 COMMON MEASUREMENT INITIATION RESPONSE

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Measurement ID	M		9.2.1.42		YES	ignore
CHOICE <i>Common Measurement Object Type</i>	O			Common Measurement Object Type that the measurement was initiated with.	YES	ignore
> <i>Cell</i>					–	
>>Common Measurement Value	M		9.2.1.12		–	
> <i>RACH</i>				FDD only	–	
>>Common Measurement Value	M		9.2.1.12		–	
> <i>CPCH</i>				FDD only	–	
>>Common Measurement Value	M		9.2.1.12		–	
SFN	O		9.2.1.53A	Common Measurement Time Reference	YES	ignore
Criticality Diagnostics	O		9.2.1.17		YES	ignore
Common Measurement Achieved Accuracy	O		Common Measurement Accuracy 9.2.1.9B		YES	ignore

### 9.1.20 COMMON MEASUREMENT INITIATION FAILURE

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Measurement ID	M		9.2.1.42		YES	ignore
Cause	M		9.2.1.6		YES	ignore
Criticality Diagnostics	O		9.2.1.17		YES	ignore

### 9.1.21 COMMON MEASUREMENT REPORT

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	ignore
Transaction ID	M		9.2.1.62		–	
Measurement ID	M		9.2.1.42		YES	ignore
CHOICE <i>Common Measurement Object Type</i>	M			Common Measurement Object Type that the measurement was initiated with.	YES	ignore
> <i>Cell</i>					–	
>>Common Measurement Value Information	M		9.2.1.12A		–	
> <i>RACH</i>				FDD only	–	
>>Common Measurement Value Information	M		9.2.1.12A		–	
> <i>CPCH</i>				FDD only	–	
>>Common Measurement Value Information	M		9.2.1.12A		–	
SFN	O		9.2.1.53A	Common Measurement Time Reference	YES	ignore

### 9.1.22 COMMON MEASUREMENT TERMINATION REQUEST

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	ignore
Transaction ID	M		9.2.1.62		–	
Measurement ID	M		9.2.1.42		YES	ignore

### 9.1.23 COMMON MEASUREMENT FAILURE INDICATION

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	ignore
Transaction ID	M		9.2.1.62		–	
Measurement ID	M		9.2.1.42		YES	ignore
Cause	M		9.2.1.6		YES	ignore

## 9.1.24 CELL SETUP REQUEST

### 9.1.24.1 FDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Local Cell ID	M		9.2.1.38		YES	reject
C-ID	M		9.2.1.9		YES	reject
Configuration Generation ID	M		9.2.1.16		YES	reject
T Cell	M		9.2.2.49		YES	reject
UARFCN	M		9.2.1.65	Corresponds to Nu [14]	YES	reject
UARFCN	M		9.2.1.65	Corresponds to Nd [14]	YES	reject

Maximum Transmission Power	M		9.2.1.40		YES	reject
Closed Loop Timing Adjustment Mode	O		9.2.2.2A		YES	reject
Primary Scrambling Code	M		9.2.2.34		YES	reject
<b>Synchronisation Configuration</b>		1			YES	reject
>N_INSYNC_IND	M		9.2.1.47A		–	
>N_OUTSYNC_IND	M		9.2.1.47B		–	
>T_RLFAILURE	M		9.2.1.56A		–	
DL TPC Pattern 01 Count	M		9.2.2.13A		YES	reject
<b>Primary SCH Information</b>		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		–	
<b>Secondary SCH Information</b>		1			YES	reject
>Common Physical Channel ID	M		9.2.1.13		–	
>Secondary SCH Power	M		DL Power 9.2.1.21		–	
>TSTD Indicator	M		9.2.1.64		–	
<b>Primary CPICH Information</b>		1			YES	reject
>Common Physical Channel ID	M		9.2.1.13		–	
>Primary CPICH power	M		9.2.2.33		–	
>Transmit Diversity Indicator	M		9.2.2.53		–	
<b>Secondary CPICH Information</b>		$0..<maxS_{CPICHCell}>$			EACH	reject
>Common Physical Channel ID	M		9.2.1.13		–	
>DL Scrambling Code	M		9.2.2.13		–	
>FDD DL Channelisation Code Number	M		9.2.2.14		–	
>Secondary CPICH Power	M		DL Power 9.2.1.21		–	
>Transmit Diversity Indicator	M		9.2.2.53		–	
<b>Primary CCPCH Information</b>		1			YES	reject
>Common Physical Channel ID	M		9.2.1.13		–	
<b>&gt;BCH Information</b>		1			–	
>>Common Transport Channel ID	M		9.2.1.14		–	
>>BCH Power	M		DL Power 9.2.1.21		–	
>STTD Indicator	M		9.2.2.48		–	
<b>Limited Power Increase Information</b>		1			YES	reject
>Power_Raise_Limit	M		9.2.2.29A		–	
>DL_power_averaging_window_size	M		9.2.2.12A		–	
<b>IPDL Parameter Information</b>		0..1			YES	reject
>IPDL FDD Parameters	M		9.2.2.18C		–	
>IPDL Indicator	M		9.2.1.36F		–	

Range Bound	Explanation
$maxSCPICHCell$	Maximum number of Secondary CPICHs that can be defined in a Cell.

## 9.1.24.2 TDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Local Cell ID	M		9.2.1.38		YES	reject
C-ID	M		9.2.1.9		YES	reject
Configuration Generation Id	M		9.2.1.16		YES	reject
UARFCN	M		9.2.1.65	Corresponds to Nt [15]	YES	reject
Cell Parameter ID	M		9.2.3.4		YES	reject
Maximum Transmission Power	M		9.2.1.40		YES	reject
Transmission Diversity Applied	M		9.2.3.26	On DCHs	YES	reject
Sync Case	M		9.2.3.18		YES	reject
<b>Synchronisation Configuration</b>		1			YES	reject
>N_INSYNC_IND	M		9.2.1.47A		–	
>N_OUTSYNC_IND	M		9.2.1.47B		–	
>T_RLFAILURE	M		9.2.1.56A		–	
DPCH Constant Value	M		Constant Value		YES	reject
PUSCH Constant Value	M		Constant Value		YES	reject
PRACH Constant Value	M		Constant Value		YES	reject
Timing Advance Applied	M		9.2.3.22A		YES	reject
<b>SCH Information</b>		0..1		Mandatory for 3.84Mcps TDD. Not Applicable to 1.28Mcps TDD.	YES	reject
>Common Physical Channel ID	M		9.2.1.13		–	
>CHOICE Sync Case	M				YES	reject
>>Case 1					–	
>>>Time Slot	M		9.2.3.23		–	
>>Case 2					–	
>>>SCH Time Slot	M		9.2.3.17		–	
>SCH Power	M		DL Power 9.2.1.21		–	
>TSTD Indicator	M		9.2.1.64		–	
<b>PCCPCH Information</b>		0..1		Mandatory for 3.84Mcps TDD. Not Applicable to 1.28Mcps TDD.	YES	reject
>Common Physical Channel ID	M		9.2.1.13		–	
>TDD Physical Channel Offset	M		9.2.3.20		–	
>Repetition Period	M		9.2.3.16		–	
>Repetition Length	M		9.2.3.15		–	
>PCCPCH Power	M		9.2.3.9		–	
>SCTD Indicator	M		9.2.3.30		–	
<b>Time Slot Configuration</b>		0..15		Mandatory for 3.84Mcps TDD. Not Applicable to 1.28Mcps TDD.	GLOBAL	reject
>Time Slot	M		9.2.3.23		–	
>Time Slot Status	M		9.2.3.25		–	

>Time Slot Direction	M		9.2.3.24		–	
<b>Time Slot Configuration LCR</b>		0..7		Mandatory for 1.28Mcps TDD. Not Applicable to 3.84Mcps TDD.	GLOBAL	reject
>Time Slot LCR	M		9.2.3.24A		–	
>Time Slot Status	M		9.2.3.25		–	
>Time Slot Direction	M		9.2.3.24		–	
<b>PCCPCH Information LCR</b>		0..1		Mandatory for 1.28Mcps TDD. Not Applicable to 3.84Mcps TDD.	YES	reject
>Common Physical Channel ID	M		9.2.1.13		–	
>TDD Physical Channel Offset	M		9.2.3.20		–	
>Repetition Period	M		9.2.3.16		–	
>Repetition Length	M		9.2.3.15		–	
>PCCPCH Power	M		9.2.3.9		–	
>SCTD Indicator	M		9.2.3.30		–	
>TSTD Indicator	M		9.2.1.64		–	
<b>DwPCH Information</b>		0..1		Mandatory for 1.28Mcps TDD. Not Applicable to 3.84Mcps TDD.	YES	reject
>Common Physical Channel ID	M		9.2.1.13		–	
>TSTD Indicator	M		9.2.1.64		–	
>DwPCH Power	M		9.2.3.5B		–	
Reference SFN Offset	O		9.2.3.14B		YES	ignore
<b>IPDL Parameter Information</b>		0..1		Applicable to 3.84Mcps TDD only	YES	reject
>IPDL TDD Parameters	M		9.2.3.5D		–	
>IPDL Indicator	M		9.2.1.36F		–	

## 9.1.25 CELL SETUP RESPONSE

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Criticality Diagnostics	O		9.2.1.17		YES	ignore

## 9.1.26 CELL SETUP FAILURE

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Cause	M		9.2.1.6		YES	ignore
Criticality Diagnostics	O		9.2.1.17		YES	ignore

## 9.1.27 CELL RECONFIGURATION REQUEST

## 9.1.27.1 FDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
C-ID	M		9.2.1.9		YES	reject
Configuration Generation ID	M		9.2.1.16		YES	reject
Maximum Transmission Power	O		9.2.1.40		YES	reject
<b>Synchronisation Configuration</b>		0..1			YES	reject
>N_INSYNC_IND	M		9.2.1.47A		–	
>N_OUTSYNC_IND	M		9.2.1.47B		–	
>T_RLFAILURE	M		9.2.1.56A		–	
<b>Primary SCH Information</b>		0..1			YES	reject
>Common Physical Channel ID	M		9.2.1.13		–	
>Primary SCH Power	M		DL Power 9.2.1.21		–	
<b>Secondary SCH Information</b>		0..1			YES	reject
>Common Physical Channel ID	M		9.2.1.13		–	
>Secondary SCH Power	M		DL Power 9.2.1.21		–	
<b>Primary CPICH Information</b>		0..1			YES	reject
>Common Physical Channel ID	M		9.2.1.13		–	
>Primary CPICH Power	M		9.2.2.33		–	
<b>Secondary CPICH Information</b>		0..<maxSCPICHCell >			EACH	reject
>Common Physical Channel ID	M		9.2.1.13		–	
>Secondary CPICH Power	M		DL Power 9.2.1.21		–	
<b>Primary CCPCH Information</b>		0..1			YES	reject
<b>&gt;BCH Information</b>		1			–	
>>Common Transport Channel ID	M		9.2.1.14		–	
>>BCH Power	M		DL Power 9.2.1.21		–	
<b>IPDL Parameter Information</b>		0..1			YES	reject
>IPDL FDD Parameters	O		9.2.2.18C		–	
>IPDL Indicator	M		9.2.1.36F		–	

Range Bound	Explanation
maxSCPICHCell	Maximum number of Secondary CPICH that can be defined in a Cell.



## 9.1.27.2 TDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
C-ID	M		9.2.1.9		YES	reject
Configuration Generation ID	M		9.2.1.16		YES	reject
<b>Synchronisation Configuration</b>		0..1			YES	reject
>N_INSYNC_IND	M		9.2.1.47A		–	
>N_OUTSYNC_IND	M		9.2.1.47B		–	
>T_RLFAILURE	M		9.2.1.56A		–	
Timing Advance Applied	O		9.2.3.22A		YES	reject
<b>SCH Information</b>		0..1		Applicable to 3.84Mcps TDD only	YES	reject
>Common Physical Channel ID	M		9.2.1.13		–	
>SCH Power	M		DL Power 9.2.1.21		–	
<b>PCCPCH Information</b>		0..1			YES	reject
>Common Physical Channel ID	M		9.2.1.13		–	
>PCCPCH Power	M		9.2.3.9		–	
Maximum Transmission Power	O		9.2.1.40		YES	reject
DPCH Constant Value	O		Constant Value		YES	reject
PUSCH Constant Value	O		Constant Value		YES	reject
PRACH Constant Value	O		Constant Value		YES	reject
<b>Time Slot Configuration</b>		0..15		Mandatory for 3.84Mcps TDD. Not Applicable to 1.28Mcps TDD.	GLOBAL	reject
>Time Slot	M		9.2.3.23		–	
>Time Slot Status	M		9.2.3.25		–	
>Time Slot Direction	M		9.2.3.24		–	
<b>Time Slot Configuration LCR</b>		0..7		Mandatory for 1.28Mcps TDD. Not Applicable to 3.84Mcps TDD.	GLOBAL	reject
>Time Slot LCR	M		9.2.3.24A		–	
>Time Slot Status	M		9.2.3.25		–	
>Time Slot Direction	M		9.2.3.24		–	
<b>DwPCH Information</b>		0..1		Applicable to 1.28Mcps TDD only.	YES	reject
>Common Physical Channel ID	M		9.2.1.13		–	
>DwPCH Power	M		9.2.3.5B		–	
<b>IPDL Parameter Information</b>		0..1			YES	reject
>IPDL TDD Parameters	O		9.2.3.5D		–	
>IPDL Indicator	M		9.2.1.36F		–	

### 9.1.28 CELL RECONFIGURATION RESPONSE

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Criticality Diagnostics	O		9.2.1.17		YES	ignore

### 9.1.29 CELL RECONFIGURATION FAILURE

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Cause	M		9.2.1.6		YES	ignore
Criticality Diagnostics	O		9.2.1.17		YES	ignore

### 9.1.30 CELL DELETION REQUEST

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
C-ID	M		9.2.1.9		YES	reject

### 9.1.31 CELL DELETION RESPONSE

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Criticality Diagnostics	O		9.2.1.17		YES	ignore

## 9.1.32 RESOURCE STATUS INDICATION

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	ignore
Transaction ID	M		9.2.1.62		–	
CHOICE <i>Indication Type</i>	M				YES	ignore
> <i>No Failure</i>					–	
>>Local Cell Information		1..<max LocalCellin NodeB>			EACH	ignore
>>>Local Cell ID	M		9.2.1.38		–	
>>>Add/Delete Indicator	M		9.2.1.1		–	
>>>DL or Global Capacity Credit	C-add		9.2.1.20B		–	
>>>UL Capacity Credit	O		9.2.1.65A		–	
>>>Common Channels Capacity Consumption Law	C-add		9.2.1.9A		–	
>>>Dedicated Channels Capacity Consumption Law	C-add		9.2.1.20A		–	
>>>Maximum DL Power Capability	C-add		9.2.1.39		–	
>>>Minimum Spreading Factor	C-add		9.2.1.47		–	
>>>Minimum DL Power Capability	C-add		9.2.1.46A		–	
>>>Local Cell Group ID	O		9.2.1.37A		–	
>>>Reference Clock Availability	C-add		9.2.3.14A	TDD only	YES	ignore
>>Local Cell Group Information		0..<maxLocalCellinNodeB>			EACH	ignore
>>>Local Cell Group ID	M		9.2.1.37A		–	
>>>DL or Global Capacity Credit	M		9.2.1.20B		–	
>>>UL Capacity Credit	O		9.2.1.65A		–	
>>>Common Channels Capacity Consumption Law	M		9.2.1.9A		–	
>>>Dedicated Channels Capacity Consumption Law	M		9.2.1.20A		–	
> <i>Service Impacting</i>					–	
>>Local Cell Information		0..<maxLocalCellinNodeB>			EACH	ignore
>>>Local Cell ID	M		9.2.1.38		–	
>>>DL or Global Capacity Credit	O		9.2.1.20B		–	
>>>UL Capacity Credit	O		9.2.1.65A		–	
>>>Common Channels Capacity Consumption Law	O		9.2.1.9A		–	
>>>Dedicated Channels Capacity Consumption	O		9.2.1.20A		–	

Law						
>>>Maximum DL Power Capability	O		9.2.1.39		–	
>>>Minimum Spreading Factor	O		9.2.1.47		–	
>>>Minimum DL Power Capability	O		9.2.1.46A		–	
>>>Reference Clock Availability	O		9.2.3.14A	TDD only	YES	ignore
<b>&gt;&gt;Local Cell Group Information</b>		<i>0..&lt;maxLocalCellinNodeB&gt;</i>			EACH	ignore
>>>Local Cell Group ID	M		9.2.1.37A		–	
>>>DL or Global Capacity Credit	O		9.2.1.20B		–	
>>>UL Capacity Credit	O		9.2.1.65A		–	
>>>Common Channels Capacity Consumption Law	O		9.2.1.9A		–	
>>>Dedicated Channels Capacity Consumption Law	O		9.2.1.20A		–	
<b>&gt;&gt;Communication Control Port Information</b>		<i>0..&lt;maxCPinNodeB&gt;</i>			EACH	ignore
>>>Communication Control Port ID	M		9.2.1.15		–	
>>>Resource Operational State	M		9.2.1.52		–	
>>>Availability Status	M		9.2.1.2		–	
<b>&gt;&gt;Cell Information</b>		<i>0..&lt;maxCellinNodeB&gt;</i>			EACH	ignore
>>>C-ID	M		9.2.1.9		–	
>>>Resource Operational State	O		9.2.1.52		–	
>>>Availability Status	O		9.2.1.2		–	
>>>Primary SCH Information	O		Common Physical Channel Status Information 9.2.1.13A	FDD only	YES	ignore
>>>Secondary SCH Information	O		Common Physical Channel Status Information 9.2.1.13A	FDD only	YES	ignore
>>>Primary CPICH Information	O		Common Physical Channel Status Information 9.2.1.13A	FDD only	YES	ignore
<b>&gt;&gt;&gt;Secondary CPICH Information</b>		<i>0..&lt;maxSCPICHCell&gt;</i>		FDD only	EACH	ignore
>>>>Secondary CPICH Individual Information	M		Common Physical Channel Status Information		–	

			9.2.1.13A			
>>>Primary CCPCH Information	O		Common Physical Channel Status Information 9.2.1.13A		YES	ignore
>>>BCH Information	O		Common Transport Channel Status Information 9.2.1.14B		YES	ignore
>>>Secondary CCPCH Information		$0..<maxS\ CCPCHCe\ ll>$			EACH	ignore
>>>>Secondary CCPCH Individual Information	M		Common Physical Channel Status Information 9.2.1.13A		–	
>>>PCH Information	O		Common Transport Channel Status Information 9.2.1.14B		YES	ignore
>>>PICH Information	O		Common Physical Channel Status Information 9.2.1.13A		YES	ignore
>>>FACH Information		$0..<maxFA\ CHCell>$			EACH	ignore
>>>>FACH Individual Information	M		Common Transport Channel Status Information 9.2.1.14B		–	
>>>PRACH Information		$0..<maxP\ RACHCell\ >$			EACH	ignore
>>>>PRACH Individual Information	M		Common Physical Channel Status Information 9.2.1.13A		–	
>>>RACH Information		$0..<maxP\ RACHCell\ >$			EACH	ignore
>>>>RACH Individual Information	M		Common Transport Channel Status Information 9.2.1.14B		–	
>>>AICH Information		$0..<maxP\ RACHCell\ >$		FDD only	EACH	ignore
>>>>AICH Individual Information	M		Common Physical Channel Status Information		–	

			9.2.1.13A			
<b>&gt;&gt;&gt;PCPCH Information</b>		<i>0..&lt;maxP CPCHCell &gt;</i>		FDD only	EACH	ignore
>>>>PCPCH Individual Information	M		Common Physical Channel Status Information 9.2.1.13A		--	
<b>&gt;&gt;&gt;CPCH Information</b>		<i>0..&lt;maxC PCHCell&gt;</i>		FDD only	EACH	ignore
>>>>CPCH Individual Information	M		Common Transport Channel Status Information 9.2.1.14B		--	
<b>&gt;&gt;&gt;AP-AICH Information</b>		<i>0..&lt;maxC PCHCell&gt;</i>		FDD only	EACH	ignore
>>>>AP-AICH Individual Information	M		Common Physical Channel Status Information 9.2.1.13A		--	
<b>&gt;&gt;&gt;CD/CA-ICH Information</b>		<i>0..&lt;maxC PCHCell&gt;</i>		FDD only	EACH	ignore
>>>>CD/CA-ICH Individual Information	M		Common Physical Channel Status Information 9.2.1.13A		--	
>>>SCH Information	O		Common Physical Channel Status Information 9.2.1.13A	Applicable to 3.84Mcps TDD only	YES	ignore
<b>&gt;&gt;&gt;FPACH Information</b>		<i>0..&lt;maxFP ACHCell&gt;</i>		Applicable to 1.28Mcps TDD only	EACH	ignore
>>>>FPACH Individual Information	M		Common Physical Channel Status Information 9.2.1.13A		--	
>>>DwPCH Information	O		Common Physical Channel Status Information 9.2.1.13A	Applicable to 1.28Mcps TDD only	YES	ignore
Cause	O		9.2.1.6		YES	ignore

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

Range Bound	Explanation
<i>maxLocalCellinNodeB</i>	Maximum number of Local Cells that can exist in the Node B
<i>maxCellinNodeB</i>	Maximum number of C-IDs that can be configured in the Node B
<i>maxCPCHCell</i>	Maximum number of CPCHs that can be defined in a Cell
<i>maxSCPICHCell</i>	Maximum number of Secondary CPICHs that can be defined in a Cell.
<i>maxSCCPCHCell</i>	Maximum number of Secondary CCPCHs that can be defined in a Cell.
<i>maxFACHCell</i>	Maximum number of FACHs that can be defined in a Cell
<i>maxPCPCHCell</i>	Maximum number of PCPCHs that can be defined in a Cell
<i>maxPRACHCell</i>	Maximum number of PRACHs and AICHs that can be defined in a Cell
<i>maxCCPinNodeB</i>	Maximum number of Communication Control Ports that can exist in the Node B
<i>maxFPACHCell</i>	Maximum number of FPACHs that can be defined in a Cell

### 9.1.33 SYSTEM INFORMATION UPDATE REQUEST

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
C-ID	M		9.2.1.9		YES	reject
BCCH Modification Time	O		9.2.1.3		YES	reject
<b>MIB/SB/SIBInformation</b>		<i>1..&lt;maxIB &gt;</i>			GLOBAL	reject
>IB Type	M		9.2.1.35		–	
>IB OC ID	M		9.2.1.31A	In one message, every occurrence of IB Type can only be deleted once and/or added once.	–	
>CHOICE <i>IB Deletion Indicator</i>	M				–	
>> <i>No Deletion</i>					–	
>>>SIB Originator	C-SIB		9.2.1.55		–	
>>>IB SG REP	O		9.2.1.34		–	
>>> <b>Segment Information</b>		<i>1..&lt;maxIB SEG&gt;</i>			GLOBAL	reject
>>>>IB SG POS	O		9.2.1.33		–	
>>>>Segment Type	C-CRNCOrigination		9.2.1.53B		–	
>>>>IB SG DATA	C-CRNCOrigination		9.2.1.32		–	
>> <i>Deletion</i>			NULL		–	

Range Bound	Explanation
<i>maxIB</i>	Maximum number of information Blocks supported in one message
<i>maxIBSEG</i>	Maximum number of segments for one Information Block

Condition	Explanation
CRNCOriination	The IE shall be present if the <i>SIB Originator</i> IE is set to 'CRNC' or if the <i>IB Type</i> IE is set to 'MIB', 'SB1' or 'SB2'.
SIB	The IE shall be present if the <i>IB Type</i> IE is set to "SIB".

### 9.1.34 SYSTEM INFORMATION UPDATE RESPONSE

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Criticality Diagnostics	O		9.2.1.17		YES	ignore

### 9.1.35 SYSTEM INFORMATION UPDATE FAILURE

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Cause	M		9.2.1.6		YES	ignore
Criticality Diagnostics	O		9.2.1.17		YES	ignore



## 9.1.36 RADIO LINK SETUP REQUEST

## 9.1.36.1 FDD message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
CRNC Communication Context ID	M		9.2.1.18	The reserved value 'All CRNCCC' shall not be used.	YES	reject
<b>UL DPCH Information</b>		1			YES	reject
>UL Scrambling Code	M		9.2.2.59		–	
>Min UL Channelisation Code Length	M		9.2.2.22		–	
>Max Number of UL DPDCHs	C-CodeLen		9.2.2.21		–	
>Puncture Limit	M		9.2.1.50	For UL	–	
>TFCS	M		9.2.1.58	For UL	–	
>UL DPCCH Slot Format	M		9.2.2.57		–	
> UL SIR Target	M		UL SIR 9.2.1.67A		–	
>Diversity Mode	M		9.2.2.9		–	
>SSDT Cell ID Length	O		9.2.2.45		–	
>S Field Length	O		9.2.2.40		–	
>DPC Mode	O		9.2.2.13C		YES	reject
<b>DL DPCH Information</b>		1			YES	reject
>TFCS	M		9.2.1.58	For DL	–	
>DL DPCH Slot Format	M		9.2.2.10		–	
>TFCI Signalling Mode	M		9.2.2.50		–	
>TFCI Presence	C-SlotFormat		9.2.1.57		–	
>Multiplexing Position	M		9.2.2.23		–	
>PDSCH RL ID	C-DSCH		RL ID 9.2.1.53		–	
>PDSCH Code Mapping	C-DSCH		9.2.2.25		–	
<b>&gt;Power Offset Information</b>		1			–	
>>PO1	M		Power Offset 9.2.2.29	Power offset for the TFCI bits	–	
>>PO2	M		Power Offset 9.2.2.29	Power offset for the TPC bits	–	
>>PO3	M		Power Offset 9.2.2.29	Power offset for the pilot bits	–	
>FDD TPC DL Step Size	M		9.2.2.16		–	
>Limited Power Increase	M		9.2.2.18A		–	
>Inner Loop DL PC Status	M		9.2.2.18B		–	
DCH Information	M		DCH FDD Information 9.2.2.4D		YES	reject
DSCH Information	O		DSCH FDD Information 9.2.2.13B		YES	reject
<b>TFCI2 bearer information</b>		0..1			YES	ignore
>ToAWS	M		9.2.1.61		–	

>ToAWE	M		9.2.1.60		–	
<b>RL Information</b>		1..<maxno ofRLs>			EACH	notify
>RL ID	M		9.2.1.53		–	
>C-ID	M		9.2.1.9		–	
>First RLS Indicator	M		9.2.2.16A		–	
>Frame Offset	M		9.2.1.31		–	
>Chip Offset	M		9.2.2.2		–	
>Propagation Delay	O		9.2.2.35		–	
>Diversity Control Field	C-NotFirstRL		9.2.1.25		–	
>DL Code Information	M		FDD DL Code Information 9.2.2.14A		–	
>Initial DL Transmission Power	M		DL Power 9.2.1.21	Initial power on DPCH	–	
>Maximum DL Power	M		DL Power 9.2.1.21	Maximum allowed power on DPCH	–	
>Minimum DL Power	M		DL Power 9.2.1.21	Minimum allowed power on DPCH	–	
>SSDT Cell Identity	O		9.2.2.44		–	
>Transmit Diversity Indicator	C-Diversity mode		9.2.2.53		–	
>SSDT Cell Identity For EDSCHPC	C-EDSCHPC		9.2.2.44A		YES	ignore
Transmission Gap Pattern Sequence Information	O		9.2.2.53A		YES	reject
Active Pattern Sequence Information	O		9.2.2.A		YES	reject
DSCH Common Information	O		DSCH FDD Common Information 9.2.2.13D		YES	ignore

Condition	Explanation
CodeLen	The IE shall be present if <i>Min UL Channelisation Code Length</i> IE equals to 4.
NotFirstRL	The IE shall be present if the RL is not the first one in the <i>RL Information</i> IE.
DSCH	The IE shall be present if the <i>DSCH Information</i> IE is present.
SlotFormat	The IE shall be present if the <i>DL DPCH Slot Format</i> IE is equal to any of the values from 12 to 16.
Diversity mode	The IE shall be present if <i>Diversity Mode</i> IE in <i>UL DPCH Information</i> IE is not set to 'none'.
EDSCHPC	The IE shall be present if <i>Enhanced DSCH PC</i> IE is present in the <i>DSCH Common Information</i> IE.

Range Bound	Explanation
<i>maxnoofRLs</i>	Maximum number of RLs for one UE

## 9.1.36.2 TDD message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
CRNC Communication Context ID	M		9.2.1.18	The reserved value 'All CRNCCC' shall not be used.	YES	reject
<b>UL CCTrCH Information</b>		<i>0..&lt;maxno CCTrCH&gt;</i>			EACH	notify
>CCTrCH ID	M		9.2.3.3		–	
>TFCS	M		9.2.1.58		–	
>TFCI Coding	M		9.2.3.22		–	
>Puncture Limit	M		9.2.1.50		–	
<b>&gt;UL DPCH Information</b>		<i>0..1</i>		Applicable to 3.84Mcps TDD only	YES	notify
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>UL Timeslot Information	M		9.2.3.26C		–	
<b>&gt;UL DPCH Information LCR</b>		<i>0..1</i>		Applicable to 1.28Mcps TDD only	YES	notify
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>UL Timeslot Information LCR	M		9.2.3.26E		–	
>UL SIR Target	O		UL SIR 9.2.1.67A	Mandatory for 1.28Mcps TDD. Not Applicable to 3.84Mcps TDD.	YES	reject
>TDD TPC UL Step Size	O		9.2.3.21a	Mandatory for 1.28Mcps TDD. Not Applicable to 3.84Mcps TDD.	YES	reject
<b>DL CCTrCH Information</b>		<i>0..&lt;maxno CCTrCH&gt;</i>			EACH	notify
>CCTrCH ID	M		9.2.3.3		–	
>TFCS	M		9.2.1.58		–	
>TFCI Coding	M		9.2.3.22		–	
>Puncture Limit	M		9.2.1.50		–	
>TDD TPC DL Step Size	M		9.2.3.21		–	
<b>&gt;TPC CCTrCH List</b>		<i>0..&lt;maxno CCTrCH&gt;</i>		List of uplink CCTrCH which provide TPC	–	
>>TPC CCTrCH ID	M		CCTrCH ID 9.2.3.3		–	
<b>&gt;DL DPCH information</b>		<i>0..1</i>		Applicable to 3.84Mcps TDD only	YES	notify
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	

>>DL Timeslot Information	M		9.2.3.4E		–	
<b>&gt;DL DPCH information LCR</b>		0..1		Applicable to 1.28Mcps TDD only	YES	notify
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>DL Timeslot Information LCR	M		9.2.3.4O		–	
>>TSTD Indicator	M		9.2.1.64		–	
DCH Information	O		DCH TDD Information 9.2.3.4C		YES	reject
DSCH Information	O		DSCH TDD Information 9.2.3.5A		YES	reject
USCH Information	O		9.2.3.28		YES	reject
<b>RL Information</b>		1			YES	reject
>RL ID	M		9.2.1.53		–	
>C-ID	M		9.2.1.9		–	
>Frame Offset	M		9.2.1.31		–	
>Special Burst Scheduling	M		9.2.3.18A		–	
>Initial DL Transmission Power	M		DL Power 9.2.1.21	Initial power on DPCH	–	
>Maximum DL Power	M		DL Power 9.2.1.21	Maximum allowed power on DPCH	–	
>Minimum DL Power	M		DL Power 9.2.1.21	Minimum allowed power on DPCH	–	
>DL Time Slot ISCP Info	O		9.2.3.4F	Applicable to 3.84Mcps TDD only	–	
>DL Time Slot ISCP Info LCR	O		9.2.3.4P	Applicable to 1.28Mcps TDD only	YES	reject
<b>&gt;UL Synchronisation Parameters LCR</b>		0..1		Mandatory for 1.28Mcps TDD. Not Applicable to 3.84Mcps TDD.	YES	ignore
>>Uplink Synchronisation Step Size	M		9.2.3.26H		–	
>>Uplink Synchronisation Frequency	M		9.2.3.26G		–	
PDSCH-RL-ID	O		RL ID 9.2.1.53		YES	ignore

Range Bound	Explanation
<i>maxnoCCTrCH</i>	Number of CCTrCHs for one UE

## 9.1.37 RADIO LINK SETUP RESPONSE

## 9.1.37.1 FDD message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
CRNC Communication Context ID	M		9.2.1.18	The reserved value 'All CRNCCC' shall not be used.	YES	ignore
Node B Communication Context ID	M		9.2.1.48	The reserved value 'All NBCC' shall not be used.	YES	ignore
Communication Control Port ID	M		9.2.1.15		YES	ignore
<b>RL Information Response</b>		<i>1..&lt;maxno ofRLs&gt;</i>			EACH	ignore
>RL ID	M		9.2.1.53		–	
>RL Set ID	M		9.2.2.39		–	
>Received Total Wide Band Power	M		9.2.2.39A		–	
>CHOICE <i>Diversity Indication</i>	M				–	
>> <i>Combining</i>					–	
>>>RL ID	M		9.2.1.53	Reference RL ID for the combining	–	
>> <i>Non Combining or First RL</i>					–	
>>>DCH Information Response	M		9.2.1.20C		–	
>DSCH Information Response	O		9.2.1.27A		YES	ignore
>SSDT Support Indicator	M		9.2.2.46		–	
TFCI2 Bearer Information Response	O		9.2.2.49A		YES	ignore
Criticality Diagnostics	O		9.2.1.17		YES	ignore

Range Bound	Explanation
<i>maxnoofRLs</i>	Maximum number of RLs for one UE

## 9.1.37.2 TDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
CRNC Communication Context ID	M		9.2.1.18	The reserved value 'All CRNCCC' shall not be used.	YES	ignore
Node B Communication Context ID	M		9.2.1.48	The reserved value 'All NBCC' shall not be used.	YES	ignore
Communication Control Port ID	M		9.2.1.15		YES	ignore
<b>RL Information Response</b>		0..1		Mandatory For 3.84Mcps TDD. Not Applicable to 1.28Mcps TDD.	YES	ignore
>RL ID	M		9.2.1.53		–	
>UL Time Slot ISCP Info	M		9.2.3.26D		–	
>UL PhysCH SF Variation	M		9.2.3.26B		–	
>DCH Information Response	O		9.2.1.20C		YES	ignore
>DSCH Information Response	O		9.2.1.27A		YES	ignore
>USCH Information Response	O		9.2.3.28		YES	ignore
<b>RL Information Response LCR</b>		0..1		Mandatory For 1.28Mcps TDD. Not Applicable to 3.84Mcps TDD.	YES	ignore
>RL ID	M		9.2.1.53		–	
>UL Time Slot ISCP Info LCR	M		9.2.3.26F		–	
>UL PhysCH SF Variation	M		9.2.3.26B		–	
>DCH Information Response	O		9.2.1.20C		YES	ignore
>DSCH Information Response	O		9.2.1.27A		YES	ignore
>USCH Information Response	O		9.2.3.28		YES	ignore
Criticality Diagnostics	O		9.2.1.17		YES	ignore

## 9.1.38 RADIO LINK SETUP FAILURE

## 9.1.38.1 FDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
CRNC Communication Context ID	M		9.2.1.18	The reserved value 'All CRNCCC' shall not be used.	YES	ignore
Node B Communication Context ID	C-Success		9.2.1.48	The reserved value 'All NBCC' shall not be used	YES	ignore
Communication Control Port ID	O		9.2.1.15		YES	ignore
CHOICE <i>Cause Level</i>	M				YES	ignore
> <i>General</i>					–	
>> <i>Cause</i>	M		9.2.1.6		–	
> <i>RL Specific</i>					–	
>> <b>Unsuccessful RL Information Response</b>		1..<maxno ofRLs>			EACH	ignore
>>>RL ID	M		9.2.1.53		–	
>>>Cause	M		9.2.1.6		–	
>> <b>Successful RL Information Response</b>		0..<maxno ofRLs>		Note: There will never be maxnoofRLs repetitions of this sequence.	EACH	ignore
>>>RL ID	M		9.2.1.53		–	
>>>RL Set ID	M		9.2.2.39		–	
>>>Received Total Wide Band Power	M		9.2.2.39A		–	
>>>CHOICE <i>Diversity Indication</i>	M				–	
>>>> <i>Combining</i>					–	
>>>>>RL ID	M		9.2.1.53	Reference RL ID for the combining	–	
>>>> <i>Non Combining or First RL</i>					–	
>>>>>DCH Information Response	M		9.2.1.20C		–	
>>>DSCH Information Response	O		9.2.1.27A		YES	ignore
>>>TFCI2 Bearer Information Response	O		9.2.2.49A	There shall be only one TFCI2 bearer per Node B Communication Context.	–	
>>>SSDT Support Indicator	M		9.2.2.46		–	
Criticality Diagnostics	O		9.2.1.17		YES	ignore

Condition	Explanation
Success	The IE shall be present if at least one of the radio links has been successfully set up.

Range Bound	Explanation
<i>maxnoofRLs</i>	Maximum number of RLs for one UE

### 9.1.38.2 TDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
CRNC Communication Context ID	M		9.2.1.18	The reserved value 'All CRNCCC' shall not be used.	YES	ignore
CHOICE <i>Cause Level</i>	M				YES	ignore
> <i>General</i>					–	
>> <i>Cause</i>	M		9.2.1.6		–	
> <i>RL Specific</i>					–	
>> <b>Unsuccessful RL Information Response</b>		1			YES	ignore
>>>RL ID	M		9.2.1.53		–	
>>>Cause	M		9.2.1.6		–	
Criticality Diagnostics	O		9.2.1.17		YES	ignore



## 9.1.39 RADIO LINK ADDITION REQUEST

## 9.1.39.1 FDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Node B Communication Context ID	M		9.2.1.48	The reserved value 'All NBCC' shall not be used.	YES	reject
Compressed Mode Deactivation Flag	O		9.2.2.3A		YES	reject
<b>RL Information</b>		<i>1..&lt;maxno ofRLs-1&gt;</i>			EACH	notify
>RL ID	M		9.2.1.53		–	
>C-ID	M		9.2.1.9		–	
>Frame Offset	M		9.2.1.31		–	
>Chip Offset	M		9.2.2.2		–	
>Diversity Control Field	M		9.2.1.25		–	
>DL Code Information	M		FDD DL Code Information 9.2.2.14A		–	
>Initial DL Transmission Power	O		DL Power 9.2.1.21	Initial power on DPCH	–	
>Maximum DL Power	O		DL Power 9.2.1.21	Maximum allowed power on DPCH	–	
>Minimum DL Power	O		DL Power 9.2.1.21	Minimum allowed power on DPCH	–	
>SSDT Cell Identity	O		9.2.2.44		–	
>Transmit Diversity Indicator	O		9.2.2.53		–	

Range Bound	Explanation
<i>maxnoofRLs</i>	Maximum number of RLs for one UE

## 9.1.39.2 TDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Node B Communication Context ID	M		9.2.1.48	The reserved value 'All NBCC' shall not be used.	YES	reject
<b>UL CCTrCH Information</b>		<i>0..&lt;maxno CCTrCH&gt;</i>			GLOBAL	reject
>CCTrCH ID	M		9.2.3.3		–	
<b>&gt;UL DPCH Information</b>		<i>0..1</i>		Applicable to 3.84Mcps TDD only	YES	notify
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>UL Timeslot Information	M		9.2.3.26C		–	
<b>&gt;UL DPCH Information LCR</b>		<i>0..1</i>		Applicable to 1.28Mcps TDD only	YES	notify
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>UL Timeslot Information LCR	M		9.2.3.26E		–	
>TDD TPC UL Step Size	O		9.2.3.21a	Applicable to 1.28Mcps TDD only	YES	reject
<b>DL CCTrCH Information</b>		<i>0..&lt;maxno CCTrCH&gt;</i>			GLOBAL	reject
>CCTrCH ID	M		9.2.3.3		–	
<b>&gt;DL DPCH information</b>		<i>0..1</i>		Applicable to 3.84Mcps TDD only	YES	notify
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>DL Timeslot Information	M		9.2.3.4E		–	
<b>&gt;DL DPCH information LCR</b>		<i>0..1</i>		Applicable to 1.28Mcps TDD only	YES	notify
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>DL Timeslot Information LCR	M		9.2.3.4O		–	
>TDD TPC DL Step Size	O		9.2.3.21		YES	reject
<b>RL Information</b>		<i>1</i>			YES	reject
>RL ID	M		9.2.1.53		–	
>C-ID	M		9.2.1.9		–	
>Frame Offset	M		9.2.1.31		–	
>Diversity Control Field	M		9.2.1.25		–	
>Initial DL Transmission Power	O		DL Power 9.2.1.21	Initial power on DPCH	–	

>Maximum DL Power	O		DL Power 9.2.1.21	Maximum allowed power on DPCH	–	
>Minimum DL Power	O		DL Power 9.2.1.21	Minimum allowed power on DPCH	–	
>DL Time Slot ISCP Info	O		9.2.3.4F	Applicable to 3.84Mcps TDD only	–	
>DL Time Slot ISCP Info LCR	O		9.2.3.4P	Applicable to 1.28Mcps TDD only	YES	reject
<b>&gt;UL Synchronisation Parameters LCR</b>		0..1		Mandatory for 1.28Mcps TDD. Not Applicable to 3.84Mcps TDD.	YES	reject
>>Uplink Synchronisation Step Size	M		9.2.3.26H		–	
>>Uplink Synchronisation Frequency	M		9.2.3.26G		–	

Range Bound	Explanation
<i>maxnoCCTrCH</i>	Number of CCTrCH for one UE

## 9.1.40 RADIO LINK ADDITION RESPONSE

### 9.1.40.1 FDD message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
CRNC Communication Context ID	M		9.2.1.18	The reserved value 'All CRNCCC' shall not be used.	YES	ignore
<b>RL Information Response</b>		1..<maxno ofRLs-1>			EACH	ignore
>RL ID	M		9.2.1.53		–	
>RL Set ID	M		9.2.2.39		–	
>Received Total Wide Band Power	M		9.2.2.39A		–	
>CHOICE <i>Diversity Indication</i>	M				–	
>> <i>Combining</i>					–	
>>>RL ID	M		9.2.1.53	Reference RL	–	
>> <i>Non Combining</i>					–	
>>>DCH Information Response	M		9.2.1.20C		–	
>SSDT Support Indicator	M		9.2.2.46		–	
Criticality Diagnostics	O		9.2.1.17		YES	ignore

Range Bound	Explanation
<i>maxnoofRLs</i>	Maximum number of RLs for one UE

## 9.1.40.2 TDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
CRNC Communication Context ID	M		9.2.1.18	The reserved value 'All CRNCCC' shall not be used.	YES	ignore
<b>RL Information Response</b>		0..1		Mandatory for 3.84Mcps TDD. Not Applicable to 1.28Mcps TDD.	YES	ignore
>RL ID	M		9.2.1.53		–	
>UL Time Slot ISCP Info	M		9.2.3.26D		–	
>UL PhysCH SF Variation	M		9.2.3.26B		–	
<b>&gt;DCH Information</b>		0..1			–	
>>CHOICE <i>Diversity Indication</i>	M				–	
>>> <i>Combining</i>				In TDD it indicates whether the old Transport Bearer shall be reused or not	–	
>>>>RL ID	M		9.2.1.53	Reference RL	–	
>>>> <i>Non Combining</i>					–	
>>>>DCH Information Response	M		9.2.1.20C		–	
>DSCH Information Response	O		9.2.1.27A		YES	ignore
>USCH Information Response	O		9.2.3.29		YES	ignore
Criticality Diagnostics	O		9.2.1.17		YES	ignore
<b>RL Information Response LCR</b>		0..1		Mandatory for 1.28Mcps TDD. Not Applicable to 3.84Mcps TDD.	YES	ignore
>RL ID	M		9.2.1.53		–	
>UL Time Slot ISCP Info LCR	M		9.2.3.26F		–	
>UL PhysCH SF Variation	M		9.2.3.26B		–	
<b>&gt;DCH Information</b>		0..1			–	
>>CHOICE <i>Diversity indication</i>	M				–	
>>> <i>Combining</i>				In TDD it indicates whether the old Transport Bearer shall be reused or not	–	
>>>>RL ID	M		9.2.1.53	Reference RL	–	
>>>> <i>Non Combining</i>					–	
>>>>DCH Information Response	M		9.2.1.20C		–	
>DSCH Information Response	O		9.2.1.27A		YES	ignore

>USCH Information Response	O		9.2.3.29		YES	ignore
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## 9.1.41 RADIO LINK ADDITION FAILURE

### 9.1.41.1 FDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
CRNC Communication Context ID	M		9.2.1.18	The reserved value 'All CRNCCC' shall not be used.	YES	ignore
CHOICE Cause Level	M				YES	ignore
>General					–	
>>Cause	M		9.2.1.6		–	
>RL Specific					–	
>>Unsuccessful RL Information Response		1..<maxno ofRLs-1>			EACH	ignore
>>>RL ID	M		9.2.1.53		–	
>>>Cause	M		9.2.1.6		–	
>>Successful RL Information Response		0..<maxno ofRLs-2>			EACH	ignore
>>>RL ID	M		9.2.1.53		–	
>>>RL Set ID	M		9.2.2.39		–	
>>> Received Total Wide Band Power	M		9.2.2.39A		–	
>>>CHOICE Diversity Indication	M				–	
>>>>Combining					–	
>>>>>RL ID	M		9.2.1.53	Reference RL	–	
>>>>>Non Combining					–	
>>>>>DCH Information Response	M		9.2.1.20C		–	
>>>SSDT Support Indicator	M		9.2.2.46		–	
Criticality Diagnostics	O		9.2.1.17		YES	ignore

Range Bound	Explanation
maxnoofRLs	Maximum number of RLs for one UE

## 9.1.41.2 TDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
CRNC Communication Context ID	M		9.2.1.18	The reserved value 'All CRNCCC' shall not be used.	YES	ignore
CHOICE Cause Level	M				YES	ignore
>General					–	
>>Cause	M		9.2.1.6		–	
>RL Specific					–	
>>Unsuccessful RL Information Response		1			YES	ignore
>>>RL ID	M		9.2.1.53		–	
>>>Cause	M		9.2.1.6		–	
Criticality Diagnostics	O		9.2.1.17		YES	ignore

## 9.1.42 RADIO LINK RECONFIGURATION PREPARE

## 9.1.42.1 FDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Node B Communication Context ID	M		9.2.1.48	The reserved value 'All NBCC' shall not be used.	YES	reject
<b>UL DPCH Information</b>		<i>0..1</i>			YES	reject
>UL Scrambling Code	O		9.2.2.59		–	
>UL SIR Target	O		UL SIR 9.2.1.67A		–	
>Min UL Channelisation Code Length	O		9.2.2.22		–	
>Max Number of UL DPDCHs	C-CodeLen		9.2.2.21		–	
>Puncture Limit	O		9.2.1.50	For UL	–	
>TFCS	O		9.2.1.58		–	
>UL DPCCH Slot Format	O		9.2.2.57		–	
>Diversity Mode	O		9.2.2.9		–	
>SSDT Cell Identity Length	O		9.2.2.45		–	
>S-Field Length	O		9.2.2.40		–	
<b>DL DPCH Information</b>		<i>0..1</i>			YES	reject
>TFCS	O		9.2.1.58		–	
>DL DPCH Slot Format	O		9.2.2.10		–	
>TFCI Signalling Mode	O		9.2.2.50		–	
>TFCI Presence	C-SlotFormat		9.2.1.57		–	
>Multiplexing Position	O		9.2.2.23		–	
>PDSCH Code Mapping	O		9.2.2.25		–	
>PDSCH RL ID	O		RL ID 9.2.1.53		–	
>Limited Power Increase	O		9.2.2.18A		–	
DCHs To Modify	O		DCHs FDD To Modify 9.2.2.4E		YES	reject
DCHs To Add	O		DCH FDD Information 9.2.2.4D		YES	reject
<b>DCHs To Delete</b>		<i>0..&lt;maxno ofDCHs&gt;</i>			GLOBAL	reject
>DCH ID	M		9.2.1.20		–	
<b>DSCH To Modify</b>		<i>0..&lt;maxno ofDSCHs&gt;</i>			EACH	reject
>DSCH ID	M		9.2.1.27		–	
>Transport Format Set	O		9.2.1.59	For the DL.	–	
>Allocation/Retention Priority	O		9.2.1.1A		–	
>Frame Handling Priority	O		9.2.1.30		–	
>ToAWS	O		9.2.1.61		–	
>ToAWE	O		9.2.1.60		–	
>Transport Bearer Request Indicator	M		9.2.1.62A		–	

DSCH To Add	O		DSCH FDD Information 9.2.2.13B		YES	reject
<b>DSCH To Delete</b>		$0..<maxno\ of\ DSCHs>$			EACH	reject
>DSCH ID	M		9.2.1.27		–	
<b>TFCI2 Bearer Information</b>		$0..1$			YES	reject
>CHOICE <i>TFCI2 Bearer Action</i>	M				–	
>>Add or Modify					–	
>>>ToAWS	M		9.2.1.61		–	
>>>ToAWE	M		9.2.1.60		–	
>>Delete			NULL		–	
<b>RL Information</b>		$0..<maxno\ of\ RLS>$			EACH	reject
>RL ID	M		9.2.1.53		–	
>DL Code Information	O		FDD DL Code Information 9.2.2.14A		–	
>Maximum DL Power	O		DL Power 9.2.1.21	Maximum allowed power on DPCH	–	
>Minimum DL Power	O		DL Power 9.2.1.21	Minimum allowed power on DPCH	–	
>SSDT Indication	O		9.2.2.47		–	
>SSDT Cell Identity	C-SSDTIndON		9.2.2.44		–	
>Transmit Diversity Indicator	CDiversity mode		9.2.2.53		–	
>SSDT Cell Identity For EDSCHPC	C-EDSCHPC		9.2.2.44A		YES	ignore
Transmission Gap Pattern Sequence Information	O		9.2.2.53A		YES	reject
DSCH Common Information	O		DSCH FDD Common Information 9.2.2.13D		YES	ignore

Condition	Explanation
SSDTIndON	The IE shall be present if the <i>SSDT Indication</i> IE is set to 'SSDT Active in the UE'.
CodeLen	The IE shall be present if the <i>Min UL Channelisation Code Length</i> IE is equal to 4.
SlotFormat	The IE shall be present if the <i>DL DPCH Slot Format</i> IE is equal to any of the values from 12 to 16.
Diversity mode	The IE shall be present if the <i>Diversity Mode</i> IE is present in the <i>UL DPCH Information</i> IE and is not set to 'none'.
EDSCHPC	The IE shall be present if the <i>Enhanced DSCH PC</i> IE is present in the <i>DSCH Common Information</i> IE.

Range Bound	Explanation
<i>maxnoofDCHs</i>	Maximum number of DCHs for a UE
<i>maxnoofDSCHs</i>	Maximum number of DSCHs for a UE
<i>maxnoofRLs</i>	Maximum number of RLS for a UE



## 9.1.42.2 TDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Node B Communication Context ID	M		9.2.1.48	The reserved value 'All NBCC' shall not be used.	YES	reject
<b>UL CCTrCH To Add</b>		<i>0..&lt;maxno of CCTrCHs&gt;</i>			GLOBAL	reject
>CCTrCH ID	M		9.2.3.3		–	
>TFCS	M		9.2.1.58		–	
>TFCI Coding	M		9.2.3.22		–	
>Puncture Limit	M		9.2.1.50		–	
<b>&gt;UL DPCH Information</b>		<i>0..1</i>		Applicable to 3.84Mcps TDD only	YES	reject
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>UL Timeslot Information	M		9.2.3.26C		–	
<b>&gt;UL DPCH Information LCR</b>		<i>0..1</i>		Applicable to 1.28Mcps TDD only	YES	reject
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>UL Timeslot Information LCR	M		9.2.3.26E		–	
>UL SIR Target	O		UL SIR 9.2.1.67A	Mandatory for 1.28Mcps TDD; not Applicable to 3.84Mcps TDD	YES	reject
>TDD TPC UL Step Size	O		9.2.3.21a	Mandatory for 1.28Mcps TDD. Not Applicable to 3.84Mcps TDD.	YES	reject
<b>UL CCTrCH To Modify</b>		<i>0..&lt;maxno of CCTrCHs&gt;</i>			GLOBAL	reject
>CCTrCH ID	M		9.2.3.3		–	
>TFCS	O		9.2.1.58		–	
>TFCI Coding	O		9.2.3.22		–	
>Puncture Limit	O		9.2.1.50		–	
<b>&gt;UL DPCH To Add</b>		<i>0..1</i>		Applicable to 3.84Mcps TDD only	YES	reject
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>UL Timeslot Information	M		9.2.3.26C		–	
<b>&gt;UL DPCH To Modify</b>		<i>0..1</i>			YES	reject
>>Repetition Period	O		9.2.3.16		–	

>>Repetition Length	O		9.2.3.15		–	
>>TDD DPCH Offset	O		9.2.3.19A		–	
<b>&gt;&gt;UL Timeslot Information</b>		<i>0..&lt;maxno ofULts&gt;</i>		Applicable to 3.84Mcps TDD only	–	
>>>Time Slot	M		9.2.3.23		–	
>>>Midamble Shift And Burst Type	O		9.2.3.7		–	
>>>TFCI Presence	O		9.2.1.57		–	
<b>&gt;&gt;&gt;UL Code Information</b>		<i>0..&lt;maxno ofDPCHs&gt;</i>			–	
>>>>DPCH ID	M		9.2.3.5		–	
>>>>TDD Channelisation Code	O		9.2.3.19		–	
<b>&gt;&gt;UL Timeslot Information LCR</b>		<i>0..&lt;maxno ofULtsLCR&gt;</i>		Applicable to 1.28Mcps TDD only	GLOBAL	reject
>>>Time Slot LCR	M		9.2.3.24A		–	
>>>Midamble Shift LCR	O		9.2.3.7A		–	
>>>TFCI Presence	O		9.2.1.57		–	
<b>&gt;&gt;&gt;UL Code Information LCR</b>		<i>0..&lt;maxno ofDPCHsLCR&gt;</i>			–	
>>>>DPCH ID	M		9.2.3.5		–	
>>>>TDD Channelisation Code LCR	O		9.2.3.19a		–	
>>>> TDD UL DPCH Time Slot Format LCR	O		9.2.3.21C		YES	reject
<b>&gt;UL DPCH To Delete</b>		<i>0..&lt;maxno ofDPCHs&gt;</i>			GLOBAL	reject
>>DPCH ID	M		9.2.3.5		–	
<b>&gt;UL DPCH To Add LCR</b>		<i>0..1</i>		Applicable to 1.28Mcps TDD only	YES	reject
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>UL Timeslot Information LCR	M		9.2.3.26E		–	
>UL SIR Target	O		UL SIR 9.2.1.67A	Applicable to 1.28Mcps TDD only	YES	reject
>TDD TPC UL Step Size	O		9.2.3.21a	Applicable to 1.28Mcps TDD only	YES	reject
<b>UL CCTrCH To Delete</b>		<i>0..&lt;maxno ofCCTrCHs&gt;</i>			GLOBAL	reject
>CCTrCH ID	M		9.2.3.3		–	
<b>DL CCTrCH To Add</b>		<i>0..&lt;maxno ofCCTrCHs&gt;</i>			GLOBAL	reject
>CCTrCH ID	M		9.2.3.3		–	
>TFCS	M		9.2.1.58		–	
>TFCI Coding	M		9.2.3.22		–	
>Puncture Limit	M		9.2.1.50		–	
<b>&gt;TPC CCTrCH List</b>		<i>0..&lt;maxno ofCCTrCHs&gt;</i>		List of uplink CCTrCH which provide TPC	–	
>>TPC CCTrCH ID	M		CCTrCH ID 9.2.3.3		–	

<b>&gt;DL DPCH Information</b>		0..1		Applicable to 3.84Mcps TDD only	YES	reject
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>DL Timeslot Information	M		9.2.3.4E		–	
<b>&gt;DL DPCH Information LCR</b>		0..1		Applicable to 1.28Mcps TDD only	YES	reject
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>DL Timeslot Information LCR	M		9.2.3.4O		–	
>TDD TPC DL Step Size	O		9.2.3.21		YES	reject
<b>DL CCTrCH To Modify</b>		0..<maxno of CCTrCHs>			GLOBAL	reject
>CCTrCH ID	M		9.2.3.3.		–	
>TFCS	O		9.2.1.58		–	
>TFCI Coding	O		9.2.3.22		–	
>Puncture Limit	O		9.2.1.50		–	
<b>&gt;TPC CCTrCH List</b>		0..<maxno of CCTrCHs>		List of uplink CCTrCH which provide TPC	–	
>>TPC CCTrCH ID	M		CCTrCH ID 9.2.3.3		–	
<b>&gt;DL DPCH To Add</b>		0..1		Applicable to 3.84Mcps TDD only	YES	reject
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>DL Timeslot Information	M		9.2.3.4E		–	
<b>&gt;DL DPCH To Modify</b>		0..1			YES	reject
>>Repetition Period	O		9.2.3.16		–	
>>Repetition Length	O		9.2.3.15		–	
>>TDD DPCH Offset	O		9.2.3.19A		–	
<b>&gt;&gt;DL Timeslot Information</b>		0..<maxno of DLts>		Applicable to 3.84Mcps TDD only	–	
>>>Time Slot	M		9.2.3.23		–	
>>>Midamble Shift And Burst Type	O		9.2.3.7		–	
>>>TFCI Presence	O		9.2.1.57		–	
<b>&gt;&gt;&gt;DL Code Information</b>		0..<maxno of DPCHs>			–	
>>>>DPCH ID	M		9.2.3.5		–	
>>>>TDD Channelisation Code	O		9.2.3.19		–	
<b>&gt;&gt;DL Timeslot Information LCR</b>		0..<maxno of DLtsLCR>		Applicable to 1.28Mcps TDD only	GLOBAL	reject
>>>Time Slot LCR	M		9.2.3.24A		–	
>>>Midamble Shift LCR	O		9.2.3.7A		–	
>>>TFCI Presence	O		9.2.1.57		–	
<b>&gt;&gt;&gt;DL Code</b>		0..<maxno			–	

Information LCR		<i>ofDPCHsL CR&gt;</i>				
>>>>DPCH ID	M		9.2.3.5		–	
>>>>TDD Channelisation Code LCR	O		9.2.3.19a		–	
>>>>TDD DL DPCH Time Slot Format LCR	O		9.2.3.19D		YES	reject
<b>&gt;DL DPCH To Delete</b>		<i>0..&lt;maxno ofDPCHs&gt;</i>			GLOBAL	reject
>>DPCH ID	M		9.2.3.5		–	
<b>&gt;DL DPCH To Add LCR</b>		<i>0..1</i>		Applicable to 1.28Mcps TDD only	YES	reject
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>DL Timeslot Information LCR	M		9.2.3.4O		–	
>TDD TPC DL Step Size	O		9.2.3.21		YES	reject
<b>DL CCTrCH To Delete</b>		<i>0..&lt;maxno ofCCTrCH s&gt;</i>			GLOBAL	reject
>CCTrCH ID	M		9.2.3.3		–	
DCHs To Modify	O		DCHs TDD To Modify 9.2.3.4D		YES	reject
DCHs To Add	O		DCH TDD Information 9.2.3.4C		YES	reject
<b>DCHs To Delete</b>		<i>0..&lt;maxno ofDCHs&gt;</i>			GLOBAL	reject
>DCH ID	M		9.2.1.20		–	
<b>DSCH To Modify</b>		<i>0..&lt;maxno ofDSCHs&gt;</i>			GLOBAL	reject
>DSCH ID	M		9.2.1.27		–	
>CCTrCH ID	O		9.2.3.3	DL CCTrCH in which the DSCH is mapped	–	
>Transport Format Set	O		9.2.1.59		–	
>Allocation/Retention Priority	O		9.2.1.1A		–	
>Frame Handling Priority	O		9.2.1.30		–	
>ToAWS	O		9.2.1.61		–	
>ToAWE	O		9.2.1.60		–	
>Transport Bearer Request Indicator	M		9.2.1.62A		–	
DSCH To Add	O		DSCH TDD Information 9.2.3.5A		YES	reject
<b>DSCH To Delete</b>		<i>0..&lt;maxno ofDSCHs&gt;</i>			GLOBAL	reject
>DSCH ID	M		9.2.1.27		–	
<b>USCH To Modify</b>		<i>0..&lt;maxno ofUSCHs&gt;</i>			GLOBAL	reject
>USCH ID	M		9.2.3.27		–	
>Transport Format Set	O		9.2.1.59		–	
>Allocation/Retention Priority	O		9.2.1.1A		–	
>CCTrCH ID	O		9.2.3.2	UL CCTrCH in	–	

				which the USCH is mapped		
>Transport Bearer Request Indicator	M		9.2.1.62A		–	
USCH To Add	O		USCH Information 9.2.3.28		YES	reject
<b>USCH To Delete</b>		<i>0..&lt;maxno ofUSCHs&gt;</i>			GLOBAL	reject
>USCH ID	M		9.2.3.27		–	
<b>RL Information</b>		<i>0..1</i>			YES	reject
>RL ID	M		9.2.1.53		–	
>Maximum Downlink Power	O		DL Power 9.2.1.21	Maximum allowed power on DPCH	–	
>Minimum Downlink Power	O		DL Power 9.2.1.21	Minimum allowed power on DPCH	–	
>Initial DL Transmission Power	O		DL Power 9.2.1.21	Initial power on DPCH	YES	ignore
<b>&gt;UL Synchronisation Parameters LCR</b>		<i>0..1</i>		Mandatory for 1.28Mcps TDD. Not applicable to 3.84Mcps TDD.	YES	ignore
>> Uplink Synchronisation Step Size	M		9.2.3.26H			
>> Uplink Synchronisation Frequency	M		9.2.3.26G			
PDSCH-RL-ID	O		RL ID 9.2.1.53		YES	ignore

Range Bound	Explanation
<i>maxnoofDCHs</i>	Maximum number of DCHs for a UE
<i>maxnoofCCTrCHs</i>	Maximum number of CCTrCHs for a UE
<i>maxnoofDPCHs</i>	Maximum number of DPCHs in one CCTrCH for 3.84Mcps TDD
<i>maxnoofDPCHsLCR</i>	Maximum number of DPCHs in one CCTrCH for 1.28Mcps TDD
<i>mmaxnoofDSCHs</i>	Maximum number of DSCHs for one UE
<i>maxnoofUSCHs</i>	Maximum number of USCHs for one UE
<i>maxnoofDLts</i>	Maximum number of Downlink time slots per Radio Link for 3.84Mcps TDD
<i>maxnoofDLtsLCR</i>	Maximum number of Downlink time slots per Radio Link for 1.28Mcps TDD
<i>maxnoofULts</i>	Maximum number of Uplink time slots per Radio Link for 3.84Mcps TDD
<i>maxnoofULtsLCR</i>	Maximum number of Uplink time slots per Radio Link for 1.28Mcps TDD

## 9.1.43 RADIO LINK RECONFIGURATION READY

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
CRNC Communication Context ID	M		9.2.1.18	The reserved value 'All CRNCCC' shall not be used.	YES	ignore
<b>RL Information Response</b>		<i>0..&lt;maxno ofRLs&gt;</i>			EACH	ignore
>RL ID	M		9.2.1.53		–	
>DCH Information Response	O		9.2.1.20C		YES	ignore
>DSCH Information Response	O		9.2.1.27A		YES	ignore
>USCH Information Response	O		9.2.3.29	TDD only	YES	ignore
>TFCI2 Bearer Information Response	O		9.2.2.49A	FDD only: There shall be only one TFCI2 bearer per Node B Communication Context.	–	
Criticality Diagnostics	O		9.2.1.17		YES	ignore

Range Bound	Explanation
<i>maxnoofRLs</i>	Maximum number of RLs for a UE

## 9.1.44 RADIO LINK RECONFIGURATION FAILURE

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
CRNC Communication Context ID	M		9.2.1.18	The reserved value 'All CRNCCC' shall not be used.	YES	ignore
CHOICE Cause Level	M				YES	ignore
>General					–	
>>Cause	M		9.2.1.6		YES	ignore
>RL Specific					–	
<b>&gt;&gt;RLs Causing Reconfiguration Failure</b>		<i>0..&lt;maxno ofRLs&gt;</i>			EACH	ignore
>>>RL ID	M		9.2.1.53		–	
>>>Cause	M		9.2.1.6		–	
Criticality Diagnostics	O		9.2.1.17		YES	ignore

Range Bound	Explanation
<i>maxnoofRLs</i>	Maximum number of RLs for a UE

## 9.1.45 RADIO LINK RECONFIGURATION COMMIT

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

## 9.1.46 RADIO LINK RECONFIGURATION CANCEL

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

## 9.1.47 RADIO LINK RECONFIGURATION REQUEST

### 9.1.47.1 FDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Node B Communication Context ID	M		9.2.1.48	The reserved value 'All NBCC' shall not be used.	YES	reject
<b>UL DPCH Information</b>		0..1			YES	reject
>TFCS	O		9.2.1.58	For the UL.	–	
<b>DL DPCH Information</b>		0..1			YES	reject
>TFCS	O		9.2.1.58	For the DL.	–	
>TFCS Signalling Mode	O		9.2.2.50		–	
>Limited Power Increase	O		9.2.2.18A		–	
DCHs To Modify	O		DCHs FDD To Modify 9.2.2.4E		YES	reject
DCHs To Add	O		DCH FDD Information 9.2.2.4D		YES	reject
<b>DCHs To Delete</b>		0..<maxno ofDCHs>			GLOBAL	reject
>DCH ID	M		9.2.1.20		–	
<b>Radio Link Information</b>		0..<maxno ofRLs>			EACH	reject
>RL ID	M		9.2.1.53		–	
>Maximum DL Power	O		DL Power 9.2.1.21	Maximum allowed power on DPCH	–	
>Minimum DL Power	O		DL Power 9.2.1.21	Minimum allowed power on DPCH	–	
>DL Code Information	C-SF/2		FDD DL Code Information 9.2.2.14A		–	
Transmission Gap Pattern Sequence Information	O		9.2.2.53A		YES	reject

Range Bound	Explanation
<i>maxnoofDCHs</i>	Maximum number of DCHs for a UE
<i>maxnoofRLs</i>	Maximum number of RLs for a UE

Condition	Explanation
SF/2	The IE shall be present if the <i>Transmission Gap Pattern Sequence Information</i> IE is included and the indicated Downlink Compressed Mode method for at least one of the included Transmission Gap Pattern Sequence is set to "SF/2".



## 9.1.47.2 TDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantic Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Node B Communication Context ID	M		9.2.1.48	The reserved value 'All NBCC' shall not be used.	YES	reject
<b>UL CCH To Modify</b>		<i>0..&lt;maxno ofCCHs&gt;</i>			EACH	notify
>CCH ID	M		9.2.3.3		–	
>TFCS	O		9.2.1.58		–	
>Puncture Limit	O		9.2.1.50		–	
>UL SIR Target	O		UL SIR 9.2.1.67A	Applicable to 1.28Mcps TDD only	YES	reject
<b>UL CCH To Delete</b>		<i>0..&lt;maxno ofCCHs&gt;</i>			EACH	notify
>CCH ID	M		9.2.3.3		–	
<b>DL CCH To Modify</b>		<i>0..&lt;maxno ofCCHs&gt;</i>			EACH	notify
>CCH ID	M		9.2.3.3		–	
>TFCS	O		9.2.1.58		–	
>Puncture Limit	O		9.2.1.50		–	
<b>DL CCH To Delete</b>		<i>0..&lt;maxno ofCCHs&gt;</i>			EACH	notify
>CCH ID	M		9.2.3.3		–	
DCHs To Modify	O		DCHs TDD To Modify 9.2.3.4D		YES	reject
DCHs To Add	O		DCH TDD Information 9.2.3.4C		YES	reject
<b>DCHs To Delete</b>		<i>0..&lt;maxno ofDSCHs&gt;</i>			GLOBAL	reject
>DCH ID	M		9.2.1.20		–	
<b>RL Information</b>		<i>0..1</i>			YES	reject
>RL ID	M		9.2.1.53		–	
>Maximum Downlink Power	O		DL Power 9.2.1.21	Maximum allowed power on DPCH	–	
>Minimum Downlink Power	O		DL Power 9.2.1.21	Minimum allowed power on DPCH	–	
<b>&gt;UL Synchronisation Parameters LCR</b>		<i>0..1</i>		Mandatory for 1.28Mcps TDD. Not Applicable to 3.84Mcps TDD.	YES	ignore
>>Uplink Synchronisation Step Size	M		9.2.3.26H		–	
>>Uplink Synchronisation Frequency	M		9.2.3.26G		–	

Range Bound	Explanation
<i>maxnoofCCTrCHs</i>	Maximum number of CCTrCHs for a UE

### 9.1.48 RADIO LINK RECONFIGURATION RESPONSE

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
CRNC Communication Context ID	M		9.2.1.18	The reserved value 'All CRNCCC' shall not be used.	YES	ignore
<b>RL Information Response</b>		<i>0..&lt;maxno ofRLs&gt;</i>			EACH	ignore
>RL ID	M		9.2.1.53		–	
>DCH Information Response	O		9.2.1.20C		YES	ignore
Criticality Diagnostics	O		9.2.1.17		YES	ignore

Range Bound	Explanation
<i>maxnoofRLs</i>	Maximum number of RLs for a UE

### 9.1.49 RADIO LINK DELETION REQUEST

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Node B Communication Context ID	M		9.2.1.48	The reserved value 'All NBCC' shall not be used.	YES	reject
CRNC Communication Context ID	M		9.2.1.18		YES	reject
<b>RL Information</b>		<i>1..&lt;maxno ofRLs&gt;</i>			EACH	notify
>RL ID	M		9.2.1.53		–	

Range Bound	Explanation
<i>maxnoofRLs</i>	Maximum number of radio links for one UE

## 9.1.50 RADIO LINK DELETION RESPONSE

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
CRNC Communication Context ID	M		9.2.1.18	The reserved value 'All CRNCCC' shall not be used.	YES	ignore
Criticality Diagnostics	O		9.2.1.17		YES	ignore

## 9.1.51 DL POWER CONTROL REQUEST [FDD]

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	ignore
Transaction ID	M		9.2.1.62		–	
Node B Communication Context ID	M		9.2.1.48	The reserved value 'All NBCC' shall not be used.	YES	ignore
Power Adjustment Type	M		9.2.2.27		YES	ignore
DL Reference Power	C-Common		DL power 9.2.1.21	Power on DPCH	YES	ignore
Inner Loop DL PC Status	O		9.2.2.18B		YES	ignore
<b>DL Reference Power Information</b>	C-Individual	<i>1..&lt;maxno ofRLs&gt;</i>			EACH	ignore
>RL ID	M		9.2.1.53		–	
>DL Reference Power	M		DL power 9.2.1.21	Power on DPCH	–	
Max Adjustment Step	C-Common OrIndividual		9.2.2.20		YES	ignore
Adjustment Period	C-Common OrIndividual		9.2.2.B		YES	ignore
Adjustment Ratio	C-Common OrIndividual		9.2.2.C		YES	ignore

Condition	Explanation
Common	The IE shall be present if the <i>Adjustment Type</i> IE is equal to 'Common'.
Individual	The IE shall be present if the <i>Adjustment Type</i> IE is equal to 'Individual'.
CommonOrIndividual	The IE shall be present if the <i>Adjustment Type</i> IE is equal to 'Common' or 'Individual'.

Range Bound	Explanation
<i>maxnoofRLs</i>	Maximum number of Radio Links for a UE

## 9.1.52 DEDICATED MEASUREMENT INITIATION REQUEST

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Node B Communication Context ID	M		9.2.1.48	The reserved value 'All NBCC' shall not be used when the Report characteristics type is set to 'On Demand'.	YES	reject
Measurement ID	M		9.2.1.42		YES	reject
CHOICE <i>Dedicated Measurement Object Type</i>	M				YES	reject
>RL					–	
>>RL Information		1..<maxno ofRLs>			EACH	reject
>>>RL ID	M		9.2.1.53		–	
>>>DPCH ID	O		9.2.3.5	TDD only	–	
>>>PUSCH Information		0..<maxno ofPUSCHs >		TDD only	GLOBAL	reject
>>>>PUSCH ID	M		9.2.3.12		–	
>RLS				FDD only	–	
>>RL Set Information		1..<maxno ofRLSets>			–	
>>>RL Set ID	M		9.2.2.39		–	
>ALL RL			NULL		–	
>ALL RLS			NULL	FDD only	–	
Dedicated Measurement Type	M		9.2.1.23		YES	reject
Measurement Filter Coefficient	O		9.2.1.41		YES	reject
Report Characteristics	M		9.2.1.51		YES	reject
CFN Reporting Indicator	M		FN Reporting Indicator 9.2.1.29B		YES	reject
CFN	O		9.2.1.7		YES	reject

Range Bound	Explanation
<i>maxnoofRLs</i>	Maximum number of individual RLS a measurement can be started on
<i>maxnoofPUSCHs</i>	Maximum number of PUSCHs per RL a measurement can be started on
<i>maxnoofRLSets</i>	Maximum number of individual RL Sets a measurement can be started on

## 9.1.53 DEDICATED MEASUREMENT INITIATION RESPONSE

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
CRNC Communication Context ID	M		9.2.1.18		YES	ignore
Measurement ID	M		9.2.1.42		YES	ignore
CHOICE <i>Dedicated Measurement Object Type</i>	O			Dedicated Measurement Object Type the measurement was initiated with	YES	ignore
<i>&gt;RL or ALL RL</i>					–	
<b>&gt;&gt;RL Information</b>		<i>1..&lt;maxno ofRLs&gt;</i>			EACH	ignore
>>>RL ID	M		9.2.1.53		–	
>>>DPCH ID	O		9.2.3.5	TDD only	–	
>>>Dedicated Measurement Value	M		9.2.1.24		–	
>>>CFN	O		9.2.1.7	Dedicated Measurement Time Reference	–	
<b>&gt;&gt;&gt;PUSCH Information</b>		<i>0..&lt;maxno ofPUSCHs &gt;</i>		TDD only	GLOBAL	reject
>>>>PUSCH ID	M		9.2.3.12		–	
<i>&gt;RLS or ALL RLS</i>				FDD only	–	
<b>&gt;&gt;RL Set Information</b>		<i>1..&lt;maxno ofRLSets&gt;</i>			EACH	ignore
>>>RL Set ID	M		9.2.2.39		–	
>>>Dedicated Measurement Value	M		9.2.1.24		–	
>>>CFN	O		9.2.1.7	Dedicated Measurement Time Reference	–	
Criticality Diagnostics	O		9.2.1.17		YES	ignore

Range Bound	Explanation
<i>maxnoofRLs</i>	Maximum number of individual RLS the measurement can be started on.
<i>maxnoofPUSCHs</i>	Maximum number of PUSCHs per RL a measurement can be started on.
<i>maxnoofRLSets</i>	Maximum number of individual RL Sets a measurement can be started on.

## 9.1.54 DEDICATED MEASUREMENT INITIATION FAILURE

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
CRNC Communication Context ID	M		9.2.1.18		YES	ignore
Measurement ID	M		9.2.1.42		YES	ignore
Cause	M		9.2.1.6		YES	ignore
Criticality Diagnostics	O		9.2.1.17		YES	ignore

## 9.1.55 DEDICATED MEASUREMENT REPORT

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	ignore
Transaction ID	M		9.2.1.62		–	
CRNC Communication Context ID	M		9.2.1.18	The reserved value 'All CRNCCC' shall not be used.	YES	ignore
Measurement ID	M		9.2.1.42		YES	ignore
CHOICE <i>Dedicated Measurement Object Type</i>	M			Dedicated Measurement Object Type the measurement was initiated with	YES	ignore
>RL or ALL RL					–	
>>RL Information		1..<maxno ofRLs>			EACH	ignore
>>>RL ID	M		9.2.1.53		–	
>>>DPCH ID	O		9.2.3.5	TDD only	–	
>>>Dedicated Measurement Value Information	M		9.2.1.24A		–	
>>>PUSCH Information		0..<maxno ofPUSCHs >		TDD only	GLOBAL	reject
>>>>PUSCH ID	M		9.2.3.12		–	
>RLS or ALL RLS				FDD only	–	
>>RL Set Information		1..<maxno ofRLSets>			EACH	ignore
>>>RL Set ID	M		9.2.2.39		–	
>>>Dedicated Measurement Value Information	M		9.2.1.24A		–	

Range Bound	Explanation
<i>maxnoofRLs</i>	Maximum number of individual RLs the measurement can be started on
<i>maxnoofPUSCHs</i>	Maximum number of PUSCHs per RL a measurement can be started on
<i>maxnoofRLSets</i>	Maximum number of individual RL Sets a measurement can be started on

### 9.1.56 DEDICATED MEASUREMENT TERMINATION REQUEST

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	ignore
Transaction ID	M		9.2.1.62		–	
Node B Communication Context ID	M		9.2.1.48	The reserved value "All NBCC" shall be used if this value was used when initiating the measurement. Otherwise, the reserved value "All NBCC" shall not be used.	YES	ignore
Measurement ID	M		9.2.1.42		YES	ignore

## 9.1.57 DEDICATED MEASUREMENT FAILURE INDICATION

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



## 9.1.58 RADIO LINK FAILURE INDICATION

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	ignore
Transaction ID	M		9.2.1.62		–	
CRNC Communication Context ID	M		9.2.1.18	The reserved value 'All CRNCCC' shall not be used.	YES	ignore
CHOICE <i>Reporting Object</i>	M			Object for which the Failure shall be reported.	YES	ignore
>RL					–	
>>RL Information		1..<maxno ofRLs>			EACH	ignore
>>>RL ID	M		9.2.1.53		–	
>>>Cause	M		9.2.1.6		–	
>RL Set				FDD only	–	
>>RL Set Information		1..<maxno ofRLSets>			EACH	ignore
>>>RL Set ID	M		9.2.2.39		–	
>>>Cause	M		9.2.1.6		–	
>CCTrCH				TDD only	–	
>>RL ID	M		9.2.1.53		–	
>>CCTrCH List		1..<maxno ofCCTrCHs>			EACH	ignore
>>>CCTrCH ID	M		9.2.3.3		–	
>>>Cause	M		9.2.1.6		–	

Range Bound	Explanation
<i>maxnoofRLs</i>	Maximum number of RLs for one UE
<i>maxnoofRLSets</i>	Maximum number of RL Sets for one UE
<i>maxnoofCCTrCHs</i>	Maximum number of CCTrCHs for a UE

## 9.1.59 RADIO LINK RESTORE INDICATION

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	ignore
Transaction ID	M		9.2.1.62		–	
CRNC Communication Context ID	M		9.2.1.18	The reserved value 'All CRNCCC' shall not be used.	YES	ignore
CHOICE <i>Reporting Object</i>	M			Object for which the Restoration shall be reported.	YES	ignore
>RL				TDD only	–	
>>Radio Link Information		1..<maxno ofRLs>			EACH	ignore
>>>RL ID	M		9.2.1.53		–	
>RL Set				FDD only	–	
>>RL Set Information		1..<maxno ofRLSets>			EACH	ignore
>>>RL Set ID	M		9.2.2.39		–	
>CCTrCH				TDD only	–	
>>RL ID	M		9.2.1.53		–	
>>CCTrCH List		1..<maxno ofCCTrCHs>			EACH	ignore
>>>CCTrCH ID	M		CCTrCH ID 9.2.3.3		–	

Range Bound	Explanation
<i>maxnoofRLs</i>	Maximum number of RLs for one UE
<i>maxnoofRLSets</i>	Maximum number of RL Sets for one UE
<i>maxnoofCCTrCHs</i>	Maximum number of CCTrCHs for a UE

## 9.1.60 COMPRESSED MODE COMMAND [FDD]

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	ignore
Transaction ID	M		9.2.1.62		–	
Node B Communication Context ID	M		9.2.1.48	The reserved value 'All NBCC' shall not be used.	YES	ignore
Active Pattern Sequence Information	M		9.2.2.A		YES	ignore

## 9.1.61 ERROR INDICATION

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	ignore
Transaction ID	M		9.2.1.62		–	
CRNC Communication Context ID	O		9.2.1.18	The reserved value 'All CRNCCC' shall not be used.	YES	ignore
Node B Communication Context ID	O		9.2.1.48	The reserved value 'All NBCC' shall not be used.	YES	ignore
Cause	O		9.2.1.6		YES	ignore
Criticality Diagnostics	O		9.2.1.17		YES	ignore

## 9.1.62 PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST [TDD]

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
C-ID	M		9.2.1.9		YES	reject
SFN	O		9.2.1.53A		YES	reject
<b>PDSCH Sets To Add</b>		<i>0..&lt;maxno of PDSCH Sets&gt;</i>			GLOBAL	reject
>PDSCH Set ID	M		9.2.3.11		–	
<b>&gt;PDSCH To Add Information</b>		<i>0..1</i>		Mandatory for 3.84Mcps TDD. Not Applicable to 1.28Mcps TDD.	YES	reject
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD Physical Channel Offset	M		9.2.3.20		–	
<b>&gt;&gt;DL Timeslot Information</b>		<i>1..&lt;maxno of DLts&gt;</i>			–	
>>>Time Slot	M		9.2.3.23		–	
>>>Midamble Shift And Burst Type	M		9.2.3.7		–	
>>>TFCI Presence	M		9.2.1.57		–	
<b>&gt;&gt;&gt;DL Code Information</b>		<i>1..&lt;maxno of PDSCHs &gt;</i>			–	
>>>>PDSCH ID	M		9.2.3.10		–	
>>>>TDD Channelisation Code	M		9.2.3.19		–	
<b>&gt;PDSCH To Add Information LCR</b>		<i>0..1</i>		Mandatory for 1.28Mcps TDD. Not Applicable to 3.84Mcps TDD.	YES	reject

>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD Physical Channel Offset	M		9.2.3.20		–	
<b>&gt;&gt;DL Timeslot Information LCR</b>		1..<maxno ofDLtsLCR >			–	
>>>Time Slot LCR	M		9.2.3.24A		–	
>>>Midamble Shift LCR	M		9.2.3.7A		–	
>>>TFCI Presence	M		9.2.1.57		–	
<b>&gt;&gt;&gt;DL Code Information LCR</b>		1..<maxno ofPDSCHs >			–	
>>>>PDSCH ID	M		9.2.3.10		–	
>>>>TDD Channelisation Code LCR	M		9.2.3.19a		–	
<b>PDSCH Sets To Modify</b>		0..<maxno of PDSCHSets>			GLOBAL	reject
>PDSCH Set ID	M		9.2.3.11		–	
>CHOICE HCR or LCR	M			See note 1 below	–	
>>3.84Mcps TDD					–	
<b>&gt;&gt;&gt;PDSCH To Modify Information</b>		1			YES	reject
>>>>Repetition Period	O		9.2.3.16		–	
>>>>Repetition Length	O		9.2.3.15		–	
>>>>TDD Physical Channel Offset	O		9.2.3.20		–	
<b>&gt;&gt;&gt;&gt;DL Timeslot Information</b>		0..<maxno ofDLts>			–	
>>>>>Time Slot	M		9.2.3.23		–	
>>>>>Midamble Shift And Burst Type	O		9.2.3.7		–	
>>>>>TFCI Presence	O		9.2.1.57		–	
<b>&gt;&gt;&gt;&gt;&gt;DL Code Information</b>		0..<maxno ofPDSCHs >			–	
>>>>>>PDSCH ID	M		9.2.3.10		–	
>>>>>>TDD Channelisation Code	M		9.2.3.19		–	
>>1.28Mcps TDD					–	
<b>&gt;&gt;&gt;PDSCH To Modify Information LCR</b>		1			YES	reject
>>>>Repetition Period	O		9.2.3.16		–	
>>>>Repetition Length	O		9.2.3.15		–	
>>>>TDD Physical Channel Offset	O		9.2.3.20		–	
<b>&gt;&gt;&gt;&gt;DL Timeslot Information LCR</b>		0..<maxno ofDLtsLCR >			–	
>>>>>Time Slot LCR	M		9.2.3.24A		–	

>>>>Midamble Shift LCR	O		9.2.3.7A		–	
>>>>TFCI Presence	O		9.2.1.57		–	
>>>>DL Code Information LCR		0..<maxno ofPDSCHs >			–	
>>>>>PDSCH ID	M		9.2.3.10		–	
>>>>>TDD Channelisation Code LCR	M		9.2.3.19a		–	
<b>PDSCH Sets To Delete</b>		0..<maxno of PDSCHsets>			GLOBAL	reject
>PDSCH Set ID	M		9.2.3.11		–	
<b>PUSCH Sets To Add</b>		0..<maxno of PUSCHsets>			GLOBAL	reject
>PUSCH Set ID	M		9.2.3.13		–	
<b>&gt;PUSCH To Add Information</b>		0..1		Mandatory for 3.84Mcps TDD. Not Applicable to 1.28Mcps TDD.	YES	reject
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD Physical Channel Offset	M		9.2.3.20		–	
<b>&gt;&gt;UL Timeslot Information</b>		1..<maxno ofULts>			–	
>>>Time Slot	M		9.2.3.23		–	
>>>Midamble Shift And Burst Type	M		9.2.3.7		–	
>>>TFCI Presence	M		9.2.1.57		–	
<b>&gt;&gt;&gt;UL Code Information</b>		1..<maxno ofPUSCHs >			–	
>>>>PUSCH ID	M		9.2.3.12		–	
>>>>TDD Channelisation Code	M		9.2.3.19		–	
<b>&gt;PUSCH To Add Information LCR</b>		0..1		Mandatory for 1.28Mcps TDD. Not Applicable to 3.84Mcps TDD.	YES	reject
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD Physical Channel Offset	M		9.2.3.20		–	
<b>&gt;&gt;UL Timeslot Information LCR</b>		1..<maxno ofULtsLCR >			–	
>>>Time Slot LCR	M		9.2.3.24A		–	
>>>Midamble Shift LCR	M		9.2.3.7A		–	
>>>TFCI Presence	M		9.2.1.57		–	
<b>&gt;&gt;&gt;UL Code Information LCR</b>		1..<maxno ofPUSCHs >			–	
>>>>PUSCH ID	M		9.2.3.12		–	

>>>>TDD Channelisation Code LCR	M		9.2.3.19a		–	
<b>PUSCH Sets To Modify</b>		<i>0..&lt;maxno of PUSCHSets&gt;</i>			GLOBAL	reject
>PUSCH Set ID	M		9.2.3.13		–	
>CHOICE <i>HCR or LCR</i>	M			See note 1 below	–	
>>3.84Mcps TDD					–	
<b>&gt;&gt;&gt;PUSCH To Modify Information</b>		1			YES	reject
>>>>Repetition Period	O		9.2.3.16		–	
>>>>Repetition Length	O		9.2.3.15		–	
>>>>TDD Physical Channel Offset	O		9.2.3.20		–	
<b>&gt;&gt;&gt;&gt;UL Timeslot Information</b>		<i>0..&lt;maxno of ULts&gt;</i>			–	
>>>>>Time Slot	M		9.2.3.23		–	
>>>>>Midamble Shift And Burst Type	O		9.2.3.7		–	
>>>>>TFCI Presence	O		9.2.1.57		–	
<b>&gt;&gt;&gt;&gt;&gt;UL Code Information</b>		<i>0..&lt;maxno of PUSCHs &gt;</i>			–	
>>>>>>PUSCH ID	M		9.2.3.12		–	
>>>>>>TDD Channelisation Code	M		9.2.3.19		–	
>>1.28Mcps TDD					–	
<b>&gt;&gt;&gt;PUSCH To Modify Information LCR</b>		1			YES	reject
>>>>Repetition Period	O		9.2.3.16		–	
>>>>Repetition Length	O		9.2.3.15		–	
>>>>TDD Physical Channel Offset	O		9.2.3.20		–	
<b>&gt;&gt;&gt;&gt;UL Timeslot Information LCR</b>		<i>0..&lt;maxno of ULtsLCR &gt;</i>		Applicable to 1.28Mcps TDD only	–	
>>>>>Time Slot LCR	M		9.2.3.24A		–	
>>>>>Midamble Shift LCR	O		9.2.3.7A		–	
>>>>>TFCI Presence	O		9.2.1.57		–	
<b>&gt;&gt;&gt;&gt;&gt;UL Code Information LCR</b>		<i>0..&lt;maxno of PUSCHs &gt;</i>			–	
>>>>>>PUSCH ID	M		9.2.3.12		–	
>>>>>>TDD Channelisation Code LCR	M		9.2.3.19a		–	
<b>PUSCH Sets To Delete</b>		<i>0..&lt;maxno of PUSCH Sets&gt;</i>			GLOBAL	reject
>PUSCH Set ID	M		9.2.3.13		–	

Note 1: This information element is a simplified representation of the ASN.1. The choice is in reality performed through the use of ProtocolIE-Single-Container within the ASN.1.

Range Bound	Explanation
<i>maxnoofPDSCHSets</i>	Maximum number of PDSCH Sets in a cell
<i>maxnoofPDSCHs</i>	Maximum number of PDSCHs in a cell
<i>maxnoofPUSCHSets</i>	Maximum number of PUSCH Sets in a cell
<i>maxnoofPUSCHs</i>	Maximum number of PUSCHs in a cell
<i>maxnoofDLts</i>	Maximum number of Downlink time slots in a cell for 3.84Mcps TDD
<i>maxnoofDLtsLCR</i>	Maximum number of Downlink time slots in a cell for 1.28Mcps TDD
<i>maxnoofULts</i>	Maximum number of Uplink time slots in a cell for 3.84Mcps TDD
<i>maxnoofULtsLCR</i>	Maximum number of Uplink time slots in a cell for 1.28Mcps TDD

### 9.1.63 PHYSICAL SHARED CHANNEL RECONFIGURATION RESPONSE [TDD]

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Criticality Diagnostics	O		9.2.1.17		YES	ignore

### 9.1.64 PHYSICAL SHARED CHANNEL RECONFIGURATION FAILURE [TDD]

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
CHOICE <i>Cause Level</i>	M				YES	ignore
> <i>General</i>					–	
>> <i>Cause</i>	M		9.2.1.6		–	
> <i>Set Specific</i>					–	
>> <b>Unsuccessful DL Shared Channel Set</b>		<i>0..&lt;maxno ofPDSCH Sets&gt;</i>			EACH	ignore
>>>PDSCH Set ID	M		9.2.3.13		–	
>>>Cause	M		9.2.1.6		–	
>> <b>Unsuccessful UL Shared Channel Set</b>		<i>0..&lt;maxno ofPUSCH Sets&gt;</i>			EACH	ignore
>>>PUSCH Set ID	M		9.2.3.13		–	
>>>Cause	M		9.2.1.6		–	
Criticality Diagnostics	O		9.2.1.17		YES	ignore

Range Bound	Explanation
<i>maxnoofPDSCHSets</i>	Maximum number of PDSCH Sets in a cell
<i>maxnoofPUSCHSets</i>	Maximum number of PUSCH Sets in a cell

## 9.1.65 RESET REQUEST

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
CHOICE <i>Reset Indicator</i>	M				YES	ignore
> <i>Communication Context</i>					–	
>> <b>Communication Context Information</b>		1..<maxCommunicationContext>			EACH	reject
>>>CHOICE <i>Communication Context Type</i>	M				–	
>>>>CRNC <i>Communication Context</i>					–	
>>>>>CRNC <i>Communication Context ID</i>	M		9.2.1.18		–	
>>>>Node B <i>Communication Context</i>					–	
>>>>>Node B <i>Communication Context ID</i>	M		9.2.1.48		–	
> <i>Communication Control Port</i>					–	
>> <b>Communication Control Port Information</b>		1..<maxCCPinNodeB>			EACH	reject
>>>Communication <i>Control Port ID</i>	M		9.2.1.15		–	
> <i>Node B</i>			NULL		–	

Range Bound	Explanation
<i>maxCommunicationContext</i>	Maximum number of Communication Contexts that can exist in the Node B
<i>maxCCPinNodeB</i>	Maximum number of Communication Control Ports that can exist in the Node B

## 9.1.66 RESET RESPONSE

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Criticality Diagnostics	O		9.2.1.17		YES	ignore



## 9.1.67 DL POWER TIMESLOT CONTROL REQUEST [TDD]

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	ignore
Transaction ID	M		9.2.1.62		–	
Node B Communication Context ID	M		9.2.1.48	The reserved value 'All NBCC' shall not be used.	YES	ignore
DL Time Slot ISCP Info	O		9.2.3.4F	Mandatory for 3.84Mcps TDD. Not Applicable to 1.28Mcps TDD.	YES	ignore
DL Time Slot ISCP Info LCR	O		9.2.3.4P	Mandatory for 1.28Mcps TDD. Not Applicable to 3.84Mcps TDD.	YES	ignore

## 9.1.68 RADIO LINK PREEMPTION REQUIRED INDICATION

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	ignore
Transaction ID	M		9.2.1.62		–	
CRNC Communication Context ID	M		9.2.1.18		YES	ignore
<b>RL Information</b>		<i>0..&lt;maxno ofRLs&gt;</i>			EACH	ignore
>RL ID	M		9.2.1.53		–	

Range Bound	Explanation
<i>maxnoofRLs</i>	Maximum number of radio links for one UE

## 9.1.69 INFORMATION EXCHANGE INITIATION REQUEST

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Information Exchange ID	M		9.2.1.36C		YES	reject
CHOICE <i>Information Exchange Object Type</i>	M				YES	reject
>Cell					–	
>>C-ID	M		9.2.1.9		–	
Information Type	M		9.2.1.36D		YES	reject
Information Report Characteristics	M		9.2.1.36B		YES	reject

### 9.1.70 INFORMATION EXCHANGE INITIATION RESPONSE

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Information Exchange ID	M		9.2.1.36C		YES	ignore
CHOICE <i>Information Exchange Object Type</i>	O				YES	ignore
>Cell					–	
>>Requested Data Value	M		9.2.1.51A		–	
Criticality Diagnostics	O		9.2.1.17		YES	ignore

### 9.1.71 INFORMATION EXCHANGE INITIATION FAILURE

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Information Exchange ID	M		9.2.1.36C		YES	ignore
Cause	M		9.2.1.6		YES	ignore
Criticality Diagnostics	O		9.2.1.17		YES	ignore

### 9.1.72 INFORMATION REPORT

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	ignore
Transaction ID	M		9.2.1.62		–	
Information Exchange ID	M		9.2.1.36C		YES	ignore
CHOICE <i>Information Exchange Object Type</i>	M				YES	ignore
>Cell					–	
>>Requested Data Value Information	M		9.2.1.51B		–	

### 9.1.73 INFORMATION EXCHANGE TERMINATION REQUEST

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	ignore
Transaction ID	M		9.2.1.62		–	
Information Exchange ID	M		9.2.1.36C		YES	ignore

## 9.1.74 INFORMATION EXCHANGE FAILURE INDICATION

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	ignore
Transaction ID	M		9.2.1.62		–	
Information Exchange ID	M		9.2.1.36C		YES	ignore
Cause	M		9.2.1.6		YES	ignore

## 9.1.75 CELL SYNCHRONISATION INITIATION REQUEST [3.84Mcps TDD]

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
C-ID	M		9.2.1.9		YES	reject
Cell Sync Burst Repetition Period	M		9.2.3.4J		YES	reject
<b>Time Slot Information</b>		1..15			GLOBAL	reject
>Time Slot	M		9.2.3.23		–	
<b>Cell Sync Burst Transmission Initiation Information</b>		0..1			GLOBAL	reject
>CSB Transmission ID	M		9.2.3.4N		–	
>SFN	M		9.2.1.53A		–	
>Cell Sync Burst Code	M		9.2.3.4G		–	
>Cell Sync Burst Code Shift	M		9.2.3.4H		–	
>Initial DL Transmission Power	M		DL Power 9.2.1.21		–	
<b>Cell Sync Burst Measurement Initiation Information</b>		0..1			GLOBAL	reject
>CSB Measurement ID	M		9.2.3.4I		–	
>Cell Sync Burst Code	M		9.2.3.4G		–	
>Cell Sync Burst Code Shift	M		9.2.3.4H		–	
>Synchronisation Report Type	M		9.2.3.18 <sup>E</sup>		–	
>SFN	O		9.2.1.53A		–	
>Synchronisation Report Characteristics	M		9.2.3.18D		–	

## 9.1.76 CELL SYNCHRONISATION INITIATION RESPONSE [3.84Mcps TDD]

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Criticality Diagnostics	O		9.2.1.17		YES	ignore

## 9.1.77 CELL SYNCHRONISATION INITIATION FAILURE [3.84Mcps TDD]

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Cause	M		9.2.1.6		YES	ignore
Criticality Diagnostics	O		9.2.1.17		YES	ignore

## 9.1.78 CELL SYNCHRONISATION RECONFIGURATION REQUEST [3.84Mcps TDD]

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
C-ID	M		9.2.1.9		YES	reject
Time Slot	M		9.2.3.23		YES	reject
Number Of Cycles Per SFN Period	M		9.2.3.7B		YES	reject
Number Of Repetitions Per Cycle Period	M		9.2.3.7C		YES	reject
<b>Cell Sync Burst Transmission Reconfiguration Information</b>		<i>0..&lt;maxno ofCellSync Bursts&gt;</i>			GLOBAL	reject
>CSB Transmission ID	M		9.2.3.4N		–	
>Sync Frame Number To Transmit	M		Sync Frame Number 9.2.3.18C		–	
>Cell Sync Burst Code	O		9.2.3.4G		–	
>Cell Sync Burst Code Shift	O		9.2.3.4H		–	
>DL Transmission Power	O		DL Power 9.2.1.21		–	
<b>Cell Sync Burst Measurement Reconfiguration Information</b>		<i>0..1</i>			YES	reject
<b>&gt;Cell Sync Burst Measurement Information</b>		<i>1..&lt;maxno ofCellSync Bursts&gt;</i>			GLOBAL	reject
>>Sync Frame Number To Receive	M		Sync Frame Number 9.2.3.18C		–	
<b>&gt;&gt;Cell Sync Burst Information</b>		<i>1..&lt;maxno ofreceptionsperSync Frame&gt;</i>			–	
>>>CSB Measurement ID	M		9.2.3.4I		–	
>>>Cell Sync Burst Code	M		9.2.3.4G		–	
>>>Cell Sync Burst Code shift	M		9.2.3.4H		–	
>Synchronisation Report Type	O		9.2.3.18E		YES	reject
>Synchronisation Report Characteristics	O		9.2.3.18D		YES	reject

Range Bound	Explanation
<i>maxnoofCellSyncBursts</i>	Maximum number of cell sync bursts per cycle
<i>maxnoofreceptionsperSyncFrame</i>	Maximum number of cell sync burst receptions per Sync Frame

### 9.1.79 CELL SYNCHRONISATION RECONFIGURATION RESPONSE [3.84Mcps TDD]

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Criticality Diagnostics	O		9.2.1.17		YES	ignore

### 9.1.80 CELL SYNCHRONISATION RECONFIGURATION FAILURE [3.84Mcps TDD]

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Cause	M		9.2.1.6		YES	ignore
Criticality Diagnostics	O		9.2.1.17		YES	ignore

### 9.1.81 CELL SYNCHRONISATION REPORT [3.84Mcps TDD]

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	ignore
Transaction ID	M		9.2.1.62		–	
<b>Cell Synchronisation Information</b>		1..<maxCellsInNodeB>			EACH	ignore
>C-ID	M		9.2.1.9		YES	ignore
>CHOICE Synchronisation Report Type					YES	ignore
>>Initial Phase or Steady-State Phase					–	
>>>Cell Sync Burst Measured Information		1..<maxNumberOfCellSyncBursts>			–	
>>>>SFN	M		9.2.1.53A		–	
>>>>Cell Sync Burst Information		1..<maxNumberOfReceptionSyncFrame>			–	
>>>>>CHOICE Cell Sync Burst Availability Indicator	M				–	
>>>>>>Cell Sync Burst Available					–	
>>>>>>>Cell Sync Burst Timing	M		9.2.3.4L		–	
>>>>>>>Cell Sync Burst SIR	M		9.2.3.4K		–	
>>>>>>>Cell Sync Burst Not Available			NULL		–	
>>Late-Entrant Cell			NULL		–	
>>Frequency Acquisition			NULL		–	

Range Bound	Explanation
<i>maxCellinNodeB</i>	Maximum number of Cells in a Node B
<i>maxnoofCellSyncBursts</i>	Maximum number of cell synchronisation bursts per cycle
<i>maxnoofreceptionsperSyncFrame</i>	Maximum number of cell synchronisation burst receptions per Sync Frame

### 9.1.82 CELL SYNCHRONISATION TERMINATION REQUEST [3.84Mcps TDD]

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	ignore
Transaction ID	M		9.2.1.62		–	
C-ID	M		9.2.1.9		YES	ignore
CSB Transmission ID	O		9.2.3.4N		YES	ignore
CSB Measurement ID	O		9.2.3.4I		YES	ignore

### 9.1.83 CELL SYNCHRONISATION FAILURE INDICATION [3.84Mcps TDD]

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	ignore
Transaction ID	M		9.2.1.62		–	
C-ID	M		9.2.1.9		YES	ignore
CSB Transmission ID	O		9.2.3.4N		YES	ignore
CSB Measurement ID	O		9.2.3.4I		YES	ignore
Cause	M		9.2.1.6		YES	ignore

### 9.1.84 CELL SYNCHRONISATION ADJUSTMENT REQUEST [3.84Mcps TDD]

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
<b>Cell Adjustment Information</b>		<i>1..&lt;maxCellinNodeB&gt;</i>			EACH	ignore
>C-ID	M		9.2.1.9		–	
>Frame Adjustment Value	O		9.2.3.5C		–	
>Timing Adjustment Value	O		9.2.3.22a		–	
>DL Transmission Power	O		9.2.1.21		–	
>SFN	O		9.2.1.53A		–	

Range Bound	Explanation
<i>maxCellinNodeB</i>	Maximum number of Cells in a Node B

## 9.1.85 CELL SYNCHRONISATION ADJUSTMENT RESPONSE [3.84Mcps TDD]

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Criticality Diagnostics	O		9.2.1.17		YES	ignore

## 9.1.86 CELL SYNCHRONISATION ADJUSTMENT FAILURE [3.84Mcps TDD]

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
CHOICE Cause Level	M				YES	ignore
>General					–	
>>Cause	M		9.2.1.6		–	
>Cell Specific					–	
>>Unsuccessful Cell Information Response		1..<maxCellinNodeB>			EACH	ignore
>>>C-ID	M		9.2.1.9		–	
>>>Cause	M		9.2.1.6		–	
Criticality Diagnostics	O		9.2.1.17		YES	ignore

Range Bound	Explanation
maxCellinNodeB	Maximum number of Cells in a Node B

## 9.2 Information Element Functional Definition and Contents

### 9.2.0 General

Subclause 9.2 presents the NBAP IE definitions in tabular format. The corresponding ASN.1 definition is presented in Subclause 9.3. In case there is a contradiction between the tabular format in Subclause 9.2 and the ASN.1 definition, the ASN.1 shall take precedence, except for the definition of conditions for the presence of conditional elements, where the tabular format shall take precedence.

When specifying information elements which are to be represented by bitstrings, if not otherwise specifically stated in the semantics description of the concerned IE or elsewhere, the following principle applies with regards to the ordering of bits:

- The first bit (leftmost bit) contains the most significant bit (MSB);
- The last bit (rightmost bit) contains the least significant bit (LSB);
- When importing bitstrings from other specifications, the first bit of the bitstring contains the first bit of the concerned information;



## 9.2.1 Common parameters

### 9.2.1.1 Add/Delete Indicator

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Add/Delete Indicator			ENUMERATED (Add, Delete)	

### 9.2.1.1A Allocation/Retention Priority

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Priority Level	M		INTEGER (0..15)	This IE indicates the priority of the request. <b>Usage:</b> Value "0" means "Spare"; It shall be treated as a logical error if received. Values between "1" and "14" are ordered in decreasing order of priority, "1" being the highest and "14" the lowest. Value "15" means "No Priority".
Pre-emption Capability	M		ENUMERATED (shall not trigger pre-emption, may trigger pre-emption)	
Pre-emption Vulnerability	M		ENUMERATED (not pre-emptable, pre-emptable)	

### 9.2.1.2 Availability Status

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Availability Status			ENUMERATED (empty, in test, failed, power off, off line, off duty, dependency, degraded, not installed, log full, ...)	

### 9.2.1.3 BCCH Modification Time

Indicates the time after which the new system information shall be applied on BCCH.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
BCCH Modification Time			INTEGER (0..511)	All SFN values in which MIB may be mapped are allowed. The tabular description is presented in [18].

### 9.2.1.4 Binding ID

The Binding ID is the identifier of a user data stream. It is allocated at the Node B and it is unique for each transport bearer under establishment to/from the Node B.

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

### 9.2.1.5 Blocking Priority Indicator

The Blocking priority indicator shall indicate the immediacy with which a resource should be blocked from use. The following priority classes shall be supported in the Blocking priority indicator.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Blocking Priority Indicator			ENUMERATED ( High, Normal, Low, ...)	"High" priority: Block resource immediately. "Normal" priority: Block resource when idle or upon timer expiry. "Low" priority: Block resource when idle.

### 9.2.1.5A Burst Mode Parameters

The *Burst Mode Parameters* IE provides information to be applied for IPDL burst mode.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Burst Start	M		INTEGER (0..15)	See [10] and [21]
Burst Length	M		INTEGER (10..25)	See [10] and [21]
Burst Freq	M		INTEGER (1..16)	See [10] and [21]

## 9.2.1.6 Cause

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
CHOICE Cause Group				
>Radio Network Layer				
>>Radio Network Layer Cause	M		ENUMERATED ( unknown C-ID, Cell not available, Power level not supported, DL radio resources not available, UL radio resources not available, RL Already Activated/allocated, Node B Resources Unavailable, Measurement not supported for the object, Combining Resources not available, Requested configuration not supported, Synchronization failure, Priority transport channel established, SIB Origination in Node B not Supported, Requested Tx Diversity Mode not supported, Unspecified, BCCH scheduling error, Measurement Temporarily not Available, Invalid CM Setting, Reconfiguration CFN not elapsed, Number of DL codes not supported, S-CPICH not supported, Combining not supported, UL SF not supported, DL SF not supported, Common Transport Channel Type not supported, Dedicated Transport Channel Type not supported, Downlink Shared Channel Type not supported, Uplink Shared Channel Type not supported, CM not supported, Tx diversity no longer supported, Unknown Local Cell ID, ..., Number of UL codes not supported, Information temporarily not available, Information Provision not supported for the object, Cell Synchronisation not supported, Cell Synchronisation Adjustment not supported, DPC Mode Change not Supported,	

			IPDL already activated, IPDL not supported, IPDL parameters not available, Frequency Acquisition not supported)	
>Transport Layer				
>>Transport Layer Cause	M		ENUMERATED ( Transport resource unavailable, Unspecified, ...)	
>Protocol				
>>Protocol Cause			ENUMERATED ( Transfer syntax error, Abstract syntax error (reject), Abstract syntax error (ignore and notify), Message not compatible with receiver state, Semantic error, Unspecified, Abstract syntax error (falsely constructed message), ...)	
>Misc				
>>Miscellaneous Cause	M		ENUMERATED ( Control processing overload Hardware failure, O&M intervention, Not enough user plane processing resources, Unspecified, ...)	

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

Radio Network Layer cause	Meaning
BCCH scheduling error	The Node B has detected an illegal BCCH schedule update (see subclause 8.2.16.3).
Cell not Available	The concerned cell or local cell is not available.
Cell Synchronisation Adjustment not supported	The concerned cell(s) do not support Cell Synchronisation Adjustment.
Cell Synchronisation not supported	The concerned cell(s) do not support Cell Synchronisation.
Combining not supported	The Node B does not support RL combining for the concerned cells.
Combining Resources Not Available	The value of the received <i>Diversity Control Field</i> IE was set to "Must", but the Node B cannot perform the requested combining.
CM not supported	The concerned cell(s) do not support Compressed Mode.
Common Transport Channel Type not supported	The concerned cell(s) do not support the RACH and/or FACH and/or CPCH Common Transport Channel Type.
Dedicated Transport Channel Type not supported	The concerned cell(s) do not support the Dedicated Transport Channel Type.
DL Radio Resources not Available	The Node B does not have sufficient DL radio resources available.
DL SF not supported	The concerned cell(s) do not support the requested DL SF.
DL Shared Channel Type not supported	The concerned cell(s) do not support the Downlink Shared Channel Type.
DPC Mode Change not Supported	The concerned cells do not support DPC mode changes.
Frequency Acquisition not supported	The concerned cell(s) do not support Frequency Acquisition.
Information Provision not supported for the object	The requested information provision is not supported for the concerned object types.
Information temporarily not available	The requested information can temporarily not be provided.
Invalid CM Settings	The concerned cell(s) consider the requested Compressed Mode settings

	invalid.
IPDL already activated	The concerned cell(s) have already active IPDL ongoing.
IPDL not supported	The concerned cell(s) do not support the IPDL.
IPDL parameters not available	The concerned cell(s) do not have IPDL parameters defining IPDL to be applied.
Measurement not Supported For The Object	At least one of the concerned cell(s) does not support the requested measurement on the concerned object type.
Measurement Temporarily not Available	The Node B can temporarily not provide the requested measurement value.
Node B resources unavailable	The Node B does not have sufficient resources available.
Number of DL codes not supported	The concerned cell(s) do not support the requested number of DL codes.
Number of UL codes not supported	The concerned cell(s) do not support the requested number of UL codes.
Power Level not Supported	A DL power level was requested which the concerned cell(s) do not support.
Priority transport channel established	The CRNC cannot perform the requested blocking since a transport channel with a high priority is present.
Reconfiguration CFN not elapsed	The requested action cannot be performed due to that a RADIO LINK RECONFIGURATION COMMIT message was received previously, but the concerned CFN has not yet elapsed.
Requested Configuration not Supported	The concerned cell(s) do not support the requested configuration i.e. power levels, Transport Formats, physical channel parameters.
Requested Tx Diversity mode not supported	The concerned cell(s) do not support the requested transmit diversity mode.
RL already Activated/ allocated	The Node B has already allocated an RL with the requested RL-id for this UE context.
S-CPICH not supported	The concerned cell(s) do not support S-CPICH.
SIB Origination in Node B not Supported	The Node B does not support the origination of the requested SIB for the concerned cell.
Synchronisation Failure	Loss of UL Uu synchronisation.
Tx diversity no longer supported	Tx diversity can no longer be supported in the concerned cell.
UL Radio Resources not Available	The Node B does not have sufficient UL radio resources available.
UL SF not supported	The concerned cell(s) do not support the requested minimum UL SF.
UL Shared Channel Type not supported	The concerned cell(s) do not support the Uplink Shared Channel Type.
Unknown C-ID	The Node B is not aware of a cell with the provided C-ID.
Unknown Local Cell ID	The Node B is not aware of a local cell with the provided Local Cell ID.
Unspecified	Sent when none of the above cause values applies but still the cause is Radio Network layer related.

<b>Transport Network Layer cause</b>	<b>Meaning</b>
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.

<b>Protocol cause</b>	<b>Meaning</b>
Abstract Syntax Error (Reject)	The received message included an abstract syntax error and the concerned criticality indicated "reject" (see subclause 10.3).
Abstract Syntax Error (Ignore and Notify)	The received message included an abstract syntax error and the concerned criticality indicated "ignore and notify" (see subclause 10.3).
Abstract syntax error (falsely constructed message)	The received message contained IEs in wrong order or with too many occurrences (see subclause 10.3).
Message not Compatible with Receiver State	The received message was not compatible with the receiver state (see subclause 10.4).
Semantic Error	The received message included a semantic error (see subclause 10.4).
Transfer Syntax Error	The received message included a transfer syntax error (see subclause 10.2).

Unspecified	Sent when none of the above cause values applies but still the cause is protocol related.
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Miscellaneous cause	Meaning
Control Processing Overload	Node B control processing overload.
Hardware Failure	Node B hardware failure.
Not enough User Plane Processing Resources	Node B has insufficient user plane processing resources available.
O&M Intervention	Operation and Maintenance intervention related to Node B equipment.
Unspecified	Sent when none of the above cause values applies and the cause is not related to any of the categories Radio Network Layer, Transport Network Layer or Protocol.

### 9.2.1.7 CFN

Connection Frame Number for the radio connection, see ref. [17].

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
CFN			INTEGER (0..255)	

### 9.2.1.8 CFN Offset

Void.

### 9.2.1.9 C-ID

The C-ID (Cell identifier) is the identifier of a cell in one RNC.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
C-ID			INTEGER (0..65535)	

### 9.2.1.9A Common Channels Capacity Consumption Law

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

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

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

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

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

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

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

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

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
<b>SF Allocation Law</b>		1..<maxno of SFs>		[FDD - For each SF, cost of its allocation: the first instance corresponds to SF = 4, the second to SF = 8, the third to SF = 16 and so on.] [TDD - For each SF, cost of its allocation: the first instance corresponds to SF = 1, the second to SF = 2, the third to SF = 4 and so on.]
>DL cost	M		INTEGER (0..65535)	
>UL cost	M		INTEGER (0..65535)	

Range Bound	Explanation
maxnoofSFs	Maximum number of Spreading Factors

### 9.2.1.9B Common Measurement Accuracy

The *Common Measurement Accuracy* IE indicates the accuracy of the common measurement.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
CHOICE <i>Common Measurement Accuracy</i>				
> <i>T<sub>UTRAN-GPS</sub> Measurement Accuracy Class</i>				
>> <i>T<sub>UTRAN-GPS</sub> Measurement Accuracy Class</i>	M		<i>T<sub>UTRAN-GPS</sub> Accuracy Class</i> 9.2.1.64C	

### 9.2.1.10 Common Measurement Object Type

Void.

### 9.2.1.11 Common Measurement Type

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Common Measurement Type			ENUMERATED ( Received Total Wide Band Power, Transmitted Carrier Power, Acknowledged PRACH Preambles, UL Timeslot ISCP, Acknowledged PCPCH Access Preambles, Detected PCPCH Access Preambles, ..., UTRAN GPS Timing of Cell Frames forUE Positioning, SFN-SFN Observed Time Difference)	"UL Timeslot ISCP" is used by TDD only, "Acknowledged PRACH Preambles", "Acknowledged PCPCH Access Preambles", "Detected PCPCH Access Preambles" are used by FDD only

### 9.2.1.12 Common Measurement Value

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



IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
CHOICE <i>Common Measurement Value</i>					–	
> <i>Transmitted Carrier Power</i>					–	
>> <i>Transmitted Carrier Power Value</i>	M		INTEGER (0..100)	According to mapping in [22] and [23]	–	
> <i>Received Total Wide Band Power</i>					–	
>> <i>Received Total Wide Band Power Value</i>	M		INTEGER (0..621)	According to mapping in [22] and [23]	–	
> <i>Acknowledged PRACH Preambles</i>				FDD Only	–	
>> <i>Acknowledged PRACH Preamble Value</i>	M		INTEGER (0..240,...)	According to mapping in [22]	–	
> <i>UL Timeslot ISCP</i>				TDD Only	–	
>> <i>UL Timeslot ISCP</i>	M		INTEGER (0..127)	According to mapping in [23]	–	
> <i>Acknowledged PCPCH Access Preambles</i>				FDD Only	–	
>> <i>Acknowledged PCPCH Access Preambles</i>	M		INTEGER (0..15,...)	According to mapping in [22]	–	
> <i>Detected PCPCH Access Preambles</i>				FDD Only	–	
>> <i>Detected PCPCH Access Preambles</i>	M		INTEGER (0..240,...)	According to mapping in [22]	–	
> <i>Additional Common Measurement Values</i>					–	
>> <i>UTRAN GPS Timing of Cell Frames for UE Positioning</i>					–	
>>> <i>T<sub>UTRAN-GPS</sub> Measurement Value Information</i>	M		9.2.1.64A		YES	ignore
>> <i>SFN-SFN Observed Time Difference</i>					–	
>>> <i>SFN-SFN Measurement Value Information</i>	M		9.2.1.53E		YES	ignore

### 9.2.1.12A Common Measurement Value Information

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
CHOICE <i>Measurement Availability Indicator</i>	M			
> <i>Measurement Available</i>				
>> <i>Common Measurement Value</i>	M		9.2.1.12	
> <i>Measurement Not Available</i>			NULL	

### 9.2.1.13 Common Physical Channel ID

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Common Physical Channel ID			INTEGER (0..255)	

### 9.2.1.13A Common Physical Channel Status Information

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Common Physical Channel ID	M		9.2.1.13	
Resource Operational State	M		9.2.1.52	
Availability Status	M		9.2.1.2	

### 9.2.1.14 Common Transport Channel ID

Common Transport Channel ID is the unique identifier for one common transport channel within a cell.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Common Transport Channel ID			INTEGER (0..255)	

### 9.2.1.14A Common Transport Channel Information Response

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Common Transport Channel ID	M		9.2.1.14	
Binding ID	O		9.2.1.4	
Transport Layer Address	O		9.2.1.63	

### 9.2.1.14B Common Transport Channel Status Information

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Common Transport Channel ID	M		9.2.1.14	
Resource Operational State	M		9.2.1.52	
Availability Status	M		9.2.1.2	

### 9.2.1.15 Communication Control Port ID

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Communication Control Port ID			INTEGER (0..65535)	

### 9.2.1.16 Configuration Generation ID

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Configuration Generation ID			INTEGER (0..255)	Value "0" means "No configuration". At possible wraparound of the ID counter in CRNC the value "0" shall not be used.

### 9.2.1.17 Criticality Diagnostics

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

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
<b>Procedure ID</b>		<i>0..1</i>		Procedure ID is to be used if Criticality Diagnostics is part of Error Indication procedure, and not within the response message of the same procedure that caused the error	–	
>Procedure Code	M		INTEGER (0..255)		–	
>Ddmode	M		ENUMERATED (TDD, FDD, Common, ...)	"Common" = common to FDD and TDD.	–	
Triggering Message	O		ENUMERATED (initiating message, successful outcome, unsuccessful outcome, outcome)	The Triggering Message is used only if the Criticality Diagnostics is part of Error Indication.	–	
Procedure Criticality	O		ENUMERATED (reject, ignore, notify)	This Procedure Criticality is used for reporting the Criticality of the Triggering message (Procedure).	–	
Transaction ID	O		9.2.1.62		–	
<b>Information Element Criticality Diagnostics</b>		<i>0..&lt;max nooferrors&gt;</i>			–	
>IE Criticality	M		ENUMERATED (reject, ignore, notify)	The IE Criticality is used for reporting the criticality of the triggering IE. The value "ignore" shall never be used.	–	
>IE ID	M		INTEGER (0..65535)	The IE ID of the not understood or missing IE	–	
>Repetition Number	O		INTEGER (0..255)	The <i>Repetition Number</i> IE gives: <ul style="list-style-type: none"> <li>• for a not understood IE: The number of occurrences of the reported IE up to and including the not understood occurrence</li> <li>• for a missing IE: The number of occurrences up to but not including the missing occurrence.</li> </ul> Note: All the counted occurrences of the reported IE must have the same topdown hierarchical message structure of IEs with assigned criticality above them.	–	

>Message Structure	O		9.2.1.45A	The <i>Message Structure</i> IE describes the structure where the not understood or missing IE was detected. This IE is included if the not understood IE is not the top level of the message.	YES	ignore
>Type Of Error	M		ENUMERATED ( not understood, missing, ...)		YES	ignore

Range Bound	Explanation
<i>maxnooferrors</i>	Maximum number of IE errors allowed to be reported with a single message.

### 9.2.1.18 CRNC Communication Context ID

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
CRNC Communication Context ID			INTEGER (0..2 <sup>20</sup> – 1)	"2 <sup>20</sup> -1" is a reserved value indicating all the CRNC Communication Contexts that can be reached by the Communication Control Port (All CRNCCC).

### 9.2.1.18A CTFC

The CTFC is an integer number calculated in accordance with [18], subclause 14.10. Regarding the channel ordering, for all transport channels, "TrCH1" corresponds to the transport channel having the lowest transport channel identity among all configured transport channels on this CCTrCH. "TrCH2" corresponds to the transport channel having the next lowest transport channel identity, and so on.

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

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

### 9.2.1.19 DCH Combination Indicator

Void.

### 9.2.1.20 DCH ID

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
DCH ID			INTEGER (0..255)	

### 9.2.1.20A Dedicated Channels Capacity Consumption Law

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

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

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

For the Radio Link Setup and Radio Link Addition procedures, the cost given in the consumption law shall be debited from the Capacity Credit, whereas it shall be credited to the Capacity Credit for the Radio Link Deletion procedure. For the Radio Link Reconfiguration procedure, the difference of the consumption cost for the new spreading factor and the consumption cost for the old spreading factor shall be debited from the Capacity Credit (or credited when this difference is negative).

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

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

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

[FDD- When a PDSCH is allocated in the Radio Link Setup procedure, the processing cost associated to this PDSCH, equal to the DL cost RL, shall be debited from the Capacity Credit, in addition to the processing cost of the radio links.

In a similar way, this cost shall be credited to the Capacity Credit, when a PDSCH is deleted and the difference between the new cost and the old cost shall be debited from the Capacity Credit (or credited if this difference is negative) when a PDSCH is reconfigured.]

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

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

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

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
<b>SF Allocation Law</b>		<i>1..&lt;maxno of SFs&gt;</i>		[FDD - For each SF, cost of its allocation: the first instance corresponds to SF = 4, the second to SF = 8, the third to SF = 16 and so on.] [TDD – For each SF, cost of its allocation: the first instance corresponds to SF = 1, the second to SF = 2, the third to SF = 4 and so on.]
>DL Cost 1	M		INTEGER (0..65535)	[FDD – This is the cost of a RLS.] [TDD – This is the additional cost of the first DPCH/PDSCH/PUSCH assigned to any user in a cell within a timeslot.]
>DL Cost 2	M		INTEGER (0..65535)	[FDD – This is the cost of a RL.] [TDD – This is the cost of a DPCH/PDSCH/PUSCH]
>UL Cost 1	M		INTEGER (0..65535)	FDD – This is the cost of a RLS.] [TDD – This is the additional cost of the first DPCH/PDSCH/PUSCH assigned to any user in a cell within a timeslot.]
>UL Cost 2	M		INTEGER (0..65535)	[FDD – This is the cost of a RL.] [TDD – This is the cost of a DPCH/PDSCH/PUSCH.]

Range Bound	Explanation
<i>maxnoofSFs</i>	Maximum number of Spreading Factors

### 9.2.1.20B DL or Global Capacity Credit

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
DL or Global Capacity Credit			INTEGER (0..65535)	

### 9.2.1.20C DCH Information Response

The *DCH Information Response* IE provides information for DCHs that have been established or modified.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
<b>DCH Information Response</b>		<i>1..&lt;maxno ofDCHs&gt;</i>		Only one DCH per set of coordinated DCHs shall be included
>DCH ID	M		9.2.1.20	
>Binding ID	O		9.2.1.4	
>Transport Layer Address	O		9.2.1.63	

Range Bound	Explanation
<i>maxnoofDCHs</i>	Maximum number of DCH per UE

### 9.2.1.21 DL Power

The *DL Power* IE indicates a power level relative to the [FDD - primary CPICH power] [TDD - primary CCPCH power] configured in a cell. If Transmit Diversity is applied to a downlink physical channel, the *DL Power* IE indicates the power offset between the linear sum of the power for this downlink physical channel on all branches and the [FDD - primary CPICH power] [TDD - PCCPCH power] configured in a cell.

[FDD - If referred to a DPCH, it indicates the power of the transmitted DPDCH symbols.] [FDD - If referred to a DL-DPCCH for CPCH, it indicates the power of the transmitted pilot symbols].

[TDD - If referred to a DPCH, it indicates the power of a spreading factor 16 code, the power for a spreading factor 1 code would be 12 dB higher].

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

### 9.2.1.22 Dedicated Measurement Object Type

Void.

### 9.2.1.23 Dedicated Measurement Type

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



IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Dedicated Measurement Type			ENUMERATED ( SIR, SIR Error, Transmitted Code Power, RSCP, Rx Timing Deviation, Round Trip Time, ..., Rx Timing Deviation LCR)	"RSCP" is used by TDD only. "Rx Timing Deviation" is used by 3.84Mcps TDD only. "Rx Timing Deviation LCR" is used by 1.28 Mcps TDD only. "Round Trip Time", "SIR Error" are used by FDD only.

Note: For definitions of the measurement types refer to [4] and [5].

### 9.2.1.24 Dedicated Measurement Value

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
<i>CHOICE Dedicated Measurement Value</i>					–	
<i>&gt;SIR Value</i>					–	
<i>&gt;&gt;SIR Value</i>	M		INTEGER (0..63)	According to mapping in [22] and [23]	–	
<i>&gt;SIR Error Value</i>				FDD only	–	
<i>&gt;&gt;SIR Error Value</i>	M		INTEGER (0..125)	According to mapping in [22]	–	
<i>&gt;Transmitted Code Power Value</i>					–	
<i>&gt;&gt;Transmitted Code Power Value</i>	M		INTEGER (0..127)	According to mapping in [22] and [23]. Values 0 to 9 and 123 to 127 shall not be used.	–	
<i>&gt;RSCP</i>				TDD only	–	
<i>&gt;&gt;RSCP</i>	M		INTEGER (0..127)	According to mapping in [23]	–	
<i>&gt;Rx Timing Deviation Value</i>				Applicable to 3.84Mcps TDD only	–	
<i>&gt;&gt;Rx Timing Deviation</i>	M		INTEGER (0..8191)	According to mapping in [23]	–	
<i>&gt;Round Trip Time</i>				FDD only	–	
<i>&gt;&gt;Round Trip Time</i>	M		INTEGER (0..32767)	According to mapping in [22]	–	
<i>&gt;Additional Dedicated Measurement Values</i>					–	
<i>&gt;&gt;Rx Timing Deviation Value LCR</i>				Applicable to 1.28Mcps TDD only	–	
<i>&gt;&gt;&gt;Rx Timing Deviation LCR</i>	M		INTEGER (0..511)	According to mapping in [23]	YES	reject

### 9.2.1.24A Dedicated Measurement Value Information

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
CHOICE <i>Measurement Availability Indicator</i>	M			
> <i>Measurement Available</i>				
>>Dedicated Measurement Value	M		9.2.1.24	
>>CFN	O		9.2.1.7	Dedicated Measurement Time Reference
> <i>Measurement Not Available</i>			NULL	

### 9.2.1.24B DGPS Corrections

The DGPS Corrections IE contains DGPS information used by the UE Positioning A-GPS method. For further details on the meaning of parameters, see [28].

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
GPS TOW	M		INTEGER (0..604799)	Time in seconds. This field indicates the baseline time for which the corrections are valid
Status/Health	M		ENUMERATED ( UDRE scale 1.0, UDRE scale 0.75, UDRE scale 0.5, UDRE scale 0.3, UDRE scale 0.1, no data, invalid data)	This field indicates the status of the differential corrections
<b>Satellite Information</b>		<i>1..&lt;maxNo Sat&gt;</i>		
>SatID	M		INTEGER (0..63)	Satellite ID
>IODE	M		BIT STRING (8)	This IE is the sequence number for the ephemeris for the particular satellite. It can be used to determine if new ephemeris is used for calculating the corrections that are provided. This eight-bit IE is incremented for each new set of ephemeris for the satellite and may occupy the numerical range of [0, 239] during normal operations.
>UDRE	M		ENUMERATED ( UDRE $\leq$ 1.0m, 1.0m < UDRE $\leq$ 4.0m, 4.0m < UDRE $\leq$ 8.0m, 8.0m < UDRE)	User Differential Range Error. This field provides an estimate of the uncertainty (1- $\sigma$ ) in the corrections for the particular satellite. The value in this field shall be multiplied by the UDRE Scale Factor in the common Corrections Status/Health field to determine the final UDRE estimate for the particular satellite
>PRC	M		INTEGER (-2047..2047)	Pseudo Range Correction Unit: m (meters) Step: 0.32 meters
>Range Correction Rate	M		INTEGER (-127..127)	Unit: m/s Step: 0.032 m/s

Range Bound	Explanation
<i>maxNoSat</i>	Maximum number of satellites for which information can be provided

### 9.2.1.25 Diversity Control Field

The Diversity Control Field indicates if the current RL may, must or must not be combined with the already existing RLs.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Diversity Control Field			ENUMERATED ( May, Must, Must Not)	

### 9.2.1.26 Diversity Indication

Void.

### 9.2.1.27 DSCH ID

The DSCH ID uniquely identifies a DSCH within a Node B Communication Context.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
DSCH ID			INTEGER (0..255)	

### 9.2.1.27A DSCH Information Response

The *DSCH Information Response* IE provides information for DSCHs that have been established or modified.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
<b>DSCH Information Response</b>		<i>1..&lt;maxno ofDSCHs&gt;</i>		
>DSCH ID	M		9.2.1.27	
>Binding ID	O		9.2.1.4	
>Transport Layer Address	O		9.2.1.63	

Range Bound	Explanation
<i>maxnoofDSCHs</i>	Maximum number of DSCHs for one UE

### 9.2.1.28 DSCH Transport Format Set

Void.

### 9.2.1.29 DSCH Transport Format Combination Set

Void.

### 9.2.1.29A End Of Audit Sequence Indicator

Indicates if the AUDIT RESPONSE message ends an audit sequence or not.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
End Of Audit Sequence Indicator			ENUMERATED ( End of audit sequence, Not end of audit sequence)	"End of audit sequence" = all audit information has been provided by the Node B. "Not end of audit sequence" = more audit information is available.

### 9.2.1.29B FN Reporting Indicator

The Frame Number Reporting Indicator indicates if the SFN or CFN shall be included together with the reported measurement value.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
FN Reporting Indicator			ENUMERATED ( FN Reporting Required, FN Reporting Not Required)	

### 9.2.1.30 Frame Handling Priority

This parameter indicates the priority level to be used during the lifetime of the DCH/DSCH for temporary restriction of the allocated resources due overload reason.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Frame Handling Priority			INTEGER (0..15)	"0" = lowest priority, ... "15" = highest priority

### 9.2.1.31 Frame Offset

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Frame Offset			INTEGER (0..255)	Frames

### 9.2.1.31A IB\_OC\_ID

The IB OC ID identifies the occurrence of a specific Information Block.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
IB OC ID			INTEGER (1..16)	

### 9.2.1.31B GPS Navigation Model & Time Recovery

This IE contains subframes 1 to 3 of the GPS navigation message. For further details on the meaning of parameters, see [27].

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
<b>Navigation Message 1to3</b>		<i>1..&lt;maxNoSat&gt;</i>		
>Transmission TOW	M		INTEGER (0..1048575)	Time of the Week when the message is broadcast.
>SatID	M		INTEGER (0..63)	Satellite ID of the satellite from which the information is obtained
>TLM Message	M		BIT STRING (14)	
>TIm Revd (C)	M		BIT STRING (2)	
>HO-Word	M		BIT STRING (22)	
>WN	M		BIT STRING (10)	
>C/A or P on L2	M		BIT STRING (2)	
>User Range Accuracy Index	M		BIT STRING (4)	
>SV Health	M		BIT STRING (6)	
>IODC	M		BIT STRING (10)	
>L2 P Data Flag	M		BIT STRING (1)	
>SF 1 Reserved	M		BIT STRING (87)	
>T <sub>GD</sub>	M		BIT STRING (8)	
>t <sub>oc</sub>	M		BIT STRING (16)	
>af <sub>2</sub>	M		BIT STRING (8)	
>af <sub>1</sub>	M		BIT STRING (16)	
>af <sub>0</sub>	M		BIT STRING (22)	
>C <sub>rs</sub>	M		BIT STRING (16)	
>Δn	M		BIT STRING (16)	
>M <sub>0</sub>	M		BIT STRING (32)	
>C <sub>uc</sub>	M		BIT STRING (16)	
>e	M		BIT STRING (32)	
>C <sub>us</sub>	M		BIT STRING (16)	
>(A) <sup>1/2</sup>	M		BIT STRING (32)	
>t <sub>oe</sub>	M		BIT STRING (16)	
>Fit Interval Flag	M		BIT STRING (1)	
>AODO	M		BIT STRING (5)	
>C <sub>ic</sub>	M		BIT STRING (16)	
>OMEGA <sub>0</sub>	M		BIT STRING (32)	
>C <sub>is</sub>	M		BIT STRING (16)	
>i <sub>0</sub>	M		BIT STRING (32)	
>C <sub>rc</sub>	M		BIT STRING (16)	
>ω	M		BIT STRING (32)	
>OMEGAdot	M		BIT STRING (24)	
>ldot	M		BIT STRING (14)	
>Spare/zero fill	M		BIT STRING (20)	

Range Bound	Explanation
<i>maxNoSat</i>	Maximum number of satellites for which information can be provided

### 9.2.1.31C GPS Ionospheric Model

This IE provides the information regarding the GPS Ionospheric Model. For further details on the meaning of parameters, see [27].

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
$\alpha_0$	M		BIT STRING (8)	
$\alpha_1$	M		BIT STRING (8)	
$\alpha_2$	M		BIT STRING (8)	
$\alpha_3$	M		BIT STRING (8)	
$\beta_0$	M		BIT STRING (8)	
$\beta_1$	M		BIT STRING (8)	
$\beta_2$	M		BIT STRING (8)	
$\beta_3$	M		BIT STRING (8)	

### 9.2.1.31D GPS UTC Model

This IE provides the information regarding the GPS UTC Model. For further details on the meaning of parameters, see [27].

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
$A_1$	M		BIT STRING (24)	
$A_0$	M		BIT STRING (32)	
$t_{ot}$	M		BIT STRING (8)	
$\Delta t_{LS}$	M		BIT STRING (8)	
$WN_t$	M		BIT STRING (8)	
$WN_{LSF}$	M		BIT STRING (8)	
DN	M		BIT STRING (8)	
$\Delta t_{LSF}$	M		BIT STRING (8)	

### 9.2.1.31E GPS Real-Time Integrity

This IE provides the information regarding the status of the GPS constellation. For further details on the meaning of parameters, see [27].

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
CHOICE <i>Bad Satellites Presence</i>	M			
> <i>Bad Satellites</i>				
>> <b>Satellite information</b>		1..< <i>maxNo Sat</i> >		
>>>BadSatID	M		INTEGER (0..63)	Satellite ID
> <i>No Bad Satellites</i>			NULL	

Range Bound	Explanation
<i>maxNoSat</i>	Maximum number of satellites for which information can be provided

### 9.2.1.31F GPS Almanac

This IE provides the information regarding the GPS Almanac. For further details on the meaning of parameters, see [27].

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
WN <sub>a</sub>	M		BIT STRING (8)	
<b>Satellite information</b>	M	1..<maxNoSat>		
>DataID	M		INTEGER (0..3)	
>SatID	M		INTEGER (0..63)	Satellite ID
>e	M		BIT STRING (16)	
>t <sub>oa</sub>	M		BIT STRING (8)	
>δi	M		BIT STRING (16)	
>OMEGADOT	M		BIT STRING (16)	
>SV Health	M		BIT STRING (8)	
>A <sup>1/2</sup>	M		BIT STRING (24)	
>OMEGA <sub>0</sub>	M		BIT STRING (24)	
>M <sub>0</sub>	M		BIT STRING (24)	
>ω	M		BIT STRING (24)	
>af <sub>0</sub>	M		BIT STRING (11)	
>af <sub>1</sub>	M		BIT STRING (11)	
SV Global Health	O		BIT STRING (364)	

Range Bound	Explanation
maxNoSat	Maximum number of satellites for which information can be provided

### 9.2.1.31G GPS Receiver Geographical Position (GPS RX Pos)

The GPS Receiver Geographical Position is used to identify the geographical coordinates of a GPS receiver relevant for a certain Information Exchange Object.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Latitude Sign	M		ENUMERATED (North, South)	
Degrees of Latitude	M		INTEGER (0..2 <sup>23</sup> -1)	The IE value (N) is derived by this formula: $N \leq 2^{23} \times X / 90 < N+1$ X being the latitude in degree (0°.. 90°)
Degrees of Longitude	M		INTEGER (-2 <sup>23</sup> ..2 <sup>23</sup> -1)	The IE value (N) is derived by this formula: $N \leq 2^{24} \times X / 360 < N+1$ X being the longitude in degree (-180°..+180°)
Direction of Altitude	M		ENUMERATED (Height, Depth)	
Altitude	M		INTEGER (0..2 <sup>15</sup> -1)	The relation between the value (N) and the altitude (a) in meters it describes is $N \leq a < N+1$ , except for $N=2^{15}-1$ for which the range is extended to include all greater values of (a).

### 9.2.1.32 IB\_SG\_DATA

Segment as defined in ref. [18].

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
IB_SG_DATA			BIT STRING	Contains 'SIB data fixed' or 'SIB data variable' in segment as encoded in ref. [18].

### 9.2.1.33 IB\_SG\_POS

The lowest position of a specific Information Block segment in the SFN cycle ( $IB\_SG\_POS < IB\_SG\_REP$ ).

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
IB_SG_POS			INTEGER (0..4094)	Only even positions are allowed. See ref. [18]

### 9.2.1.34 IB\_SG\_REP

Repetition distance for an Information Block segment. The segment shall be transmitted when  $SFN \bmod IB\_SG\_REP = IB\_SG\_POS$ .

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
IB_SG_REP			ENUMERATED (4, 8, 16, 32, 64, 128, 256, 512, 1024, 2048, 4096)	Repetition period for the IB segment in frames

### 9.2.1.35 IB Type

The IB Type identifies a specific system information block.



IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
IB Type			ENUMERATED ( MIB, SB1, SB2, SIB1, SIB2, SIB3, SIB4, SIB5, SIB6, SIB7, SIB8, SIB9, SIB10, SIB11, SIB12, SIB13, SIB13.1, SIB13.2, SIB13.3, SIB13.4, SIB14, SIB15, SIB15.1, SIB15.2, SIB15.3, SIB16, ..., SIB17, SIB15.4, SIB18, SIB15.5)	

### 9.2.1.36 Indication Type

Void.

### 9.2.1.36A Information Exchange Object Type

Void.

### 9.2.1.36B Information Report Characteristics

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
CHOICE <i>Information Report Characteristics Type</i>				
> <i>On Demand</i>			NULL	
> <i>Periodic</i>				
>>CHOICE <i>Information Report Periodicity Scale</i>	M			The frequency with which the Node B shall send information reports.
>>> <i>minute</i>				
>>>>Report Periodicity Value	M		INTEGER (1..60,...)	Unit: min
>>> <i>hour</i>				
>>>>Report Periodicity Value	M		INTEGER (1..24,...)	Unit: h
> <i>On Modification</i>				
>>Information Threshold	O		9.2.1.36E	

### 9.2.1.36C Information Exchange ID

The Information Exchange ID uniquely identifies any requested information per Node B.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Information Exchange ID	M		INTEGER (0..2 <sup>20</sup> -1)	

### 9.2.1.36D Information Type

The Information Type indicates which kind of information the Node B shall provide.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Information Type Item	M		ENUMERATED ( GPS Information, DGPS Corrections, GPS RX Pos, ...)	
<b>GPS Information</b>	C-GPS	0..<maxNoGPSItems >		
>GPS Information Item			ENUMERATED ( GPS Navigation Model & Time Recovery, GPS Ionospheric Model, GPS UTC Model, GPS Almanac, GPS Real-Time Integrity, ...)	

Condition	Explanation
GPS	The IE shall be present if the <i>Information Type Item</i> IE indicates 'GPS Information'.

Range Bound	Explanation
<i>maxNoGPSItems</i>	Maximum number of GPS Information Items supported in one Information Exchange

### 9.2.1.36E Information Threshold

The Information Threshold indicates which kind of information shall trigger the Information Reporting procedure.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
CHOICE <i>Information Type Item</i>	M			
>DGPS				
>>PRC Deviation	M		ENUMERATED (1, 2, 5, 10, ...)	PRC deviation in meters from the previously reported value, which shall trigger a report

### 9.2.1.36F IPDL Indicator

Indicates if IPDL periods shall be active or not.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
IPDL Indicator			ENUMERATED (active, inactive)	

### 9.2.1.37 Limited Power Increase

Void.

### 9.2.1.37A Local Cell Group ID

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Local Cell Group ID			Local Cell ID 9.2.1.38	

### 9.2.1.38 Local Cell ID

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Local Cell ID			INTEGER (0..268435455)	

### 9.2.1.39 Maximum DL Power Capability

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

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

### 9.2.1.40 Maximum Transmission Power

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

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

### 9.2.1.40A Measurement Availability Indicator

Void.

### 9.2.1.40B Measurement Change Time

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

### 9.2.1.41 Measurement Filter Coefficient

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Measurement Filter Coefficient			ENUMERATED (0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 13, 15, 17, 19,...)	

### 9.2.1.41A Measurement Hysteresis Time

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

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

### 9.2.1.42 Measurement ID

The Measurement ID uniquely identifies any measurement per (Node B or Communication) Control Port.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Measurement ID			INTEGER (0..2 <sup>20</sup> -1)	

### 9.2.1.43 Measurement Increase/Decrease Threshold

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
<i>CHOICE Measurement Increase/Decrease Threshold</i>				
>Received Total Wide Band Power				
>>Received Total Wide Band Power	M		INTEGER (0..620)	Unit: dB Range: 0..62 dB Step: 0.1 dB
>Transmitted Carrier Power				
>>Transmitted Carrier Power	M		INTEGER (0..100)	According to mapping in [22] and [23]
>Acknowledged PRACH Preambles				FDD only
>>Acknowledged PRACH Preambles	M		INTEGER (0..240,...)	According to mapping in [22]
>UL Timeslot ISCP				TDD only
>>UL Timeslot ISCP	M		INTEGER (0..126)	Unit: dB Range: 0..63 dB Step: 0.5 dB
>SIR				
>>SIR	M		INTEGER (0..62)	Unit: dB Range: 0..31 dB Step: 0.5 dB
>SIR Error				FDD only
>>SIR Error	M		INTEGER (0..124)	Unit: dB Range: 0..62 dB Step: 0.5 dB
>Transmitted Code Power				
>>Transmitted Code Power	M		INTEGER (0..112,...)	Unit: dB Range: 0..56 dB Step: 0.5 dB
>RSCP				TDD only
>>RSCP	M		INTEGER (0..126)	Unit: dB Range: 0..63 dB Step: 0.5 dB
>Round Trip Time				FDD only
>>Round Trip Time	M		INTEGER (0..32766)	Unit: chips Range: 0 .. 2047.875 chips Step: 0.625 chips
>Acknowledged PCPCH Access Preambles				FDD only
>>Acknowledged PCPCH Access Preambles	M		INTEGER (0..15,...)	According to mapping in [22]
>Detected PCPCH Access Preambles				FDD only
>>Detected PCPCH Access Preambles	M		INTEGER (0..240,...)	According to mapping in [22]

### 9.2.1.44 Measurement Threshold

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
CHOICE <i>Measurement Threshold</i>					–	
> <i>Received Total Wide Band Power</i>					–	
>> <i>Received Total Wide Band Power</i>	M		INTEGER (0..621)	According to mapping in [22] and [23]	–	
> <i>Transmitted Carrier Power</i>					–	
>> <i>Transmitted Carrier Power</i>	M		INTEGER (0..100)	According to mapping in [22] and [23]	–	
> <i>Acknowledged PRACH Preambles</i>				FDD only	–	
>> <i>Acknowledged PRACH Preambles</i>	M		INTEGER (0..240,...)	According to mapping in [22]	–	
> <i>UL Timeslot ISCP</i>				TDD only	–	
>> <i>UL Timeslot ISCP</i>	M		INTEGER (0..127)	According to mapping in [23]	–	
> <i>SIR</i>					–	
>> <i>SIR</i>	M		INTEGER (0..63)	According to mapping in [22] and [23]	–	
> <i>SIR Error</i>				FDD only	–	
>> <i>SIR Error</i>	M		INTEGER (0..125)	According to mapping in [22]	–	
> <i>Transmitted Code Power</i>					–	
>> <i>Transmitted Code Power</i>	M		INTEGER (0..127)	According to mapping in [22] and [23]	–	
> <i>RSCP</i>				TDD only	–	
>> <i>RSCP</i>	M		INTEGER (0..127)	According to mapping in [23]	–	
> <i>Rx Timing Deviation</i>				Applicable to 3.84Mcps TDD only	–	
>> <i>Rx Timing Deviation</i>	M		INTEGER (0..8191)	According to mapping in [23]	–	
> <i>Round Trip Time</i>				FDD only	–	
>> <i>Round Trip Time</i>	M		INTEGER (0..32767)	According to mapping in [22]	–	
> <i>Acknowledged PCPCH Access Preambles</i>				FDD only	–	
>> <i>Acknowledged PCPCH Access Preambles</i>	M		INTEGER (0..15,...)	According to mapping in [22]	–	
> <i>Detected PCPCH Access Preambles</i>				FDD only	–	
>> <i>Detected PCPCH Access Preambles</i>	M		INTEGER (0..240,...)	According to mapping in [22]	–	
> <i>Additional Measurement Thresholds</i>					–	
>> <i>UTRAN GPS Timing of Cell Frames for UE Positioning</i>					–	
>>> <i>T<sub>UTRAN-GPS</sub> Measurement Threshold Information</i>	M		9.2.1.64B		YES	reject
>> <i>SFN-SFN Observed Time Difference</i>					–	
>>> <i>SFN-SFN Measurement Threshold</i>	M		9.2.1.53C		YES	reject

Information						
>Rx Timing Deviation LCR				Applicable to 1.28Mcps TDD Only	–	
>>Rx Timing Deviation LCR	M		INTEGER (0..255)	According to mapping in [23]	YES	reject

### 9.2.1.45 Message Discriminator

This field is used to discriminate between Dedicated NBAP and Common NBAP messages.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Message Discriminator			ENUMERATED (Common, Dedicated)	

### 9.2.1.45A Message Structure

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
<b>Message Structure</b>		1..<maxnooflevels>		The first repetition of the <i>Message Structure</i> IE corresponds to the top level of the message. The last repetition of the <i>Message Structure</i> IE corresponds to the level above the reported level for the occurred error of the message.
>IE ID	M		INTEGER (0..65535)	The IE ID of this level's IE containing the not understood or missing IE.
>Repetition Number	O		INTEGER (1..256)	The <i>Repetition Number</i> 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 hierarchical message structure of IEs with assigned criticality above them.

Range Bound	Explanation
maxnooflevels	Maximum number of message levels to report. The value for maxnooflevels is 256.

### 9.2.1.46 Message Type

The Message Type uniquely identifies the message being sent.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
<b>Procedure ID</b>	M	1		
>Procedure Code	M		INTEGER (0..255)	"0" = Audit "1" = Audit Required "2" = Block Resource "3" = Cell Deletion "4" = Cell Reconfiguration "5" = Cell Setup "6" = Common Measurement Failure "7" = Common Measurement Initiation "8" = Common Measurement Report "9" = Common Measurement Termination "10" = Common Transport Channel Delete "11" = Common Transport Channel Reconfigure "12" = Common Transport Channel Setup "13" = Reset "14" = Compressed Mode Command "16" = Dedicated Measurement Failure "17" = Dedicated Measurement Initiation "18" = Dedicated Measurement Report "19" = Dedicated Measurement Termination "20" = Downlink Power Control "21" = Error Indication (For Dedicated Procedures) "23" = Radio Link Addition "24" = Radio Link Deletion "25" = Radio Link Failure "26" = Radio Link Restoration "27" = Radio Link Setup "28" = Resource Status Indication "29" = Synchronised Radio Link Reconfiguration Cancellation "30" = Synchronised Radio Link Reconfiguration Commit "31" = Synchronised Radio Link Reconfiguration Preparation "32" = System Information Update "33" = Unblock Resource "34" = Unsynchronised Radio Link Reconfiguration "35" = Error Indication (For Common Procedures) "37" = Physical Shared Channel Reconfiguration "38" = Downlink Power Timeslot Control "39" = Radio Link Preemption "40" = Information Exchange Failure "41" = Information Exchange Initiation "42" = Information Exchange Termination "43" = Information Reporting "44" = Cell Synchronisation Adjustment "45" = Cell Synchronisation Initiation "46" = Cell Synchronisation Reconfiguration "47" = Cell Synchronisation Reporting "48" = Cell Synchronisation Termination "49" = Cell Synchronisation Failure
>Ddmode	M		ENUMERATED (TDD, FDD, Common, ...)	Common = common to FDD and TDD.
Type of Message	M		ENUMERATED (Initiating Message, Successful Outcome,	



			Unsuccessful Outcome, Outcome)	
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### 9.2.1.46A Minimum DL Power Capability

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

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

### 9.2.1.47 Minimum Spreading Factor

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Minimum Spreading Factor			ENUMERATED (4, 8, 16, 32, 64, 128, 256, 512)	[TDD – Mapping scheme for the minimum spreading factor 1 and 2: '256' means 1 '512' means 2]

### 9.2.1.47A N\_INSYNC\_IND

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
N_INSYNC_IND			INTEGER (1..256)	

### 9.2.1.47B N\_OUTSYNC\_IND

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
N_OUTSYNC_IND			INTEGER (1..256)	

### 9.2.1.47C Neighbouring FDD Cell Measurement Information

This IE provides information on the FDD neighbouring cells used for the purpose of measurements.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
UC-Id	M		9.2.1.65B	
UARFCN	M		9.2.1.65	Corresponds to Nd [14]
Primary Scrambling Code	M		9.2.2.34	

### 9.2.1.47D Neighbouring TDD Cell Measurement Information

This IE provides information on the 3.84Mcps TDD neighbouring cells used for the purpose of measurements. Since the measurement can be performed on every time slot and midamble shift, the *Time Slot IE* and *Midamble Shift And Burst Type IE* shall be included if available.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
UC-Id	M		9.2.1.65B	
UARFCN	M		9.2.1.65	Corresponds to Nt [15]
Cell Parameter ID	M		9.2.3.4	
Time Slot	O		9.2.3.23	
Midamble Shift And Burst Type	O		9.2.3.7	

### 9.2.1.48 Node B Communication Context ID

The Node B Communication Context ID is the identifier of the Communication Context in the Node B, it corresponds to the dedicated resources which are necessary for an UE using one or more dedicated channels in a given Node B.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Node B Communication Context ID			INTEGER (0..2 <sup>20</sup> -1)	"2 <sup>20</sup> -1" is a reserved value indicating all the existing and future Node B Communication Contexts that can be reached by the Communication Control Port (All NBCC).

### 9.2.1.49 Payload CRC Presence Indicator

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Payload CRC Presence Indicator			ENUMERATED (CRC Included, CRC Not Included, ...)	

### 9.2.1.49A PICH Power

The *PICH Power* IE indicates a power level relative to the [FDD - Primary CPICH power] [TDD - Primary CCPCH power] configured in a cell. If Transmit Diversity is applied to the PICH, the *PICH Power* IE indicates the power offset between the linear sum of the power for the PICH on all branches and the [FDD - Primary CPICH power] [TDD - Primary CCPCH power] configured in a cell.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
PICH Power			INTEGER (-10..+5)	Unit: dB Range: -10 .. +5 dB Step: 1dB

### 9.2.1.50 Puncture Limit

The Puncture Limit limits the amount of puncturing that can be applied in order to minimise the number of dedicated physical channels.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Puncture Limit			INTEGER (0..15)	Unit: % Range: 40..100 % Step: 4 % 100% means no puncturing

### 9.2.1.50A QE-Selector

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
QE-Selector			ENUMERATED ( Selected, Non-Selected)	

### 9.2.1.51 Report Characteristics

The report characteristics define how the reporting shall be performed.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
CHOICE <i>Report Characteristics</i>					–	
> <i>On Demand</i>			NULL		–	
> <i>Periodic</i>					–	
>>Report Periodicity	M		9.2.1.51a	The frequency with which the Node B shall send measurement reports.	–	
> <i>Event A</i>					–	
>>Measurement Threshold	M		9.2.1.44	The threshold for which the Node B shall trigger a measurement report.	–	
>>Measurement Hysteresis Time	O		9.2.1.41A		–	
> <i>Event B</i>					–	
>>Measurement Threshold	M		9.2.1.44	The threshold for which the Node B shall trigger a measurement report.	–	
>>Measurement Hysteresis Time	O		9.2.1.41A		–	
> <i>Event C</i>					–	
>>Measurement Increase/Decrease Threshold	M		9.2.1.43		–	
>>Measurement Change Time	M		9.2.1.40B	The time the measurement entity shall rise on (in ms), in order to trigger a measurement report.	–	
> <i>Event D</i>					–	
>>Measurement Increase/Decrease Threshold	M		9.2.1.43		–	
>>Measurement Change Time	M		9.2.1.40B	The time the measurement entity shall fall (in ms), in order to trigger a measurement report.	–	
> <i>Event E</i>					–	
>>Measurement Threshold 1	M		Measurement Threshold 9.2.1.44		–	
>>Measurement Threshold 2	O		Measurement Threshold 9.2.1.44		–	
>>Measurement Hysteresis Time	O		9.2.1.41A		–	
>>Report Periodicity	O		9.2.1.51a	The frequency with which the Node B shall send measurement reports.	–	
> <i>Event F</i>					–	
>>Measurement Threshold 1	M		Measurement Threshold 9.2.1.44		–	
>>Measurement Threshold 2	O		Measurement Threshold 9.2.1.44		–	
>>Measurement Hysteresis Time	O		9.2.1.41A		–	
>>Report Periodicity	O		9.2.1.51a	The frequency with which the Node B shall send	–	

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

### 9.2.1.51a Report Periodicity

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

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

### 9.2.1.51A Requested Data Value

The *Requested Data Value* IE contains the relevant data concerning the ongoing information exchange. The *Requested Data Value* IE shall include at least one of the following IE.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
DGPS Corrections	O		9.2.1.24B	
GPS Navigation Model & Time Recovery	O		9.2.1.31B	
GPS Ionospheric Model	O		9.2.1.31C	
GPS UTC Model	O		9.2.1.31D	
GPS Almanac	O		9.2.1.31F	
GPS Real-Time Integrity	O		9.2.1.31E	
GPS RX Pos	O		9.2.1.31G	

### 9.2.1.51B Requested Data Value Information

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
CHOICE Information Availability Indicator	M			
>Information Available				
>>Requested Data Value	M		9.2.1.51A	
>Information Not Available			NULL	

### 9.2.1.52 Resource Operational State

The Resource Operational State is used to indicate the current operational state of the associated resource following a Node B failure.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Resource Operational State			ENUMERATED ( Enabled, Disabled)	When a resource is marked as disabled, then its child resources are implicitly disabled. Cell Resource hierarchy can be referred to [6].

### 9.2.1.52A Retention Priority

Void.

### 9.2.1.53 RL ID

The RL ID is the unique identifier for one RL associated with a UE.

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

### 9.2.1.53a RNC-Id

This is the identifier of one RNC in UTRAN.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
RNC-Id			INTEGER (0..4095)	

### 9.2.1.53A SFN

System Frame Number of the cell, see ref. [17].

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
SFN			INTEGER (0..4095)	

### 9.2.1.53B Segment Type

Segment type as defined in [18].

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Segment Type			ENUMERATED ( First segment, First segment short, Subsequent segment, Last segment, Last segment short, Complete SIB, Complete SIB short, ...)	

### 9.2.1.53C SFN-SFN Measurement Threshold Information

The SFN-SFN Measurement Threshold Information defines the related thresholds SFN-SFN Observed Time Difference measurements which shall trigger the Event On Modification.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
SFN-SFN Change Limit	O		INTEGER(1..256)	Change of SFN-SFN value compared to previously reported value, which shall trigger a new report. Unit: chip Step: 1/16 chip
Predicted SFN-SFN Deviation Limit	O		INTEGER(1..256)	Deviation of the predicated SFN-SFN from the latest measurement result, which shall trigger a new report. Unit: chip Step: 1/16 chip

### 9.2.1.53D SFN-SFN Measurement Time Stamp

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
CHOICE <i>Mode</i>				
> <i>FDD</i>				
>>SFN	M		9.2.1.53A	Indicates the SFN of the reference cell at which the measurement has been performed.
> <i>TDD</i>				
>>SFN	M		9.2.1.53A	Indicates the SFN of the reference cell at which the measurement has been performed.
>>Time Slot	M		9.2.3.23	Indicates the Time Slot of the reference cell at which this measurement has been performed.

### 9.2.1.53E SFN-SFN Measurement Value Information

The *SFN-SFN Measurement Value Information* IE indicates the measurement result related to SFN-SFN Observed Time Difference measurements.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
<b>Successful Neighbouring Cell SFN-SFN Observed Time Difference Measurement Information</b>		<i>1..&lt;maxno MeasNCell &gt;</i>		
>UC-Id	M		9.2.1.65B	
>SFN-SFN Value	M		9.2.1.53F	
>SFN-SFN Quality	O		INTEGER (0..255)	Indicates the standard deviation (std) of the SFN-SFN Observed Time Difference measurements in 1/16 chip. SFN-SFN Quality = $\sqrt{E[(x-\mu)^2]}$ = std of reported SFN-SFN Value, where x is the reported SFN-SFN Value and $\mu = E[x]$ is the expectation value of x.
>SFN-SFN Drift Rate	M		INTEGER (-100..+100)	Indicates the SFN-SFN drift rate in 1/256 chip per second. A positive value indicates that the Reference cell clock is running at a greater frequency than the measured neighbouring cell.
>SFN-SFN Drift Rate Quality	O		INTEGER (0..100)	Indicates the standard deviation (std) of the SFN-SFN drift rate measurements in 1/256 chip per second. SFN-SFN Drift Rate Quality = $\sqrt{E[(x-\mu)^2]}$ = std of reported SFN-SFN Drift Rate, where x is the reported SFN-SFN Drift Rate and $\mu = E[x]$ is the expectation value of x.
>SFN-SFN Measurement Time Stamp	M		9.2.1.53D	
<b>Unsuccessful Neighbouring Cell SFN-SFN Observed Time Difference Measurement Information</b>		<i>0..&lt;maxno MeasNCell -1&gt;</i>		
>UC-Id	M		9.2.1.65B	

Range Bound	Explanation
<i>maxnoMeasNCell</i>	Maximum number of neighbouring cells that can be measured on.

### 9.2.1.53F SFN-SFN Value

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
CHOICE Mode				
>FDD				
>>SFN-SFN	M		INTEGER (0..614399)	According to mapping in [22].
>TDD				
>>SFN-SFN	M		INTEGER (0..40961)	According to mapping in [23].

### 9.2.1.54 SIB Deletion Indicator

Void.



### 9.2.1.55 SIB Originator

Indicates if the Node B shall fill in the SIB information or not.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
SIB Originator			ENUMERATED (Node B, CRNC, ...)	

### 9.2.1.56 Shutdown Timer

The shutdown timer shall indicate the length of time available to the CRNC to perform the block of a resource when a Normal priority block is requested.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Shutdown Timer			INTEGER (1..3600)	Unit: second

### 9.2.1.56A T\_RLFAILURE

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

Information Element/Group Name	Presence	Range	IE Type and Reference	Semantics Description
T_RLFAILURE			INTEGER (0..255)	Unit: second Range: 0 .. 25.5 s Step: 0.1 s

### 9.2.1.56B Start Of Audit Sequence Indicator

Indicates if the AUDIT REQUEST message initiates a new audit sequence or not.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Start Of Audit Sequence Indicator			ENUMERATED (Start Of Audit Sequence, Not Start Of Audit Sequence)	

### 9.2.1.57 TFCI Presence

The TFCI Presence parameter indicates whether the TFCI shall be included. [TDD - If it is present in the timeslot, it will be mapped to the channelisation code defined by [19].]

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
TFCI presence			ENUMERATED (Present, Not Present)	

### 9.2.1.58 TFCS (Transport Format Combination Set)

The Transport Format Combination Set is defined as a set of Transport Format Combinations on a Coded Composite Transport Channel. It is the allowed Transport Format Combinations of the corresponding Transport Channels. The DL Transport Format Combination Set is applicable for DL Transport Channels.

[FDD - Where the UE is assigned access to one or more DSCH transport channels then the UTRAN has the choice of two methods for signalling the mapping between TFCI(field 2) values and the corresponding TFC:

#### Method #1 - TFCI range

The mapping is described in terms of a number of groups, each group corresponding to a given transport format combination (value of CTFC(field2)). The CTFC(field2) value specified in the first group applies for all values of TFCI(field 2) between 0 and the specified 'Max TFCI(field2) value'. The CTFC(field2) value specified in the second group applies for all values of TFCI(field 2) between the 'Max TFCI(field2) value' specified in the last group plus one and the specified 'Max TFCI(field2) value' in the second group. The process continues in the same way for the following groups with the TFCI(field 2) value used by the UE in constructing its mapping table starting at the largest value reached in the previous group plus one.

#### Method #2 - Explicit

The mapping between TFCI(field 2) value and CTFC(field2) is spelt out explicitly for each value of TFCI (field2) ]

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
CHOICE <i>DSCH</i>				
>No split in TFCI				This choice is made if : a) The TFCS refers to the Uplink. OR b) The mode is FDD and none of the Radio Links of the concerned UE are assigned any DSCH transport channels. OR c) The mode is TDD.
>>TFCS		1..<maxno ofTFCs>		The first instance of the parameter corresponds to TFCI zero, the second to 1 and so on. [TDD - The first entry (for TFCI 0) should be ignored by the receiver.]
>>>CTFC	M		9.2.1.18A	
>>>CHOICE Gain Factors	C-PhysChan			
>>>>Signalled Gain Factors				
>>>>>CHOICE Mode	M			
>>>>>>FDD				
>>>>>>>Gain Factor $\beta_c$	M		INTEGER (0..15)	For UL DPCCCH or control part of PRACH or control part of PCPCH in FDD; mapping in accordance to [9]
>>>>>>>Gain Factor $\beta_D$	M		INTEGER (0..15)	For UL DPDCH or data part of PRACH or data part of PCPCH in FDD; mapping in accordance to [9]
>>>>>>>TDD				
>>>>>>>>Gain Factor $\beta$	M		INTEGER (0..15)	For UL DPCH in TDD; mapping in accordance to [20].
>>>>>>Reference TFC nr	O		INTEGER (0..3)	If this TFC is a reference TFC, this IE indicates the reference number.
>>>>>Computed Gain Factors				
>>>>>>Reference TFC nr	M		INTEGER (0..3)	Indicates the reference TFC to be used to calculate the gain factors for this TFC.
>There is a split in the TFCI				This choice is made if : a) The TFCS refers to the Downlink. AND b) The mode is FDD and one of the Radio Links of the concerned UE is assigned one or more DSCH transport channels.
>>Transport Format Combination DCH		1..<maxTF Cl_1_Comb>		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)	M		9.2.1.18A	
>>CHOICE Signalling Method				
>>>TFCI Range				
>>>>TFC Mapping On DSCH		1..<maxNo TFCIGrou		

		<i>ps&gt;</i>		
>>>>Max TFCI(field2) Value	M		INTEGER (1..1023)	This is the Maximum value in the range of TFCI(field2) values for which the specified CTFC(field2) applies
>>>>CTFC(field2)	M		9.2.1.18A	
>>>> <i>Explicit</i>				
>>>> <b>Transport Format Combination DSCH</b>		<i>1..&lt;maxTF CI_2_Combs&gt;</i>		The first instance of the parameter <i>Transport Format Combination DSCH</i> corresponds to TFCI (field2) = 0, the second to TFCI (field 2) = 1 and so on.
>>>>CTFC(field2)	M		9.2.1.18A	

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

Range Bound	Explanation
<i>maxnoofTFCs</i>	The maximum number of Transport Format Combinations
<i>maxTFCI_1_Combs</i>	Maximum number of TFCI (field 1) combinations (given by 2 raised to the power of the length of the TFCI (field 1))
<i>maxTFCI_2_Combs</i>	Maximum number of TFCI (field 2) combinations (given by 2 raised to the power of the length of the TFCI (field 2))
<i>maxNoTFCIGroups</i>	Maximum number of groups, each group described in terms of a range of TFCI(field 2) values for which a single value of CTFC(field2) applies

### 9.2.1.59 Transport Format Set

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

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
<b>Dynamic Transport Format Information</b>		$1..<maxTFcount>$		The first instance of the parameter corresponds to TFI zero, the second to 1 and so on.
>Number Of Transport Blocks	M		INTEGER (0..512)	
>Transport Block Size	C-Blocks		INTEGER (0..5000)	Unit: Bits
>CHOICE Mode	M			
>>TDD				
<b>&gt;&gt;&gt;Transmission Time Interval Information</b>	C-TTIdynamic	$1..<maxTTlcount>$		
>>>>Transmission Time Interval	M		ENUMERATED (10, 20, 40, 80,...)	Unit: ms
<b>Semi-Static Transport Format Information</b>		1		
>Transmission Time Interval	M		ENUMERATED (10, 20, 40, 80, dynamic,...,5)	Unit: ms; Value 'dynamic' for TDD only; Value '5' for LCR TDD only
>Type Of Channel Coding	M		ENUMERATED (No codingTDD, Convolutional, Turbo, ...)	[FDD - The value "No codingTDD" shall be treated as logical error if received]
>Coding Rate	C-Coding		ENUMERATED (1/2, 1/3,...)	
>Rate Matching Attribute	M		INTEGER (1..maxRM)	
>CRC Size	M		ENUMERATED (0, 8, 12, 16, 24,...)	
>CHOICE Mode	M			
>>TDD				
>>>2 <sup>nd</sup> Interleaving Mode	M		ENUMERATED (Frame related, Timeslot related, ...)	

Condition	Explanation
Blocks	The IE shall be present if the <i>Number Of Transport Blocks</i> IE is set to a value greater than 0.
Coding	The IE shall be present if the <i>Type Of Channel Coding</i> IE is set to "Convolutional" or "Turbo".
TTIdynamic	The IE shall be present if the <i>Transmission Time Interval</i> IE in the <i>Semi-Static Transport Format Information</i> IE is set to 'dynamic'.

Range Bound	Explanation
<i>maxTFcount</i>	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
<i>maxTTlcount</i>	The amount of different TTIs that are possible for that Transport Format

### 9.2.1.60 ToAWE

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
ToAWE			INTEGER (0..2559)	Unit: ms.

### 9.2.1.61 ToAWS

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
ToAWS			INTEGER (0..1279)	Unit: ms

### 9.2.1.62 Transaction ID

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

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
CHOICE <i>Transaction ID Length</i>				The Transaction ID shall be interpreted for its integer value, not for the type of encoding ('short' or 'long').
<i>&gt;Short</i>				
>>Transaction ID Value	M		INTEGER (0..127)	
<i>&gt;Long</i>				
>>Transaction ID Value	M		INTEGER (0..32767)	

### 9.2.1.62A Transport Bearer Request Indicator

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Transport Bearer Request Indicator			ENUMERATED ( Bearer Requested, Bearer Not Requested, ...)	

### 9.2.1.63 Transport Layer Address

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Transport Layer Address			BIT STRING (1..160, ...)	

## 9.2.1.64 TSTD Indicator

Indicates if TSTD shall be active or not.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
TSTD Indicator			ENUMERATED (active, inactive)	

9.2.1.64A  $T_{\text{UTRAN-GPS}}$  Measurement Value Information

The  $T_{\text{UTRAN-GPS}}$  *Measurement Value Information* IE indicates the measurement results related to the UTRAN GPS Timing of Cell Frames for UE Positioning measurements.

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

9.2.1.64B  $T_{\text{UTRAN-GPS}}$  Measurement Threshold Information

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
$T_{\text{UTRAN-GPS}}$ Change Limit	O		INTEGER (1..256)	Change of $T_{\text{UTRAN-GPS}}$ value compared to previously reported value, which shall trigger a new report. Unit: chip Step: 1/16 chip
Predicted $T_{\text{UTRAN-GPS}}$ Deviation Limit	O		INTEGER (1..256)	Deviation of the predicated $T_{\text{UTRAN-GPS}}$ from the latest measurement result, which shall trigger a new report. Unit: chip. Step: 1/16 chip

### 9.2.1.64C $T_{\text{UTRAN-GPS}}$ Accuracy Class

The  $T_{\text{UTRAN-GPS}}$  Accuracy Class IE indicates the accuracy class of the UTRAN GPS Timing of Cell Frames for UE Positioning measurement.

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

### 9.2.1.65 UARFCN

Designates the central frequency of the channel number.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
UARFCN			INTEGER (0..16383,...)	Unit: MHz Range: 0 .. 3276.6 MHz Step: 0.2 MHz (subclause 5.4.3 in [14] and [15])

### 9.2.1.65A UL Capacity Credit

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
UL Capacity Credit			INTEGER (0..65535)	

### 9.2.1.65B UTRAN Cell Identifier (UC-Id)

The UC-Id (UTRAN Cell identifier) is the identifier of a cell in one UTRAN.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
RNC-Id	M		9.2.1.53a	
C-Id	M		9.2.1.9	



### 9.2.1.66 UL FP Mode

This parameter defines if normal or silent mode of the Frame Protocol shall be used for the UL.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
UL FP Mode			ENUMERATED (Normal, Silent, ...)	

### 9.2.1.67 UL interference level

Void.

### 9.2.1.67A UL SIR

The UL SIR indicates a received UL SIR.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
UL SIR			INTEGER (-82..173)	Value = UL SIR/10 Unit: dB Range: -8.2 .. +17.3 dB Step: 0.1 dB

## 9.2.2 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	
<b>Transmission Gap Pattern Sequence Status</b>		$0..<maxT_{GPS}>$		
>TGPS Identifier	M		INTEGER (1..maxTGPS)	If the group is not present, none of the pattern sequences are activated. References an already defined sequence.
>TGPRC	M		INTEGER (0..511)	The number of transmission gap patterns within the Transmission Gap Pattern Sequence. "0"=Infinity
>TGCFN	M		CFN 9.2.1.7	Connection Frame Number of the first frame of the first pattern 1 within the Transmission Gap Pattern Sequence.

Range Bound	Explanation
$maxTGPS$	Maximum number of active pattern sequences. Value 6.

### 9.2.2.B Adjustment Period

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

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

### 9.2.2.C Adjustment Ratio

The *Adjustment Ratio* IE (*Radj*) defines the convergence rate used for the associated Adjustment Period.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Adjustment Ratio			INTEGER (0..100)	Unit: None Range: 0..1 Step: 0.01

### 9.2.2.D AICH Power

The *AICH Power* IE indicates a power level (measured as the power per transmitted acquisition indicator when several AIs are transmitted in parallel) relative to the primary CPICH power configured in a cell. If Transmit Diversity is applied to the AICH, the *AICH Power* IE indicates the power offset between the linear sum of the power for the AICH on all branches and the Primary CPICH power configured in a cell.

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

#### 9.2.2.1 AICH Transmission Timing

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
AICH Transmission Timing			ENUMERATED (0, 1)	See parameter AICH_Transmission_Timing in ref. [7].

#### 9.2.2.1A AP Preamble Signature

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
AP Preamble Signature			INTEGER (0..15)	Described in ref. [9]

#### 9.2.2.1B AP Sub Channel Number

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

### 9.2.2.1C CD Sub Channel Numbers

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

### 9.2.2.1D Channel Assignment Indication

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Channel Assignment Indication			ENUMERATED ( CA Active, CA Inactive)	

### 9.2.2.2 Chip Offset

The Chip Offset is defined as the radio timing offset inside a radio frame. The Chip offset is used as offset for the DL DPCH relative to the Primary CPICH timing.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Chip Offset			INTEGER (0..38399)	Unit: chips

### 9.2.2.2A Closed Loop Timing Adjustment Mode

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Closed Loop Timing Adjustment Mode			ENUMERATED ( Offset1, Offset2, ...)	According to ref. [10] subclause 7.1: "Offset1" = slot(j+1)mod15 "Offset2" = slot(j+2)mod15

### 9.2.2.3 Common Channels Capacity Consumption Law

Void.

### 9.2.2.3A Compressed Mode Deactivation Flag

The Compressed Mode Deactivation Flag indicates whether Compressed Mode shall be deactivated or not in the new RL.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Compressed Mode Deactivation Flag			ENUMERATED ( Deactivate, Maintain Active)	

### 9.2.2.4 Compressed Mode Method

Void.

#### 9.2.2.4A CPCH Allowed Total Rate

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
CPCH Allowed Total Rate			ENUMERATED ( 15, 30, 60, 120, 240, 480, 960, 1920, 2880, 3840, 4800, 5760,...)	Channel Symbol Rate Unit: kbps

#### 9.2.2.4B CPCH Scrambling Code Number

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
CPCH Scrambling Code Number			INTEGER (0..79)	Described in ref. [9]

#### 9.2.2.4C CPCH UL DPCCH Slot Format

Indicates the slot format used in UL CPCH message control part, accordingly to ref. [7]

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
CPCH UL DPCCH Slot Format			INTEGER (0..2,...)	

#### 9.2.2.4D DCH FDD Information

The *DCH FDD Information* IE provides information for DCHs to be established.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
<b>DCH FDD Information</b>		<i>1..&lt;maxno ofDCHs&gt;</i>		
>Payload CRC Presence Indicator	M		9.2.1.49	
>UL FP Mode	M		9.2.1.66	
>ToAWS	M		9.2.1.61	
>ToAWE	M		9.2.1.60	
<b>&gt;DCH Specific Info</b>		<i>1..&lt;maxno ofDCHs&gt;</i>		
>>DCH ID	M		9.2.1.20	
>>Transport Format Set	M		9.2.1.59	For UL
>>Transport Format Set	M		9.2.1.59	For DL
>>Allocation/Retention Priority	M		9.2.1.1A	
>>Frame Handling Priority	M		9.2.1.30	
>>QE-Selector	M		9.2.1.50A	

Range Bound	Explanation
<i>maxnoofDCHs</i>	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
<b>DCHs FDD To Modify</b>		<i>1..&lt;maxno ofDCHs&gt;</i>		
>UL FP Mode	O		9.2.1.66	
>ToAWS	O		9.2.1.61	
>ToAWE	O		9.2.1.60	
>Transport Bearer Request Indicator	M		9.2.1.62A	
<b>&gt;DCH Specific Info</b>		<i>1..&lt;maxno ofDCHs&gt;</i>		
>>DCH ID	M		9.2.1.20	
>>Transport Format Set	O		9.2.1.59	For the UL.
>>Transport Format Set	O		9.2.1.59	For the DL.
>>Allocation/Retention Priority	O		9.2.1.1A	
>>Frame Handling Priority	O		9.2.1.30	

Range Bound	Explanation
<i>maxnoofDCHs</i>	Maximum number of DCHs for one UE

#### 9.2.2.5 D-Field Length

Void.

#### 9.2.2.6 Dedicated Channels Capacity Consumption Law

Void.

### 9.2.2.7 Diversity Control Field

Void.

### 9.2.2.8 Diversity Indication

Void.

### 9.2.2.9 Diversity mode

Define the diversity mode to be applied.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Diversity Mode			ENUMERATED (None, STTD, Closed loop mode 1, Closed loop mode 2, ...)	

### 9.2.2.10 DL DPCH Slot Format

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
DL DPCH Slot Format			INTEGER (0..16,...)	

### 9.2.2.11 DL frame type

Void.

### 9.2.2.12 DL or Global Capacity Credit

Void.

### 9.2.2.12A DL\_power\_averaging\_window\_size

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
DL_power_averaging_window_size			INTEGER (1..60)	Unit: inner loop power adjustments Range: 1..60 Step: 1 adjustment

### 9.2.2.13 DL Scrambling Code

DL scrambling code to be used by the RL. One cell may have multiple DL scrambling codes available.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
DL Scrambling Code			INTEGER (0..15)	"0" = Primary scrambling code of the cell "1".."15" = Secondary scrambling code

### 9.2.2.13A DL TPC Pattern 01 Count

The *DL TPC Pattern 01 Count* IE contains the value of the parameter n, which is used for determining the DL TPC pattern on Radio Links marked with "first RLS" by the *First RLS indicator* IE before UL synchronisation is achieved.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
DL TPC Pattern 01 Count			INTEGER(0..30,...)	

### 9.2.2.13B DSCH FDD Information

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
<b>DSCH FDD Information</b>		1..<maxno of DSCHs>		
>DSCH ID	M		9.2.1.27	
>Transport Format Set	M		9.2.1.59	For DSCH
>Allocation/Retention Priority	M		9.2.1.1A	
>Frame Handling Priority	M		9.2.1.30	
>ToAWS	M		9.2.1.61	
>ToAWE	M		9.2.1.60	

Range Bound	Explanation
<i>maxnoofDSCHs</i>	Maximum number of DSCHs for one UE

### 9.2.2.13C DPC Mode

The *DPC Mode* IE indicates the DPC mode to be applied [10].

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
DPC Mode			ENUMERATED ( Mode0, Mode1, ...)	"Mode0": The Node B shall estimate the UE transmitted TPC command and update the DL power in every slot  "Mode1": The Node B shall estimate the UE transmitted TPC command over three slots and shall update the DL power in every three slots

### 9.2.2.13D DSCH FDD Common Information

The DSCH Common Information includes common information for all DSCHs for one UE.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Enhanced DSCH PC Indicator	O		9.2.2.13G	
Enhanced DSCH PC	C-EDSCHPC On		9.2.2.13E	

Condition	Explanation
EDSCHPCOn	The IE shall be present if the <i>Enhanced DSCH PC Indicator</i> IE is set to 'Enhanced DSCH PC Active in the UE'.

### 9.2.2.13E Enhanced DSCH PC

The Enhanced DSCH PC includes all the parameters which are needed for DSCH power control improvement during soft handover.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Enhanced DSCH PC Wnd	M		9.2.2.13H	
Enhanced DSCH PC Counter	M		9.2.2.13F	
Enhanced DSCH Power Offset	M		9.2.2.13I	

### 9.2.2.13F Enhanced DSCH PC Counter

The Enhanced DSCH PC Counter parameter gives the number of correct cell ID command to receive in the averaging window, *Enhanced DSCH PC Wnd* IE, see ref. [10] subclause 5.2.2.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Enhanced DSCH PC Counter			INTEGER(1..50)	

### 9.2.2.13G Enhanced DSCH PC Indicator

The Enhanced DSCH PC Indicator indicates whether Enhanced DSCH PC is in use by the UE or not.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Enhanced DSCH PC Indicator			ENUMERATED(Enhanced DSCH PC Active in the UE, Enhanced DSCH PC not Active in the UE)	

### 9.2.2.13H Enhanced DSCH PC Wnd

The Enhanced DSCH PC Wnd parameter shows the window size to decide primary or non-primary cell, see ref. [10] subclause 5.2.2.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Enhanced DSCH PC Wnd			INTEGER (1..10)	

### 9.2.2.13I Enhanced DSCH Power Offset

The Enhanced DSCH Power Offset parameter gives the power offset to be added on DSCH when cell is decided to be primary.



IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Enhanced DSCH Power Offset			INTEGER (-15..0)	Unit: dB Range: -15 .. 0 dB Step: 1 dB

### 9.2.2.14 FDD DL Channelisation Code Number

The DL Channelisation Code Number indicates the DL Channelisation Code number for a specific DL physical channel.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
FDD DL ChannelisationCode Number			INTEGER (0..511)	According to the mapping in [9]. The maximum value is equal to the DL spreading factor –1.

### 9.2.2.14A FDD DL Code Information

The *FDD DL Code Information* IE provides DL Code information for the RL.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
<b>FDD DL Code Information</b>		<i>1..&lt;maxno ofCodes&gt;</i>		
>DL Scrambling Code	M		9.2.2.13	
>FDD DL Channelisation Code Number	M		9.2.2.14	
>Transmission Gap Pattern Sequence Code Information	O		9.2.2.53B	

Range Bound	Explanation
<i>maxnoofCodes</i>	Maximum number of DL code information

### 9.2.2.15 FDD SCCPCH Offset

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
FDD SCCPCH Offset			INTEGER (0..149)	Unit: chip Range: 0..38144 chips Step: 256 chips See ref. [7]

### 9.2.2.16 FDD TPC DL Step Size

This parameter indicates step size for the DL power adjustment.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
FDD TPC Downlink Step Size			ENUMERATED (0.5, 1, 1.5, 2,...)	Unit: dB

### 9.2.2.16A First RLS Indicator

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
First RLS Indicator			ENUMERATED ( First RLS, Not First RLS, ...)	

### 9.2.2.17 Gap Period

Void.

### 9.2.2.18 Gap Position Mode

Void.

### 9.2.2.18A Limited Power Increase

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

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Limited Power Increase			ENUMERATED ( Used, Not Used )	

### 9.2.2.18B Inner Loop DL PC Status

The *Inner Loop DL PC Status* IE indicates whether inner loop DL control shall be active or inactive for all radio links associated with the context identified by the *Node B Communication Context Id* IE.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Inner Loop DL PC Status			ENUMERATED ( Active, Inactive)	

### 9.2.2.18C IPDL FDD Parameters

The *IPDL FDD Parameters* IE provides information about IPDL to be applied for FDD when activated.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
IP SpacingFDD	M		ENUMERATED (5, 7, 10, 15, 20, 30, 40, 50,...)	See [10]
IP Length	M		ENUMERATED (5, 10)	See [10]
Seed	M		INTEGER (0..63)	See [10]
Burst Mode Parameters	O		9.2.1.5A	
IP Offset	M		INTEGER (0..9)	See [10]

### 9.2.2.19 Max Adjustment Period

Void.

### 9.2.2.20 Max Adjustment Step

Defines the maximum allowed value for the change of DL power level during a certain number of slots that can be utilised by the downlink power balancing algorithm. *Max Adjustment Step* IE defines a time period, in terms of number of slots, in which the accumulated power adjustment shall be maximum 1dB. This value does not include the DL inner loop PC adjustment.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Max Adjustment Step			INTEGER (1..10)	Unit: Slots

### 9.2.2.20A Max Number Of PCPCHs

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Max Number Of PCPCHs			INTEGER (1..64,...)	

### 9.2.2.21 Maximum Number Of UL DPDCHs

Maximum number of uplink DPDCHs to be used during the connection. Needed by the rate matching algorithm.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Max Number Of UL DPDCHs			INTEGER (1..6)	

### 9.2.2.22 Minimum UL Channelisation Code Length

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

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

### 9.2.2.23 Multiplexing Position

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

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

### 9.2.2.23A N\_EOT

The N\_EOT is defined as number of End of Transmission for release of PCPCH transmission.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
N_EOT			INTEGER (0..8)	Unit: TTI Value "8" is never used in this release.

### 9.2.2.23B NF\_max

The NF\_max is defined as maximum number of Frame in a PCPCH message data part.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
NF_max			INTEGER (1..64,...)	

### 9.2.2.23C N\_Start\_Message

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

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

### 9.2.2.24 Pattern Duration (PD)

Void.

### 9.2.2.24A PCP Length

Indicates CPCH power control preamble length.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
PCP Length			ENUMERATED (0, 8)	

### 9.2.2.25 PDSCH Code Mapping

This IE indicates the association between each possible value of TFCI(field 2) and the corresponding PDSCH channelisation code(s). There are three fundamentally different ways that the UTRAN must choose between in order to signal the mapping information, these are described below. The signalling capacity consumed by the different methods will vary depending on the way in which the UTRAN configures usage of the DSCH. A fourth option is also provided which allows the UTRAN to replace individual entries in the TFCI(field 2) to PDSCH code mapping table with new PDSCH code values.

Method #1 - Using code range

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

- The PDSCH codes used for TFCI(field 2) = 0 are given by the SF of the Code Group 1 (i.e. first instance in *PDSCH Code Mapping*) and the code numbers between CodeNumber<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" + "Multi-Code Info" - 1. So if multi-code is not used, the set of PDSCH codes is reduced to one element indicated by the *Code Number* IE.

#### Method #3 - Explicit

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

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

#### Method #4 - Replace

The "TFCI (field2)" value(s) for which the mapping to PDSCH channelisation code (or a set of PDSCH codes for multicode) is changed are 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" + "Multi-Code Info" - 1. So if multi-code is not used, the set of PDSCH codes is reduced to one element indicated by the *Code Number* IE.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
DL Scrambling Code	M		9.2.2.13	Scrambling code on which PDSCH is transmitted.
<i>CHOICE Signalling Method</i>	M			
<i>&gt;Code Range</i>				
<b>&gt;&gt;PDSCH Code Mapping</b>		<i>1..&lt;maxNo CodeGroups&gt;</i>		
>>>Spreading Factor	M		ENUMERATED (4, 8, 16, 32, 64, 128, 256,...)	
>>>Multi-Code Info	M		INTEGER (1..16)	
>>>Start Code Number	M		INTEGER (0..maxCodeNumComp-1)	PDSCH code start, Numbering as described in [18]. The maximum value is equal to the Spreading Factor - 1.
>>>Stop Code Number	M		INTEGER (0..maxCodeNumComp-1)	PDSCH code stop, Numbering as described in [18]. The maximum value is equal to the Spreading Factor - 1.
<i>&gt;TFCI Range</i>				
<b>&gt;&gt;DSCH Mapping</b>		<i>1..&lt;maxNo TFCIGroups&gt;</i>		
>>>Max TFCI(field2) Value	M		INTEGER (1..1023)	This is the maximum value in the range of TFCI(field 2) values for which the specified PDSCH code applies
>>>Spreading Factor	M		ENUMERATED (4, 8, 16, 32, 64, 128, 256,...)	SF of PDSCH code
>>>Multi-Code Info	M		INTEGER (1..16)	
>>>Code Number	M		INTEGER (0..maxCodeNumComp-1)	Code number of PDSCH code. Numbering as described in [18]. The maximum value is equal to the Spreading Factor - 1.
<i>&gt;Explicit</i>				
<b>&gt;&gt;PDSCH Code</b>		<i>1..&lt;maxTFCI_2_Combos&gt;</i>		The first instance of the parameter PDSCH code corresponds to TFCI (field2) = 0, the second to TFCI(field 2) = 1 and so on.
>>>Spreading Factor	M		ENUMERATED (4, 8, 16, 32, 64, 128, 256,...)	SF of PDSCH code
>>>Multi-Code Info	M		INTEGER (1..16)	
>>>Code Number	M		INTEGER (0..maxCodeNumComp-1)	Code number of PDSCH code. Numbering as described in [18]. The maximum value is equal to the Spreading Factor - 1.
<i>&gt;Replace</i>				
<b>&gt;&gt;Replaced PDSCH Code</b>		<i>1..&lt;maxTFCI_2_Combos&gt;</i>		
>>>TFCI (field2)	M		INTEGER (0..1023)	Value of TFCI(field 2) for which PDSCH code mapping will be changed
>>>Spreading Factor	M		ENUMERATED (4, 8, 16, 32, 64, 128, 256,...)	SF of PDSCH code
>>>Multi-Code Info	M		INTEGER (1..16)	
>>>Code Number	M		INTEGER (0..maxCodeNumComp-1)	Code number of PDSCH code. Numbering as described in [18].

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

Range Bound	Explanation
maxCodeNumComp	Maximum number of codes at the defined spreading factor, within the complete code tree.
maxTFCI_2_Combs	Maximum number of TFCI (field 2) combinations (given by 2 raised to the power of the length of the TFCI field 2)
maxNoTFCIGroups	Maximum number of groups, each group described in terms of a range of TFCI(field 2) values for which a single PDSCH code applies.
maxNoCodeGroups	Maximum number of groups, each group described in terms of a range of PDSCH channelisation code values for which a single spreading factor applies.

### 9.2.2.26 PICH Mode

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
PICH Mode			ENUMERATED (18, 36, 72, 144,...)	Number of PIs per frame

### 9.2.2.27 Power Adjustment Type

Defines the characteristic of the power adjustment.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Power Adjustment Type			ENUMERATED (None, Common, Individual)	

### 9.2.2.28 Power Control Mode

Void.

### 9.2.2.29 Power Offset

This IE defines a power offset relative to the Downlink transmission power of a DPDCH or a Secondary CCPCH data field or a DL-DPCCH for CPCH pilot field..

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Power Offset			INTEGER (0..24)	Unit: dB Range: 0..6 dB Step: 0.25 dB

### 9.2.2.29A Power\_Raise\_Limit

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Power_Raise_Limit			INTEGER (0..10)	Unit: dB Range: 0..10 dB Step: 1 dB

### 9.2.2.30 Power Resume Mode

Void.

### 9.2.2.31 Preamble Signature

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

### 9.2.2.32 Preamble Threshold

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

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

### 9.2.2.33 Primary CPICH Power

The Primary CPICH power is the power that shall be used for transmitting the P-CPICH in a cell. The reference point is the antenna connector. If Transmit Diversity is applied to the Primary CPICH, the Primary CPICH power is the linear sum of the power that is used for transmitting the Primary CPICH on all branches.

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

### 9.2.2.34 Primary Scrambling Code

The Primary scrambling code to be used in the cell.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Primary Scrambling Code			INTEGER (0..511)	

### 9.2.2.35 Propagation Delay

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



IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Propagation Delay			INTEGER (0..255)	Unit: chips Range: 0..765 chips Step: 3 chips

### 9.2.2.36 QE-Selector

Void.

### 9.2.2.37 RACH Slot Format

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

### 9.2.2.38 RACH Sub Channel Numbers

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

### 9.2.2.39 RL Set ID

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

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

### 9.2.2.39A Received Total Wide Band Power

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

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

### 9.2.2.40 S-Field Length

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

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

#### 9.2.2.41 Scrambling Code Change

Void.

#### 9.2.2.42 Scrambling Code Number

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

#### 9.2.2.43 Secondary CCPCH Slot Format

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

#### 9.2.2.44 SSDT Cell Identity

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

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

#### 9.2.2.44A SSDT Cell Identity For EDSCHPC

The SSDT Cell Identity for EDSCHPC is a temporary ID for enhanced DSCH power control assigned to a cell.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
SSDT Cell Identity For EDSCHPC			SSDT Cell Identity 9.2.2.44	

#### 9.2.2.45 SSDT Cell ID Length

The SSDT Cell ID Length parameter shows the length of the SSDT Cell ID.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Cell ID Length			ENUMERATED ( Short, Medium, Long)	

### 9.2.2.46 SS DT Support Indicator

The SS DT Support Indicator indicates whether a RL supports SS DT or not.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
SS DT Support Indicator			ENUMERATED ( SS DT Supported, SS DT Not Supported)	

### 9.2.2.47 SS DT Indication

The SS DT Indication indicates whether SS DT is in use by the UE or not.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
SS DT Indication			ENUMERATED ( SS DT Active in the UE, SS DT Not Active in the UE)	

### 9.2.2.48 STTD Indicator

Indicates if STTD shall be active or not.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
STTD Indicator			ENUMERATED ( active, inactive, ...)	

### 9.2.2.49 T Cell

Timing delay used for defining start of SCH, CPICH and the DL scrambling code(s) in a cell relative BFN. Resolution 256 chips.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
T Cell			ENUMERATED (0, 1,...,9)	Unit: 0 chip Range: 0..2304 chips Step: 256 chips See ref. [17]

### 9.2.2.49A TFCI2 Bearer Information Response

The *TFCI2 Bearer Information Response* IE provides information for TFCI2 bearer that have been established or modified.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Binding ID	M		9.2.1.4	
Transport Layer Address	M		9.2.1.63	

### 9.2.2.50 TFCI Signalling Mode

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
TFCI Signalling Option	M		ENUMERATED ( Normal, Split)	"Normal" : meaning no split in the TFCI field (either "Logical" or "Hard") "Split" : meaning there is a split in the TFCI field (either "Logical" or "Hard")
Split Type	C-IfSplit		ENUMERATED ( Hard, Logical)	"Hard" : meaning that TFCI (field 1) and TFCI (field 2) are each 5 bits long and each field is block coded separately. "Logical" : meaning that on the physical layer TFCI (field 1) and TFCI (field 2) are concatenated, field 1 taking the most significant bits and field 2 taking the least significant bits). The whole is then encoded with a single block code.
Length Of TFCI2	C-SplitType		INTEGER (1..10)	This IE indicates the length measured in number of bits of TFCI (field2).

Condition	Explanation
IfSplit	The IE shall be present if the <i>TFCI Signalling Option</i> IE is set to 'Split'.
SplitType	The IE shall be present if the <i>Split Type</i> IE is set to 'Logical'.

### 9.2.2.51 TGD

Void.

### 9.2.2.52 TGL

Void.

### 9.2.2.53 Transmit Diversity Indicator

The Transmit Diversity Indicator indicates whether transmit diversity shall be active or not.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Transmit Diversity Indicator			ENUMERATED ( active, inactive)	

### 9.2.2.53A Transmission Gap Pattern Sequence Information

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
<b>Transmission Gap Pattern Sequence Information</b>		<i>1..&lt;maxT GPS&gt;</i>		
>TGPS Identifier	M		INTEGER (1..maxTGPS)	Transmission Gap Pattern Sequence Identifier: Establish a reference to the compressed mode pattern sequence. Up to <maxTGPS> simultaneous compressed mode pattern sequences can be used.
>TGSN	M		INTEGER (0..14)	Transmission Gap Starting Slot Number: The slot number of the first transmission gap slot within the TGCFN.
>TGL1	M		INTEGER (1..14)	The length of the first Transmission Gap within the transmission gap pattern expressed in number of slots.
>TGL2	O		INTEGER (1..14)	The length of the second Transmission Gap within the transmission gap pattern. If omitted, then TGL2=TGL1.
>TGD	M		INTEGER (0, 15.. 269)	Transmission Gap Distance: indicates the number of slots between the starting slots of two consecutive transmission gaps within a transmission gap pattern. If there is only one transmission gap in the transmission gap pattern, this parameter shall be set to "0" ("0" =undefined).
>TGPL1	M		INTEGER (1..144,...)	The duration of transmission gap pattern 1 in frames.
>TGPL2	O		INTEGER (1..144,...)	The duration of transmission gap pattern 2 in frames. If omitted, then TGPL2=TGPL1.
>UL/DL Mode	M		ENUMERATED ( UL only, DL only, UL/DL)	Defines whether only DL, only UL or combined UL/DL compressed mode is used.
>Downlink Compressed Mode Method	C-DL		ENUMERATED ( Puncturing, SF/2, Higher Layer Scheduling, ...)	Method for generating downlink compressed mode gap None means that compressed mode pattern is stopped.
>Uplink Compressed Mode Method	C-UL		ENUMERATED ( SF/2, Higher Layer Scheduling, ...)	Method for generating uplink compressed mode gap.
>Downlink Frame Type	M		ENUMERATED (A, B,...)	Defines if frame structure type "A" or "B" shall be used in downlink compressed mode.
>DeltaSIR1	M		INTEGER (0..30)	Delta in SIR target value to be set in the Node B during the frame containing the start of the first transmission gap in the transmission gap pattern (without including the effect of the bit-rate increase). Unit: dB Range: 0..3 dB Step: 0.1 dB

>DeltaSIRafter1	M		INTEGER (0..30)	Delta in SIR target value to be set in the Node B one frame after the frame containing the start of the first transmission gap in the transmission gap pattern. Unit: dB Range: 0..3 dB Step: 0.1 dB
>DeltaSIR2	O		INTEGER (0..30)	Delta in SIR target value to be set in the Node B during the frame containing the start of the second transmission gap in the transmission gap pattern (without including the effect of the bit-rate increase). When omitted, DeltaSIR2 = DeltaSIR1. Unit: dB Range: 0..3 dB Step: 0.1 dB
>DeltaSIRafter2	O		INTEGER (0..30)	Delta in SIR target value to be set in the Node B one frame after the frame containing the start of the second transmission gap in the transmission gap pattern. When omitted, DeltaSIRafter2 = DeltaSIRafter1. Unit: dB Range: 0..3 dB Step: 0.1 dB

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

Range Bound	Explanation
<i>maxTGPS</i>	Maximum number of transmission gap pattern sequences

### 9.2.2.53B Transmission Gap Pattern Sequence Code Information

This IE indicates whether the alternative scrambling code shall be used for the Downlink compressed mode method or not in the Transmission Gap Pattern Sequence. For details see [9].

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Transmission Gap Pattern Sequence Code Information			ENUMERATED ( Code Change, No Code Change)	Indicates whether the alternative scrambling code is used for compressed mode method "SF/2".

### 9.2.2.54 UL/DL compressed mode selection:

Void.

## 9.2.2.55 UL delta SIR

Void.

## 9.2.2.56 UL delta SIR after

Void.

## 9.2.2.57 UL DPCCH Slot Format

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
UL DPCCH Slot Format			INTEGER (0..5,...)	

## 9.2.2.58 UL SIR

Void.

## 9.2.2.59 UL Scrambling Code

The UL Scrambling Code is the scrambling code used by UE. Every UE has its specific UL Scrambling Code.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
UL Scrambling Code Number	M		INTEGER (0..2 <sup>24</sup> -1)	
UL Scrambling Code Length	M		ENUMERATED (Short, Long)	

## 9.2.2.60 UL Capacity Credit

Void.

## 9.2.3 TDD specific Parameters

## 9.2.3.1 Block STTD Indicator

Void.

## 9.2.3.2 Burst Type

Void.

### 9.2.3.3 CCTrCH ID

The CCTrCH ID for dedicated and shared channels identifies unambiguously an uplink or downlink CCTrCH inside a Radio Link. For S-CCPCH, it identifies unambiguously a downlink CCTrCH within a cell.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
CCTrCH ID			INTEGER (0..15)	

### 9.2.3.4 Cell Parameter ID

The Cell Parameter ID identifies unambiguously the [3.84 Mcps TDD - Code Groups, Scrambling Codes, Midambles and Toffset] [1.28 Mcps TDD - SYNC-DL and SYNC-UL sequences, the scrambling codes and the midamble codes] (see ref. [20]).

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Cell Parameter ID			INTEGER (0..127,...)	

#### 9.2.3.4A Constant Value

The Constant Value is the power margin used by a UE to set the proper uplink power for a DCH, USCH, or a RACH.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Constant Value			INTEGER (-10..10,...)	Unit: dB Range: -10 .. +10 dB Step: 1 dB.

#### 9.2.3.4B DL Timeslot ISCP

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
DL Timeslot ISCP			INTEGER (0..91)	According to mapping in ref. [5].

#### 9.2.3.4C DCH TDD Information

The *DCH TDD Information* IE provides information for DCHs to be established.



IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
<b>DCH TDD Information</b>		1..<maxno ofDCHs>		
>Payload CRC Presence Indicator	M		9.2.1.49	
>UL FP Mode	M		9.2.1.66	
>ToAWS	M		9.2.1.61	
>ToAWE	M		9.2.1.60	
<b>&gt;DCH Specific Info</b>		1..<maxno ofDCHs>		
>>DCH ID	M		9.2.1.20	
>>CCTrCH ID	M		9.2.3.3	UL CCTrCH in which the DCH is mapped
>>CCTrCH ID	M		9.2.3.3	DL CCTrCH in which the DCH is mapped
>>Transport Format Set	M		9.2.1.59	For UL
>>Transport Format Set	M		9.2.1.59	For DL
>>Allocation/Retention Priority	M		9.2.1.1A	
>>Frame Handling Priority	M		9.2.1.30	
>>QE-Selector	C-CoordDCH		9.2.1.50A	

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

Range Bound	Explanation
maxnoofDCHs	Maximum number of DCHs for one UE

#### 9.2.3.4D 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
<b>DCHs TDD To Modify</b>		1..<maxno ofDCHs>		
>UL FP Mode	O		9.2.1.66	
>ToAWS	O		9.2.1.61	
>ToAWE	O		9.2.1.60	
>Transport Bearer Request Indicator	M		9.2.1.62A	
<b>&gt;DCH Specific Info</b>		1..<maxno ofDCHs>		
>>DCH ID	M		9.2.1.20	
>>CCTrCH ID	O		9.2.3.3	UL CCTrCH in which the DCH is mapped.
>>CCTrCH ID	O		9.2.3.3	DL CCTrCH in which the DCH is mapped
>>Transport Format Set	O		9.2.1.59	For the UL.
>>Transport Format Set	O		9.2.1.59	For the DL.
>>Allocation/Retention Priority	O		9.2.1.1A	
>>Frame Handling Priority	O		9.2.1.30	

Range Bound	Explanation
<i>maxnoofDCHs</i>	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
<b>DL Timeslot Information</b>		<i>1..&lt;maxno ofDLts&gt;</i>		
>Time Slot	M		9.2.3.23	
>Midamble Shift And Burst Type	M		9.2.3.7	
>TFCI Presence	M		9.2.1.57	
>DL Code Information	M		TDD DL Code Information 9.2.3.19B	

Range Bound	Explanation
<i>maxnoofDLts</i>	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
<b>DL Time Slot ISCP Info</b>		<i>1..&lt;maxno ofDLts&gt;</i>		
>Time Slot	M		9.2.3.23	
>DL Timeslot ISCP	M		9.2.3.4B	

Range Bound	Explanation
<i>maxnoofDLts</i>	Maximum number of Downlink time slots per Radio Link for 3.84Mcps TDD.

#### 9.2.3.4G Cell Sync Burst Code

The *Cell Sync Burst Code* IE indicates which Code is used for a given Cell Sync Burst.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Cell Sync Burst Code			INTEGER (0..7,...)	

#### 9.2.3.4H Cell Sync Burst Code Shift

The *Cell Sync Burst Code Shift* IE indicates the number of code shifts used for a given Cell Sync Burst.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Cell Sync Burst Code Shift			INTEGER (0..7)	

### 9.2.3.4I CSB Measurement ID

The *Cell Sync Burst Measurement ID* IE uniquely identifies any cell synchronisation burst measurement per Node B Control Port.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
CSB Measurement ID			INTEGER (0..65535)	

### 9.2.3.4J Cell Sync Burst Repetition Period

The *Cell Sync Burst Repetition Period* IE represents the number of consecutive Radio Frames after which the cell synchronisation burst transmission/measurement is repeated. This means that if the Time Slot  $K$  is assigned to the cell synchronisation burst transmission/measurements in the Radio Frame  $J$ , the cell synchronisation burst transmission/measurement is also in all the Radio Frames  $J+n*Repetition\ Period$ .

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Cell Sync Burst Repetition Period			INTEGER (0..4095)	

### 9.2.3.4K Cell Sync Burst SIR

Indicates the Signal to Interference Ratio of the cell synchronisation burst measurement according definition in [5].

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Cell Sync Burst SIR			INTEGER (0..31)	According to mapping in [23]

### 9.2.3.4L Cell Sync Burst Timing

The *Cell Sync Burst Timing* IE defines the time of start (defined by the first detected path in time) of the cell synchronisation burst of a neighbouring cell see [5].

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

### 9.2.3.4M Cell Sync Burst Timing Threshold

The *Cell Sync Burst Timing Threshold* IE defines the threshold that shall trigger a CELL SYNCHRONISATION REPORT message.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Cell Sync Burst Timing Threshold			INTEGER (0..254)	Unit: chip Range: 0 .. 31.75 chips Step: 0.125 chip

### 9.2.3.4N CSB Transmission ID

The *Cell Sync Burst Transmisson ID* IE uniquely identifies any cell synchronisation burst transmission per Node B Control Port.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
CSB Transmission ID			INTEGER (0..65535)	

### 9.2.3.4O DL Timeslot Information LCR

The *DL Timeslot Information LCR* IE provides information for DL Time slot to be established.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
<b>DL Timeslot Information LCR</b>		<i>1..&lt;maxno ofDLtsLCR &gt;</i>		
>Time Slot LCR	M		9.2.3.24A	
>Midamble Shift LCR	M		9.2.3.7A	
>TFCI Presence	M		9.2.1.57	
>DL Code Information	M		TDD DL Code Information LCR 9.2.3.19C	

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

### 9.2.3.4P DL Time Slot ISCP Info LCR

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
<b>DL Time Slot ISCP Info LCR</b>		<i>1..&lt;maxno ofDLtsLCR &gt;</i>		
>Time Slot LCR	M		9.2.3.24A	
>DL Timeslot ISCP	M		9.2.3.4B	

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

### 9.2.3.5 DPCH ID

The DPCH ID identifies unambiguously a DPCH inside a Radio Link.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
DPCH ID			INTEGER (0..239)	

### 9.2.3.5A DSCH TDD Information

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
<b>DSCH TDD Information</b>		1..<maxno ofDSCHs>		
>DSCH ID	M		9.2.1.27	
>CCTrCH ID	M		9.2.3.2	DL CCTrCH in which the DSCH is mapped
>Transport Format Set	M		9.2.1.59	For DSCH
>Allocation/Retention Priority	M		9.2.1.1A	
>Frame Handling Priority	M		9.2.1.30	
>ToAWS	M		9.2.1.61	
>ToAWE	M		9.2.1.60	

Range Bound	Explanation
maxnoofDSCHs	Maximum number of DSCH for one UE

### 9.2.3.5B DwPCH Power

DwPCH Power is the power that shall be used for transmitting the DwPCH in a cell. The reference point is the antenna connector. If Transmit Diversity is applied to the DwPCH, the DwPCH power is the linear sum of the power that is used for transmitting the DwPCH on all branches.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
DwPCH Power			INTEGER (-150..+400,...)	Unit: dBm Range: -15 ..+40 dBm Step: 0.1 dB

### 9.2.3.5C Frame Adjustment Value

The *Frame Adjustment Value* IE represents the frame number correction within the initial synchronisation phase.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Frame Adjustment Value			INTEGER (0..4095)	$SFN_{new}=(SFN_{old}+Frame\ Adjustment\ Value)\ mod\ 4096$

### 9.2.3.5D IPDL TDD Parameter

The *IPDL TDD Parameter* IE provides information about IPDL to be applied for TDD when activated.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
IP SpacingTDD	M		ENUMERATED (30, 40, 50, 70, 100, ...)	See [21]
IP Start	M		INTEGER (0..4095)	See [21]
IP Slot	M		INTEGER (0..14)	See [21]
IP PCCPCH	M		ENUMERATED ( Switch off 1 frame, Switch off 2 frames)	See [21]
Burst Mode parameters	O		9.2.1.5A	

### 9.2.3.5E Max FPACH Power

Max FPACH Power is the maximum power that shall be used for transmitting the FPACH in a cell. The reference point is the antenna connector. If Transmit Diversity is applied to the FPACH, the Max FPACH Power is the maximum of the linear sum of the power that is allowed for transmitting the FPACH on all branches.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
FPACH Power			INTEGER (-150..+400,...)	Unit: dBm Range: -15 ..+40 dBm Step: 0.1 dB

### 9.2.3.6 Max PRACH Midamble Shift

Indicates the maximum number of Midamble shifts to be used in a cell.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Max PRACH Midamble Shift			ENUMERATED (4, 8,...)	

### 9.2.3.7 Midamble Shift And Burst Type

This information element indicates burst type and midamble allocation.

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

Three different midamble allocation schemes exist:

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

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

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

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

### 9.2.3.7A Midamble Shift LCR

This information element indicates midamble allocation in 1.28Mcps TDD.

Three different midamble allocation schemes exist:

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

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

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

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

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

### 9.2.3.7B Number Of cycles Per SFN Period

The *Number Of Cycles Per SFN Period* IE indicates the number of repetitions per SFN period where the same schedule shall apply.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Number Of Cycles Per SFN Period			ENUMERATED (1, 2, 4, 8, ...)	

### 9.2.3.7C Number Of Repetitions Per Cycle Period

The *Number Of Repetitions Per Cycle Period* IE indicates the number of Sync frames per Cycle Length where the cell synchronisation bursts shall be transmitted or the cell synchronisation bursts from the neighbouring cells shall be measured.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Number Of Repetitions Per Cycle Period			INTEGER (2..10)	

### 9.2.3.8 Paging Indicator Length

The Paging Indicator Length indicates the number of symbols for Page Indication transmitted in one timeslot (see ref [19]).

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Paging Indicator Length			ENUMERATED (2, 4, 8,...)	

### 9.2.3.9 PCCPCH Power

The Primary CCPCH power is the power that shall be used for transmitting the P CCPCH in a cell. The P CCPCH power is the reference power in a TDD-cell. The reference point is the antenna connector. If Transmit Diversity is applied to the Primary CCPCH, the Primary CCPCH power is the linear sum of the power that is used for transmitting the Primary CCPCH on all branches.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
PCCPCH Power			INTEGER (-150..+400,...)	Unit: dBm Range: -15 ..+40 dBm Step: 0.1 dB

### 9.2.3.10 PDSCH ID

The PDSCH ID identifies unambiguously a PDSCH inside a cell.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
PDSCH ID			INTEGER (0..255)	

### 9.2.3.11 PDSCH Set ID

The PDSCH Set Id identifies unambiguously a PDSCH Set inside a cell.



IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
PDSCH Set ID			INTEGER (0..255)	See ref. [6]

### 9.2.3.12 PUSCH ID

The PUSCH ID identifies unambiguously a PUSCH inside a cell.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
PUSCH ID			INTEGER (0..255)	

### 9.2.3.13 PUSCH Set ID

The PUSCH Set ID identifies unambiguously a PUSCH Set inside a cell.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
PUSCH Set ID			INTEGER (0..255)	See ref. [6]

### 9.2.3.14 PRACH Midamble

The PRACH Midamble indicates if only the Basic Midamble Sequence or also the time-inverted Midamble Sequence is used.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
PRACH Midamble			ENUMERATED ( Inverted, Direct, ...)	

### 9.2.3.14A Reference Clock Availability

The *Reference Clock Availability* IE is used to indicate the presence and operating of a Reference Clock connected to a TDD cell for cell synchronisation purpose.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Reference Clock Availability			ENUMERATED ( Available, Not Available)	

### 9.2.3.14B Reference SFN Offset

The *Reference SFN Offset* IE indicates the number of frames the reference SFN shall be shifted compared to the SFN derived from the synchronisation port.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Reference SFN Offset			INTEGER (0..255)	

### 9.2.3.15 Repetition Length

The Repetition Length represents the number of consecutive Radio Frames inside a Repetition Period in which the same Time Slot is assigned to the same Physical Channel see ref. [18].

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Repetition Length			INTEGER (1..63)	

### 9.2.3.16 Repetition Period

The Repetition Period represents the number of consecutive Radio Frames after which the same assignment scheme of Time Slots to a Physical Channel is repeated. This means that if the Time Slot  $K$  is assigned to a physical channel in the Radio Frame  $J$ , it is assigned to the same physical channel also in all the Radio Frames  $J+n*Repetition\ Period$  (where  $n$  is an integer) see ref. [18].

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Repetition Period			ENUMERATED (1, 2, 4, 8, 16, 32, 64,...)	

### 9.2.3.17 SCH Time Slot

The *SCH Time Slot* IE represents the first time slot ( $k$ ) of a pair of time slots inside a Radio Frame that shall be assigned to the Physical Channel SCH. The *SCH Time Slot* IE is only applicable if the value of *Sync Case* IE is Case 2 since in this case the SCH is allocated in TS# $k$  and TS# $k+8$ .

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
SCH Time Slot			INTEGER (0..6)	

### 9.2.3.18 Sync Case

The SCH and PCCPCH are mapped on one or two downlink slots per frame. There are two cases of SCH and PCCPCH allocation as follows:

- Case 1) SCH and PCCPCH allocated in a single TS# $k$
- Case 2) SCH allocated in two TS: TS# $k$  and TS# $k+8$   
PCCPCH allocated in TS# $k$

[1.28Mcps TDD - There is no Sync Case indication needed for 1.28Mcps TDD. If the *Sync Case* IE must be included in a message from CRNC to Node B used for 1.28Mcps TDD, the CRNC should indicate Sync Case 1 and the Node B shall ignore it.]

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Sync Case			INTEGER (1..2,...)	

### 9.2.3.18A Special Burst Scheduling

The number of frames between special burst transmissions during DTX.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Special Burst Scheduling			INTEGER (1..256)	Number of frames between special burst transmission during DTX

### 9.2.3.18B SYNC\_DL Code ID

Void.

### 9.2.3.18C Sync Frame Number

The *Sync Frame Number* IE indicates the number of the Sync frame per Cycle Length where the cell synchronisation bursts shall be transmitted or the cell synchronisation bursts from the neighbouring cells shall be measured.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Sync Frame Number			INTEGER (1..10)	

### 9.2.3.18D Synchronisation Report Characteristics

The *Synchronisation Report Characteristics* IE defines how the reporting on measured cell synchronisation bursts shall be performed

Different methods shall apply for the measured cell synchronisation burst reports. In the frequency acquisition phase the measurement report shall be sent when the frequency locking is completed. In the initial phase and for the measurement on late-entrant cells an immediate report after the measured frame is expected.

In the steady-state phase measurement reports may be given after every measured frame, after every SFN period, after every cycle length or only when the requested threshold is exceeded.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Synchronisation Report Characteristics Type	M		ENUMERATED ( Frame related, SFN period related, Cycle length related, Threshold exceeding, Frequency Acquisition completed, ...)	
<b>Threshold Exceeding</b>	C-Threshold Exceeding			Applies only to the Steady State Phase
<b>&gt;Cell Sync Burst Threshold Information</b>		1..<maxno ofCellSync Bursts>		
>>Sync Frame Number To Receive	M		Sync Frame Number 9.2.3.18C	
<b>&gt;&gt;Cell Sync Burst Information</b>		1..<maxno ofreceptionsperSync Frame>		
>>>Cell Sync Burst Code	M		9.2.3.4G	
>>>Cell Sync Burst Code Shift	M		9.2.3.4H	
>>>Cell Sync Burst Arrival Time	O		Cell Sync Burst Timing 9.2.3.4L	
>>>Cell Sync Burst Timing Threshold	O		9.2.3.4M	

Range Bound	Explanation
<i>maxnoofCellSyncBursts</i>	Maximum number of cell synchronisation burst per cycle
<i>maxnoofreceptionsperSyncFrame</i>	Maximum number of cell synchronisation burst receptions per Sync Frame

### 9.2.3.18E Synchronisation Report Type

The *Synchronisation Report Type* IE represents the individual types of synchronisation reports that shall apply within the individual synchronisation phases. (see [17]).

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Synchronisation Report Type			ENUMERATED ( Initial Phase, Steady-State Phase, Late-Entrant Cell, Frequency Acquisition, ...)	

### 9.2.3.19 TDD Channelisation Code

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
TDD Channelisation Code			ENUMERATED ( (1/1), (2/1), (2/2), (4/1), .. (4/4), (8/1), .. (8/8), (16/1), .. (16/16),...)	

### 9.2.3.19a TDD Channelisation Code LCR

The Channelisation Code Number indicates which Channelisation Code is used for a given Physical Channel. In 1.28Mcps TDD the Channelisation Code is an Orthogonal Variable Spreading Factor code, that can have a spreading factor of 1, 2, 4, 8 or 16 and there is a choice between QPSK and 8PSK modulation.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
TDD Channelisation Code			9.2.3.19	
Modulation			ENUMERATED (QPSK, 8PSK,...)	Modulation options for 1.28Mcps TDD in contrast to 3.84Mcps TDD

### 9.2.3.19A TDD DPCH Offset

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
CHOICE <i>Offset Type</i>				
> <i>Initial Offset</i>				
>>TDD DPCH Offset Value	M		INTEGER (0..255)	
> <i>No Initial Offset</i>				
>>TDD DPCH Offset Value	M		INTEGER (0..63)	

### 9.2.3.19B 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
<b>TDD DL Code Information</b>		1..<maxno ofDPCHs>		
>DPCH ID	M		9.2.3.5	
>TDD Channelisation Code	M		9.2.3.19	

Range Bound	Explanation
maxnoofDPCHs	Maximum number of DPCHs in one CCTrCH

### 9.2.3.19C TDD DL Code Information LCR

The *TDD DL Code Information LCR* IE provides DL Code information for the RL.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
<b>TDD DL Code Information LCR</b>		1..<maxno ofDPCHsLCR>		
>DPCH ID	M		9.2.3.5	
>TDD Channelisation Code LCR	M		9.2.3.19a	
> TDD DL DPCH Time Slot Format LCR	M		9.2.3.19D	

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

### 9.2.3.19D TDD DL DPCH Time Slot Format LCR

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

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

### 9.2.3.20 TDD Physical Channel Offset

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

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

### 9.2.3.21 TDD TPC DL Step Size

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

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

### 9.2.3.21a TDD TPC UL Step Size

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

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

### 9.2.3.21A TDD UL Code Information

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
<b>TDD UL Code Information</b>		<i>1..&lt;maxno ofDPCHs&gt;</i>		
>DPCH ID	M		9.2.3.5	
>TDD Channelisation Code	M		9.2.3.19	

Range Bound	Explanation
<i>maxnoofDPCHs</i>	Maximum number of DPCHs in one CCTrCH

### 9.2.3.21B TDD UL Code Information LCR

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
<b>TDD UL Code Information LCR</b>		<i>1..&lt;maxno ofDPCHsLCR&gt;</i>		
>DPCH ID	M		9.2.3.5	
>TDD Channelisation Code LCR	M		9.2.3.19a	
>TDD UL DPCH Time Slot Format LCR	M		9.2.3.21C	

Range Bound	Explanation
<i>maxnoofDPCHsLCR</i>	Maximum number of DPCHs in one CCTrCH for 1.28Mcps TDD

### 9.2.3.21C TDD UL DPCH Time Slot Format LCR

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

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

### 9.2.3.22 TFCI Coding

The TFCI Coding describes the way how the TFCI bits are coded. By default 1 TFCI bit is coded with 4 bits, 2 TFCI bits are coded with 8 bits, 3-5 TFCI bits are coded with 16 bits and 6-10 TFCI bits are coded with 32 bits.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
TFCI Coding			ENUMERATED (4, 8, 16, 32,...)	

### 9.2.3.22a Timing Adjustment Value

The *Timing Adjustment Value* IE indicates the timing correction within a Frame. Type 1 is used for the initial phase of Node B synchronisation. Type 2 is used for the steady-state phase of Node B synchronisation.

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

### 9.2.3.22A Timing Advance Applied

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Timing Advance Applied			ENUMERATED (Yes, No)	

### 9.2.3.23 Time Slot

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Time Slot			INTEGER (0..14)	

### 9.2.3.24 Time Slot Direction

This parameter indicates whether the TS in the cell is used in Uplink or Downlink direction.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Time Slot Direction			ENUMERATED (UL, DL, ...)	

### 9.2.3.24A Time Slot LCR

The Time Slot LCR is the number of the traffic time slot within a 5 ms subframe of LCR TDD.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Time Slot LCR			INTEGER (0..6)	

### 9.2.3.25 Time Slot Status

This parameter indicates whether the TS in the cell is active or not.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Time Slot Status			ENUMERATED (Active, Not Active, ...)	

### 9.2.3.26 Transmission Diversity Applied

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

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

### 9.2.3.26A UL Timeslot ISCP

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
UL Timeslot ISCP			INTEGER (0..127)	According to mapping in [23].

### 9.2.3.26B UL PhysCH SF Variation

Indicates whether variation of SF in UL is supported by Radio Link or not.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
UL PhysCH SF Variation			ENUMERATED (SF_Variation_supported, SF_Variation_NOT_supported)	



### 9.2.3.26C UL Timeslot Information

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
<b>UL Timeslot Information</b>		1..<maxno ofULts>		
>Time Slot	M		9.2.3.23	
>Midamble Shift And Burst Type	M		9.2.3.7	
>TFCI Presence	M		9.2.1.57	
>UL Code Information	M		TDD UL Code Information 9.2.3.21A	

Range Bound	Explanation
<i>maxnoofULts</i>	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 Interference level for each time slot within the Radio Link.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
<b>UL Time Slot ISCP Info</b>		1..<maxno ofULts>		
>Time Slot	M		9.2.3.23	
>UL Timeslot ISCP	M		9.2.3.26A	

Range Bound	Explanation
<i>maxnoofULts</i>	Maximum number of Uplink time slots per Radio Link

### 9.2.3.26E UL Timeslot Information LCR

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
<b>UL Timeslot Information LCR</b>		1..<maxno ofULtsLCR >		
>Time Slot LCR	M		9.2.3.24A	
>Midamble Shift LCR	M		9.2.3.7A	
>TFCI Presence	M		9.2.1.57	
>UL Code Information	M		TDD UL Code Information LCR 9.2.3.21B	

Range Bound	Explanation
<i>maxnoofULtsLCR</i>	Maximum number of Uplink time slots per Radio Link for 1.28Mcps TDD.

### 9.2.3.26F UL Time Slot ISCP Info LCR

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
<b>UL Time Slot ISCP Info LCR</b>		<i>1..&lt;maxno ofULtsLCR&gt;</i>		
>Time Slot LCR	M		9.2.3.24A	
>UL Timeslot ISCP	M		9.2.3.26A	

Range Bound	Explanation
<i>maxnoofULtsLCR</i>	Maximum number of Uplink time slots per Radio Link for 1.28Mcps TDD

### 9.2.3.26G Uplink Synchronisation Frequency

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

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

### 9.2.3.26H Uplink Synchronisation Step Size

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

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

### 9.2.3.27 USCH ID

The USCH ID uniquely identifies a USCH within a Node B Communication Context.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
USCH ID			INTEGER (0..255)	

### 9.2.3.28 USCH Information

The *USCH Information* IE provides information for USCHs to be established.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
<b>USCH Information</b>		<i>1..&lt;maxno ofUSCHs&gt;</i>		
>USCH ID	M		9.2.3.27	
>CCTrCH ID	M		9.2.3.3	UL CCTrCH in which the USCH is mapped
>Transport Format Set	M		9.2.1.59	For USCH
>Allocation/Retention Priority	M		9.2.1.1A	

Range bound	Explanation
<i>maxnoofUSCHs</i>	Maximum number of USCHs for one UE

### 9.2.3.29 USCH Information Response

The *USCH Information Response* IE provides information for USCHs that have been established or modified.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
<b>USCH Information Response</b>		<i>1..&lt;maxno ofUSCHs&gt;</i>		
>USCH ID	M		9.2.3.27	
>Binding ID	O		9.2.1.4	
>Transport Layer Address	O		9.2.1.63	

Range Bound	Explanation
<i>maxnoofUSCHs</i>	Maximum number of USCHs for one UE

### 9.2.3.30 SCTD Indicator

Indicates if SCTD antenna diversity is applied or not to the PCCPCH and PICH [3.84Mcps TDD].

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
SCTD Indicator			ENUMERATED (active, inactive)	

## 9.3 Message and Information Element Abstract Syntax (with ASN.1)

### 9.3.0 General

Subclause 9.3 presents the Abstract Syntax of NBAP protocol with ASN.1. In case there is contradiction between the ASN.1 definition in this subclause and the tabular format in subclauses 9.1 and 9.2, the ASN.1 shall take precedence, except for the definition of conditions for the presence of conditional elements, where the tabular format shall take precedence.

The ASN.1 definition specifies the structure and content of NBAP messages. NBAP messages can contain any IEs specified in the object set definitions for that message without the order or number of occurrence being restricted by ASN.1. However, for this version of the standard, a sending entity shall construct a NBAP message according to the PDU definitions module and with the following additional rules (Note that in the following IE means an IE in the object set with an explicit id. If one IE needed to appear more than once in one object set, then the different occurrences have different IE ids):

- IEs shall be ordered (in an IE container) in the order they appear in object set definitions.
- Object set definitions specify how many times IEs may appear. An IE shall appear exactly once if the presence field in an object has value "mandatory". An IE may appear at most once if the presence field in an object has value "optional" or "conditional". If in a tabular format there is multiplicity specified for an IE (i.e. an IE list) then in the corresponding ASN.1 definition the list definition is separated into two parts. The first part defines an IE container list where the list elements reside. The second part defines list elements. The IE container list appears as an IE of its own. For this version of the standard an IE container list may contain only one kind of list elements.

If a NBAP message that is not constructed as defined above is received, this shall be considered as Abstract Syntax Error, and the message shall be handled as defined for Abstract Syntax Error in subclause 10.3.6.

### 9.3.1 Usage of Private Message mechanism for non-standard use

The private message mechanism for non-standard use may be used

- For special operator- (and/or vendor) specific features considered not to be part of the basic functionality, i.e. the functionality required for a complete and high-quality specification in order to guarantee multi-vendor inter-operability.
- By vendors for research purposes, e.g. to implement and evaluate new algorithms/features before such features are proposed for standardisation

The private message mechanism shall not be used for basic functionality. Such functionality shall be standardised.

### 9.3.2 Elementary Procedure Definitions

```
-- *****
--
-- Elementary Procedure definitions
--
-- *****
```

```
NBAP-PDU-Discriptions {
```

```
itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
umts-Access (20) modules (3) nbap (2) version1 (1) nbap-PDU-Descriptions (0) }
```

```
DEFINITIONS AUTOMATIC TAGS ::=
```

```
BEGIN
```

```
-- *****
--
-- IE parameter types from other modules.
--
-- *****
```

```
IMPORTS
```

```
    Criticality,
    ProcedureID,
    MessageDiscriminator,
    TransactionID
```

```
FROM NBAP-CommonDataTypes
```

```
    CommonTransportChannelSetupRequestFDD,
    CommonTransportChannelSetupRequestTDD,
    CommonTransportChannelSetupResponse,
    CommonTransportChannelSetupFailure,
    CommonTransportChannelReconfigurationRequestFDD,
    CommonTransportChannelReconfigurationRequestTDD,
    CommonTransportChannelReconfigurationResponse,
    CommonTransportChannelReconfigurationFailure,
    CommonTransportChannelDeletionRequest,
    CommonTransportChannelDeletionResponse,
    BlockResourceRequest,
    BlockResourceResponse,
    BlockResourceFailure,
    UnblockResourceIndication,
    AuditFailure,
    AuditRequiredIndication,
    AuditRequest,
    AuditResponse,
    CommonMeasurementInitiationRequest,
    CommonMeasurementInitiationResponse,
    CommonMeasurementInitiationFailure,
    CommonMeasurementReport,
    CommonMeasurementTerminationRequest,
    CommonMeasurementFailureIndication,
    CellSetupRequestFDD,
    CellSetupRequestTDD,
    CellSetupResponse,
    CellSetupFailure,
    CellReconfigurationRequestFDD,
    CellReconfigurationRequestTDD,
    CellReconfigurationResponse,
    CellReconfigurationFailure,
    CellDeletionRequest,
    CellDeletionResponse,
```

InformationExchangeInitiationRequest,  
InformationExchangeInitiationResponse,  
InformationExchangeInitiationFailure,  
InformationReport,  
InformationExchangeTerminationRequest,  
InformationExchangeFailureIndication,  
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,  
CellSynchronisationInitiationRequestTDD,  
CellSynchronisationInitiationResponseTDD,

CellSynchronisationInitiationFailureTDD,  
CellSynchronisationReconfigurationRequestTDD,  
CellSynchronisationReconfigurationResponseTDD,  
CellSynchronisationReconfigurationFailureTDD,  
CellSynchronisationAdjustmentRequestTDD,  
CellSynchronisationAdjustmentResponseTDD,  
CellSynchronisationAdjustmentFailureTDD,  
CellSynchronisationReportTDD,  
CellSynchronisationTerminationRequestTDD,  
CellSynchronisationFailureIndicationTDD

FROM NBAP-PDU-Contents

id-audit,  
id-auditRequired,  
id-blockResource,  
id-cellDeletion,  
id-cellReconfiguration,  
id-cellSetup,  
id-cellSynchronisationInitiation,  
id-cellSynchronisationReconfiguration,  
id-cellSynchronisationReporting,  
id-cellSynchronisationTermination,  
id-cellSynchronisationFailure,  
id-commonMeasurementFailure,  
id-commonMeasurementInitiation,  
id-commonMeasurementReport,  
id-commonMeasurementTermination,  
id-commonTransportChannelDelete,  
id-commonTransportChannelReconfigure,  
id-commonTransportChannelSetup,  
id-compressedModeCommand,  
id-dedicatedMeasurementFailure,  
id-dedicatedMeasurementInitiation,  
id-dedicatedMeasurementReport,  
id-dedicatedMeasurementTermination,  
id-downlinkPowerControl,  
id-downlinkPowerTimeslotControl,  
id-errorIndicationForDedicated,  
id-errorIndicationForCommon,  
id-informationExchangeFailure,  
id-informationExchangeInitiation,  
id-informationReporting,  
id-informationExchangeTermination,  
id-physicalSharedChannelReconfiguration,  
id-privateMessageForDedicated,  
id-privateMessageForCommon,  
id-radioLinkAddition,  
id-radioLinkDeletion,  
id-radioLinkFailure,  
id-radioLinkPreemption,  
id-radioLinkRestoration,  
id-radioLinkSetup,  
id-reset,  
id-resourceStatusIndication,

```

    id-cellSynchronisationAdjustment,
    id-synchronisedRadioLinkReconfigurationCancellation,
    id-synchronisedRadioLinkReconfigurationCommit,
    id-synchronisedRadioLinkReconfigurationPreparation,
    id-systemInformationUpdate,
    id-unblockResource,
    id-unSynchronisedRadioLinkReconfiguration
FROM NBAP-Constants;

-- *****
--
-- Interface Elementary Procedure Class
--
-- *****

NBAP-ELEMENTARY-PROCEDURE ::= CLASS {
    &InitiatingMessage          ,
    &SuccessfulOutcome          OPTIONAL,
    &UnsuccessfulOutcome        OPTIONAL,
    &Outcome                    OPTIONAL,
    &messageDiscriminator        MessageDiscriminator,
    &procedureID                 ProcedureID    UNIQUE,
    &criticality                 Criticality    DEFAULT ignore
}

WITH SYNTAX {
    INITIATING MESSAGE          &InitiatingMessage
    [SUCCESSFUL OUTCOME         &SuccessfulOutcome]
    [UNSUCCESSFUL OUTCOME       &UnsuccessfulOutcome]
    [OUTCOME                    &Outcome]
    MESSAGE DISCRIMINATOR       &messageDiscriminator
    PROCEDURE ID                &procedureID
    [CRITICALITY                &criticality]
}

-- *****
--
-- Interface PDU Definition
--
-- *****

NBAP-PDU ::= CHOICE {
    initiatingMessage           InitiatingMessage,
    successfulOutcome           SuccessfulOutcome,
    unsuccessfulOutcome         UnsuccessfulOutcome,
    outcome                     Outcome,
    ...
}

InitiatingMessage ::= SEQUENCE {
    procedureID                 NBAP-ELEMENTARY-PROCEDURE.&procedureID    ( {NBAP-ELEMENTARY-PROCEDURES} ),
    criticality                 NBAP-ELEMENTARY-PROCEDURE.&criticality    ( {NBAP-ELEMENTARY-PROCEDURES} { @procedureID } ),
    messageDiscriminator        NBAP-ELEMENTARY-PROCEDURE.&messageDiscriminator ( {NBAP-ELEMENTARY-PROCEDURES} { @procedureID } ),
    transactionID               TransactionID,

```



```

    value                NBAP-ELEMENTARY-PROCEDURE.&InitiatingMessage({NBAP-ELEMENTARY-PROCEDURES}{@procedureID})
}

SuccessfulOutcome ::= SEQUENCE {
    procedureID          NBAP-ELEMENTARY-PROCEDURE.&procedureID  ({NBAP-ELEMENTARY-PROCEDURES}),
    criticality          NBAP-ELEMENTARY-PROCEDURE.&criticality  ({NBAP-ELEMENTARY-PROCEDURES}{@procedureID}),
    messageDiscriminator NBAP-ELEMENTARY-PROCEDURE.&messageDiscriminator({NBAP-ELEMENTARY-PROCEDURES}{@procedureID}),
    transactionID       TransactionID,
    value               NBAP-ELEMENTARY-PROCEDURE.&SuccessfulOutcome({NBAP-ELEMENTARY-PROCEDURES}{@procedureID})
}

UnsuccessfulOutcome ::= SEQUENCE {
    procedureID          NBAP-ELEMENTARY-PROCEDURE.&procedureID  ({NBAP-ELEMENTARY-PROCEDURES}),
    criticality          NBAP-ELEMENTARY-PROCEDURE.&criticality  ({NBAP-ELEMENTARY-PROCEDURES}{@procedureID}),
    messageDiscriminator NBAP-ELEMENTARY-PROCEDURE.&messageDiscriminator({NBAP-ELEMENTARY-PROCEDURES}{@procedureID}),
    transactionID       TransactionID,
    value               NBAP-ELEMENTARY-PROCEDURE.&UnsuccessfulOutcome({NBAP-ELEMENTARY-PROCEDURES}{@procedureID})
}

Outcome ::= SEQUENCE {
    procedureID          NBAP-ELEMENTARY-PROCEDURE.&procedureID  ({NBAP-ELEMENTARY-PROCEDURES}),
    criticality          NBAP-ELEMENTARY-PROCEDURE.&criticality  ({NBAP-ELEMENTARY-PROCEDURES}{@procedureID}),
    messageDiscriminator NBAP-ELEMENTARY-PROCEDURE.&messageDiscriminator({NBAP-ELEMENTARY-PROCEDURES}{@procedureID}),
    transactionID       TransactionID,
    value               NBAP-ELEMENTARY-PROCEDURE.&Outcome  ({NBAP-ELEMENTARY-PROCEDURES}{@procedureID})
}

-- *****
--
-- Interface Elementary Procedure List
--
-- *****

NBAP-ELEMENTARY-PROCEDURES NBAP-ELEMENTARY-PROCEDURE ::= {
    NBAP-ELEMENTARY-PROCEDURES-CLASS-1 |
    NBAP-ELEMENTARY-PROCEDURES-CLASS-2 ,
    ...
}

NBAP-ELEMENTARY-PROCEDURES-CLASS-1 NBAP-ELEMENTARY-PROCEDURE ::= {
    cellSetupFDD
    cellSetupTDD
    cellReconfigurationFDD
    cellReconfigurationTDD
    cellDeletion
    commonTransportChannelSetupFDD
    commonTransportChannelSetupTDD
    commonTransportChannelReconfigureFDD
    commonTransportChannelReconfigureTDD
    commonTransportChannelDelete
    audit
    blockResource
    radioLinkSetupFDD
    radioLinkSetupTDD

```

```

systemInformationUpdate
commonMeasurementInitiation
radioLinkAdditionFDD
radioLinkAdditionTDD
radioLinkDeletion
reset
synchronisedRadioLinkReconfigurationPreparationFDD
synchronisedRadioLinkReconfigurationPreparationTDD
unsynchronisedRadioLinkReconfigurationFDD
unsynchronisedRadioLinkReconfigurationTDD
dedicatedMeasurementInitiation
physicalSharedChannelReconfiguration
...
informationExchangeInitiation
cellSynchronisationInitiationTDD
cellSynchronisationReconfigurationTDD
cellSynchronisationAdjustmentTDD
}

NBAP-ELEMENTARY-PROCEDURES-CLASS-2 NBAP-ELEMENTARY-PROCEDURE ::= {
resourceStatusIndication
auditRequired
commonMeasurementReport
commonMeasurementTermination
commonMeasurementFailure
synchronisedRadioLinkReconfigurationCommit
synchronisedRadioLinkReconfigurationCancellation
radioLinkFailure
radioLinkPreemption
radioLinkRestoration
dedicatedMeasurementReport
dedicatedMeasurementTermination
dedicatedMeasurementFailure
downlinkPowerControlFDD
downlinkPowerTimeslotControl
compressedModeCommand
unblockResource
errorIndicationForDedicated
errorIndicationForCommon
privateMessageForDedicated
privateMessageForCommon
...
informationReporting
informationExchangeTermination
informationExchangeFailure
cellSynchronisationReportingTDD
cellSynchronisationTerminationTDD
cellSynchronisationFailureTDD
}

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

```

```
-- *****
-- Class 1
-- *** CellSetup (FDD) ***
cellSetupFDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      CellSetupRequestFDD
    SUCCESSFUL OUTCOME      CellSetupResponse
    UNSUCCESSFUL OUTCOME    CellSetupFailure
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID            { procedureCode id-cellSetup, ddMode fdd }
    CRITICALITY             reject
}
-- *** CellSetup (TDD) ***
cellSetupTDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      CellSetupRequestTDD
    SUCCESSFUL OUTCOME      CellSetupResponse
    UNSUCCESSFUL OUTCOME    CellSetupFailure
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID            { procedureCode id-cellSetup, ddMode tdd }
    CRITICALITY             reject
}
-- *** CellReconfiguration(FDD) ***
cellReconfigurationFDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      CellReconfigurationRequestFDD
    SUCCESSFUL OUTCOME      CellReconfigurationResponse
    UNSUCCESSFUL OUTCOME    CellReconfigurationFailure
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID            { procedureCode id-cellReconfiguration, ddMode fdd }
    CRITICALITY             reject
}
-- *** CellReconfiguration(TDD) ***
cellReconfigurationTDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      CellReconfigurationRequestTDD
    SUCCESSFUL OUTCOME      CellReconfigurationResponse
    UNSUCCESSFUL OUTCOME    CellReconfigurationFailure
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID            { procedureCode id-cellReconfiguration, ddMode tdd }
    CRITICALITY             reject
}
-- *** CellDeletion ***
cellDeletion NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      CellDeletionRequest
    SUCCESSFUL OUTCOME      CellDeletionResponse
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID            { procedureCode id-cellDeletion, ddMode common }
    CRITICALITY             reject
}
-- *** CommonTransportChannelSetup (FDD) ***
```

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

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

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

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

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

-- *** Audit ***
audit NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE      AuditRequest
  SUCCESSFUL OUTCOME      AuditResponse
  UNSUCCESSFUL OUTCOME    AuditFailure
  MESSAGE DISCRIMINATOR   common
}
```

```
    PROCEDURE ID          { procedureCode id-audit, ddMode common }
    CRITICALITY           reject
}

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

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

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

-- *** SystemInformationUpdate ***
systemInformationUpdate NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE    SystemInformationUpdateRequest
    SUCCESSFUL OUTCOME    SystemInformationUpdateResponse
    UNSUCCESSFUL OUTCOME SystemInformationUpdateFailure
    MESSAGE DISCRIMINATOR common
    PROCEDURE ID         { procedureCode id-systemInformationUpdate, ddMode common }
    CRITICALITY           reject
}

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

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

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

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

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

-- *** SynchronisedRadioLinkReconfigurationPreparation (FDD) ***
synchronisedRadioLinkReconfigurationPreparationFDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      RadioLinkReconfigurationPrepareFDD
    SUCCESSFUL OUTCOME      RadioLinkReconfigurationReady
    UNSUCCESSFUL OUTCOME    RadioLinkReconfigurationFailure
    MESSAGE DISCRIMINATOR   dedicated
    PROCEDURE ID            { procedureCode id-synchronisedRadioLinkReconfigurationPreparation, ddMode fdd }
    CRITICALITY             reject
}

-- *** SynchronisedRadioLinkReconfigurationPreparation (TDD) ***
synchronisedRadioLinkReconfigurationPreparationTDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      RadioLinkReconfigurationPrepareTDD
    SUCCESSFUL OUTCOME      RadioLinkReconfigurationReady

```

```
    UNSUCCESSFUL OUTCOME    RadioLinkReconfigurationFailure
    MESSAGE DISCRIMINATOR    dedicated
    PROCEDURE ID             { procedureCode id-synchronisedRadioLinkReconfigurationPreparation, ddMode tdd }
    CRITICALITY              reject
}

-- *** UnSynchronisedRadioLinkReconfiguration (FDD) ***
unSynchronisedRadioLinkReconfigurationFDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      RadioLinkReconfigurationRequestFDD
    SUCCESSFUL OUTCOME      RadioLinkReconfigurationResponse
    UNSUCCESSFUL OUTCOME    RadioLinkReconfigurationFailure
    MESSAGE DISCRIMINATOR    dedicated
    PROCEDURE ID            { procedureCode id-unSynchronisedRadioLinkReconfiguration, ddMode fdd }
    CRITICALITY              reject
}

-- *** UnSynchronisedRadioLinkReconfiguration (TDD) ***
unSynchronisedRadioLinkReconfigurationTDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      RadioLinkReconfigurationRequestTDD
    SUCCESSFUL OUTCOME      RadioLinkReconfigurationResponse
    UNSUCCESSFUL OUTCOME    RadioLinkReconfigurationFailure
    MESSAGE DISCRIMINATOR    dedicated
    PROCEDURE ID            { procedureCode id-unSynchronisedRadioLinkReconfiguration, ddMode tdd }
    CRITICALITY              reject
}

-- *** DedicatedMeasurementInitiation ***
dedicatedMeasurementInitiation NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      DedicatedMeasurementInitiationRequest
    SUCCESSFUL OUTCOME      DedicatedMeasurementInitiationResponse
    UNSUCCESSFUL OUTCOME    DedicatedMeasurementInitiationFailure
    MESSAGE DISCRIMINATOR    dedicated
    PROCEDURE ID            { procedureCode id-dedicatedMeasurementInitiation, ddMode common }
    CRITICALITY              reject
}

-- *** PhysicalSharedChannelReconfiguration (TDD only) ***
physicalSharedChannelReconfiguration NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      PhysicalSharedChannelReconfigurationRequestTDD
    SUCCESSFUL OUTCOME      PhysicalSharedChannelReconfigurationResponseTDD
    UNSUCCESSFUL OUTCOME    PhysicalSharedChannelReconfigurationFailureTDD
    MESSAGE DISCRIMINATOR    common
    PROCEDURE ID            { procedureCode id-physicalSharedChannelReconfiguration, ddMode tdd }
    CRITICALITY              reject
}

--*** InformationExchangeInitiation ***
informationExchangeInitiation NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      InformationExchangeInitiationRequest
    SUCCESSFUL OUTCOME      InformationExchangeInitiationResponse
    UNSUCCESSFUL OUTCOME    InformationExchangeInitiationFailure
    MESSAGE DISCRIMINATOR    common
    PROCEDURE ID            { procedureCode id-informationExchangeInitiation, ddMode common }
    CRITICALITY              reject
}
```

```
}

-- *** CellSynchronisationInitiation (TDD only) ***
cellSynchronisationInitiationTDD NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE    CellSynchronisationInitiationRequestTDD
  SUCCESSFUL OUTCOME    CellSynchronisationInitiationResponseTDD
  UNSUCCESSFUL OUTCOME CellSynchronisationInitiationFailureTDD
  MESSAGE DISCRIMINATOR common
  PROCEDURE ID          { procedureCode id-cellSynchronisationInitiation, ddMode tdd }
  CRITICALITY           reject
}

-- *** CellSynchronisationReconfiguration (TDD only) ***
cellSynchronisationReconfigurationTDD NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE    CellSynchronisationReconfigurationRequestTDD
  SUCCESSFUL OUTCOME    CellSynchronisationReconfigurationResponseTDD
  UNSUCCESSFUL OUTCOME CellSynchronisationReconfigurationFailureTDD
  MESSAGE DISCRIMINATOR common
  PROCEDURE ID          { procedureCode id-cellSynchronisationReconfiguration, ddMode tdd }
  CRITICALITY           reject
}

-- *** CellSynchronisationAdjustment (TDD only) ***
cellSynchronisationAdjustmentTDD NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE    CellSynchronisationAdjustmentRequestTDD
  SUCCESSFUL OUTCOME    CellSynchronisationAdjustmentResponseTDD
  UNSUCCESSFUL OUTCOME CellSynchronisationAdjustmentFailureTDD
  MESSAGE DISCRIMINATOR common
  PROCEDURE ID          { procedureCode id-cellSynchronisationAdjustment, ddMode tdd }
  CRITICALITY           reject
}

-- Class 2

-- *** ResourceStatusIndication ***
resourceStatusIndication NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE    ResourceStatusIndication
  MESSAGE DISCRIMINATOR common
  PROCEDURE ID          { procedureCode id-resourceStatusIndication, ddMode common }
  CRITICALITY           ignore
}

-- *** AuditRequired ***
auditRequired NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE    AuditRequiredIndication
  MESSAGE DISCRIMINATOR common
  PROCEDURE ID          { procedureCode id-auditRequired, ddMode common }
  CRITICALITY           ignore
}

-- *** CommonMeasurementReport ***
commonMeasurementReport NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE    CommonMeasurementReport
  MESSAGE DISCRIMINATOR common
}
```



```
    PROCEDURE ID      { procedureCode id-commonMeasurementReport, ddMode common }
    CRITICALITY      ignore
  }

-- *** CommonMeasurementTermination ***
commonMeasurementTermination NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE    CommonMeasurementTerminationRequest
  MESSAGE DISCRIMINATOR common
  PROCEDURE ID          { procedureCode id-commonMeasurementTermination, ddMode common }
  CRITICALITY          ignore
}

-- *** CommonMeasurementFailure ***
commonMeasurementFailure NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE    CommonMeasurementFailureIndication
  MESSAGE DISCRIMINATOR common
  PROCEDURE ID          { procedureCode id-commonMeasurementFailure, ddMode common }
  CRITICALITY          ignore
}

-- *** SynchronisedRadioLinkReconfigurationCommit ***
synchronisedRadioLinkReconfigurationCommit NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE    RadioLinkReconfigurationCommit
  MESSAGE DISCRIMINATOR dedicated
  PROCEDURE ID          { procedureCode id-synchronisedRadioLinkReconfigurationCommit, ddMode common }
  CRITICALITY          ignore
}

-- *** SynchronisedRadioReconfigurationCancellation ***
synchronisedRadioLinkReconfigurationCancellation NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE    RadioLinkReconfigurationCancel
  MESSAGE DISCRIMINATOR dedicated
  PROCEDURE ID          { procedureCode id-synchronisedRadioLinkReconfigurationCancellation, ddMode common }
  CRITICALITY          ignore
}

-- *** RadioLinkFailure ***
radioLinkFailure NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE    RadioLinkFailureIndication
  MESSAGE DISCRIMINATOR dedicated
  PROCEDURE ID          { procedureCode id-radioLinkFailure, ddMode common }
  CRITICALITY          ignore
}

-- *** RadioLinkPreemption ***
radioLinkPreemption NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE    RadioLinkPreemptionRequiredIndication
  MESSAGE DISCRIMINATOR dedicated
  PROCEDURE ID          { procedureCode id-radioLinkPreemption, ddMode common }
  CRITICALITY          ignore
}

-- *** RadioLinkRestoration ***
radioLinkRestoration NBAP-ELEMENTARY-PROCEDURE ::= {
```

```
INITIATING MESSAGE      RadioLinkRestoreIndication
MESSAGE DISCRIMINATOR   dedicated
PROCEDURE ID            { procedureCode id-radioLinkRestoration, ddMode common }
CRITICALITY             ignore
}

-- *** DedicatedMeasurementReport ***
dedicatedMeasurementReport NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE      DedicatedMeasurementReport
  MESSAGE DISCRIMINATOR   dedicated
  PROCEDURE ID            { procedureCode id-dedicatedMeasurementReport, ddMode common }
  CRITICALITY             ignore
}

-- *** DedicatedMeasurementTermination ***
dedicatedMeasurementTermination NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE      DedicatedMeasurementTerminationRequest
  MESSAGE DISCRIMINATOR   dedicated
  PROCEDURE ID            { procedureCode id-dedicatedMeasurementTermination, ddMode common }
  CRITICALITY             ignore
}

-- *** DedicatedMeasurementFailure ***
dedicatedMeasurementFailure NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE      DedicatedMeasurementFailureIndication
  MESSAGE DISCRIMINATOR   dedicated
  PROCEDURE ID            { procedureCode id-dedicatedMeasurementFailure, ddMode common }
  CRITICALITY             ignore
}

-- *** DLPowerControl (FDD only) ***
downlinkPowerControlFDD NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE      DL-PowerControlRequest
  MESSAGE DISCRIMINATOR   dedicated
  PROCEDURE ID            { procedureCode id-downlinkPowerControl, ddMode fdd }
  CRITICALITY             ignore
}

-- *** DLPowerTimeslotControl (TDD only) ***
downlinkPowerTimeslotControl NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE      DL-PowerTimeslotControlRequest
  MESSAGE DISCRIMINATOR   dedicated
  PROCEDURE ID            { procedureCode id-downlinkPowerTimeslotControl, ddMode tdd }
  CRITICALITY             ignore
}

-- *** CompressedModeCommand (FDD only) ***
compressedModeCommand NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE      CompressedModeCommand
  MESSAGE DISCRIMINATOR   dedicated
  PROCEDURE ID            { procedureCode id-compressedModeCommand, ddMode fdd }
  CRITICALITY             ignore
}
```

```
-- *** UnblockResourceIndication ***
unblockResource NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE      UnblockResourceIndication
  MESSAGE DISCRIMINATOR   common
  PROCEDURE ID            { procedureCode id-unblockResource, ddMode common }
  CRITICALITY             ignore
}

-- *** ErrorIndication for Dedicated procedures ***
errorIndicationForDedicated NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE      ErrorIndication
  MESSAGE DISCRIMINATOR   dedicated
  PROCEDURE ID            { procedureCode id-errorIndicationForDedicated, ddMode common }
  CRITICALITY             ignore
}

-- *** ErrorIndication for Common procedures ***
errorIndicationForCommon NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE      ErrorIndication
  MESSAGE DISCRIMINATOR   common
  PROCEDURE ID            { procedureCode id-errorIndicationForCommon, ddMode common }
  CRITICALITY             ignore
}

-- *** CellSynchronisationReporting (TDD only) ***
cellSynchronisationReportingTDD NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE      CellSynchronisationReportTDD
  MESSAGE DISCRIMINATOR   common
  PROCEDURE ID            { procedureCode id-cellSynchronisationReporting, ddMode tdd }
  CRITICALITY             ignore
}

-- *** CellSynchronisationTermination (TDD only) ***
cellSynchronisationTerminationTDD NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE      CellSynchronisationTerminationRequestTDD
  MESSAGE DISCRIMINATOR   common
  PROCEDURE ID            { procedureCode id-cellSynchronisationTermination, ddMode tdd }
  CRITICALITY             ignore
}

-- *** CellSynchronisationFailure (TDD only) ***
cellSynchronisationFailureTDD NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE      CellSynchronisationFailureIndicationTDD
  MESSAGE DISCRIMINATOR   common
  PROCEDURE ID            { procedureCode id-cellSynchronisationFailure, ddMode tdd }
  CRITICALITY             ignore
}

-- *** PrivateMessage for Dedicated procedures ***
privateMessageForDedicated NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE      PrivateMessage
  MESSAGE DISCRIMINATOR   dedicated
  PROCEDURE ID            { procedureCode id-privateMessageForDedicated, ddMode common }
  CRITICALITY             ignore
}
```

```

}

-- *** PrivateMessage for Common procedures ***
privateMessageForCommon NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE      PrivateMessage
  MESSAGE DISCRIMINATOR   common
  PROCEDURE ID             { procedureCode id-privateMessageForCommon, ddMode common }
  CRITICALITY              ignore
}

-- *** InformationReporting ***
informationReporting NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE      InformationReport
  MESSAGE DISCRIMINATOR   common
  PROCEDURE ID             { procedureCode id-informationReporting, ddMode common }
  CRITICALITY              ignore
}

-- *** InformationExchangeTermination ***
informationExchangeTermination NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE      InformationExchangeTerminationRequest
  MESSAGE DISCRIMINATOR   common
  PROCEDURE ID             { procedureCode id-informationExchangeTermination, ddMode common }
  CRITICALITY              ignore
}

-- *** InformationExchangeFailure ***
informationExchangeFailure NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE      InformationExchangeFailureIndication
  MESSAGE DISCRIMINATOR   common
  PROCEDURE ID             { procedureCode id-informationExchangeFailure, ddMode common }
  CRITICALITY              ignore
}

}

END

```

### 9.3.3 PDU Definitions

```

-- *****
--
-- PDU definitions for NBAP.
--
-- *****

NBAP-PDU-Contents {
itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
umts-Access (20) modules (3) nbap (2) version1 (1) nbap-PDU-Contents (1) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

```

```
-- *****  
--  
-- IE parameter types from other modules.  
--  
-- *****
```

## IMPORTS

```
Active-Pattern-Sequence-Information,  
AddorDeleteIndicator,  
AICH-Power,  
AICH-TransmissionTiming,  
AllocationRetentionPriority,  
APPreambleSignature,  
APSubChannelNumber,  
AvailabilityStatus,  
BCCH-ModificationTime,  
BindingID,  
BlockingPriorityIndicator,  
SCTD-Indicator,  
Cause,  
CCTrCH-ID,  
CDSubChannelNumbers,  
CellParameterID,  
CellSyncBurstCode,  
CellSyncBurstCodeShift,  
CellSyncBurstRepetitionPeriod,  
CellSyncBurstSIR,  
CellSyncBurstTiming,  
CellSyncBurstTimingThreshold,  
CFN,  
Channel-Assignment-Indication,  
ChipOffset,  
C-ID,  
Closedlooptimingadjustmentmode,  
CommonChannelsCapacityConsumptionLaw,  
Compressed-Mode-Deactivation-Flag,  
CommonMeasurementAccuracy,  
CommonMeasurementType,  
CommonMeasurementValue,  
CommonMeasurementValueInformation,  
CommonPhysicalChannelID,  
Common-PhysicalChannel-Status-Information,  
Common-TransportChannel-Status-Information,  
CommonTransportChannelID,  
CommonTransportChannel-InformationResponse,  
CommunicationControlPortID,  
ConfigurationGenerationID,  
ConstantValue,  
CriticalityDiagnostics,  
CPCH-Allowed-Total-Rate,  
CPCHScramblingCodeNumber,  
CPCH-UL-DPCCH-SlotFormat,  
CRNC-CommunicationContextID,  
CSBMeasurementID,
```

CSBTransmissionID,  
DCH-FDD-Information,  
DCH-InformationResponse,  
DCH-ID,  
FDD-DCHs-to-Modify,  
TDD-DCHs-to-Modify,  
DCH-TDD-Information,  
DedicatedChannelsCapacityConsumptionLaw,  
DedicatedMeasurementType,  
DedicatedMeasurementValue,  
DedicatedMeasurementValueInformation,  
DiversityControlField,  
DiversityMode,  
DL-DPCH-SlotFormat,  
DL-or-Global-CapacityCredit,  
DL-Power,  
DLPowerAveragingWindowSize,  
DL-ScramblingCode,  
DL-TimeslotISCP,  
DL-Timeslot-Information,  
DL-TimeslotLCR-Information,  
DL-TimeslotISCPInfo,  
DL-TimeslotISCPInfoLCR,  
DL-TPC-Pattern01Count,  
DPC-Mode,  
DPCH-ID,  
DSCH-ID,  
DSCH-FDD-Common-Information,  
DSCH-FDD-Information,  
DSCH-InformationResponse,  
DSCH-TDD-Information,  
DwPCH-Power,  
End-Of-Audit-Sequence-Indicator,  
EnhancedDSCHPC,  
EnhancedDSCHPCCounter,  
EnhancedDSCHPCIndicator,  
EnhancedDSCHPCWnd,  
EnhancedDSCHPowerOffset,  
FDD-DL-ChannelisationCodeNumber,  
FDD-DL-CodeInformation,  
FDD-S-CCPCH-Offset,  
FDD-TPC-DownlinkStepSize,  
FirstRLS-Indicator,  
FNReportingIndicator,  
FPACH-Power,  
FrameAdjustmentValue,  
FrameHandlingPriority,  
FrameOffset,  
IB-OC-ID,  
IB-SG-DATA,  
IB-SG-POS,  
IB-SG-REP,  
IB-Type,  
InformationExchangeID,

InformationReportCharacteristics,  
InformationType,  
InnerLoopDLPCStatus,  
IPDL-FDD-Parameters,  
IPDL-TDD-Parameters,  
IPDL-Indicator,  
LimitedPowerIncrease,  
Local-Cell-ID,  
MaximumDL-PowerCapability,  
MaximumTransmissionPower,  
Max-Number-of-PCPCHes,  
MaxNrOfUL-DPDCHs,  
MaxPRACH-MidambleShifts,  
MeasurementFilterCoefficient,  
MeasurementID,  
MidambleAllocationMode,  
MidambleShiftAndBurstType,  
MidambleShiftLCR,  
MinimumDL-PowerCapability,  
MinSpreadingFactor,  
MinUL-ChannelisationCodeLength,  
MultiplexingPosition,  
NEOT,  
NCyclesPerSFNperiod,  
NFmax,  
NRepetitionsPerCyclePeriod,  
N-INSYNC-IND,  
N-OUTSYNC-IND,  
NeighbouringCellMeasurementInformation,  
NeighbouringFDDCellMeasurementInformation,  
NeighbouringTDDCellMeasurementInformation,  
NodeB-CommunicationContextID,  
NStartMessage,  
PagingIndicatorLength,  
PayloadCRC-PresenceIndicator,  
PCCPCH-Power,  
PCP-Length,  
PDSCH-CodeMapping,  
PDSCHSet-ID,  
PDSCH-ID,  
PICH-Mode,  
PICH-Power,  
PowerAdjustmentType,  
PowerOffset,  
PowerRaiseLimit,  
PRACH-Midamble,  
PreambleSignatures,  
PreambleThreshold,  
PredictedSFNSFNDeviationLimit,  
PredictedTUTRANGPSDeviationLimit,  
PrimaryCPICH-Power,  
PrimaryScramblingCode,  
PropagationDelay,  
SCH-TimeSlot,

PunctureLimit,  
PUSCHSet-ID,  
PUSCH-ID,  
QE-Selector,  
RACH-SlotFormat,  
RACH-SubChannelNumbers,  
ReferenceClockAvailability,  
ReferenceSFNoffset,  
RepetitionLength,  
RepetitionPeriod,  
ReportCharacteristics,  
RequestedDataValue,  
RequestedDataValueInformation,  
ResourceOperationalState,  
RL-Set-ID,  
RL-ID,  
Received-total-wide-band-power-Value,  
AdjustmentPeriod,  
ScaledAdjustmentRatio,  
MaxAdjustmentStep,  
RNC-ID,  
ScramblingCodeNumber,  
SecondaryCCPCH-SlotFormat,  
Segment-Type,  
S-FieldLength,  
SFN,  
SFNSFNChangeLimit,  
SFNSFNDriftRate,  
SFNSFNDriftRateQuality,  
SFNSFNQuality,  
ShutdownTimer,  
SIB-Originator,  
SpecialBurstScheduling,  
SSDT-Cell-Identity,  
SSDT-CellID-Length,  
SSDT-Indication,  
Start-Of-Audit-Sequence-Indicator,  
STTD-Indicator,  
SSDT-SupportIndicator,  
SyncCase,  
SyncFrameNumber,  
SynchronisationReportCharacteristics,  
SynchronisationReportType,  
T-Cell,  
T-RLFALLURE,  
TDD-ChannelisationCode,  
TDD-ChannelisationCodeLCR,  
TDD-DL-Code-LCR-Information,  
TDD-DPCHOffset,  
TDD-TPC-DownlinkStepSize,  
TDD-PhysicalChannelOffset,  
TDD-UL-Code-LCR-Information,  
TFCI2-BearerInformationResponse,  
TFCI-Coding,



```
TFCI-Presence,
TFCI-SignallingMode,
TFCS,
TimeSlot,
TimeSlotLCR,
TimeSlotDirection,
TimeSlotStatus,
TimingAdjustmentValue,
TimingAdvanceApplied,
ToAWE,
ToAWS,
TransmissionDiversityApplied,
TransmitDiversityIndicator,
TransmissionGapPatternSequenceCodeInformation,
Transmission-Gap-Pattern-Sequence-Information,
TransportBearerRequestIndicator,
TransportFormatSet,
TransportLayerAddress,
TSTD-Indicator,
TUTRANGPS,
TUTRANGPSChangeLimit,
TUTRANGPSDriftRate,
TUTRANGPSDriftRateQuality,
TUTRANGPSQuality,
UARFCN,
UC-Id,
USCH-Information,
USCH-InformationResponse,
UL-CapacityCredit,
UL-DPCCH-SlotFormat,
UL-SIR,
UL-FP-Mode,
UL-PhysCH-SF-Variation,
UL-ScramblingCode,
UL-Timeslot-Information,
UL-TimeslotLCR-Information,
UL-TimeSlot-ISCP-Info,
UL-TimeSlot-ISCP-LCR-Info,
UL-TimeslotISCP-Value,
UL-TimeslotISCP-Value-IncrDecrThres,
USCH-ID,
UL-Synchronisation-Parameters-LCR,
TDD-DL-DPCH-TimeSlotFormat-LCR,
TDD-UL-DPCH-TimeSlotFormat-LCR,
TDD-TPC-UplinkStepSize-LCR
FROM NBAP-IES

PrivateIE-Container{},
ProtocolExtensionContainer{},
ProtocolIE-Container{},
ProtocolIE-Single-Container{},
ProtocolIE-ContainerList{},
NBAP-PRIVATE-IES,
NBAP-PROTOCOL-IES,
```

NBAP-PROTOCOL-EXTENSION  
FROM NBAP-Containers

id-Active-Pattern-Sequence-Information,  
id-AdjustmentRatio,  
id-AICH-Information,  
id-AICH-ParametersListIE-CTCH-ReconfRqstFDD,  
id-AP-AICH-Information,  
id-AP-AICH-ParametersListIE-CTCH-ReconfRqstFDD,  
id-BCH-Information,  
id-BCCH-ModificationTime,  
id-BlockingPriorityIndicator,  
id-Cause,  
id-CauseLevel-PSCH-ReconfFailureTDD,  
id-CauseLevel-RL-AdditionFailureFDD,  
id-CauseLevel-RL-AdditionFailureTDD,  
id-CauseLevel-RL-ReconfFailure,  
id-CauseLevel-RL-SetupFailureFDD,  
id-CauseLevel-RL-SetupFailureTDD,  
id-CauseLevel-SyncAdjustmntFailureTDD,  
id-CCP-InformationItem-AuditRsp,  
id-CCP-InformationList-AuditRsp,  
id-CCP-InformationItem-ResourceStatusInd,  
id-CCTrCH-InformationItem-RL-FailureInd,  
id-CCTrCH-InformationItem-RL-RestoreInd,  
id-CDCA-ICH-Information,  
id-CDCA-ICH-ParametersListIE-CTCH-ReconfRqstFDD,  
id-CellAdjustmentInfo-SyncAdjustmntRqstTDD,  
id-CellAdjustmentInfoItem-SyncAdjustmentRqstTDD,  
id-Cell-InformationItem-AuditRsp,  
id-Cell-InformationItem-ResourceStatusInd,  
id-Cell-InformationList-AuditRsp,  
id-CellParameterID,  
id-CellSyncBurstTransInit-CellSyncInitiationRqstTDD,  
id-CellSyncBurstMeasureInit-CellSyncInitiationRqstTDD,  
id-cellSyncBurstRepetitionPeriod,  
id-CellSyncBurstTransReconfiguration-CellSyncReconfRqstTDD,  
id-CellSyncBurstTransReconfInfo-CellSyncReconfRqstTDD,  
id-CellSyncBurstMeasReconfiguration-CellSyncReconfRqstTDD,  
id-CellSyncBurstMeasInfoList-CellSyncReconfRqstTDD,  
id-CellSyncBurstInfoList-CellSyncReconfRqstTDD,  
id-CellSyncInfo-CellSyncReprtTDD,  
id-CFN,  
id-CFNReportingIndicator,  
id-C-ID,  
id-Closed-Loop-Timing-Adjustment-Mode,  
id-CommonMeasurementAccuracy,  
id-CommonMeasurementObjectType-CM-Rprt,  
id-CommonMeasurementObjectType-CM-Rqst,  
id-CommonMeasurementObjectType-CM-Rsp,  
id-CommonMeasurementType,  
id-CommonPhysicalChannelID,  
id-CommonPhysicalChannelType-CTCH-ReconfRqstFDD,  
id-CommonPhysicalChannelType-CTCH-SetupRqstFDD,

id-CommonPhysicalChannelType-CTCH-SetupRqstTDD,  
id-CommunicationContextInfoItem-Reset,  
id-CommunicationControlPortID,  
id-CommunicationControlPortInfoItem-Reset,  
id-Compressed-Mode-Deactivation-Flag,  
id-ConfigurationGenerationID,  
id-CPCH-Information,  
id-CPCH-Parameters-CTCH-SetupRsp,  
id-CPCH-ParametersListIE-CTCH-ReconfRqstFDD,  
id-CRNC-CommunicationContextID,  
id-CriticalityDiagnostics,  
id-CSBTransmissionID,  
id-CSBMeasurementID,  
id-DCHs-to-Add-FDD,  
id-DCHs-to-Add-TDD,  
id-DCH-AddList-RL-ReconfPrepTDD,  
id-DCH-DeleteList-RL-ReconfPrepFDD,  
id-DCH-DeleteList-RL-ReconfPrepTDD,  
id-DCH-DeleteList-RL-ReconfRqstFDD,  
id-DCH-DeleteList-RL-ReconfRqstTDD,  
id-DCH-FDD-Information,  
id-DCH-TDD-Information,  
id-DCH-InformationResponse,  
id-FDD-DCHs-to-Modify,  
id-TDD-DCHs-to-Modify,  
id-DedicatedMeasurementObjectType-DM-Rprt,  
id-DedicatedMeasurementObjectType-DM-Rqst,  
id-DedicatedMeasurementObjectType-DM-Rsp,  
id-DedicatedMeasurementType,  
id-DL-CCTrCH-InformationAddList-RL-ReconfPrepTDD,  
id-DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD,  
id-DL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD,  
id-DL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD,  
id-DL-CCTrCH-InformationItem-RL-SetupRqstTDD,  
id-DL-CCTrCH-InformationList-RL-AdditionRqstTDD,  
id-DL-CCTrCH-InformationList-RL-SetupRqstTDD,  
id-DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD,  
id-DL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD,  
id-DL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD,  
id-DL-DPCH-InformationAddListIE-RL-ReconfPrepTDD,  
id-DL-DPCH-InformationItem-RL-AdditionRqstTDD,  
id-DL-DPCH-InformationList-RL-SetupRqstTDD,  
id-DL-DPCH-InformationModify-AddListIE-RL-ReconfPrepTDD,  
id-DL-DPCH-InformationModify-DeleteListIE-RL-ReconfPrepTDD,  
id-DL-DPCH-InformationModify-ModifyListIE-RL-ReconfPrepTDD,  
id-DL-DPCH-Information-RL-ReconfPrepFDD,  
id-DL-DPCH-Information-RL-ReconfRqstFDD,  
id-DL-DPCH-Information-RL-SetupRqstFDD,  
id-DL-ReferencePowerInformationItem-DL-PC-Rqst,  
id-DLReferencePower,  
id-DLReferencePowerList-DL-PC-Rqst,  
id-DL-TPC-Pattern01Count,  
id-DPC-Mode,  
id-DPCHConstant,

id-DSCH-AddItem-RL-ReconfPrepFDD,  
id-DSCHs-to-Add-FDD,  
id-DSCH-DeleteItem-RL-ReconfPrepFDD,  
id-DSCH-DeleteList-RL-ReconfPrepFDD,  
id-DSCHs-to-Add-TDD,  
id-DSCH-Information-DeleteList-RL-ReconfPrepTDD,  
id-DSCH-Information-ModifyList-RL-ReconfPrepTDD,  
id-DSCH-InformationResponse,  
id-DSCH-FDD-Information,  
id-DSCH-FDD-Common-Information,  
id-DSCH-TDD-Information,  
id-DSCH-ModifyItem-RL-ReconfPrepFDD,  
id-DSCH-ModifyList-RL-ReconfPrepFDD,  
id-End-Of-Audit-Sequence-Indicator,  
id-EnhancedDSCHPC,  
id-EnhancedDSCHPCIndicator,  
id-FACH-Information,  
id-FACH-ParametersList-CTCH-ReconfRqstTDD,  
id-FACH-ParametersList-CTCH-SetupRsp,  
id-FACH-ParametersListIE-CTCH-ReconfRqstFDD,  
id-FACH-ParametersListIE-CTCH-SetupRqstFDD,  
id-FACH-ParametersListIE-CTCH-SetupRqstTDD,  
id-IndicationType-ResourceStatusInd,  
id-InformationExchangeID,  
id-InformationExchangeObjectType-InfEx-Rqst,  
id-InformationExchangeObjectType-InfEx-Rsp,  
id-InformationExchangeObjectType-InfEx-Rprt,  
id-InformationReportCharacteristics,  
id-InformationType,  
id-InitDL-Power,  
id-InnerLoopDLPCStatus,  
id-IntStdPhCellSyncInfoItem-CellSyncReprtTDD,  
id-IPDLParameter-Information-Cell-ReconfRqstFDD,  
id-IPDLParameter-Information-Cell-SetupRqstFDD,  
id-IPDLParameter-Information-Cell-ReconfRqstTDD,  
id-IPDLParameter-Information-Cell-SetupRqstTDD,  
id-LateEntranceCellSyncInfoItem-CellSyncReprtTDD,  
id-Limited-power-increase-information-Cell-SetupRqstFDD,  
id-Local-Cell-ID,  
id-Local-Cell-Group-InformationItem-AuditRsp,  
id-Local-Cell-Group-InformationItem-ResourceStatusInd,  
id-Local-Cell-Group-InformationItem2-ResourceStatusInd,  
id-Local-Cell-Group-InformationList-AuditRsp,  
id-Local-Cell-InformationItem-AuditRsp,  
id-Local-Cell-InformationItem-ResourceStatusInd,  
id-Local-Cell-InformationItem2-ResourceStatusInd,  
id-Local-Cell-InformationList-AuditRsp,  
id-AdjustmentPeriod,  
id-MaxAdjustmentStep,  
id-MaximumTransmissionPower,  
id-MeasurementFilterCoefficient,  
id-MeasurementID,  
id-MIB-SB-SIB-InformationList-SystemInfoUpdateRqst,  
id-NCyclesPerSFNperiod,

id-NeighbouringCellMeasurementInformation,  
id-NodeB-CommunicationContextID,  
id-NRepetitionsPerCyclePeriod,  
id-P-CCPCH-Information,  
id-P-CPICH-Information,  
id-P-SCH-Information,  
id-PCCPCH-Information-Cell-ReconfRqstTDD,  
id-PCCPCH-Information-Cell-SetupRqstTDD,  
id-PCH-Parameters-CTCH-ReconfRqstTDD,  
id-PCH-Parameters-CTCH-SetupRsp,  
id-PCH-ParametersItem-CTCH-ReconfRqstFDD,  
id-PCH-ParametersItem-CTCH-SetupRqstFDD,  
id-PCH-ParametersItem-CTCH-SetupRqstTDD,  
id-PCH-Information,  
id-PCPCH-Information,  
id-PICH-ParametersItem-CTCH-ReconfRqstFDD,  
id-PDSCH-Information-AddListIE-PSCH-ReconfRqst,  
id-PDSCH-Information-ModifyListIE-PSCH-ReconfRqst,  
id-PDSCH-RL-ID,  
id-PDSCHSets-AddList-PSCH-ReconfRqst,  
id-PDSCHSets-DeleteList-PSCH-ReconfRqst,  
id-PDSCHSets-ModifyList-PSCH-ReconfRqst,  
id-PICH-Information,  
id-PICH-Parameters-CTCH-ReconfRqstTDD,  
id-PICH-ParametersItem-CTCH-SetupRqstTDD,  
id-PowerAdjustmentType,  
id-PRACH-Information,  
id-PRACHConstant,  
id-PRACH-ParametersItem-CTCH-SetupRqstTDD,  
id-PRACH-ParametersListIE-CTCH-ReconfRqstFDD,  
id-PrimaryCCPCH-Information-Cell-ReconfRqstFDD,  
id-PrimaryCCPCH-Information-Cell-SetupRqstFDD,  
id-PrimaryCPICH-Information-Cell-ReconfRqstFDD,  
id-PrimaryCPICH-Information-Cell-SetupRqstFDD,  
id-PrimarySCH-Information-Cell-ReconfRqstFDD,  
id-PrimarySCH-Information-Cell-SetupRqstFDD,  
id-PrimaryScramblingCode,  
id-SCH-Information-Cell-ReconfRqstTDD,  
id-SCH-Information-Cell-SetupRqstTDD,  
id-PUSCH-Information-AddListIE-PSCH-ReconfRqst,  
id-PUSCH-Information-ModifyListIE-PSCH-ReconfRqst,  
id-PUSCHConstant,  
id-PUSCHSets-AddList-PSCH-ReconfRqst,  
id-PUSCHSets-DeleteList-PSCH-ReconfRqst,  
id-PUSCHSets-ModifyList-PSCH-ReconfRqst,  
id-RACH-Information,  
id-RACH-Parameters-CTCH-SetupRsp,  
id-RACH-ParametersItem-CTCH-SetupRqstFDD,  
id-RACH-ParameterItem-CTCH-SetupRqstTDD,  
id-ReferenceClockAvailability,  
id-ReferenceSFNoffset,  
id-ReportCharacteristics,  
id-Reporting-Object-RL-FailureInd,  
id-Reporting-Object-RL-RestoreInd,

id-ResetIndicator,  
id-RL-InformationItem-DM-Rprt,  
id-RL-InformationItem-DM-Rqst,  
id-RL-InformationItem-DM-Rsp,  
id-RL-InformationItem-RL-AdditionRqstFDD,  
id-RL-InformationItem-RL-DeletionRqst,  
id-RL-InformationItem-RL-FailureInd,  
id-RL-InformationItem-RL-PreemptRequiredInd,  
id-RL-InformationItem-RL-ReconfPrepFDD,  
id-RL-InformationItem-RL-ReconfRqstFDD,  
id-RL-InformationItem-RL-RestoreInd,  
id-RL-InformationItem-RL-SetupRqstFDD,  
id-RL-InformationList-RL-AdditionRqstFDD,  
id-RL-InformationList-RL-DeletionRqst,  
id-RL-InformationList-RL-PreemptRequiredInd,  
id-RL-InformationList-RL-ReconfPrepFDD,  
id-RL-InformationList-RL-ReconfRqstFDD,  
id-RL-InformationList-RL-SetupRqstFDD,  
id-RL-InformationResponseItem-RL-AdditionRspFDD,  
id-RL-InformationResponseItem-RL-ReconfReady,  
id-RL-InformationResponseItem-RL-ReconfRsp,  
id-RL-InformationResponseItem-RL-SetupRspFDD,  
id-RL-InformationResponseList-RL-AdditionRspFDD,  
id-RL-InformationResponseList-RL-ReconfReady,  
id-RL-InformationResponseList-RL-ReconfRsp,  
id-RL-InformationResponseList-RL-SetupRspFDD,  
id-RL-InformationResponse-RL-AdditionRspTDD,  
id-RL-InformationResponse-RL-SetupRspTDD,  
id-RL-Information-RL-AdditionRqstTDD,  
id-RL-Information-RL-ReconfRqstTDD,  
id-RL-Information-RL-ReconfPrepTDD,  
id-RL-Information-RL-SetupRqstTDD,  
id-RL-ReconfigurationFailureItem-RL-ReconfFailure,  
id-RL-Set-InformationItem-DM-Rprt,  
id-RL-Set-InformationItem-DM-Rsp,  
id-RL-Set-InformationItem-RL-FailureInd,  
id-RL-Set-InformationItem-RL-RestoreInd,  
id-S-CCPCH-Information,  
id-S-CPICH-Information,  
id-SCH-Information,  
id-S-SCH-Information,  
id-Secondary-CCPCHListIE-CTCH-ReconfRqstTDD,  
id-Secondary-CCPCH-parameterListIE-CTCH-SetupRqstTDD,  
id-Secondary-CCPCH-Parameters-CTCH-ReconfRqstTDD,  
id-SecondaryCPICH-InformationItem-Cell-ReconfRqstFDD,  
id-SecondaryCPICH-InformationItem-Cell-SetupRqstFDD,  
id-SecondaryCPICH-InformationList-Cell-ReconfRqstFDD,  
id-SecondaryCPICH-InformationList-Cell-SetupRqstFDD,  
id-SecondarySCH-Information-Cell-ReconfRqstFDD,  
id-SecondarySCH-Information-Cell-SetupRqstFDD,  
id-SegmentInformationListIE-SystemInfoUpdate,  
id-SFN,  
id-SFNReportingIndicator,  
id-ShutdownTimer,

id-SSDT-CellIDforEDSCHPC,  
id-Start-Of-Audit-Sequence-Indicator,  
id-Successful-RL-InformationRespItem-RL-AdditionFailureFDD,  
id-Successful-RL-InformationRespItem-RL-SetupFailureFDD,  
id-Synchronisation-Configuration-Cell-ReconfRqst,  
id-Synchronisation-Configuration-Cell-SetupRqst,  
id-SyncCase,  
id-SyncCaseIndicatorItem-Cell-SetupRqstTDD-PSCH,  
id-SyncFrameNumber,  
id-SynchronisationReportType,  
id-SynchronisationReportCharacteristics,  
id-SyncReportType-CellSyncReprtTDD,  
id-T-Cell,  
id-TFCI2-Bearer-Information-RL-SetupRqstFDD,  
id-TFCI2-BearerInformationResponse,  
id-TFCI2-BearerSpecificInformation-RL-ReconfPrepFDD,  
id-Transmission-Gap-Pattern-Sequence-Information,  
id-TimeSlotConfigurationList-Cell-ReconfRqstTDD,  
id-TimeSlotConfigurationList-Cell-SetupRqstTDD,  
id-timeslotInfo-CellSyncInitiationRqstTDD,  
id-TimeslotISCPInfo,  
id-TimingAdvanceApplied,  
id-TransmissionDiversityApplied,  
id-UARFCNforNt,  
id-UARFCNforNd,  
id-UARFCNforNu,  
id-UL-CCTrCH-InformationAddList-RL-ReconfPrepTDD,  
id-UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD,  
id-UL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD,  
id-UL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD,  
id-UL-CCTrCH-InformationItem-RL-SetupRqstTDD,  
id-UL-CCTrCH-InformationList-RL-AdditionRqstTDD,  
id-UL-CCTrCH-InformationList-RL-SetupRqstTDD,  
id-UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD,  
id-UL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD,  
id-UL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD,  
id-UL-DPCH-InformationAddListIE-RL-ReconfPrepTDD,  
id-UL-DPCH-InformationItem-RL-AdditionRqstTDD,  
id-UL-DPCH-InformationList-RL-SetupRqstTDD,  
id-UL-DPCH-InformationModify-AddListIE-RL-ReconfPrepTDD,  
id-UL-DPCH-InformationModify-DeleteListIE-RL-ReconfPrepTDD,  
id-UL-DPCH-InformationModify-ModifyListIE-RL-ReconfPrepTDD,  
id-UL-DPCH-Information-RL-ReconfPrepFDD,  
id-UL-DPCH-Information-RL-ReconfRqstFDD,  
id-UL-DPCH-Information-RL-SetupRqstFDD,  
id-Unsuccessful-cell-InformationRespItem-SyncAdjustmntFailureTDD,  
id-Unsuccessful-PDSCHSetItem-PSCH-ReconfFailureTDD,  
id-Unsuccessful-PUSCHSetItem-PSCH-ReconfFailureTDD,  
id-Unsuccessful-RL-InformationRespItem-RL-AdditionFailureFDD,  
id-Unsuccessful-RL-InformationRespItem-RL-SetupFailureFDD,  
id-Unsuccessful-RL-InformationResp-RL-AdditionFailureTDD,  
id-Unsuccessful-RL-InformationResp-RL-SetupFailureTDD,  
id-USCH-Information-Add,  
id-USCH-Information-DeleteList-RL-ReconfPrepTDD,

id-USCH-Information-ModifyList-RL-ReconfPrepTDD,  
id-USCH-InformationResponse,  
id-USCH-Information,  
id-DL-DPCH-LCR-Information-RL-SetupRqstTDD,  
id-DwPCH-LCR-Information,  
id-DwPCH-LCR-InformationList-AuditRsp,  
id-DwPCH-LCR-Information-Cell-SetupRqstTDD,  
id-DwPCH-LCR-Information-Cell-ReconfRqstTDD,  
id-DwPCH-LCR-Information-ResourceStatusInd,  
id-maxFACH-Power-LCR-CTCH-SetupRqstTDD,  
id-maxFACH-Power-LCR-CTCH-ReconfRqstTDD,  
id-FPACH-LCR-Information,  
id-FPACH-LCR-Information-AuditRsp,  
id-FPACH-LCR-InformationList-AuditRsp,  
id-FPACH-LCR-InformationList-ResourceStatusInd,  
id-FPACH-LCR-Parameters-CTCH-SetupRqstTDD,  
id-FPACH-LCR-Parameters-CTCH-ReconfRqstTDD,  
id-PCCPCH-LCR-Information-Cell-SetupRqstTDD,  
id-PCH-Power-LCR-CTCH-SetupRqstTDD,  
id-PCH-Power-LCR-CTCH-ReconfRqstTDD,  
id-PICH-LCR-Parameters-CTCH-SetupRqstTDD,  
id-PRACH-LCR-ParametersList-CTCH-SetupRqstTDD,  
id-RL-InformationResponse-LCR-RL-SetupRspTDD,  
id-Secondary-CCPCH-LCR-parameterList-CTCH-SetupRqstTDD,  
id-TimeSlot,  
id-TimeSlotConfigurationList-LCR-Cell-ReconfRqstTDD,  
id-TimeSlotConfigurationList-LCR-Cell-SetupRqstTDD,  
id-TimeslotISCP-LCR-InfoList-RL-SetupRqstTDD,  
id-TimeSlotLCR-CM-Rqst,  
id-UL-DPCH-LCR-Information-RL-SetupRqstTDD,  
id-DL-DPCH-InformationItem-LCR-RL-AdditionRqstTDD,  
id-UL-DPCH-InformationItem-LCR-RL-AdditionRqstTDD,  
id-TimeslotISCP-InformationList-LCR-RL-AdditionRqstTDD,  
id-DL-DPCH-LCR-InformationAddList-RL-ReconfPrepTDD,  
id-DL-DPCH-LCR-InformationModify-AddList-RL-ReconfPrepTDD,  
id-DL-Timeslot-LCR-InformationModify-ModifyList-RL-ReconfPrepTDD,  
id-TimeslotISCPInfoList-LCR-DL-PC-RqstTDD,  
id-UL-DPCH-LCR-InformationAddListIE-RL-ReconfPrepTDD,  
id-UL-DPCH-LCR-InformationModify-AddList,  
id-UL-TimeslotLCR-Information-RL-ReconfPrepTDD,  
id-UL-SIRTarget,  
id-PDSCH-AddInformation-LCR-PSCH-ReconfRqst,  
id-PDSCH-AddInformation-LCR-AddListIE-PSCH-ReconfRqst,  
id-PDSCH-ModifyInformation-LCR-PSCH-ReconfRqst,  
id-PDSCH-ModifyInformation-LCR-ModifyListIE-PSCH-ReconfRqst,  
id-PUSCH-AddInformation-LCR-PSCH-ReconfRqst,  
id-PUSCH-AddInformation-LCR-AddListIE-PSCH-ReconfRqst,  
id-PUSCH-ModifyInformation-LCR-PSCH-ReconfRqst,  
id-PUSCH-ModifyInformation-LCR-ModifyListIE-PSCH-ReconfRqst,  
id-PUSCH-Info-DM-Rqst,  
id-PUSCH-Info-DM-Rsp,  
id-PUSCH-Info-DM-Rprt,  
id-RL-InformationResponse-LCR-RL-AdditionRspTDD,  
id-UL-Synchronisation-Parameters-LCR,



id-DL-DPCH-TimeSlotFormat-LCR-ModifyItem-RL-ReconfPrepTDD,  
id-UL-DPCH-TimeSlotFormat-LCR-ModifyItem-RL-ReconfPrepTDD,  
id-TDD-TPC-UplinkStepSize-LCR-RL-SetupRqstTDD,  
id-TDD-TPC-UplinkStepSize-LCR-RL-AdditionRqstTDD,  
id-TDD-TPC-DownlinkStepSize-RL-AdditionRqstTDD,  
id-TDD-TPC-UplinkStepSize-InformationAdd-LCR-RL-ReconfPrepTDD,  
id-TDD-TPC-UplinkStepSize-InformationModify-LCR-RL-ReconfPrepTDD,  
id-TDD-TPC-DownlinkStepSize-InformationModify-RL-ReconfPrepTDD,  
id-TDD-TPC-DownlinkStepSize-InformationAdd-RL-ReconfPrepTDD,

maxNrOfCCTrCHs,  
maxNrOfCellSyncBursts,  
maxNrOfCodes,  
maxNrOfCPCHs,  
maxNrOfDCHs,  
maxNrOfDLTSSs,  
maxNrOfDLTSLCRs,  
maxNrOfDPCHs,  
maxNrOfDPCHLCRs,  
maxNrOfDSCHs,  
maxNrOfFACHs,  
maxNrOfRLs,  
maxNrOfRLs-1,  
maxNrOfRLs-2,  
maxNrOfRLSets,  
maxNrOfPCPCHs,  
maxNrOfPDSCHs,  
maxNrOfPUSCHs,  
maxNrOfPRACHLCRs,  
maxNrOfPDSCHSets,  
maxNrOfPUSCHSets,  
maxNrOfReceiptsPerSyncFrame,  
maxNrOfSCCPCHs,  
maxNrOfSCCPCHLCRs,  
maxNrOfULTSSs,  
maxNrOfULTSLCRs,  
maxNrOfUSCHs,  
maxAPSigNum,  
maxCPCHCell,  
maxFACHCell,  
maxFPACHCell,  
maxNoofLen,  
maxRACHCell,  
maxPCPCHCell,  
maxPRACHCell,  
maxSCCPCHCell,  
maxSCPICHCell,  
maxCellinNodeB,  
maxCCPinNodeB,  
maxCommunicationContext,  
maxLocalCellinNodeB,  
maxNrOfSlotFormatsPRACH,  
maxNrOfCellSyncBursts,  
maxNrOfReceiptsPerSyncFrame,

```

    maxIB,
    maxIBSEG
FROM NBAP-Constants;

-- *****
--
-- COMMON TRANSPORT CHANNEL SETUP REQUEST FDD
--
-- *****

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

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

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

CommonPhysicalChannelType-CTCH-SetupRqstFDD ::= CHOICE {
    secondary-CCPCH-parameters    Secondary-CCPCH-CTCH-SetupRqstFDD,
    PRACH-parameters              PRACH-CTCH-SetupRqstFDD,
    PCPCHes-parameters            PCPCH-CTCH-SetupRqstFDD,
    ...
}

Secondary-CCPCH-CTCH-SetupRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID        CommonPhysicalChannelID,
    fdd-S-CCPCH-Offset             FDD-S-CCPCH-Offset,
    dl-ScramblingCode              DL-ScramblingCode    OPTIONAL,
    -- This IE shall be present if the PCH Parameters IE is not present
    fdd-DL-ChannelisationCodeNumber    FDD-DL-ChannelisationCodeNumber,
    tFCS                            TFCS,
    secondary-CCPCH-SlotFormat      SecondaryCCPCH-SlotFormat,
    tFCI-Presence                   TFCI-Presence    OPTIONAL,
    -- This IE shall be present if the Secondary CCPCH Slot Format is set to any of the values from 8 to 17
    multiplexingPosition            MultiplexingPosition,
    powerOffsetInformation           PowerOffsetInformation-CTCH-SetupRqstFDD,
    sTTD-Indicator                  STTD-Indicator,
    fACH-Parameters                 FACH-ParametersList-CTCH-SetupRqstFDD    OPTIONAL,
    pCH-Parameters                  PCH-Parameters-CTCH-SetupRqstFDD    OPTIONAL,
    iE-Extensions                    ProtocolExtensionContainer    { { Secondary-CCPCHItem-CTCH-SetupRqstFDD-ExtIEs} }    OPTIONAL,
    ...
}

```

```

}

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

PowerOffsetInformation-CTCH-SetupRqstFDD ::= SEQUENCE {
    p01-ForTFCI-Bits          PowerOffset,
    p03-ForPilotBits          PowerOffset,
    iE-Extensions              ProtocolExtensionContainer { { PowerOffsetInformation-CTCH-SetupRqstFDD-ExtIEs } } OPTIONAL,
    ...
}

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

FACH-ParametersList-CTCH-SetupRqstFDD ::= ProtocolIE-Single-Container {{ FACH-ParametersListIEs-CTCH-SetupRqstFDD }}

FACH-ParametersListIEs-CTCH-SetupRqstFDD NBAP-PROTOCOL-IES ::= {
    { ID id-FACH-ParametersListIE-CTCH-SetupRqstFDD    CRITICALITY reject    TYPE FACH-ParametersListIE-CTCH-SetupRqstFDD PRESENCE mandatory }
}

FACH-ParametersListIE-CTCH-SetupRqstFDD ::= SEQUENCE (SIZE (1..maxNrOfFACHs)) OF FACH-ParametersItem-CTCH-SetupRqstFDD

FACH-ParametersItem-CTCH-SetupRqstFDD ::= SEQUENCE {
    commonTransportChannelID      CommonTransportChannelID,
    transportFormatSet            TransportFormatSet,
    toAWS                          ToAWS,
    toAWE                          ToAWE,
    maxFACH-Power                 DL-Power,
    iE-Extensions                  ProtocolExtensionContainer { { FACH-ParametersItem-CTCH-SetupRqstFDD-ExtIEs } } OPTIONAL,
    ...
}

FACH-ParametersItem-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PCH-Parameters-CTCH-SetupRqstFDD ::= ProtocolIE-Single-Container {{ PCH-ParametersIE-CTCH-SetupRqstFDD }}

PCH-ParametersIE-CTCH-SetupRqstFDD NBAP-PROTOCOL-IES ::= {
    { ID id-PCH-ParametersItem-CTCH-SetupRqstFDD    CRITICALITY reject    TYPE PCH-ParametersItem-CTCH-SetupRqstFDD PRESENCE mandatory }
}

PCH-ParametersItem-CTCH-SetupRqstFDD ::= SEQUENCE {
    commonTransportChannelID      CommonTransportChannelID,
    transportFormatSet            TransportFormatSet,
    toAWS                          ToAWS,
    toAWE                          ToAWE,
    pCH-Power                      DL-Power,
    pICH-Parameters                PICH-Parameters-CTCH-SetupRqstFDD,
    iE-Extensions                  ProtocolExtensionContainer { { PCH-ParametersItem-CTCH-SetupRqstFDD-ExtIEs } } OPTIONAL,
    ...
}

```

```

}
PCH-ParametersItem-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}
PICH-Parameters-CTCH-SetupRqstFDD ::= SEQUENCE {
  commonPhysicalChannelID          CommonPhysicalChannelID,
  fdd-dl-ChannelisationCodeNumber  FDD-DL-ChannelisationCodeNumber,
  pICH-Power                       PICH-Power,
  pICH-Mode                        PICH-Mode,
  sTTD-Indicator                   STTD-Indicator,
  iE-Extensions                    ProtocolExtensionContainer { { PICH-Parameters-CTCH-SetupRqstFDD-ExtIEs} } OPTIONAL,
  ...
}
PICH-Parameters-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}
PRACH-CTCH-SetupRqstFDD ::= SEQUENCE {
  commonPhysicalChannelID          CommonPhysicalChannelID,
  scramblingCodeNumber             ScramblingCodeNumber,
  tFCS                             TFCS,
  preambleSignatures               PreambleSignatures,
  allowedSlotFormatInformationList  AllowedSlotFormatInformationList-CTCH-SetupRqstFDD,
  rACH-SubChannelNumbers           RACH-SubChannelNumbers,
  ul-punctureLimit                 PunctureLimit,
  preambleThreshold                PreambleThreshold,
  rACH-Parameters                  RACH-Parameters-CTCH-SetupRqstFDD,
  aICH-Parameters                  AICH-Parameters-CTCH-SetupRqstFDD,
  iE-Extensions                    ProtocolExtensionContainer { { PRACHItem-CTCH-SetupRqstFDD-ExtIEs} } OPTIONAL,
  ...
}
PRACHItem-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}
AllowedSlotFormatInformationList-CTCH-SetupRqstFDD ::= SEQUENCE (SIZE (1.. maxNrOfSlotFormatsPRACH)) OF AllowedSlotFormatInformationItem-CTCH-SetupRqstFDD
AllowedSlotFormatInformationItem-CTCH-SetupRqstFDD ::= SEQUENCE {
  rACHSlotFormat                   RACH-SlotFormat,
  iE-Extensions                    ProtocolExtensionContainer { { AllowedSlotFormatInformationItem-CTCH-SetupRqstFDD-ExtIEs} } OPTIONAL,
  ...
}
AllowedSlotFormatInformationItem-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}
RACH-Parameters-CTCH-SetupRqstFDD ::= ProtocolIE-Single-Container { { RACH-ParametersIE-CTCH-SetupRqstFDD } }

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RACH-ParametersIE-CTCH-SetupRqstFDD NBAP-PROTOCOL-IES ::= {
  { ID id-RACH-ParametersItem-CTCH-SetupRqstFDD    CRITICALITY reject  TYPE RACH-ParametersItem-CTCH-SetupRqstFDD  PRESENCE mandatory }
}

RACH-ParametersItem-CTCH-SetupRqstFDD ::= SEQUENCE {
  commonTransportChannelID          CommonTransportChannelID,
  transportFormatSet                TransportFormatSet,
  iE-Extensions                     ProtocolExtensionContainer { { RACH-ParametersItem-CTCH-SetupRqstFDD-ExtIEs} }  OPTIONAL,
  ...
}

RACH-ParametersItem-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

AICH-Parameters-CTCH-SetupRqstFDD ::= SEQUENCE {
  commonPhysicalChannelID          CommonPhysicalChannelID,
  aICH-TransmissionTiming          AICH-TransmissionTiming,
  fdd-dl-ChannelisationCodeNumber  FDD-DL-ChannelisationCodeNumber,
  aICH-Power                       AICH-Power,
  sTTD-Indicator                   STTD-Indicator,
  iE-Extensions                     ProtocolExtensionContainer { { AICH-Parameters-CTCH-SetupRqstFDD-ExtIEs} }  OPTIONAL,
  ...
}

AICH-Parameters-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

PCPCH-CTCH-SetupRqstFDD ::= SEQUENCE {
  cPCH-Parameters                  CPCH-Parameters-CTCH-SetupRqstFDD,
  iE-Extensions                     ProtocolExtensionContainer { { PCPCHItem-CTCH-SetupRqstFDD-ExtIEs} }  OPTIONAL,
  ...
}

PCPCHItem-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

CPCH-Parameters-CTCH-SetupRqstFDD ::= SEQUENCE {
  commonTransportChannelID          CommonTransportChannelID,
  transportFormatSet                TransportFormatSet,
  aPPreambleScramblingCode          CPCHScramblingCodeNumber,
  cDPreambleScramblingCode          CPCHScramblingCodeNumber,
  tFCS                              TFCS,
  cDSignatures                      PreambleSignatures          OPTIONAL,
  cDSubChannelNumbers              CDSUBChannelNumbers        OPTIONAL,
  punctureLimit                    PunctureLimit,
  cPCH-UL-DPCCH-SlotFormat          CPCH-UL-DPCCH-SlotFormat,
  uL-SIR                            UL-SIR,
  initialDL-transmissionPower        DL-Power,
  maximumDLPower                    DL-Power,
  minimumDLPower                    DL-Power,
}

```

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    pO2-ForTPC-Bits           PowerOffset,
    fDD-TPC-DownlinkStepSize  FDD-TPC-DownlinkStepSize,
    nStartMessage             NStartMessage,
    nEOT                       NEOT,
    channel-Assignment-Indication Channel-Assignment-Indication,
    cPCH-Allowed-Total-Rate    CPCH-Allowed-Total-Rate,
    pCPCHChannelInformation    PCPCHChannelInformationList-CTCH-SetupRqstFDD,
    vCAMMapping-Information    VCAMMapping-InformationList-CTCH-SetupRqstFDD     OPTIONAL,
    -- this IE shall be present if the Channel Assignment Indication is set to 'CA Active' --
    aP-AICH-Parameters         AP-AICH-Parameters-CTCH-SetupRqstFDD,
    cDCA-ICH-Parameters        CDCA-ICH-Parameters-CTCH-SetupRqstFDD,
    iE-Extensions              ProtocolExtensionContainer { { CPCH-Parameters-CTCH-SetupRqstFDD-ExtIEs } }     OPTIONAL,
    ...
}

CPCH-Parameters-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PCPCHChannelInformationList-CTCH-SetupRqstFDD ::= SEQUENCE (SIZE (1..maxNrOfPCPCHs)) OF PCPCHChannelInformationItem-CTCH-SetupRqstFDD

PCPCHChannelInformationItem-CTCH-SetupRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID      CommonPhysicalChannelID,
    cPCHScramblingCodeNumber     CPCHScramblingCodeNumber,
    dL-ScramblingCode            DL-ScramblingCode,
    fdd-dl-ChannelisationCodeNumber FDD-DL-ChannelisationCodeNumber,
    pCP-Length                    PCP-Length,
    uCSM-Information              UCSM-Information-CTCH-SetupRqstFDD     OPTIONAL,
    -- this IE shall be present if the Channel Assignment Indication is equal to 'CA Inactive' --
    iE-Extensions                 ProtocolExtensionContainer { { PCPCHChannelInformationItem-CTCH-SetupRqstFDD-ExtIEs } }     OPTIONAL,
    ...
}

PCPCHChannelInformationItem-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UCSM-Information-CTCH-SetupRqstFDD ::= SEQUENCE {
    minUL-ChannelisationCodeLength MinUL-ChannelisationCodeLength,
    nFmax                            NFmax,
    channelRequestParameters         ChannelRequestParametersList-CTCH-SetupRqstFDD     OPTIONAL,
    iE-Extensions                     ProtocolExtensionContainer { { UCSM-InformationItem-CTCH-SetupRqstFDD-ExtIEs } }     OPTIONAL,
    ...
}

UCSM-InformationItem-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

ChannelRequestParametersList-CTCH-SetupRqstFDD ::= SEQUENCE (SIZE (1..maxAPSigNum)) OF ChannelRequestParametersItem-CTCH-SetupRqstFDD

ChannelRequestParametersItem-CTCH-SetupRqstFDD ::= SEQUENCE {
    aPPreambleSignature             APPreambleSignature,
    aPSubChannelNumber              APSubChannelNumber     OPTIONAL,

```

```

    iE-Extensions          ProtocolExtensionContainer { { ChannelRequestParametersItem-CTCH-SetupRqstFDD-ExtIEs } }    OPTIONAL,
    ...
}

ChannelRequestParametersItem-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

VCAMMapping-InformationList-CTCH-SetupRqstFDD ::= SEQUENCE (SIZE (1..maxNoofLen)) OF VCAMMapping-InformationItem-CTCH-SetupRqstFDD

VCAMMapping-InformationItem-CTCH-SetupRqstFDD ::= SEQUENCE {
    minUL-ChannelisationCodeLength      MinUL-ChannelisationCodeLength,
    nFmax                                NFmax,
    max-Number-of-PCPCHes                Max-Number-of-PCPCHes,
    SFRequestParameters                  SFRequestParametersList-CTCH-SetupRqstFDD,
    iE-Extensions                        ProtocolExtensionContainer { { VCAMMapping-InformationItem-CTCH-SetupRqstFDD-ExtIEs } }    OPTIONAL,
    ...
}

VCAMMapping-InformationItem-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

SFRequestParametersList-CTCH-SetupRqstFDD ::= SEQUENCE (SIZE (1..maxAPSigNum)) OF SFRequestParametersItem-CTCH-SetupRqstFDD

SFRequestParametersItem-CTCH-SetupRqstFDD ::= SEQUENCE {
    aPPreambleSignature                  APPreambleSignature,
    aPSubChannelNumber                   APSubChannelNumber    OPTIONAL,
    iE-Extensions                        ProtocolExtensionContainer { { SFRequestParametersItem-CTCH-SetupRqstFDD-ExtIEs } }    OPTIONAL,
    ...
}

SFRequestParametersItem-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

AP-AICH-Parameters-CTCH-SetupRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID              CommonPhysicalChannelID,
    fdd-dl-ChannelisationCodeNumber      FDD-DL-ChannelisationCodeNumber,
    aP-AICH-Power                         AICH-Power,
    cSICH-Power                           AICH-Power,
    sTTD-Indicator                        STTD-Indicator,
    iE-Extensions                        ProtocolExtensionContainer { { AP-AICH-Parameters-CTCH-SetupRqstFDD-ExtIEs } }    OPTIONAL,
    ...
}

AP-AICH-Parameters-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CDCA-ICH-Parameters-CTCH-SetupRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID              CommonPhysicalChannelID,
    fdd-dl-ChannelisationCodeNumber      FDD-DL-ChannelisationCodeNumber,
    cDCA-ICH-Power                        AICH-Power,

```

```

    sTTD-Indicator          STTD-Indicator,
    iE-Extensions          ProtocolExtensionContainer { { CDCA-ICH-Parameters-CTCH-SetupRqstFDD-ExtIEs } } OPTIONAL,
    ...
}

CDCA-ICH-Parameters-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- COMMON TRANSPORT CHANNEL SETUP REQUEST TDD
--
-- *****

CommonTransportChannelSetupRequestTDD ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container   {{CommonTransportChannelSetupRequestTDD-IEs}},
    protocolExtensions  ProtocolExtensionContainer {{CommonTransportChannelSetupRequestTDD-Extensions}} OPTIONAL,
    ...
}

CommonTransportChannelSetupRequestTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-C-ID          CRITICALITY reject      TYPE      C-ID
      PRESENCE mandatory }|
    { ID    id-ConfigurationGenerationID  CRITICALITY reject      TYPE      ConfigurationGenerationID
      PRESENCE mandatory }|
    { ID    id-CommonPhysicalChannelType-CTCH-SetupRqstTDD  CRITICALITY ignore      TYPE      CommonPhysicalChannelType-CTCH-
SetupRqstTDD          PRESENCE mandatory },
    ...
}

CommonTransportChannelSetupRequestTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CommonPhysicalChannelType-CTCH-SetupRqstTDD ::= CHOICE {
    secondary-CCPCH-parameters  Secondary-CCPCH-CTCH-SetupRqstTDD,
    pRACH-parameters            PRACH-CTCH-SetupRqstTDD,
    ...
}

Secondary-CCPCH-CTCH-SetupRqstTDD ::= SEQUENCE {
    sCCPCH-CCTrCH-ID          CCTrCH-ID,
    tFCS                      TFCS,
    tFCI-Coding               TFCI-Coding,
    punctureLimit             PunctureLimit,
    secondaryCCPCH-parameterList  Secondary-CCPCH-parameterList-CTCH-SetupRqstTDD,
    fACH-ParametersList       FACH-ParametersList-CTCH-SetupRqstTDD OPTIONAL,
    pCH-Parameters            PCH-Parameters-CTCH-SetupRqstTDD OPTIONAL,
    iE-Extensions            ProtocolExtensionContainer {{Secondary-CCPCHItem-CTCH-SetupRqstTDD-ExtIEs}} OPTIONAL,
    ...
}

Secondary-CCPCHItem-CTCH-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {

```



```

}
...
Secondary-CCPCH-parameterList-CTCH-SetupRqstTDD ::= ProtocolIE-Single-Container {{ Secondary-CCPCH-parameterListIEs-CTCH-SetupRqstTDD }}

Secondary-CCPCH-parameterListIEs-CTCH-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
  { ID id-Secondary-CCPCH-parameterListIE-CTCH-SetupRqstTDD CRITICALITY reject TYPE Secondary-CCPCH-parameterListIE-CTCH-SetupRqstTDD PRESENCE
optional }|
  { ID id-Secondary-CCPCH-LCR-parameterList-CTCH-SetupRqstTDD CRITICALITY reject TYPE Secondary-CCPCH-LCR-parameterList-CTCH-SetupRqstTDD
PRESENCE optional }
}

Secondary-CCPCH-parameterListIE-CTCH-SetupRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfSCCPCHs)) OF Secondary-CCPCH-parameterItem-CTCH-SetupRqstTDD

Secondary-CCPCH-parameterItem-CTCH-SetupRqstTDD ::= SEQUENCE {
  commonPhysicalChannelID CommonPhysicalChannelID,
  tdd-ChannelisationCode TDD-ChannelisationCode,
  timeslot Timeslot,
  midambleShiftAndBurstType MidambleShiftAndBurstType,
  tdd-PhysicalChannelOffset TDD-PhysicalChannelOffset,
  repetitionPeriod RepetitionPeriod,
  repetitionLength RepetitionLength,
  s-CCPCH-Power DL-Power,
  iE-Extensions ProtocolExtensionContainer { { Secondary-CCPCH-parameterItem-CTCH-SetupRqstTDD-ExtIEs } }
OPTIONAL,
  ...
}

Secondary-CCPCH-parameterItem-CTCH-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

FACH-ParametersList-CTCH-SetupRqstTDD ::= ProtocolIE-Single-Container {{ FACH-ParametersListIEs-CTCH-SetupRqstTDD }}

FACH-ParametersListIEs-CTCH-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
  { ID id-FACH-ParametersListIE-CTCH-SetupRqstTDD CRITICALITY reject TYPE FACH-ParametersListIE-CTCH-SetupRqstTDD PRESENCE mandatory }
}

FACH-ParametersListIE-CTCH-SetupRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfFACHs)) OF FACH-ParametersItem-CTCH-SetupRqstTDD

FACH-ParametersItem-CTCH-SetupRqstTDD ::= SEQUENCE {
  commonTransportChannelID CommonTransportChannelID,
  fACH-CCTrCH-ID CCTrCH-ID,
  dl-TransportFormatSet TransportFormatSet,
  toAWS ToAWS,
  toAWE ToAWE,
  iE-Extensions ProtocolExtensionContainer { { FACH-ParametersItem-CTCH-SetupRqstTDD-ExtIEs } } OPTIONAL,
  ...
}

FACH-ParametersItem-CTCH-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  { ID id-maxFACH-Power-LCR-CTCH-SetupRqstTDD CRITICALITY reject EXTENSION DL-Power PRESENCE optional },
  -- Applicable to 1.28Mcps TDD only
  ...
}

```

```

}

PCH-Parameters-CTCH-SetupRqstTDD ::= ProtocolIE-Single-Container {{ PCH-ParametersIE-CTCH-SetupRqstTDD }}

PCH-ParametersIE-CTCH-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
  { ID id-PCH-ParametersItem-CTCH-SetupRqstTDD   CRITICALITY reject   TYPE PCH-ParametersItem-CTCH-SetupRqstTDD   PRESENCE mandatory }
}

PCH-ParametersItem-CTCH-SetupRqstTDD ::= SEQUENCE {
  commonTransportChannelID          CommonTransportChannelID,
  pCH-CCTrCH-ID                     CCTrCH-ID,
  dl-TransportFormatSet              TransportFormatSet,
  toAWS                               ToAWS,
  toAWE                               ToAWE,
  pICH-Parameters                    PICH-Parameters-CTCH-SetupRqstTDD,
  iE-Extensions                      ProtocolExtensionContainer { { PCH-ParametersItem-CTCH-SetupRqstTDD-ExtIEs} }   OPTIONAL,
  ...
}

PCH-ParametersItem-CTCH-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  { ID id-PCH-Power-LCR-CTCH-SetupRqstTDD      CRITICALITY reject      EXTENSION DL-Power      PRESENCE optional },
  ...
}

PICH-Parameters-CTCH-SetupRqstTDD ::= ProtocolIE-Single-Container {{ PICH-ParametersIE-CTCH-SetupRqstTDD }}

PICH-ParametersIE-CTCH-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
  { ID id-PICH-ParametersItem-CTCH-SetupRqstTDD CRITICALITY reject TYPE PICH-ParametersItem-CTCH-SetupRqstTDD PRESENCE optional }|
  { ID id-PICH-LCR-Parameters-CTCH-SetupRqstTDD CRITICALITY reject TYPE PICH-LCR-Parameters-CTCH-SetupRqstTDD PRESENCE optional}
}

PICH-ParametersItem-CTCH-SetupRqstTDD ::= SEQUENCE {
  commonPhysicalChannelID          CommonPhysicalChannelID,
  tdd-ChannelisationCode           TDD-ChannelisationCode,
  timeSlot                         TimeSlot,
  midambleShiftAndBurstType        MidambleShiftAndBurstType,
  tdd-PhysicalChannelOffset        TDD-PhysicalChannelOffset,
  repetitionPeriod                 RepetitionPeriod,
  repetitionLength                  RepetitionLength,
  pagingIndicatorLength            PagingIndicatorLength,
  pICH-Power                       PICH-Power,
  iE-Extensions                    ProtocolExtensionContainer { { PICH-ParametersItem-CTCH-SetupRqstTDD-ExtIEs} }   OPTIONAL,
  ...
}

PICH-ParametersItem-CTCH-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

PICH-LCR-Parameters-CTCH-SetupRqstTDD ::= SEQUENCE {
  commonPhysicalChannelID          CommonPhysicalChannelID,
  tdd-ChannelisationCodeLCR        TDD-ChannelisationCodeLCR,
  timeSlotLCR                     TimeSlotLCR,
  midambleShiftLCR                MidambleShiftLCR,

```

```

    tdd-PhysicalChannelOffset      TDD-PhysicalChannelOffset,
    repetitionPeriod              RepetitionPeriod,
    repetitionLength              RepetitionLength,
    pagingIndicatorLength        PagingIndicatorLength,
    pICH-Power                   PICH-Power,
    second-TDD-ChannelisationCodeLCR TDD-ChannelisationCodeLCR,
    iE-Extensions                 ProtocolExtensionContainer { { PICH-LCR-ParametersItem-CTCH-SetupRqstTDD-ExtIEs } } OPTIONAL,
    ...
}

PICH-LCR-ParametersItem-CTCH-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Secondary-CCPCH-LCR-parameterList-CTCH-SetupRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfSCCPCHLCRs)) OF Secondary-CCPCH-LCR-parameterItem-CTCH-SetupRqstTDD

Secondary-CCPCH-LCR-parameterItem-CTCH-SetupRqstTDD ::= SEQUENCE {
    commonPhysicalChannelID      CommonPhysicalChannelID,
    tdd-ChannelisationCodeLCR    TDD-ChannelisationCodeLCR,
    timeslotLCR                  TimeSlotLCR,
    midambleShiftLCR            MidambleShiftLCR,
    tdd-PhysicalChannelOffset    TDD-PhysicalChannelOffset,
    repetitionPeriod             RepetitionPeriod,
    repetitionLength             RepetitionLength,
    s-CCPCH-Power                DL-Power,
    s-CCPCH-TimeSlotFormat-LCR   TDD-DL-DPCH-TimeSlotFormat-LCR,
    iE-Extensions                ProtocolExtensionContainer { { Secondary-CCPCH-LCR-parameterItem-CTCH-SetupRqstTDD-ExtIEs } } OPTIONAL,
    ...
}

Secondary-CCPCH-LCR-parameterItem-CTCH-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PRACH-CTCH-SetupRqstTDD ::= SEQUENCE {
    pRACH-Parameters-CTCH-SetupRqstTDD PRACH-Parameters-CTCH-SetupRqstTDD,
    iE-Extensions                       ProtocolExtensionContainer { { PRACH-CTCH-SetupRqstTDD-ExtIEs } } OPTIONAL,
    ...
}

PRACH-CTCH-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-FPACH-LCR-Parameters-CTCH-SetupRqstTDD CRITICALITY reject EXTENSION FPACH-LCR-Parameters-CTCH-SetupRqstTDD PRESENCE optional }, -- Mandatory for 1.28Mcps TDD, Not Applicable to 3.84Mcps TDD
    ...
}

PRACH-Parameters-CTCH-SetupRqstTDD ::= ProtocolIE-Single-Container { { PRACH-ParametersIE-CTCH-SetupRqstTDD } }

PRACH-ParametersIE-CTCH-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID id-PRACH-ParametersItem-CTCH-SetupRqstTDD CRITICALITY reject TYPE PRACH-ParametersItem-CTCH-SetupRqstTDD PRESENCE optional } |
    { ID id-PRACH-LCR-ParametersList-CTCH-SetupRqstTDD CRITICALITY reject TYPE PRACH-LCR-ParametersList-CTCH-SetupRqstTDD PRESENCE optional }
}

```

```

}

PRACH-ParametersItem-CTCH-SetupRqstTDD ::= SEQUENCE {
    commonPhysicalChannelID      CommonPhysicalChannelID,
    tFCS                          TFCS,
    timeslot                       TimeSlot,
    tdd-ChannelisationCode        TDD-ChannelisationCode,
    maxPRACH-MidambleShifts      MaxPRACH-MidambleShifts,
    pRACH-Midamble                PRACH-Midamble,
    rACH                          RACH-Parameter-CTCH-SetupRqstTDD,
    iE-Extensions                 ProtocolExtensionContainer { { PRACH-ParametersItem-CTCH-SetupRqstTDD-ExtIEs} }    OPTIONAL,
    ...
}

PRACH-ParametersItem-CTCH-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RACH-Parameter-CTCH-SetupRqstTDD ::= ProtocolIE-Single-Container {{ RACH-ParameterIE-CTCH-SetupRqstTDD }}

RACH-ParameterIE-CTCH-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID id-RACH-ParameterItem-CTCH-SetupRqstTDD    CRITICALITY reject    TYPE RACH-ParameterItem-CTCH-SetupRqstTDD    PRESENCE mandatory }
}

RACH-ParameterItem-CTCH-SetupRqstTDD ::= SEQUENCE {
    commonTransportChannelID      CommonTransportChannelID,
    uL-TransportFormatSet         TransportFormatSet,
    iE-Extensions                 ProtocolExtensionContainer { { RACH-ParameterItem-CTCH-SetupRqstTDD-ExtIEs} }    OPTIONAL,
    ...
}

RACH-ParameterItem-CTCH-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PRACH-LCR-ParametersList-CTCH-SetupRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfPRACHLCRs)) OF PRACH-LCR-ParametersItem-CTCH-SetupRqstTDD

PRACH-LCR-ParametersItem-CTCH-SetupRqstTDD ::= SEQUENCE {
    commonPhysicalChannelID      CommonPhysicalChannelID,
    tFCS                          TFCS,
    timeslotLCR                   TimeSlotLCR,
    tdd-ChannelisationCodeLCR     TDD-ChannelisationCodeLCR,
    midambleShiftLCR             MidambleShiftLCR,
    rACH                          RACH-Parameter-CTCH-SetupRqstTDD,
    iE-Extensions                 ProtocolExtensionContainer { { PRACH-LCR-ParametersItem-CTCH-SetupRqstTDD-ExtIEs} }    OPTIONAL,
    ...
}

PRACH-LCR-ParametersItem-CTCH-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

FPACH-LCR-Parameters-CTCH-SetupRqstTDD ::= SEQUENCE {
    commonPhysicalChannelID      CommonPhysicalChannelID,

```

```

    tdd-ChannelisationCodeLCR          TDD-ChannelisationCodeLCR,
    timeslotLCR                        TimeSlotLCR,
    midambleShiftLCR                   MidambleShiftLCR,
    fPACH-Power                         FPACH-Power,
    iE-Extensions                       ProtocolExtensionContainer { { FPACH-LCR-ParametersItem-CTCH-SetupRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

FPACH-LCR-ParametersItem-CTCH-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- COMMON TRANSPORT CHANNEL SETUP RESPONSE
--
-- *****

CommonTransportChannelSetupResponse ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{CommonTransportChannelSetupResponse-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{CommonTransportChannelSetupResponse-Extensions}} OPTIONAL,
    ...
}

CommonTransportChannelSetupResponse-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-FACH-ParametersList-CTCH-SetupRsp    CRITICALITY ignore    TYPE    FACH-CommonTransportChannel-InformationResponse    PRESENCE
      optional    }|
    { ID    id-PCH-Parameters-CTCH-SetupRsp        CRITICALITY ignore    TYPE    CommonTransportChannel-InformationResponse    PRESENCE
      optional    }|
    { ID    id-RACH-Parameters-CTCH-SetupRsp       CRITICALITY ignore    TYPE    CommonTransportChannel-InformationResponse    PRESENCE
      optional    }|
    { ID    id-CPCH-Parameters-CTCH-SetupRsp       CRITICALITY ignore    TYPE    CommonTransportChannel-InformationResponse
      PRESENCE optional    }|
    { ID    id-CriticalityDiagnostics               CRITICALITY ignore    TYPE    CriticalityDiagnostics    PRESENCE
      optional    },
    ...
}

CommonTransportChannelSetupResponse-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

FACH-CommonTransportChannel-InformationResponse ::= SEQUENCE (SIZE (1..maxNrOfFACHs)) OF CommonTransportChannel-InformationResponse

-- *****
--
-- COMMON TRANSPORT CHANNEL SETUP FAILURE
--
-- *****

CommonTransportChannelSetupFailure ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{CommonTransportChannelSetupFailure-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{CommonTransportChannelSetupFailure-Extensions}} OPTIONAL,
    ...
}

```

```

}

CommonTransportChannelSetupFailure-IEs NBAP-PROTOCOL-IES ::= {
  { ID      id-Cause          CRITICALITY ignore      TYPE      Cause          PRESENCE mandatory  }|
  { ID      id-CriticalityDiagnostics  CRITICALITY ignore      TYPE      CriticalityDiagnostics PRESENCE optional   },
  ...
}

CommonTransportChannelSetupFailure-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST FDD
--
-- *****

CommonTransportChannelReconfigurationRequestFDD ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container    {{CommonTransportChannelReconfigurationRequestFDD-IEs}},
  protocolExtensions   ProtocolExtensionContainer {{CommonTransportChannelReconfigurationRequestFDD-Extensions}} OPTIONAL,
  ...
}

CommonTransportChannelReconfigurationRequestFDD-IEs NBAP-PROTOCOL-IES ::= {
  { ID      id-C-ID          CRITICALITY reject      TYPE      C-ID          PRESENCE mandatory  }|
  { ID      id-ConfigurationGenerationID          CRITICALITY reject      TYPE      ConfigurationGenerationID          PRESENCE mandatory  }|
  { ID      id-CommonPhysicalChannelType-CTCH-ReconfRqstFDD CRITICALITY reject      TYPE      CommonPhysicalChannelType-CTCH-ReconfRqstFDD PRESENCE mandatory  },
  ...
}

CommonTransportChannelReconfigurationRequestFDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

CommonPhysicalChannelType-CTCH-ReconfRqstFDD ::= CHOICE {
  secondary-CCPCH-parameters      Secondary-CCPCHList-CTCH-ReconfRqstFDD,
  pRACH-parameters                PRACHList-CTCH-ReconfRqstFDD,
  cPCH-parameters                 CPCHList-CTCH-ReconfRqstFDD,
  ...
}

Secondary-CCPCHList-CTCH-ReconfRqstFDD ::= SEQUENCE {
  fACH-ParametersList-CTCH-ReconfRqstFDD  FACH-ParametersList-CTCH-ReconfRqstFDD OPTIONAL,
  pCH-Parameters-CTCH-ReconfRqstFDD      PCH-Parameters-CTCH-ReconfRqstFDD     OPTIONAL,
  pICH-Parameters-CTCH-ReconfRqstFDD     PICH-Parameters-CTCH-ReconfRqstFDD    OPTIONAL,
  iE-Extensions                         ProtocolExtensionContainer { { Secondary-CCPCH-CTCH-ReconfRqstFDD-ExtIEs } } OPTIONAL,
  ...
}

Secondary-CCPCH-CTCH-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

```

```

}

FACH-ParametersList-CTCH-ReconfRqstFDD ::= ProtocolIE-Single-Container {{ FACH-ParametersListIEs-CTCH-ReconfRqstFDD }}

FACH-ParametersListIEs-CTCH-ReconfRqstFDD NBAP-PROTOCOL-IES ::= {
  { ID id-FACH-ParametersListIE-CTCH-ReconfRqstFDD   CRITICALITY reject   TYPE FACH-ParametersListIE-CTCH-ReconfRqstFDD   PRESENCE mandatory }
}

FACH-ParametersListIE-CTCH-ReconfRqstFDD ::= SEQUENCE (SIZE (1..maxFACHCell)) OF FACH-ParametersItem-CTCH-ReconfRqstFDD

FACH-ParametersItem-CTCH-ReconfRqstFDD ::= SEQUENCE {
  commonTransportChannelID      CommonTransportChannelID,
  maxFACH-Power                 DL-Power           OPTIONAL,
  toAWS                         ToAWS           OPTIONAL,
  toAWE                         ToAWE           OPTIONAL,
  iE-Extensions                 ProtocolExtensionContainer { { FACH-ParametersItem-CTCH-ReconfRqstFDD-ExtIEs } } OPTIONAL,
  ...
}

FACH-ParametersItem-CTCH-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

PCH-Parameters-CTCH-ReconfRqstFDD ::= ProtocolIE-Single-Container {{ PCH-ParametersIE-CTCH-ReconfRqstFDD }}

PCH-ParametersIE-CTCH-ReconfRqstFDD NBAP-PROTOCOL-IES ::= {
  { ID id-PCH-ParametersItem-CTCH-ReconfRqstFDD   CRITICALITY reject   TYPE PCH-ParametersItem-CTCH-ReconfRqstFDD   PRESENCE mandatory }
}

PCH-ParametersItem-CTCH-ReconfRqstFDD ::= SEQUENCE {
  commonTransportChannelID      CommonTransportChannelID,
  pCH-Power                     DL-Power           OPTIONAL,
  toAWS                         ToAWS           OPTIONAL,
  toAWE                         ToAWE           OPTIONAL,
  iE-Extensions                 ProtocolExtensionContainer { { PCH-ParametersItem-CTCH-ReconfRqstFDD-ExtIEs } } OPTIONAL,
  ...
}

PCH-ParametersItem-CTCH-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

PICH-Parameters-CTCH-ReconfRqstFDD ::= ProtocolIE-Single-Container {{ PICH-ParametersIE-CTCH-ReconfRqstFDD }}

PICH-ParametersIE-CTCH-ReconfRqstFDD NBAP-PROTOCOL-IES ::= {
  { ID id-PICH-ParametersItem-CTCH-ReconfRqstFDD   CRITICALITY reject   TYPE PICH-ParametersItem-CTCH-ReconfRqstFDD   PRESENCE mandatory }
}

PICH-ParametersItem-CTCH-ReconfRqstFDD ::= SEQUENCE {
  commonPhysicalChannelID      CommonPhysicalChannelID,
  pICH-Power                   PICH-Power           OPTIONAL,
  iE-Extensions                 ProtocolExtensionContainer { { PICH-ParametersItem-CTCH-ReconfRqstFDD-ExtIEs } } OPTIONAL,
  ...
}

```

```

PICH-ParametersItem-CTCH-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PRACHList-CTCH-ReconfRqstFDD ::= SEQUENCE {
    pRACH-ParametersList-CTCH-ReconfRqstFDD PRACH-ParametersList-CTCH-ReconfRqstFDD OPTIONAL,
    aICH-ParametersList-CTCH-ReconfRqstFDD AICH-ParametersList-CTCH-ReconfRqstFDD OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { { PRACH-CTCH-ReconfRqstFDD-ExtIEs} } OPTIONAL,
    ...
}

PRACH-CTCH-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PRACH-ParametersList-CTCH-ReconfRqstFDD ::= ProtocolIE-Single-Container { { PRACH-ParametersListIEs-CTCH-ReconfRqstFDD } }

PRACH-ParametersListIEs-CTCH-ReconfRqstFDD NBAP-PROTOCOL-IES ::= {
    { ID id-PRACH-ParametersListIE-CTCH-ReconfRqstFDD CRITICALITY reject TYPE PRACH-ParametersListIE-CTCH-ReconfRqstFDD PRESENCE mandatory }
}

PRACH-ParametersListIE-CTCH-ReconfRqstFDD ::= SEQUENCE (SIZE (1..maxPRACHCell)) OF PRACH-ParametersItem-CTCH-ReconfRqstFDD

PRACH-ParametersItem-CTCH-ReconfRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID CommonPhysicalChannelID,
    preambleSignatures PreambleSignatures OPTIONAL,
    allowedSlotFormatInformation AllowedSlotFormatInformationList-CTCH-ReconfRqstFDD OPTIONAL,
    rACH-SubChannelNumbers RACH-SubChannelNumbers OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { { PRACH-ParametersItem-CTCH-ReconfRqstFDD-ExtIEs} } OPTIONAL,
    ...
}

PRACH-ParametersItem-CTCH-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

AllowedSlotFormatInformationList-CTCH-ReconfRqstFDD ::= SEQUENCE (SIZE (1.. maxNrOfSlotFormatsPRACH)) OF AllowedSlotFormatInformationItem-CTCH-ReconfRqstFDD

AllowedSlotFormatInformationItem-CTCH-ReconfRqstFDD ::= SEQUENCE {
    rACH-SlotFormat RACH-SlotFormat,
    iE-Extensions ProtocolExtensionContainer { { AllowedSlotFormatInformationItem-CTCH-ReconfRqstFDD-ExtIEs} }
    OPTIONAL,
    ...
}

AllowedSlotFormatInformationItem-CTCH-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

AICH-ParametersList-CTCH-ReconfRqstFDD ::= ProtocolIE-Single-Container { { AICH-ParametersListIEs-CTCH-ReconfRqstFDD } }

AICH-ParametersListIEs-CTCH-ReconfRqstFDD NBAP-PROTOCOL-IES ::= {

```



```

    { ID id-AICH-ParametersListIE-CTCH-ReconfRqstFDD    CRITICALITY reject    TYPE AICH-ParametersListIE-CTCH-ReconfRqstFDD    PRESENCE mandatory }
}

AICH-ParametersListIE-CTCH-ReconfRqstFDD ::= SEQUENCE (SIZE (1..maxPRACHCell)) OF AICH-ParametersItem-CTCH-ReconfRqstFDD

AICH-ParametersItem-CTCH-ReconfRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID        CommonPhysicalChannelID,
    aICH-Power                      AICH-Power          OPTIONAL,
    iE-Extensions                   ProtocolExtensionContainer { { AICH-ParametersItemIE-CTCH-ReconfRqstFDD-ExtIEs } }    OPTIONAL,
    ...
}

AICH-ParametersItemIE-CTCH-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CPCHList-CTCH-ReconfRqstFDD ::= SEQUENCE {
    cPCH-ParametersList-CTCH-ReconfRqstFDD        CPCH-ParametersList-CTCH-ReconfRqstFDD                OPTIONAL,
    aP-AICH-ParametersList-CTCH-ReconfRqstFDD      AP-AICH-ParametersList-CTCH-ReconfRqstFDD                OPTIONAL,
    cDCA-ICH-ParametersList-CTCH-ReconfRqstFDD      CDCA-ICH-ParametersList-CTCH-ReconfRqstFDD                OPTIONAL,
    iE-Extensions                                   ProtocolExtensionContainer { { CPCHListItem-CTCH-ReconfRqstFDD-ExtIEs } }    OPTIONAL,
    ...
}

CPCHListItem-CTCH-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CPCH-ParametersList-CTCH-ReconfRqstFDD ::= ProtocolIE-Single-Container { { CPCH-ParametersListIEs-CTCH-ReconfRqstFDD } }

CPCH-ParametersListIEs-CTCH-ReconfRqstFDD NBAP-PROTOCOL-IES ::= {
    { ID id-CPCH-ParametersListIE-CTCH-ReconfRqstFDD    CRITICALITY reject    TYPE CPCH-ParametersListIE-CTCH-ReconfRqstFDD    PRESENCE mandatory }
}

CPCH-ParametersListIE-CTCH-ReconfRqstFDD ::= SEQUENCE (SIZE (1..maxNrOfCPCHs)) OF CPCH-ParametersItem-CTCH-ReconfRqstFDD

CPCH-ParametersItem-CTCH-ReconfRqstFDD ::= SEQUENCE {
    commonTransportChannelID        CommonTransportChannelID,
    uL-SIR                          UL-SIR              OPTIONAL,
    initialDL-transmissionPower      DL-Power            OPTIONAL,
    maximumDLPower                  DL-Power            OPTIONAL,
    minimumDLPower                  DL-Power            OPTIONAL,
    iE-Extensions                   ProtocolExtensionContainer { { CPCH-ParametersItem-CTCH-ReconfRqstFDD-ExtIEs } }    OPTIONAL,
    ...
}

CPCH-ParametersItem-CTCH-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

AP-AICH-ParametersList-CTCH-ReconfRqstFDD ::= ProtocolIE-Single-Container { { AP-AICH-ParametersListIEs-CTCH-ReconfRqstFDD } }

AP-AICH-ParametersListIEs-CTCH-ReconfRqstFDD NBAP-PROTOCOL-IES ::= {
    { ID id-AP-AICH-ParametersListIE-CTCH-ReconfRqstFDD CRITICALITY reject    TYPE AP-AICH-ParametersListIE-CTCH-ReconfRqstFDD    PRESENCE mandatory }
}

```

```

}
AP-AICH-ParametersListIE-CTCH-ReconfRqstFDD ::= SEQUENCE (SIZE (1..maxNrOfCPCHs)) OF AP-AICH-ParametersItem-CTCH-ReconfRqstFDD
AP-AICH-ParametersItem-CTCH-ReconfRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID          CommonPhysicalChannelID,
    aP-AICH-Power                    AICH-Power          OPTIONAL,
    cSICH-Power                      AICH-Power          OPTIONAL,
    iE-Extensions                    ProtocolExtensionContainer { { AP-AICH-ParametersItemIE-CTCH-ReconfRqstFDD-ExtIEs} } OPTIONAL,
    ...
}
AP-AICH-ParametersItemIE-CTCH-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
CDCA-ICH-ParametersList-CTCH-ReconfRqstFDD ::= ProtocolIE-Single-Container {{ CDCA-ICH-ParametersListIEs-CTCH-ReconfRqstFDD }}
CDCA-ICH-ParametersListIEs-CTCH-ReconfRqstFDD NBAP-PROTOCOL-IES ::= {
    { ID id-CDCA-ICH-ParametersListIE-CTCH-ReconfRqstFDD    CRITICALITY reject    TYPE CDCA-ICH-ParametersListIE-CTCH-ReconfRqstFDD PRESENCE
      mandatory }
}
CDCA-ICH-ParametersListIE-CTCH-ReconfRqstFDD ::= SEQUENCE (SIZE (1..maxNrOfCPCHs)) OF CDCA-ICH-ParametersItem-CTCH-ReconfRqstFDD
CDCA-ICH-ParametersItem-CTCH-ReconfRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID          CommonPhysicalChannelID,
    cDCA-ICH-Power                  AICH-Power          OPTIONAL,
    iE-Extensions                    ProtocolExtensionContainer { { CDCA-ICH-ParametersItemIE-CTCH-ReconfRqstFDD-ExtIEs} } OPTIONAL,
    ...
}
CDCA-ICH-ParametersItemIE-CTCH-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
-- *****
--
-- COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST TDD
--
-- *****
CommonTransportChannelReconfigurationRequestTDD ::= SEQUENCE {
    protocolIEs                    ProtocolIE-Container {{CommonTransportChannelReconfigurationRequestTDD-IEs}},
    protocolExtensions              ProtocolExtensionContainer {{CommonTransportChannelReconfigurationRequestTDD-Extensions}} OPTIONAL,
    ...
}
CommonTransportChannelReconfigurationRequestTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-C-ID                    CRITICALITY reject    TYPE C-ID
      PRESENCE mandatory }|
    { ID id-ConfigurationGenerationID CRITICALITY reject    TYPE ConfigurationGenerationID PRESENCE
      mandatory }|
}

```

```

    { ID id-Secondary-CCPCH-Parameters-CTCH-ReconfRqstTDD          CRITICALITY reject  TYPE      Secondary-CCPCH-Parameters-CTCH-ReconfRqstTDD
      PRESENCE optional  } }
    { ID id-PICH-Parameters-CTCH-ReconfRqstTDD          CRITICALITY reject  TYPE      PICH-Parameters-CTCH-ReconfRqstTDD          PRESENCE optional } |
    { ID id-FACH-ParametersList-CTCH-ReconfRqstTDD      CRITICALITY reject  TYPE      FACH-ParametersList-CTCH-ReconfRqstTDD      PRESENCE optional } |
    { ID id-PCH-Parameters-CTCH-ReconfRqstTDD          CRITICALITY reject  TYPE      PCH-Parameters-CTCH-ReconfRqstTDD          PRESENCE optional },
    ...
}

CommonTransportChannelReconfigurationRequestTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  { ID id-FPACH-LCR-Parameters-CTCH-ReconfRqstTDD          CRITICALITY reject  EXTENSION  FPACH-LCR-Parameters-CTCH-ReconfRqstTDD          PRESENCE
  optional  }, -- Mandatory For 1.28Mcps TDD, Not Applicable to 3.84Mcps TDD
  ...
}

Secondary-CCPCH-Parameters-CTCH-ReconfRqstTDD ::= SEQUENCE {
  cCtRCH-ID                CcTrCH-ID,
  secondaryCCPCHList        Secondary-CCPCHList-CTCH-ReconfRqstTDD          OPTIONAL,
  iE-Extensions             ProtocolExtensionContainer { { Secondary-CCPCH-CTCH-ReconfRqstTDD-ExtIEs } }      OPTIONAL,
  ...
}

Secondary-CCPCH-CTCH-ReconfRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

Secondary-CCPCHList-CTCH-ReconfRqstTDD ::= ProtocolIE-Single-Container { { Secondary-CCPCHListIEs-CTCH-ReconfRqstTDD } }

Secondary-CCPCHListIEs-CTCH-ReconfRqstTDD NBAP-PROTOCOL-IES ::= {
  { ID id-Secondary-CCPCHListIE-CTCH-ReconfRqstTDD          CRITICALITY reject  TYPE      Secondary-CCPCHListIE-CTCH-ReconfRqstTDD          PRESENCE mandatory }
}

Secondary-CCPCHListIE-CTCH-ReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfSCCPCHs)) OF Secondary-CCPCHItem-CTCH-ReconfRqstTDD

Secondary-CCPCHItem-CTCH-ReconfRqstTDD ::= SEQUENCE {
  commonPhysicalChannelID   CommonPhysicalChannelID,
  sCCPCH-Power              DL-Power          OPTIONAL,
  iE-Extensions             ProtocolExtensionContainer { { Secondary-CCPCHItem-CTCH-ReconfRqstTDD-ExtIEs } }      OPTIONAL,
  ...
}

Secondary-CCPCHItem-CTCH-ReconfRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

PICH-Parameters-CTCH-ReconfRqstTDD ::= SEQUENCE {
  commonPhysicalChannelID   CommonPhysicalChannelID,
  pICH-Power                PICH-Power          OPTIONAL,
  iE-Extensions             ProtocolExtensionContainer { { PICH-Parameters-CTCH-ReconfRqstTDD-ExtIEs } }      OPTIONAL,
  ...
}

PICH-Parameters-CTCH-ReconfRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

```

```

FACH-ParametersList-CTCH-ReconfRqstTDD ::= SEQUENCE (SIZE (0..maxNrOfFACHs)) OF FACH-ParametersItem-CTCH-ReconfRqstTDD

FACH-ParametersItem-CTCH-ReconfRqstTDD ::= SEQUENCE {
    commonTransportChannelID      CommonTransportChannelID,
    toAWS                          ToAWS              OPTIONAL,
    toAWE                          ToAWE              OPTIONAL,
    iE-Extensions                 ProtocolExtensionContainer { { FACH-ParametersItem-CTCH-ReconfRqstTDD-ExtIEs } }    OPTIONAL,
    ...
}

FACH-ParametersItem-CTCH-ReconfRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    { ID      id-maxFACH-Power-LCR-CTCH-ReconfRqstTDD      CRITICALITY reject      EXTENSION      DL-Power      PRESENCE      optional },
    -- Applicable to 1.28Mcps TDD only
    ...
}

PCH-Parameters-CTCH-ReconfRqstTDD ::= SEQUENCE {
    commonTransportChannelID      CommonTransportChannelID,
    toAWS                          ToAWS              OPTIONAL,
    toAWE                          ToAWE              OPTIONAL,
    iE-Extensions                 ProtocolExtensionContainer { { PCH-Parameters-CTCH-ReconfRqstTDD-ExtIEs } }    OPTIONAL,
    ...
}

PCH-Parameters-CTCH-ReconfRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    { ID      id-PCH-Power-LCR-CTCH-ReconfRqstTDD          CRITICALITY reject      EXTENSION      DL-Power      PRESENCE      optional },
    ... -- Applicable to 1.28Mcps TDD only
}

FPACH-LCR-Parameters-CTCH-ReconfRqstTDD ::= SEQUENCE {
    commonPhysicalChannelId        CommonPhysicalChannelID,
    fPACHPower                    FPACH-Power        OPTIONAL,
    iE-Extensions                 ProtocolExtensionContainer { { FPACH-LCR-Parameters-CTCH-ReconfRqstTDD-ExtIEs } }    OPTIONAL,
    ...
}

FPACH-LCR-Parameters-CTCH-ReconfRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- COMMON TRANSPORT CHANNEL RECONFIGURATION RESPONSE
--
-- *****

CommonTransportChannelReconfigurationResponse ::= SEQUENCE {
    protocolIEs                   ProtocolIE-Container  {{CommonTransportChannelReconfigurationResponse-IEs}},
    protocolExtensions            ProtocolExtensionContainer  {{CommonTransportChannelReconfigurationResponse-Extensions}}    OPTIONAL,
    ...
}

CommonTransportChannelReconfigurationResponse-IEs NBAP-PROTOCOL-IES ::= {

```

```

    { ID      id-CriticalityDiagnostics      CRITICALITY  ignore      TYPE      CriticalityDiagnostics      PRESENCE optional},
    ...
}

CommonTransportChannelReconfigurationResponse-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- COMMON TRANSPORT CHANNEL RECONFIGURATION FAILURE
--
-- *****

CommonTransportChannelReconfigurationFailure ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{CommonTransportChannelReconfigurationFailure-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{CommonTransportChannelReconfigurationFailure-Extensions}}      OPTIONAL,
    ...
}

CommonTransportChannelReconfigurationFailure-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-Cause          CRITICALITY ignore      TYPE      Cause          PRESENCE mandatory }|
    { ID      id-CriticalityDiagnostics      CRITICALITY ignore      TYPE      CriticalityDiagnostics      PRESENCE optional },
    ...
}

CommonTransportChannelReconfigurationFailure-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- COMMON TRANSPORT CHANNEL DELETION REQUEST
--
-- *****

CommonTransportChannelDeletionRequest ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{CommonTransportChannelDeletionRequest-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{CommonTransportChannelDeletionRequest-Extensions}}      OPTIONAL,
    ...
}

CommonTransportChannelDeletionRequest-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-C-ID          CRITICALITY reject      TYPE      C-ID          PRESENCE mandatory}|
    { ID      id-CommonPhysicalChannelID      CRITICALITY reject      TYPE      CommonPhysicalChannelID      PRESENCE mandatory}|
    { ID      id-ConfigurationGenerationID      CRITICALITY reject      TYPE      ConfigurationGenerationID      PRESENCE mandatory},
    ...
}

CommonTransportChannelDeletionRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****

```

```

--
-- COMMON TRANSPORT CHANNEL DELETION RESPONSE
--
-- *****

CommonTransportChannelDeletionResponse ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{CommonTransportChannelDeletionResponse-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{CommonTransportChannelDeletionResponse-Extensions}}    OPTIONAL,
    ...
}

CommonTransportChannelDeletionResponse-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-CriticalityDiagnostics    CRITICALITY    ignore    TYPE    CriticalityDiagnostics    PRESENCE optional},
    ...
}

CommonTransportChannelDeletionResponse-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- BLOCK RESOURCE REQUEST
--
-- *****

BlockResourceRequest ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{BlockResourceRequest-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{BlockResourceRequest-Extensions}}    OPTIONAL,
    ...
}

BlockResourceRequest-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-C-ID    CRITICALITY reject    TYPE    C-ID    PRESENCE mandatory }|
    { ID    id-BlockingPriorityIndicator    CRITICALITY reject    TYPE    BlockingPriorityIndicator    PRESENCE mandatory }|
    { ID    id-ShutdownTimer    CRITICALITY reject    TYPE    ShutdownTimer    PRESENCE conditional },
    -- The IE shall be present if the Blocking Priority Indicator IE indicates "Normal Priority"--
    ...
}

BlockResourceRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- BLOCK RESOURCE RESPONSE
--
-- *****

BlockResourceResponse ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{BlockResourceResponse-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{BlockResourceResponse-Extensions}}    OPTIONAL,
    ...
}

```

```

}

BlockResourceResponse-IEs NBAP-PROTOCOL-IES ::= {
  { ID      id-CriticalityDiagnostics      CRITICALITY      ignore      TYPE      CriticalityDiagnostics      PRESENCE optional},
  ...
}

BlockResourceResponse-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- BLOCK RESOURCE FAILURE
--
-- *****

BlockResourceFailure ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container      {{BlockResourceFailure-IEs}},
  protocolExtensions   ProtocolExtensionContainer {{BlockResourceFailure-Extensions}}  OPTIONAL,
  ...
}

BlockResourceFailure-IEs NBAP-PROTOCOL-IES ::= {
  { ID      id-Cause          CRITICALITY      ignore      TYPE      Cause          PRESENCE mandatory }|
  { ID      id-CriticalityDiagnostics      CRITICALITY      ignore      TYPE      CriticalityDiagnostics      PRESENCE optional },
  ...
}

BlockResourceFailure-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- UNBLOCK RESOURCE INDICATION
--
-- *****

UnblockResourceIndication ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container      {{UnblockResourceIndication-IEs}},
  protocolExtensions   ProtocolExtensionContainer {{UnblockResourceIndication-Extensions}}  OPTIONAL,
  ...
}

UnblockResourceIndication-IEs NBAP-PROTOCOL-IES ::= {
  { ID      id-C-ID          CRITICALITY      ignore      TYPE      C-ID          PRESENCE      mandatory},
  ...
}

UnblockResourceIndication-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

```

```

-- *****
--
-- AUDIT REQUIRED INDICATION
--
-- *****

AuditRequiredIndication ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{AuditRequiredIndication-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{AuditRequiredIndication-Extensions}}
    ...
}

AuditRequiredIndication-IEs NBAP-PROTOCOL-IES ::= {
    ...
}

AuditRequiredIndication-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- AUDIT REQUEST
--
-- *****

AuditRequest ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{AuditRequest-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{AuditRequest-Extensions}}
    ...
}

AuditRequest-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-Start-Of-Audit-Sequence-Indicator    CRITICALITY    reject    TYPE Start-Of-Audit-Sequence-Indicator    PRESENCE mandatory },
    ...
}

AuditRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- AUDIT RESPONSE
--
-- *****

AuditResponse ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{AuditResponse-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{AuditResponse-Extensions}}
    ...
}

AuditResponse-IEs NBAP-PROTOCOL-IES ::= {

```



```

{ ID      id-End-Of-Audit-Sequence-Indicator      CRITICALITY  ignore  TYPE  End-Of-Audit-Sequence-Indicator      PRESENCE  mandatory }|
{ ID      id-Cell-InformationList-AuditRsp        CRITICALITY  ignore  TYPE  Cell-InformationList-AuditRsp        PRESENCE
optional  }|
{ ID      id-CCP-InformationList-AuditRsp         CRITICALITY  ignore  TYPE  CCP-InformationList-AuditRsp         PRESENCE  optional
}|
-- CCP (Communication Control Port) --
{ ID      id-Local-Cell-InformationList-AuditRsp  CRITICALITY  ignore  TYPE  Local-Cell-InformationList-AuditRsp   PRESENCE
optional  }|
{ ID      id-Local-Cell-Group-InformationList-AuditRsp  CRITICALITY  ignore  TYPE  Local-Cell-Group-InformationList-AuditRsp  PRESENCE
optional  }|
{ ID      id-CriticalityDiagnostics              CRITICALITY  ignore  TYPE  CriticalityDiagnostics              PRESENCE  optional
},
...
}

AuditResponse-Extensions NBAP-PROTOCOL-EXTENSION ::= {
...
}

Cell-InformationList-AuditRsp ::= SEQUENCE (SIZE (1..maxCellinNodeB)) OF ProtocolIE-Single-Container {{ Cell-InformationItemIE-AuditRsp}}

Cell-InformationItemIE-AuditRsp NBAP-PROTOCOL-IES ::= {
{ ID      id-Cell-InformationItem-AuditRsp        CRITICALITY  ignore  TYPE  Cell-InformationItem-AuditRsp        PRESENCE  optional }
}

Cell-InformationItem-AuditRsp ::= SEQUENCE {
c-ID,
configurationGenerationID      ConfigurationGenerationID,
resourceOperationalState        ResourceOperationalState,
availabilityStatus              AvailabilityStatus,
local-Cell-ID,
primary-SCH-Information          P-SCH-Information-AuditRsp          OPTIONAL,
secondary-SCH-Information        S-SCH-Information-AuditRsp          OPTIONAL,
primary-CPICH-Information        P-CPICH-Information-AuditRsp        OPTIONAL,
secondary-CPICH-InformationList  S-CPICH-InformationList-AuditRsp    OPTIONAL,
primary-CCPCH-Information        P-CCPCH-Information-AuditRsp        OPTIONAL,
bCH-Information                 BCH-Information-AuditRsp            OPTIONAL,
secondary-CCPCH-InformationList  S-CCPCH-InformationList-AuditRsp    OPTIONAL,
pCH-Information                 PCH-Information-AuditRsp            OPTIONAL,
pICH-Information                 PICH-Information-AuditRsp           OPTIONAL,
fACH-InformationList             FACH-InformationList-AuditRsp       OPTIONAL,
pRACH-InformationList            PRACH-InformationList-AuditRsp       OPTIONAL,
rACH-InformationList             RACH-InformationList-AuditRsp       OPTIONAL,
aICH-InformationList            AICH-InformationList-AuditRsp       OPTIONAL,
pCPCH-InformationList            PCPCH-InformationList-AuditRsp       OPTIONAL,
cPCH-InformationList            CPCH-InformationList-AuditRsp       OPTIONAL,
aP-AICH-InformationList         AP-AICH-InformationList-AuditRsp     OPTIONAL,
cDCA-ICH-InformationList        CDCA-ICH-InformationList-AuditRsp    OPTIONAL,
sCH-Information                 SCH-Information-AuditRsp            OPTIONAL,
iE-Extensions                   ProtocolExtensionContainer { { Cell-InformationItem-AuditRsp-ExtIEs} }  OPTIONAL,
...
}

Cell-InformationItem-AuditRsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {

```

```

    { ID id-FPACH-LCR-InformationList-AuditRsp      CRITICALITY ignore EXTENSION FPACH-LCR-InformationList-AuditRsp      PRESENCE optional } |
    -- Applicable to 1.28Mcps TDD only
    { ID id-DwPCH-LCR-InformationList-AuditRsp      CRITICALITY ignore EXTENSION Common-PhysicalChannel-Status-Information      PRESENCE
optional    },
    -- Applicable to 1.28Mcps TDD only
    ...
}

P-SCH-Information-AuditRsp ::= ProtocolIE-Single-Container {{ P-SCH-InformationIE-AuditRsp }}

P-SCH-InformationIE-AuditRsp NBAP-PROTOCOL-IES ::= {
  { ID id-P-SCH-Information      CRITICALITY ignore TYPE Common-PhysicalChannel-Status-Information      PRESENCE mandatory }
}

S-SCH-Information-AuditRsp ::= ProtocolIE-Single-Container {{ S-SCH-InformationIE-AuditRsp }}

S-SCH-InformationIE-AuditRsp NBAP-PROTOCOL-IES ::= {
  { ID id-S-SCH-Information      CRITICALITY ignore TYPE Common-PhysicalChannel-Status-Information      PRESENCE mandatory }
}

P-CPICH-Information-AuditRsp ::= ProtocolIE-Single-Container {{ P-CPICH-InformationIE-AuditRsp }}

P-CPICH-InformationIE-AuditRsp NBAP-PROTOCOL-IES ::= {
  { ID id-P-CPICH-Information      CRITICALITY ignore TYPE Common-PhysicalChannel-Status-Information      PRESENCE mandatory }
}

S-CPICH-InformationList-AuditRsp ::= SEQUENCE (SIZE (1..maxSCPICHCell)) OF ProtocolIE-Single-Container {{ S-CPICH-InformationItemIE-AuditRsp }}

S-CPICH-InformationItemIE-AuditRsp NBAP-PROTOCOL-IES ::= {
  { ID id-S-CPICH-Information      CRITICALITY ignore TYPE Common-PhysicalChannel-Status-Information      PRESENCE mandatory }
}

P-CCPCH-Information-AuditRsp ::= ProtocolIE-Single-Container {{ P-CCPCH-InformationIE-AuditRsp }}

P-CCPCH-InformationIE-AuditRsp NBAP-PROTOCOL-IES ::= {
  { ID id-P-CCPCH-Information      CRITICALITY ignore TYPE Common-PhysicalChannel-Status-Information      PRESENCE mandatory }
}

BCH-Information-AuditRsp ::= ProtocolIE-Single-Container {{ BCH-InformationIE-AuditRsp }}

BCH-InformationIE-AuditRsp NBAP-PROTOCOL-IES ::= {
  { ID id-BCH-Information      CRITICALITY ignore TYPE Common-TransportChannel-Status-Information      PRESENCE mandatory }
}

S-CCPCH-InformationList-AuditRsp ::= SEQUENCE (SIZE (1..maxSCCPCHCell)) OF ProtocolIE-Single-Container {{ S-CCPCH-InformationItemIE-AuditRsp }}

S-CCPCH-InformationItemIE-AuditRsp NBAP-PROTOCOL-IES ::= {
  { ID id-S-CCPCH-Information      CRITICALITY ignore TYPE Common-PhysicalChannel-Status-Information      PRESENCE mandatory }
}

PCH-Information-AuditRsp ::= ProtocolIE-Single-Container {{ PCH-InformationIE-AuditRsp }}

PCH-InformationIE-AuditRsp NBAP-PROTOCOL-IES ::= {
  { ID id-PCH-Information      CRITICALITY ignore TYPE Common-TransportChannel-Status-Information      PRESENCE mandatory }
}

```

```

PICH-Information-AuditRsp ::= ProtocolIE-Single-Container {{ PICH-InformationIE-AuditRsp }}

PICH-InformationIE-AuditRsp NBAP-PROTOCOL-IES ::= {
  { ID id-PICH-Information  CRITICALITY ignore  TYPE Common-PhysicalChannel-Status-Information          PRESENCE mandatory }
}

FACH-InformationList-AuditRsp ::= SEQUENCE (SIZE (1..maxFACHCell)) OF ProtocolIE-Single-Container {{ FACH-InformationItemIE-AuditRsp }}

FACH-InformationItemIE-AuditRsp NBAP-PROTOCOL-IES ::= {
  { ID id-FACH-Information  CRITICALITY ignore  TYPE Common-TransportChannel-Status-Information          PRESENCE mandatory }
}

PRACH-InformationList-AuditRsp ::= SEQUENCE (SIZE (1..maxPRACHCell)) OF ProtocolIE-Single-Container {{ PRACH-InformationItemIE-AuditRsp }}

PRACH-InformationItemIE-AuditRsp NBAP-PROTOCOL-IES ::= {
  { ID id-PRACH-Information  CRITICALITY ignore  TYPE Common-PhysicalChannel-Status-Information          PRESENCE mandatory }
}

RACH-InformationList-AuditRsp ::= SEQUENCE (SIZE (1..maxRACHCell)) OF ProtocolIE-Single-Container {{ RACH-InformationItemIE-AuditRsp }}

RACH-InformationItemIE-AuditRsp NBAP-PROTOCOL-IES ::= {
  { ID id-RACH-Information  CRITICALITY ignore  TYPE Common-TransportChannel-Status-Information          PRESENCE mandatory }
}

AICH-InformationList-AuditRsp ::= SEQUENCE (SIZE (1..maxPRACHCell)) OF ProtocolIE-Single-Container {{ AICH-InformationItemIE-AuditRsp }}

AICH-InformationItemIE-AuditRsp NBAP-PROTOCOL-IES ::= {
  { ID id-AICH-Information  CRITICALITY ignore  TYPE Common-PhysicalChannel-Status-Information          PRESENCE mandatory }
}

PCPCH-InformationList-AuditRsp ::= SEQUENCE (SIZE (1..maxPCPCHCell)) OF ProtocolIE-Single-Container {{ PCPCH-InformationItemIE-AuditRsp }}

PCPCH-InformationItemIE-AuditRsp NBAP-PROTOCOL-IES ::= {
  { ID id-PCPCH-Information  CRITICALITY ignore  TYPE Common-PhysicalChannel-Status-Information          PRESENCE optional }
}

CPCH-InformationList-AuditRsp ::= SEQUENCE (SIZE (1..maxCPCHCell)) OF ProtocolIE-Single-Container {{ CPCH-InformationItemIE-AuditRsp }}

CPCH-InformationItemIE-AuditRsp NBAP-PROTOCOL-IES ::= {
  { ID id-CPCH-Information  CRITICALITY ignore  TYPE Common-TransportChannel-Status-Information          PRESENCE optional }
}

AP-AICH-InformationList-AuditRsp ::= SEQUENCE (SIZE (1..maxCPCHCell)) OF ProtocolIE-Single-Container {{ AP-AICH-InformationItemIE-AuditRsp }}

AP-AICH-InformationItemIE-AuditRsp NBAP-PROTOCOL-IES ::= {
  { ID id-AP-AICH-Information  CRITICALITY ignore  TYPE Common-PhysicalChannel-Status-Information          PRESENCE mandatory }
}

CDCA-ICH-InformationList-AuditRsp ::= SEQUENCE (SIZE (1..maxCPCHCell)) OF ProtocolIE-Single-Container {{ CDCA-ICH-InformationItemIE-AuditRsp }}

CDCA-ICH-InformationItemIE-AuditRsp NBAP-PROTOCOL-IES ::= {
  { ID id-CDCA-ICH-Information  CRITICALITY ignore  TYPE Common-PhysicalChannel-Status-Information          PRESENCE mandatory }
}

```

```

SCH-Information-AuditRsp ::= ProtocolIE-Single-Container {{ SCH-InformationIE-AuditRsp }}

SCH-InformationIE-AuditRsp NBAP-PROTOCOL-IES ::= {
  { ID id-SCH-Information  CRITICALITY ignore  TYPE Common-PhysicalChannel-Status-Information  PRESENCE mandatory }
}

CCP-InformationList-AuditRsp ::=SEQUENCE (SIZE (1..maxCCPinNodeB)) OF ProtocolIE-Single-Container {{ CCP-InformationItemIE-AuditRsp }}

CCP-InformationItemIE-AuditRsp NBAP-PROTOCOL-IES ::= {
  {ID id-CCP-InformationItem-AuditRsp  CRITICALITY  ignore  TYPE  CCP-InformationItem-AuditRsp  PRESENCE mandatory}
}

CCP-InformationItem-AuditRsp ::= SEQUENCE {
  communicationControlPortID  CommunicationControlPortID,
  resourceOperationalState  ResourceOperationalState,
  availabilityStatus  AvailabilityStatus,
  iE-Extensions  ProtocolExtensionContainer  {{ CCP-InformationItem-AuditRsp-ExtIEs }}  OPTIONAL,
  ...
}

CCP-InformationItem-AuditRsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

FPACH-LCR-InformationList-AuditRsp ::= SEQUENCE (SIZE (1..maxFPACHCell)) OF ProtocolIE-Single-Container {{ FPACH-LCR-InformationItemIE-AuditRsp }}

FPACH-LCR-InformationItemIE-AuditRsp NBAP-PROTOCOL-IES ::= {
  { ID id-FPACH-LCR-Information-AuditRsp  CRITICALITY ignore TYPE Common-PhysicalChannel-Status-Information  PRESENCE mandatory }
}

Local-Cell-InformationList-AuditRsp ::=SEQUENCE (SIZE (1..maxLocalCellinNodeB)) OF ProtocolIE-Single-Container {{ Local-Cell-InformationItemIE-AuditRsp }}

Local-Cell-InformationItemIE-AuditRsp NBAP-PROTOCOL-IES ::= {
  { ID  id-Local-Cell-InformationItem-AuditRsp  CRITICALITY  ignore  TYPE  Local-Cell-InformationItem-
  AuditRsp  PRESENCE  mandatory}
}

Local-Cell-InformationItem-AuditRsp ::= SEQUENCE {
  local-Cell-ID  Local-Cell-ID,
  dl-or-global-capacityCredit  DL-or-Global-CapacityCredit,
  ul-capacityCredit  UL-CapacityCredit  OPTIONAL,
  commonChannelsCapacityConsumptionLaw  CommonChannelsCapacityConsumptionLaw,
  dedicatedChannelsCapacityConsumptionLaw  DedicatedChannelsCapacityConsumptionLaw,
  maximumDL-PowerCapability  MaximumDL-PowerCapability  OPTIONAL,
  minSpreadingFactor  MinSpreadingFactor  OPTIONAL,
  minimumDL-PowerCapability  MinimumDL-PowerCapability  OPTIONAL,
  local-Cell-Group-ID  Local-Cell-ID  OPTIONAL,
  iE-Extensions  ProtocolExtensionContainer  {{ Local-Cell-InformationItem-AuditRsp-ExtIEs}}  OPTIONAL,
  ...
}

Local-Cell-InformationItem-AuditRsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {

```

```

    { ID      id-ReferenceClockAvailability      CRITICALITY      ignore      EXTENSION ReferenceClockAvailability      PRESENCE optional },
    ...
}

Local-Cell-Group-InformationList-AuditRsp ::= SEQUENCE (SIZE (1..maxLocalCellinNodeB)) OF ProtocolIE-Single-Container {{ Local-Cell-Group-
InformationItemIE-AuditRsp }}

Local-Cell-Group-InformationItemIE-AuditRsp NBAP-PROTOCOL-IES ::= {
    { ID      id-Local-Cell-Group-InformationItem-AuditRsp      CRITICALITY      ignore      TYPE Local-Cell-Group-
InformationItem-AuditRsp      PRESENCE      mandatory}
}

Local-Cell-Group-InformationItem-AuditRsp ::= SEQUENCE {
    local-Cell-Group-ID      Local-Cell-ID,
    dl-or-global-capacityCredit      DL-or-Global-CapacityCredit,
    ul-capacityCredit      UL-CapacityCredit      OPTIONAL,
    commonChannelsCapacityConsumptionLaw      CommonChannelsCapacityConsumptionLaw,
    dedicatedChannelsCapacityConsumptionLaw      DedicatedChannelsCapacityConsumptionLaw,
    iE-Extensions      ProtocolExtensionContainer {{ Local-Cell-Group-InformationItem-AuditRsp-ExtIEs}}      OPTIONAL,
    ...
}

Local-Cell-Group-InformationItem-AuditRsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- AUDIT FAILURE
--
-- *****

AuditFailure ::= SEQUENCE {
    protocolIEs      ProtocolIE-Container {{AuditFailure-IEs}},
    protocolExtensions      ProtocolExtensionContainer {{AuditFailure-Extensions}}      OPTIONAL,
    ...
}

AuditFailure-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-Cause      CRITICALITY      ignore      TYPE      Cause      PRESENCE mandatory
    }|
    { ID      id-CriticalityDiagnostics      CRITICALITY      ignore      TYPE      CriticalityDiagnostics      PRESENCE optional },
    ...
}

AuditFailure-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- COMMON MEASUREMENT INITIATION REQUEST
--
-- *****

```

```

CommonMeasurementInitiationRequest ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{CommonMeasurementInitiationRequest-IEs}},
    protocolExtensions  ProtocolExtensionContainer {{CommonMeasurementInitiationRequest-Extensions}}    OPTIONAL,
    ...
}

CommonMeasurementInitiationRequest-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-MeasurementID          CRITICALITY reject          TYPE      MeasurementID          PRESENCE
    mandatory }|
    { ID      id-CommonMeasurementObjectType-CM-Rqst  CRITICALITY reject          TYPE      CommonMeasurementObjectType-CM-Rqst  PRESENCE
    mandatory }|
    { ID      id-CommonMeasurementType  CRITICALITY reject          TYPE      CommonMeasurementType          PRESENCE
    mandatory }|
    { ID      id-MeasurementFilterCoefficient  CRITICALITY reject          TYPE      MeasurementFilterCoefficient      PRESENCE
    optional }|
    { ID      id-ReportCharacteristics  CRITICALITY reject          TYPE      ReportCharacteristics            PRESENCE
    mandatory }|
    { ID      id-SFNReportingIndicator  CRITICALITY reject          TYPE      SFNReportingIndicator            PRESENCE
    mandatory }|
    } |
    { ID      id-SFN                    CRITICALITY reject          TYPE      SFN                              PRESENCE optional
    },
    ...
}

CommonMeasurementInitiationRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    {ID id-CommonMeasurementAccuracy  CRITICALITY reject          EXTENSION CommonMeasurementAccuracy  PRESENCE
    optional},
    ...
}

CommonMeasurementObjectType-CM-Rqst ::= CHOICE {
    cell          Cell-CM-Rqst,
    rACH          RACH-CM-Rqst,
    cPCH          CPCH-CM-Rqst,
    ...
}

Cell-CM-Rqst ::= SEQUENCE {
    c-ID          C-ID,
    timeSlot     TimeSlot    OPTIONAL,    -- Applicable to 3.84Mcps TDD only
    iE-Extensions ProtocolExtensionContainer {{ CellItem-CM-Rqst-ExtIEs}}    OPTIONAL,
    ...
}

CellItem-CM-Rqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-TimeSlotLCR-CM-Rqst  CRITICALITY reject          EXTENSION  TimeSlotLCR          PRESENCE optional    }|
    -- Applicable to 1.28Mcps TDD only
    {ID id-NeighbouringCellMeasurementInformation  CRITICALITY ignore          EXTENSION NeighbouringCellMeasurementInformation  PRESENCE
    optional},
    ...
}

```

```

RACH-CM-Rqst ::= SEQUENCE {
    c-ID                               C-ID,
    commonTransportChannelID           CommonTransportChannelID,
    iE-Extensions                       ProtocolExtensionContainer { { RACHItem-CM-Rqst-ExtIEs} } OPTIONAL,
    ...
}

RACHItem-CM-Rqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CPCH-CM-Rqst ::= SEQUENCE {
    c-ID                               C-ID,
    commonTransportChannelID           CommonTransportChannelID,
    spreadingfactor                     MinUL-ChannelisationCodeLength OPTIONAL,
    iE-Extensions                       ProtocolExtensionContainer { { CPCHItem-CM-Rqst-ExtIEs} } OPTIONAL,
    ...
}

CPCHItem-CM-Rqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- COMMON MEASUREMENT INITIATION RESPONSE
--
-- *****

CommonMeasurementInitiationResponse ::= SEQUENCE {
    protocolIEs                        ProtocolIE-Container {{CommonMeasurementInitiationResponse-IEs}},
    protocolExtensions                 ProtocolExtensionContainer {{CommonMeasurementInitiationResponse-Extensions}} OPTIONAL,
    ...
}

CommonMeasurementInitiationResponse-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-MeasurementID           CRITICALITY ignore          TYPE    MeasurementID           PRESENCE
    mandatory }|
    { ID    id-CommonMeasurementObjectType-CM-Rsp CRITICALITY ignore          TYPE    CommonMeasurementObjectType-CM-Rsp PRESENCE optional
    }|
    { ID    id-SFN                     CRITICALITY ignore          TYPE    SFN                           PRESENCE
    optional }|
    { ID    id-CriticalityDiagnostics CRITICALITY ignore          TYPE    CriticalityDiagnostics         PRESENCE optional },
    ...
}

CommonMeasurementInitiationResponse-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    {ID id-CommonMeasurementAccuracy CRITICALITY ignore EXTENSION CommonMeasurementAccuracy PRESENCE optional},
    ...
}

CommonMeasurementObjectType-CM-Rsp ::= CHOICE {
    cell                Cell-CM-Rsp,
    rACH                RACH-CM-Rsp,
}

```

```

    cPCH                CPCH-CM-Rsp,
    ...
}

Cell-CM-Rsp ::= SEQUENCE {
    commonMeasurementValue      CommonMeasurementValue,
    iE-Extensions               ProtocolExtensionContainer { { CellItem-CM-Rsp-ExtIEs } }           OPTIONAL,
    ...
}

CellItem-CM-Rsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RACH-CM-Rsp ::= SEQUENCE {
    commonMeasurementValue      CommonMeasurementValue,
    iE-Extensions               ProtocolExtensionContainer { { RACHItem-CM-Rsp-ExtIEs } }           OPTIONAL,
    ...
}

RACHItem-CM-Rsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CPCH-CM-Rsp ::= SEQUENCE {
    commonMeasurementValue      CommonMeasurementValue,
    iE-Extensions               ProtocolExtensionContainer { { CPCHItem-CM-Rsp-ExtIEs } }           OPTIONAL,
    ...
}

CPCHItem-CM-Rsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- COMMON MEASUREMENT INITIATION FAILURE
--
-- *****

CommonMeasurementInitiationFailure ::= SEQUENCE {
    protocolIEs                ProtocolIE-Container  {{CommonMeasurementInitiationFailure-IEs}},
    protocolExtensions          ProtocolExtensionContainer {{CommonMeasurementInitiationFailure-Extensions}}
    ...
}

CommonMeasurementInitiationFailure-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-MeasurementID      CRITICALITY  ignore      TYPE    MeasurementID      PRESENCE mandatory }|
    { ID    id-Cause              CRITICALITY  ignore      TYPE    Cause                  PRESENCE mandatory }|
    { ID    id-CriticalityDiagnostics CRITICALITY  ignore      TYPE    CriticalityDiagnostics  PRESENCE optional },
    ...
}

CommonMeasurementInitiationFailure-Extensions NBAP-PROTOCOL-EXTENSION ::= {

```



```

}
...
}
-- *****
--
-- COMMON MEASUREMENT REPORT
--
-- *****

CommonMeasurementReport ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{CommonMeasurementReport-IEs}},
    protocolExtensions  ProtocolExtensionContainer {{CommonMeasurementReport-Extensions}}          OPTIONAL,
    ...
}

CommonMeasurementReport-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-MeasurementID          CRITICALITY ignore          TYPE      MeasurementID          PRESENCE
    mandatory }|
    { ID      id-CommonMeasurementObjectType-CM-Rprt  CRITICALITY ignore          TYPE      CommonMeasurementObjectType-CM-Rprt  PRESENCE
    mandatory }|
    { ID      id-SFN                      CRITICALITY ignore          TYPE      SFN                      PRESENCE
    optional  },
    ...
}

CommonMeasurementReport-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CommonMeasurementObjectType-CM-Rprt ::= CHOICE {
    cell          Cell-CM-Rprt,
    rACH          RACH-CM-Rprt,
    cPCH          CPCH-CM-Rprt,
    ...
}

Cell-CM-Rprt ::= SEQUENCE {
    commonMeasurementValueInformation CommonMeasurementValueInformation,
    iE-Extensions          ProtocolExtensionContainer {{ CellItem-CM-Rprt-ExtIEs }}          OPTIONAL,
    ...
}

CellItem-CM-Rprt-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RACH-CM-Rprt ::= SEQUENCE {
    commonMeasurementValueInformation CommonMeasurementValueInformation,
    iE-Extensions          ProtocolExtensionContainer {{ RACHItem-CM-Rprt-ExtIEs }}          OPTIONAL,
    ...
}

```

```

RACHItem-CM-Rprt-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

CPCH-CM-Rprt ::= SEQUENCE {
  commonMeasurementValueInformation CommonMeasurementValueInformation,
  IE-Extensions ProtocolExtensionContainer {{ CPCHItem-CM-Rprt-ExtIEs }} OPTIONAL,
  ...
}

CPCHItem-CM-Rprt-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- COMMON MEASUREMENT TERMINATION REQUEST
--
-- *****

CommonMeasurementTerminationRequest ::= SEQUENCE {
  protocolIEs ProtocolIE-Container {{CommonMeasurementTerminationRequest-IEs}},
  protocolExtensions ProtocolExtensionContainer {{CommonMeasurementTerminationRequest-Extensions}} OPTIONAL,
  ...
}

CommonMeasurementTerminationRequest-IEs NBAP-PROTOCOL-IES ::= {
  { ID id-MeasurementID CRITICALITY ignore TYPE MeasurementID PRESENCE mandatory },
  ...
}

CommonMeasurementTerminationRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- COMMON MEASUREMENT FAILURE INDICATION
--
-- *****

CommonMeasurementFailureIndication ::= SEQUENCE {
  protocolIEs ProtocolIE-Container {{CommonMeasurementFailureIndication-IEs}},
  protocolExtensions ProtocolExtensionContainer {{CommonMeasurementFailureIndication-Extensions}} OPTIONAL,
  ...
}

CommonMeasurementFailureIndication-IEs NBAP-PROTOCOL-IES ::= {
  { ID id-MeasurementID CRITICALITY ignore TYPE MeasurementID PRESENCE mandatory }|
  { ID id-Cause CRITICALITY ignore TYPE Cause PRESENCE mandatory },
  ...
}

CommonMeasurementFailureIndication-Extensions NBAP-PROTOCOL-EXTENSION ::= {

```

```

}
...
-- *****
--
-- CELL SETUP REQUEST FDD
--
-- *****

CellSetupRequestFDD ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{CellSetupRequestFDD-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{CellSetupRequestFDD-Extensions}}    OPTIONAL,
    ...
}

CellSetupRequestFDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-Local-Cell-ID                                CRITICALITY   reject                                TYPE Local-Cell-ID
      PRESENCE mandatory }|
    { ID      id-C-ID                                        CRITICALITY   reject                                TYPE C-ID
      PRESENCE mandatory }|
    { ID      id-ConfigurationGenerationID                  CRITICALITY   reject                                TYPE ConfigurationGenerationID
      PRESENCE mandatory }|
    { ID      id-T-Cell                                      CRITICALITY   reject                                TYPE T-Cell
      PRESENCE mandatory }|
    { ID      id-UARFCNforNu                                CRITICALITY   reject                                TYPE UARFCN
      PRESENCE mandatory }|
    { ID      id-UARFCNforNd                                CRITICALITY   reject                                TYPE UARFCN
      PRESENCE mandatory }|
    { ID      id-MaximumTransmissionPower                  CRITICALITY   reject                                TYPE MaximumTransmissionPower
      PRESENCE mandatory }|
    { ID      id-Closed-Loop-Timing-Adjustment-Mode        CRITICALITY   reject                                TYPE
      Closedlooptimingadjustmentmode PRESENCE optional }|
    { ID      id-PrimaryScramblingCode                      CRITICALITY   reject                                TYPE PrimaryScramblingCode
      PRESENCE mandatory }|
    { ID      id-Synchronisation-Configuration-Cell-SetupRqst CRITICALITY   reject                                TYPE Synchronisation-
      Configuration-Cell-SetupRqst PRESENCE mandatory }|
    { ID      id-DL-TPC-Pattern01Count                      CRITICALITY   reject                                TYPE DL-TPC-Pattern01Count
      PRESENCE mandatory }|
    { ID      id-PrimarySCH-Information-Cell-SetupRqstFDD   CRITICALITY   reject                                TYPE PrimarySCH-Information-
      Cell-SetupRqstFDD PRESENCE mandatory }|
    { ID      id-SecondarySCH-Information-Cell-SetupRqstFDD CRITICALITY   reject                                TYPE SecondarySCH-Information-
      Cell-SetupRqstFDD PRESENCE mandatory }|
    { ID      id-PrimaryCPICH-Information-Cell-SetupRqstFDD CRITICALITY   reject                                TYPE PrimaryCPICH-Information-
      Cell-SetupRqstFDD PRESENCE mandatory }|
    { ID      id-SecondaryCPICH-InformationList-Cell-SetupRqstFDD CRITICALITY   reject                                TYPE SecondaryCPICH-
      InformationList-Cell-SetupRqstFDD PRESENCE optional }|
    { ID      id-PrimaryCCPCH-Information-Cell-SetupRqstFDD CRITICALITY   reject                                TYPE PrimaryCCPCH-Information-
      Cell-SetupRqstFDD PRESENCE mandatory }|
    { ID      id-Limited-power-increase-information-Cell-SetupRqstFDD CRITICALITY   reject                                TYPE Limited-power-increase-
      information-Cell-SetupRqstFDD PRESENCE mandatory },
    ...
}

CellSetupRequestFDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {

```

```

    {ID id-IPDLParameter-Information-Cell-SetupRqstFDD
Cell-SetupRqstFDD      PRESENCE optional },
    ...
}

Synchronisation-Configuration-Cell-SetupRqst ::= SEQUENCE {
    n-INSYNC-IND          N-INSYNC-IND,
    n-OUTSYNC-IND         N-OUTSYNC-IND,
    t-RLFAILURE           T-RLFAILURE,
    iE-Extensions         ProtocolExtensionContainer { { Synchronisation-Configuration-Cell-SetupRqst-ExtIEs} } OPTIONAL,
    ...
}

Synchronisation-Configuration-Cell-SetupRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PrimarySCH-Information-Cell-SetupRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID CommonPhysicalChannelID,
    primarySCH-Power         DL-Power,
    tSTD-Indicator           TSTD-Indicator,
    iE-Extensions           ProtocolExtensionContainer { { PrimarySCH-Information-Cell-SetupRqstFDD-ExtIEs} } OPTIONAL,
    ...
}

PrimarySCH-Information-Cell-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

SecondarySCH-Information-Cell-SetupRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID CommonPhysicalChannelID,
    secondarySCH-Power       DL-Power,
    tSTD-Indicator           TSTD-Indicator,
    iE-Extensions           ProtocolExtensionContainer { { SecondarySCH-Information-Cell-SetupRqstFDD-ExtIEs} } OPTIONAL,
    ...
}

SecondarySCH-Information-Cell-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PrimaryCPICH-Information-Cell-SetupRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID CommonPhysicalChannelID,
    primaryCPICH-Power       PrimaryCPICH-Power,
    transmitDiversityIndicator TransmitDiversityIndicator,
    iE-Extensions           ProtocolExtensionContainer { { PrimaryCPICH-Information-Cell-SetupRqstFDD-ExtIEs} } OPTIONAL,
    ...
}

PrimaryCPICH-Information-Cell-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```
SecondaryCPICH-InformationList-Cell-SetupRqstFDD ::= SEQUENCE (SIZE (1..maxSCPICHCell)) OF ProtocolIE-Single-Container{{ SecondaryCPICH-
InformationItemIE-Cell-SetupRqstFDD }}
```

```
SecondaryCPICH-InformationItemIE-Cell-SetupRqstFDD NBAP-PROTOCOL-IES ::= {
  { ID      id-SecondaryCPICH-InformationItem-Cell-SetupRqstFDD      CRITICALITY      reject      TYPE      SecondaryCPICH-
InformationItem-Cell-SetupRqstFDD      PRESENCE      mandatory}
}
```

```
SecondaryCPICH-InformationItem-Cell-SetupRqstFDD ::= SEQUENCE {
  commonPhysicalChannelID      CommonPhysicalChannelID,
  dl-ScramblingCode            DL-ScramblingCode,
  fdd-DL-ChannelisationCodeNumber      FDD-DL-ChannelisationCodeNumber,
  secondaryCPICH-Power        DL-Power,
  transmitDiversityIndicator  TransmitDiversityIndicator,
  iE-Extensions               ProtocolExtensionContainer { { SecondaryCPICH-InformationItem-Cell-SetupRqstFDD-ExtIEs} }      OPTIONAL,
  ...
}
```

```
SecondaryCPICH-InformationItem-Cell-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}
```

```
PrimaryCCPCH-Information-Cell-SetupRqstFDD ::= SEQUENCE {
  commonPhysicalChannelID      CommonPhysicalChannelID,
  bch-information              BCH-Information-Cell-SetupRqstFDD,
  sttd-Indicator               STTD-Indicator,
  iE-Extensions               ProtocolExtensionContainer { { PrimaryCCPCH-Information-Cell-SetupRqstFDD-ExtIEs} }      OPTIONAL,
  ...
}
```

```
PrimaryCCPCH-Information-Cell-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}
```

```
BCH-Information-Cell-SetupRqstFDD ::= SEQUENCE {
  commonTransportChannelID      CommonTransportChannelID,
  bch-Power                     DL-Power,
  iE-Extensions               ProtocolExtensionContainer { { BCH-Information-Cell-SetupRqstFDD-ExtIEs} }      OPTIONAL,
  ...
}
```

```
BCH-Information-Cell-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}
```

```
Limited-power-increase-information-Cell-SetupRqstFDD ::= SEQUENCE {
  powerRaiseLimit              PowerRaiseLimit,
  dlPowerAveragingWindowSize   DLPowerAveragingWindowSize,
  iE-Extensions               ProtocolExtensionContainer { { Limited-power-increase-information-Cell-SetupRqstFDD-ExtIEs} }
  OPTIONAL,
  ...
}
```

```
Limited-power-increase-information-Cell-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
```

```

    ...
}

IPDLParameter-Information-Cell-SetupRqstFDD ::= SEQUENCE {
    iPDL-FDD-Parameters          IPDL-FDD-Parameters,
    iPDL-Indicator                IPDL-Indicator,
    iE-Extensions                 ProtocolExtensionContainer { { IPDLParameter-Information-Cell-SetupRqstFDD-ExtIEs } } OPTIONAL,
    ...
}

IPDLParameter-Information-Cell-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- CELL SETUP REQUEST TDD
--
-- *****

CellSetupRequestTDD ::= SEQUENCE {
    protocolIEs                ProtocolIE-Container  {{CellSetupRequestTDD-IEs}},
    protocolExtensions         ProtocolExtensionContainer  {{CellSetupRequestTDD-Extensions}} OPTIONAL,
    ...
}

CellSetupRequestTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-Local-Cell-ID          CRITICALITY    reject    TYPE          Local-Cell-ID
      PRESENCE    mandatory    }|
      { ID      id-C-ID                CRITICALITY    reject    TYPE          C-ID
      PRESENCE    mandatory    }|
    { ID      id-ConfigurationGenerationID  CRITICALITY    reject    TYPE          ConfigurationGenerationID
      PRESENCE    mandatory    }|
    { ID      id-UARFCNforNt            CRITICALITY    reject    TYPE          UARFCN
      PRESENCE    mandatory    }|
    { ID      id-CellParameterID        CRITICALITY    reject    TYPE          CellParameterID
      PRESENCE    mandatory    }|
    { ID      id-MaximumTransmissionPower  CRITICALITY    reject    TYPE          MaximumTransmissionPower
      PRESENCE    mandatory    }|
    { ID      id-TransmissionDiversityApplied  CRITICALITY    reject    TYPE          TransmissionDiversityApplied
      PRESENCE    mandatory    }|
    { ID      id-SyncCase                CRITICALITY    reject    TYPE          SyncCase
      PRESENCE    mandatory    }|
    { ID      id-Synchronisation-Configuration-Cell-SetupRqst  CRITICALITY    reject    TYPE          Synchronisation-Configuration-
Cell-SetupRqst PRESENCE    mandatory    }|
    { ID      id-DPCHConstant            CRITICALITY    reject    TYPE          ConstantValue
      PRESENCE    mandatory    }|
    { ID      id-PUSCHConstant           CRITICALITY    reject    TYPE          ConstantValue
      PRESENCE    mandatory    }|
    { ID      id-PRACHConstant           CRITICALITY    reject    TYPE          ConstantValue
      PRESENCE    mandatory    }|
    { ID      id-TimingAdvanceApplied    CRITICALITY    reject    TYPE          TimingAdvanceApplied
      PRESENCE    mandatory    }|
}

```

```

    { ID id-SCH-Information-Cell-SetupRqstTDD CRITICALITY reject TYPE SCH-Information-Cell-
SetupRqstTDD PRESENCE optional }| -- Mandatory for 3.84Mcps TDD, Not Applicable to 1.28Mcps TDD
    { ID id-PCCPCH-Information-Cell-SetupRqstTDD CRITICALITY reject TYPE PCCPCH-Information-Cell-
SetupRqstTDD PRESENCE optional }| -- Mandatory for 3.84Mcps TDD, Not Applicable to 1.28Mcps TDD
    { ID id-TimeSlotConfigurationList-Cell-SetupRqstTDD CRITICALITY reject TYPE TimeSlotConfigurationList-Cell-
SetupRqstTDD PRESENCE optional }, -- Mandatory for 3.84Mcps TDD, Not Applicable to 1.28Mcps TDD
    ...
}

CellSetupRequestTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-TimeSlotConfigurationList-LCR-Cell-SetupRqstTDD CRITICALITY reject EXTENSION TimeSlotConfigurationList-LCR-
Cell-SetupRqstTDD PRESENCE optional }| -- Mandatory for 1.28Mcps TDD, Not Applicable to 3.84Mcps TDD
    { ID id-PCCPCH-LCR-Information-Cell-SetupRqstTDD CRITICALITY reject EXTENSION PCCPCH-LCR-Information-Cell-
SetupRqstTDD PRESENCE optional }| -- Mandatory for 1.28Mcps TDD, Not Applicable to 3.84Mcps TDD
    { ID id-DwPCH-LCR-Information-Cell-SetupRqstTDD CRITICALITY reject EXTENSION DwPCH-LCR-Information-Cell-
SetupRqstTDD PRESENCE optional }| -- Mandatory for 1.28Mcps TDD, Not Applicable to 3.84Mcps TDD
    { ID id-ReferenceSFNoffset CRITICALITY ignore EXTENSION ReferenceSFNoffset PRESENCE optional }|
    { ID id-IPDLParameter-Information-Cell-SetupRqstTDD CRITICALITY reject EXTENSION IPDLParameter-Information-
Cell-SetupRqstTDD PRESENCE optional },
    ...
}

SCH-Information-Cell-SetupRqstTDD ::= SEQUENCE {
    commonPhysicalChannelID CommonPhysicalChannelID,
    syncCaseIndicator SyncCaseIndicator-Cell-SetupRqstTDD-PSCH,
    sCH-Power DL-Power,
    tSTD-Indicator TSTD-Indicator,
    iE-Extensions ProtocolExtensionContainer { { SCH-Information-Cell-SetupRqstTDD-ExtIEs } } OPTIONAL,
    ...
}

SCH-Information-Cell-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

SyncCaseIndicator-Cell-SetupRqstTDD-PSCH ::= ProtocolIE-Single-Container {{ SyncCaseIndicatorIE-Cell-SetupRqstTDD-PSCH }}

SyncCaseIndicatorIE-Cell-SetupRqstTDD-PSCH NBAP-PROTOCOL-IES ::= {
    { ID id-SyncCaseIndicatorItem-Cell-SetupRqstTDD-PSCH CRITICALITY reject TYPE SyncCaseIndicatorItem-Cell-SetupRqstTDD-PSCH PRESENCE
mandatory }
}

SyncCaseIndicatorItem-Cell-SetupRqstTDD-PSCH ::= CHOICE {
    case1 Case1-Cell-SetupRqstTDD,
    case2 Case2-Cell-SetupRqstTDD,
    ...
}

Case1-Cell-SetupRqstTDD ::= SEQUENCE {
    timeSlot TimeSlot,
    iE-Extensions ProtocolExtensionContainer { { Case1Item-Cell-SetupRqstTDD-ExtIEs } } OPTIONAL,
    ...
}

```

```

Case1Item-Cell-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Case2-Cell-SetupRqstTDD ::= SEQUENCE {
    sCH-TimeSlot          SCH-TimeSlot,
    iE-Extensions         ProtocolExtensionContainer { { Case2Item-Cell-SetupRqstTDD-ExtIEs} }    OPTIONAL,
    ...
}

Case2Item-Cell-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PCCPCH-Information-Cell-SetupRqstTDD ::= SEQUENCE {
    commonPhysicalChannelID          CommonPhysicalChannelID,
    tdd-PhysicalChannelOffset        TDD-PhysicalChannelOffset,
    repetitionPeriod                  RepetitionPeriod,
    repetitionLength                  RepetitionLength,
    pCCPCH-Power                      PCCPCH-Power,
    sCTD-Indicator                    SCTD-Indicator,
    iE-Extensions                     ProtocolExtensionContainer { { PCCPCH-Information-Cell-SetupRqstTDD-ExtIEs} }    OPTIONAL,
    ...
}

PCCPCH-Information-Cell-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TimeSlotConfigurationList-Cell-SetupRqstTDD ::= SEQUENCE (SIZE (1..15)) OF TimeSlotConfigurationItem-Cell-SetupRqstTDD

TimeSlotConfigurationItem-Cell-SetupRqstTDD ::= SEQUENCE {
    timeSlot          TimeSlot,
    timeSlotStatus    TimeSlotStatus,
    timeSlotDirection TimeSlotDirection,
    iE-Extensions     ProtocolExtensionContainer { { TimeSlotConfigurationItem-Cell-SetupRqstTDD-ExtIEs} }    OPTIONAL,
    ...
}

TimeSlotConfigurationItem-Cell-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TimeSlotConfigurationList-LCR-Cell-SetupRqstTDD ::= SEQUENCE (SIZE (1..7)) OF TimeSlotConfigurationItem-LCR-Cell-SetupRqstTDD

TimeSlotConfigurationItem-LCR-Cell-SetupRqstTDD ::= SEQUENCE {
    timeSlotLCR          TimeSlotLCR,
    timeSlotStatus       TimeSlotStatus,
    timeSlotDirection    TimeSlotDirection,
    iE-Extensions        ProtocolExtensionContainer { { TimeSlotConfigurationItem-LCR-Cell-SetupRqstTDD-ExtIEs} }    OPTIONAL,
    ...
}

```



```

TimeSlotConfigurationItem-LCR-Cell-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PCCPCH-LCR-Information-Cell-SetupRqstTDD ::= SEQUENCE {
    commonPhysicalChannelID          CommonPhysicalChannelID,
    tdd-PhysicalChannelOffset        TDD-PhysicalChannelOffset,
    repetitionPeriod                 RepetitionPeriod,
    repetitionLength                 RepetitionLength,
    pCCPCH-Power                    PCCPCH-Power,
    sCTD-Indicator                   SCTD-Indicator,
    tSTD-Indicator                   TSTD-Indicator,
    iE-Extensions                    ProtocolExtensionContainer { { PCCPCH-LCR-Information-Cell-SetupRqstTDD-ExtIEs } }    OPTIONAL,
    ...
}

PCCPCH-LCR-Information-Cell-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DwPCH-LCR-Information-Cell-SetupRqstTDD ::= SEQUENCE {
    commonPhysicalChannelId          CommonPhysicalChannelID,
    tSTD-Indicator                   TSTD-Indicator,
    dwPCH-Power                     DwPCH-Power,
    iE-Extensions                    ProtocolExtensionContainer { { DwPCH-LCR-Information-Cell-SetupRqstTDD-ExtIEs } }    OPTIONAL,
    ...
}

DwPCH-LCR-Information-Cell-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

IPDLParameter-Information-Cell-SetupRqstTDD ::= SEQUENCE {
    iPDL-TDD-Parameters              IPDL-TDD-Parameters,
    iPDL-Indicator                   IPDL-Indicator,
    iE-Extensions                    ProtocolExtensionContainer { { IPDLParameter-Information-Cell-SetupRqstTDD-ExtIEs } }    OPTIONAL,
    ...
}

IPDLParameter-Information-Cell-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- CELL SETUP RESPONSE
--
-- *****

CellSetupResponse ::= SEQUENCE {
    protocolIEs                      ProtocolIE-Container    {{CellSetupResponse-IEs}},
    protocolExtensions                ProtocolExtensionContainer {{CellSetupResponse-Extensions}}    OPTIONAL,
    ...
}

```

```

CellSetupResponse-IEs NBAP-PROTOCOL-IES ::= {
  { ID      id-CriticalityDiagnostics      CRITICALITY      ignore      TYPE      CriticalityDiagnostics      PRESENCE optional},
  ...
}

CellSetupResponse-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- CELL SETUP FAILURE
--
-- *****

CellSetupFailure ::= SEQUENCE {
  protocolIEs      ProtocolIE-Container      {{CellSetupFailure-IEs}},
  protocolExtensions      ProtocolExtensionContainer      {{CellSetupFailure-Extensions}}      OPTIONAL,
  ...
}

CellSetupFailure-IEs NBAP-PROTOCOL-IES ::= {
  { ID      id-Cause      CRITICALITY      ignore      TYPE      Cause      PRESENCE mandatory
  }|
  { ID      id-CriticalityDiagnostics      CRITICALITY      ignore      TYPE      CriticalityDiagnostics      PRESENCE optional },
  ...
}

CellSetupFailure-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- CELL RECONFIGURATION REQUEST FDD
--
-- *****

CellReconfigurationRequestFDD ::= SEQUENCE {
  protocolIEs      ProtocolIE-Container      {{CellReconfigurationRequestFDD-IEs}},
  protocolExtensions      ProtocolExtensionContainer      {{CellReconfigurationRequestFDD-Extensions}}      OPTIONAL,
  ...
}

CellReconfigurationRequestFDD-IEs NBAP-PROTOCOL-IES ::= {
  { ID      id-C-ID      PRESENCE      mandatory      }|
  { ID      id-ConfigurationGenerationID      PRESENCE      mandatory      }|
  { ID      id-MaximumTransmissionPower      PRESENCE      optional      }|
  { ID      id-Synchronisation-Configuration-Cell-ReconfRqst      PRESENCE      optional      }|
  Cell-ReconfRqst      PRESENCE      optional      }|
  CRITICALITY      reject      TYPE      C-ID
  CRITICALITY      reject      TYPE      ConfigurationGenerationID
  CRITICALITY      reject      TYPE      MaximumTransmissionPower
  CRITICALITY      reject      TYPE      Synchronisation-Configuration-

```

```

    { ID id-PrimarySCH-Information-Cell-ReconfRqstFDD
ReconfRqstFDD PRESENCE optional }|
    { ID id-SecondarySCH-Information-Cell-ReconfRqstFDD
ReconfRqstFDD PRESENCE optional }|
    { ID id-PrimaryCPICH-Information-Cell-ReconfRqstFDD
ReconfRqstFDD PRESENCE optional }|
    { ID id-SecondaryCPICH-InformationList-Cell-ReconfRqstFDD
Cell-ReconfRqstFDD PRESENCE optional }|
    { ID id-PrimaryCCPCH-Information-Cell-ReconfRqstFDD
ReconfRqstFDD PRESENCE optional },
    ...
}

CellReconfigurationRequestFDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    {ID id-IPDLParameter-Information-Cell-ReconfRqstFDD
Cell-ReconfRqstFDD PRESENCE optional },
    ...
}

Synchronisation-Configuration-Cell-ReconfRqst ::= SEQUENCE {
    n-INSYNC-IND N-INSYNC-IND,
    n-OUTSYNC-IND N-OUTSYNC-IND,
    t-RLFFAILURE T-RLFFAILURE,
    iE-Extensions ProtocolExtensionContainer { { Synchronisation-Configuration-Cell-ReconfRqst-ExtIEs } } OPTIONAL,
    ...
}

Synchronisation-Configuration-Cell-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PrimarySCH-Information-Cell-ReconfRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID CommonPhysicalChannelID,
    primarySCH-Power DL-Power,
    iE-Extensions ProtocolExtensionContainer { { PrimarySCH-Information-Cell-ReconfRqstFDD-ExtIEs } } OPTIONAL,
    ...
}

PrimarySCH-Information-Cell-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

SecondarySCH-Information-Cell-ReconfRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID CommonPhysicalChannelID,
    secondarySCH-Power DL-Power,
    iE-Extensions ProtocolExtensionContainer { { SecondarySCH-Information-Cell-ReconfRqstFDD-ExtIEs } } OPTIONAL,
    ...
}

SecondarySCH-Information-Cell-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PrimaryCPICH-Information-Cell-ReconfRqstFDD ::= SEQUENCE {

```

```

    commonPhysicalChannelID          CommonPhysicalChannelID,
    primaryCPICH-Power               PrimaryCPICH-Power,
    iE-Extensions                    ProtocolExtensionContainer { { PrimaryCPICH-Information-Cell-ReconfRqstFDD-ExtIEs } }    OPTIONAL,
    ...
}

PrimaryCPICH-Information-Cell-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

SecondaryCPICH-InformationList-Cell-ReconfRqstFDD ::= SEQUENCE (SIZE (1..maxSCPICHCell)) OF ProtocolIE-Single-Container{{ SecondaryCPICH-
InformationItemIE-Cell-ReconfRqstFDD }}

SecondaryCPICH-InformationItemIE-Cell-ReconfRqstFDD NBAP-PROTOCOL-IES ::= {
    { ID      id-SecondaryCPICH-InformationItem-Cell-ReconfRqstFDD      CRITICALITY    reject          TYPE    SecondaryCPICH-
InformationItem-Cell-ReconfRqstFDD      PRESENCE      mandatory}
}

SecondaryCPICH-InformationItem-Cell-ReconfRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID          CommonPhysicalChannelID,
    secondaryCPICH-Power             DL-Power,
    iE-Extensions                    ProtocolExtensionContainer { { SecondaryCPICH-InformationItem-Cell-ReconfRqstFDD-ExtIEs } }
    OPTIONAL,
    ...
}

SecondaryCPICH-InformationItem-Cell-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PrimaryCCPCH-Information-Cell-ReconfRqstFDD ::= SEQUENCE {
    bCH-information                  BCH-information-Cell-ReconfRqstFDD,
    iE-Extensions                    ProtocolExtensionContainer { { PrimaryCCPCH-Information-Cell-ReconfRqstFDD-ExtIEs } }    OPTIONAL,
    ...
}

PrimaryCCPCH-Information-Cell-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

BCH-information-Cell-ReconfRqstFDD ::= SEQUENCE {
    commonTransportChannelID        CommonTransportChannelID,
    bCH-Power                       DL-Power,
    iE-Extensions                    ProtocolExtensionContainer { { BCH-information-Cell-ReconfRqstFDD-ExtIEs } }    OPTIONAL,
    ...
}

BCH-information-Cell-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

IPDLParameter-Information-Cell-ReconfRqstFDD ::= SEQUENCE {
    iPDL-FDD-Parameters              IPDL-FDD-Parameters    OPTIONAL,
    iPDL-Indicator                   IPDL-Indicator,
}

```

```

    iE-Extensions          ProtocolExtensionContainer { { IPDLParameter-Information-Cell-ReconfRqstFDD-ExtIEs } }    OPTIONAL,
  }
  ...
}

IPDLParameter-Information-Cell-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- CELL RECONFIGURATION REQUEST TDD
--
-- *****

CellReconfigurationRequestTDD ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container    {{CellReconfigurationRequestTDD-IEs}},
  protocolExtensions   ProtocolExtensionContainer {{CellReconfigurationRequestTDD-Extensions}}    OPTIONAL,
  ...
}

CellReconfigurationRequestTDD-IEs NBAP-PROTOCOL-IES ::= {
  { ID   id-C-ID          CRITICALITY   reject   TYPE   C-ID
    PRESENCE   mandatory   }|
  { ID   id-ConfigurationGenerationID   CRITICALITY   reject   TYPE   ConfigurationGenerationID
    PRESENCE   mandatory   }|
  { ID   id-Synchronisation-Configuration-Cell-ReconfRqst   CRITICALITY   reject   TYPE   Synchronisation-Configuration-
Cell-ReconfRqst PRESENCE   optional   }|
  { ID   id-TimingAdvanceApplied   CRITICALITY   reject   TYPE   TimingAdvanceApplied
    PRESENCE   optional   }|
  { ID   id-SCH-Information-Cell-ReconfRqstTDD   CRITICALITY   reject   TYPE   SCH-Information-Cell-
ReconfRqstTDD PRESENCE   optional   }| -- Applicable to 3.84Mcps TDD only
  { ID   id-PCCPCH-Information-Cell-ReconfRqstTDD   CRITICALITY   reject   TYPE   PCCPCH-Information-Cell-
ReconfRqstTDD PRESENCE   optional   }|
  { ID   id-MaximumTransmissionPower   CRITICALITY   reject   TYPE   MaximumTransmissionPower
    PRESENCE   optional   }|
  { ID   id-DPCHConstant   CRITICALITY   reject   TYPE   ConstantValue
    PRESENCE   optional   }|
  { ID   id-PUSCHConstant   CRITICALITY   reject   TYPE   ConstantValue
    PRESENCE   optional   }|
  { ID   id-PRACHConstant   CRITICALITY   reject   TYPE   ConstantValue
    PRESENCE   optional   }|
  { ID   id-TimeSlotConfigurationList-Cell-ReconfRqstTDD   CRITICALITY   reject   TYPE   TimeSlotConfigurationList-Cell-
ReconfRqstTDD PRESENCE   optional   }, -- Applicable to 3.84Mcps TDD only
  ...
}

CellReconfigurationRequestTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  { ID   id-TimeSlotConfigurationList-LCR-Cell-ReconfRqstTDD   CRITICALITY   reject   EXTENSION   TimeSlotConfigurationList-LCR-
Cell-ReconfRqstTDD PRESENCE   optional }| -- Mandatory for 1.28Mcps TDD, Not Applicable to 3.84Mcps TDD
  { ID   id-DwPCH-LCR-Information-Cell-ReconfRqstTDD   CRITICALITY   reject   EXTENSION   DwPCH-LCR-Information-Cell-
ReconfRqstTDD PRESENCE   optional }| -- Mandatory for 1.28Mcps TDD, Not Applicable to 3.84Mcps TDD
  { ID   id-IPDLParameter-Information-Cell-ReconfRqstTDD   CRITICALITY   reject   EXTENSION   IPDLParameter-Information-
Cell-ReconfRqstTDD PRESENCE   optional },
  ...
}

```

```

}

SCH-Information-Cell-ReconfRqstTDD ::= SEQUENCE {
    commonPhysicalChannelID      CommonPhysicalChannelID,
    sCH-Power                    DL-Power,
    iE-Extensions                ProtocolExtensionContainer { { PSCH-Information-Cell-ReconfRqstTDD-ExtIEs } }    OPTIONAL,
    ...
}

PSCH-Information-Cell-ReconfRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PCCPCH-Information-Cell-ReconfRqstTDD ::= SEQUENCE {
    commonPhysicalChannelID      CommonPhysicalChannelID,
    pCCPCH-Power                PCCPCH-Power,
    iE-Extensions                ProtocolExtensionContainer { { PCCPCH-Information-Cell-ReconfRqstTDD-ExtIEs } }    OPTIONAL,
    ...
}

PCCPCH-Information-Cell-ReconfRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TimeSlotConfigurationList-Cell-ReconfRqstTDD ::= SEQUENCE (SIZE (1..15)) OF TimeSlotConfigurationItem-Cell-ReconfRqstTDD

TimeSlotConfigurationItem-Cell-ReconfRqstTDD ::= SEQUENCE {
    timeSlot                    TimeSlot,
    timeSlotStatus              TimeSlotStatus,
    timeSlotDirection           TimeSlotDirection,
    iE-Extensions                ProtocolExtensionContainer { { TimeSlotConfigurationItem-Cell-ReconfRqstTDD-ExtIEs } }    OPTIONAL,
    ...
}

TimeSlotConfigurationItem-Cell-ReconfRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TimeSlotConfigurationList-LCR-Cell-ReconfRqstTDD ::= SEQUENCE (SIZE (1..7)) OF TimeSlotConfigurationItem-LCR-Cell-ReconfRqstTDD

TimeSlotConfigurationItem-LCR-Cell-ReconfRqstTDD ::= SEQUENCE {
    timeSlotLCR                TimeSlotLCR,
    timeSlotStatus              TimeSlotStatus,
    timeSlotDirection           TimeSlotDirection,
    iE-Extensions                ProtocolExtensionContainer { { TimeSlotConfigurationItem-LCR-Cell-ReconfRqstTDD-ExtIEs } }    OPTIONAL,
    ...
}

TimeSlotConfigurationItem-LCR-Cell-ReconfRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DWPCH-LCR-Information-Cell-ReconfRqstTDD ::= SEQUENCE {
    commonPhysicalChannelId      CommonPhysicalChannelID,

```

```

    dwPCH-Power          DwPCH-Power,
    iE-Extensions        ProtocolExtensionContainer { { DwPCH-LCR-Information-Cell-ReconfRqstTDD-ExtIEs } }    OPTIONAL,
    ...
}

DwPCH-LCR-Information-Cell-ReconfRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

IPDLParameter-Information-Cell-ReconfRqstTDD ::= SEQUENCE {
    iPDL-TDD-Parameters          IPDL-TDD-Parameters          OPTIONAL,
    iPDL-Indicator               IPDL-Indicator,
    iE-Extensions               ProtocolExtensionContainer { { IPDLParameter-Information-Cell-ReconfRqstTDD-ExtIEs } }    OPTIONAL,
    ...
}

IPDLParameter-Information-Cell-ReconfRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- CELL RECONFIGURATION RESPONSE
--
-- *****

CellReconfigurationResponse ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{CellReconfigurationResponse-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{CellReconfigurationResponse-Extensions}}    OPTIONAL,
    ...
}

CellReconfigurationResponse-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-CriticalityDiagnostics    CRITICALITY    ignore          TYPE    CriticalityDiagnostics          PRESENCE optional},
    ...
}

CellReconfigurationResponse-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- CELL RECONFIGURATION FAILURE
--
-- *****

CellReconfigurationFailure ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{CellReconfigurationFailure-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{CellReconfigurationFailure-Extensions}}    OPTIONAL,
    ...
}

CellReconfigurationFailure-IEs NBAP-PROTOCOL-IES ::= {

```

```

    { ID      id-Cause                CRITICALITY  ignore          TYPE  Cause                PRESENCE
      mandatory }|
    { ID      id-CriticalityDiagnostics CRITICALITY  ignore          TYPE  CriticalityDiagnostics PRESENCE optional },
    ...
}

CellReconfigurationFailure-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- CELL DELETION REQUEST
--
-- *****

CellDeletionRequest ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{CellDeletionRequest-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{CellDeletionRequest-Extensions}}    OPTIONAL,
    ...
}

CellDeletionRequest-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-C-ID                CRITICALITY  reject          TYPE  C-ID                PRESENCE  mandatory},
    ...
}

CellDeletionRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- CELL DELETION RESPONSE
--
-- *****

CellDeletionResponse ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{CellDeletionResponse-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{CellDeletionResponse-Extensions}}    OPTIONAL,
    ...
}

CellDeletionResponse-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-CriticalityDiagnostics CRITICALITY  ignore          TYPE  CriticalityDiagnostics PRESENCE optional},
    ...
}

CellDeletionResponse-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--

```



```

-- RESOURCE STATUS INDICATION
--
-- *****
ResourceStatusIndication ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{ResourceStatusIndication-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{ResourceStatusIndication-Extensions}}          OPTIONAL,
    ...
}

ResourceStatusIndication-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-IndicationType-ResourceStatusInd          CRITICALITY ignore          TYPE IndicationType-ResourceStatusInd          PRESENCE
      mandatory }|
    { ID id-Cause                                     CRITICALITY ignore          TYPE Cause                                     PRESENCE
      optional  },
    ...
}

ResourceStatusIndication-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

IndicationType-ResourceStatusInd ::= CHOICE {
    no-Failure          No-Failure-ResourceStatusInd,
    serviceImpacting    ServiceImpacting-ResourceStatusInd,
    ...
}

No-Failure-ResourceStatusInd ::= SEQUENCE {
    local-Cell-InformationList      Local-Cell-InformationList-ResourceStatusInd,
    local-Cell-Group-InformationList Local-Cell-Group-InformationList-ResourceStatusInd OPTIONAL,
    iE-Extensions                   ProtocolExtensionContainer { { No-FailureItem-ResourceStatusInd-ExtIEs} } OPTIONAL,
    ...
}

No-FailureItem-ResourceStatusInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Local-Cell-InformationList-ResourceStatusInd ::= SEQUENCE(SIZE (1..maxLocalCellinNodeB)) OF ProtocolIE-Single-Container {{ Local-Cell-InformationItemIE-ResourceStatusInd }}

Local-Cell-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
    { ID id-Local-Cell-InformationItem-ResourceStatusInd CRITICALITY ignore TYPE Local-Cell-InformationItem-ResourceStatusInd PRESENCE
      mandatory }
}

Local-Cell-InformationItem-ResourceStatusInd ::= SEQUENCE {
    local-CellID          Local-Cell-ID,
    addorDeleteIndicator AddorDeleteIndicator,
    dl-or-global-capacityCredit DL-or-Global-CapacityCredit          OPTIONAL,
    -- This IE shall be present if AddorDeleteIndicator IE is set to 'add'
    ul-capacityCredit     UL-CapacityCredit          OPTIONAL,
    commonChannelsCapacityConsumptionLaw CommonChannelsCapacityConsumptionLaw          OPTIONAL,
}

```

```

-- This IE shall be present if AddorDeleteIndicator IE is set to 'add'
dedicatedChannelsCapacityConsumptionLaw    DedicatedChannelsCapacityConsumptionLaw    OPTIONAL,
-- This IE shall be present if AddorDeleteIndicator IE is set to 'add'
maximumDL-PowerCapability                    MaximumDL-PowerCapability                    OPTIONAL,
-- This IE shall be present if AddorDeleteIndicator IE is set to 'add'
minSpreadingFactor                           MinSpreadingFactor                           OPTIONAL,
-- This IE shall be present if AddorDeleteIndicator IE is set to 'add'
minimumDL-PowerCapability                    MinimumDL-PowerCapability                    OPTIONAL,
-- This IE shall be present if AddorDeleteIndicator IE is set to 'add'
local-Cell-Group-ID                          Local-Cell-ID                               OPTIONAL,
iE-Extensions                                ProtocolExtensionContainer { { Local-Cell-InformationItem-ResourceStatusInd-ExtIEs } } OPTIONAL,
...
}

Local-Cell-InformationItem-ResourceStatusInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  { ID id-ReferenceClockAvailability    CRITICALITY ignore    EXTENSION ReferenceClockAvailability    PRESENCE optional },
  -- This IE shall be present if AddorDeleteIndicator IE is set to 'add' and the Local Cell is related to a TDD cell
  ...
}

Local-Cell-Group-InformationList-ResourceStatusInd ::= SEQUENCE(SIZE (1..maxLocalCellinNodeB)) OF ProtocolIE-Single-Container {{ Local-Cell-Group-InformationItemIE-ResourceStatusInd }}

Local-Cell-Group-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
  { ID id-Local-Cell-Group-InformationItem-ResourceStatusInd    CRITICALITY ignore TYPE Local-Cell-Group-InformationItem-ResourceStatusInd
  PRESENCE mandatory }
}

Local-Cell-Group-InformationItem-ResourceStatusInd ::= SEQUENCE {
  local-Cell-Group-ID                Local-Cell-ID,
  dl-or-global-capacityCredit        DL-or-Global-CapacityCredit,
  ul-capacityCredit                   UL-CapacityCredit    OPTIONAL,
  commonChannelsCapacityConsumptionLaw    CommonChannelsCapacityConsumptionLaw,
  dedicatedChannelsCapacityConsumptionLaw    DedicatedChannelsCapacityConsumptionLaw,
  iE-Extensions                       ProtocolExtensionContainer { { Local-Cell-Group-InformationItem-ResourceStatusInd-ExtIEs } }
  OPTIONAL,
  ...
}

Local-Cell-Group-InformationItem-ResourceStatusInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

ServiceImpacting-ResourceStatusInd ::= SEQUENCE {
  local-Cell-InformationList          Local-Cell-InformationList2-ResourceStatusInd    OPTIONAL,
  local-Cell-Group-InformationList    Local-Cell-Group-InformationList2-ResourceStatusInd    OPTIONAL,
  cCP-InformationList                CCP-InformationList-ResourceStatusInd    OPTIONAL,
  cell-InformationList               Cell-InformationList-ResourceStatusInd    OPTIONAL,
  iE-Extensions                       ProtocolExtensionContainer { { ServiceImpactingItem-ResourceStatusInd-ExtIEs } }    OPTIONAL,
  ...
}

ServiceImpactingItem-ResourceStatusInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

```

```

}

Local-Cell-InformationList2-ResourceStatusInd ::= SEQUENCE(SIZE (1..maxLocalCellinNodeB)) OF ProtocolIE-Single-Container {{ Local-Cell-
InformationItemIE2-ResourceStatusInd }}

Local-Cell-InformationItemIE2-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
  { ID id-Local-Cell-InformationItem2-ResourceStatusInd  CRITICALITY ignore  TYPE Local-Cell-InformationItem2-ResourceStatusInd  PRESENCE
mandatory }
}

Local-Cell-InformationItem2-ResourceStatusInd ::= SEQUENCE {
  local-Cell-ID                Local-Cell-ID,
  dl-or-global-capacityCredit  DL-or-Global-CapacityCredit  OPTIONAL,
  ul-capacityCredit            UL-CapacityCredit            OPTIONAL,
  commonChannelsCapacityConsumptionLaw  CommonChannelsCapacityConsumptionLaw  OPTIONAL,
  dedicatedChannelsCapacityConsumptionLaw  DedicatedChannelsCapacityConsumptionLaw  OPTIONAL,
  maximum-DL-PowerCapability  MaximumDL-PowerCapability  OPTIONAL,
  minSpreadingFactor          MinSpreadingFactor          OPTIONAL,
  minimumDL-PowerCapability  MinimumDL-PowerCapability  OPTIONAL,
  iE-Extensions                ProtocolExtensionContainer { { Local-Cell-InformationItem2-ResourceStatusInd-ExtIEs } }  OPTIONAL,
  ...
}

Local-Cell-InformationItem2-ResourceStatusInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  { ID id-ReferenceClockAvailability  CRITICALITY ignore  EXTENSION ReferenceClockAvailability  PRESENCE optional },
  ...
}

Local-Cell-Group-InformationList2-ResourceStatusInd ::= SEQUENCE(SIZE (1..maxLocalCellinNodeB)) OF ProtocolIE-Single-Container {{ Local-Cell-Group-
InformationItemIE2-ResourceStatusInd }}

Local-Cell-Group-InformationItemIE2-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
  { ID id-Local-Cell-Group-InformationItem2-ResourceStatusInd  CRITICALITY ignore  TYPE Local-Cell-Group-InformationItem2-ResourceStatusInd
PRESENCE mandatory }
}

Local-Cell-Group-InformationItem2-ResourceStatusInd ::= SEQUENCE {
  local-Cell-Group-ID                Local-Cell-ID,
  dl-or-global-capacityCredit  DL-or-Global-CapacityCredit  OPTIONAL,
  ul-capacityCredit            UL-CapacityCredit            OPTIONAL,
  commonChannelsCapacityConsumptionLaw  CommonChannelsCapacityConsumptionLaw  OPTIONAL,
  dedicatedChannelsCapacityConsumptionLaw  DedicatedChannelsCapacityConsumptionLaw  OPTIONAL,
  iE-Extensions                ProtocolExtensionContainer { { Local-Cell-Group-InformationItem2-ResourceStatusInd-ExtIEs } }
OPTIONAL,
  ...
}

Local-Cell-Group-InformationItem2-ResourceStatusInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

CCP-InformationList-ResourceStatusInd ::= SEQUENCE (SIZE (1..maxCCPinNodeB)) OF ProtocolIE-Single-Container {{ CCP-InformationItemIE-
ResourceStatusInd }}

```

```

CCP-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
  { ID id-CCP-InformationItem-ResourceStatusInd  CRITICALITY ignore  TYPE CCP-InformationItem-ResourceStatusInd  PRESENCE mandatory }
}

CCP-InformationItem-ResourceStatusInd ::= SEQUENCE {
  communicationControlPortID      CommunicationControlPortID,
  resourceOperationalState        ResourceOperationalState,
  availabilityStatus              AvailabilityStatus,
  iE-Extensions                   ProtocolExtensionContainer { { CCP-InformationItem-ResourceStatusInd-ExtIEs} }  OPTIONAL,
  ...
}

CCP-InformationItem-ResourceStatusInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

Cell-InformationList-ResourceStatusInd ::= SEQUENCE (SIZE (1..maxCellinNodeB)) OF ProtocolIE-Single-Container {{ Cell-InformationItemIE-ResourceStatusInd }}

Cell-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
  { ID id-Cell-InformationItem-ResourceStatusInd  CRITICALITY ignore TYPE Cell-InformationItem-ResourceStatusInd  PRESENCE mandatory }
}

Cell-InformationItem-ResourceStatusInd ::= SEQUENCE {
  c-ID                            C-ID,
  resourceOperationalState        ResourceOperationalState  OPTIONAL,
  availabilityStatus              AvailabilityStatus  OPTIONAL,
  primary-SCH-Information         P-SCH-Information-ResourceStatusInd  OPTIONAL, -- FDD only
  secondary-SCH-Information       S-SCH-Information-ResourceStatusInd  OPTIONAL, -- FDD only
  primary-CPICH-Information       P-CPICH-Information-ResourceStatusInd  OPTIONAL, -- FDD only
  secondary-CPICH-Information     S-CPICH-InformationList-ResourceStatusInd  OPTIONAL, -- FDD only
  primary-CCPCH-Information       P-CCPCH-Information-ResourceStatusInd  OPTIONAL,
  bCH-Information                BCH-Information-ResourceStatusInd  OPTIONAL,
  secondary-CCPCH-InformationList S-CCPCH-InformationList-ResourceStatusInd  OPTIONAL,
  pCH-Information                PCH-Information-ResourceStatusInd  OPTIONAL,
  pICH-Information               PICH-Information-ResourceStatusInd  OPTIONAL,
  fACH-InformationList           FACH-InformationList-ResourceStatusInd  OPTIONAL,
  pRACH-InformationList          PRACH-InformationList-ResourceStatusInd  OPTIONAL,
  rACH-InformationList           RACH-InformationList-ResourceStatusInd  OPTIONAL,
  aICH-InformationList           AICH-InformationList-ResourceStatusInd  OPTIONAL, -- FDD only
  pCPCH-InformationList          PCPCH-InformationList-ResourceStatusInd  OPTIONAL, -- FDD only
  cPCH-InformationList           CPCH-InformationList-ResourceStatusInd  OPTIONAL, -- FDD only
  aP-AICH-InformationList        AP-AICH-InformationList-ResourceStatusInd  OPTIONAL, -- FDD only
  cDCA-ICH-InformationList       CDCA-ICH-InformationList-ResourceStatusInd  OPTIONAL, -- FDD only
  sCH-Information                SCH-Information-ResourceStatusInd  OPTIONAL, -- Applicable to 3.84Mcps TDD only
  iE-Extensions                 ProtocolExtensionContainer { { Cell-InformationItem-ResourceStatusInd-ExtIEs} }  OPTIONAL,
  ...
}

Cell-InformationItem-ResourceStatusInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  { ID id-FPACH-LCR-InformationList-ResourceStatusInd  CRITICALITY ignore  EXTENSION  FPACH-LCR-InformationList-ResourceStatusInd
  PRESENCE optional } | -- Applicable to 1.28Mcps TDD only
  { ID id-DwPCH-LCR-Information-ResourceStatusInd  CRITICALITY ignore  EXTENSION  DwPCH-LCR-Information-ResourceStatusInd
  PRESENCE optional }, -- Applicable to 1.28Mcps TDD only
}

```

```

}
...
}
P-SCH-Information-ResourceStatusInd ::= ProtocolIE-Single-Container {{ P-SCH-InformationIE-ResourceStatusInd }}
P-SCH-InformationIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
  { ID id-P-SCH-Information  CRITICALITY ignore  TYPE Common-PhysicalChannel-Status-Information          PRESENCE mandatory }
}
S-SCH-Information-ResourceStatusInd ::= ProtocolIE-Single-Container {{ S-SCH-InformationIE-ResourceStatusInd }}
S-SCH-InformationIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
  { ID id-S-SCH-Information  CRITICALITY ignore  TYPE Common-PhysicalChannel-Status-Information          PRESENCE mandatory }
}
P-CPICH-Information-ResourceStatusInd ::= ProtocolIE-Single-Container {{ P-CPICH-InformationIE-ResourceStatusInd }}
P-CPICH-InformationIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
  { ID id-P-CPICH-Information  CRITICALITY ignore  TYPE Common-PhysicalChannel-Status-Information          PRESENCE mandatory }
}
S-CPICH-InformationList-ResourceStatusInd ::= SEQUENCE (SIZE (1..maxSCPICHCell)) OF ProtocolIE-Single-Container {{ S-CPICH-InformationItemIE-ResourceStatusInd }}
S-CPICH-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
  { ID id-S-CPICH-Information  CRITICALITY ignore  TYPE Common-PhysicalChannel-Status-Information          PRESENCE mandatory }
}
P-CCPCH-Information-ResourceStatusInd ::= ProtocolIE-Single-Container {{ P-CCPCH-InformationIE-ResourceStatusInd }}
P-CCPCH-InformationIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
  { ID id-P-CCPCH-Information  CRITICALITY ignore  TYPE Common-PhysicalChannel-Status-Information          PRESENCE mandatory }
}
BCH-Information-ResourceStatusInd ::= ProtocolIE-Single-Container {{ BCH-InformationIE-ResourceStatusInd }}
BCH-InformationIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
  { ID id-BCH-Information  CRITICALITY ignore  TYPE Common-TransportChannel-Status-Information          PRESENCE mandatory }
}
S-CCPCH-InformationList-ResourceStatusInd ::= SEQUENCE (SIZE (1..maxSCCPCHCell)) OF ProtocolIE-Single-Container {{ S-CCPCH-InformationItemIE-ResourceStatusInd }}
S-CCPCH-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
  { ID id-S-CCPCH-Information  CRITICALITY ignore  TYPE Common-PhysicalChannel-Status-Information          PRESENCE mandatory }
}
PCH-Information-ResourceStatusInd ::= ProtocolIE-Single-Container {{ PCH-InformationIE-ResourceStatusInd }}
PCH-InformationIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
  { ID id-PCH-Information  CRITICALITY ignore  TYPE Common-TransportChannel-Status-Information          PRESENCE mandatory }
}
PICH-Information-ResourceStatusInd ::= ProtocolIE-Single-Container {{ PICH-InformationIE-ResourceStatusInd }}

```

```
PICH-InformationIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
  { ID id-PICH-Information  CRITICALITY ignore  TYPE Common-PhysicalChannel-Status-Information          PRESENCE mandatory }
}

FACH-InformationList-ResourceStatusInd ::= SEQUENCE (SIZE (1..maxFACHCell)) OF ProtocolIE-Single-Container {{ FACH-InformationItemIE-ResourceStatusInd }}

FACH-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
  { ID id-FACH-Information  CRITICALITY ignore  TYPE Common-TransportChannel-Status-Information          PRESENCE mandatory }
}

PRACH-InformationList-ResourceStatusInd ::= SEQUENCE (SIZE (1..maxPRACHCell)) OF ProtocolIE-Single-Container {{ PRACH-InformationItemIE-ResourceStatusInd }}

PRACH-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
  { ID id-PRACH-Information  CRITICALITY ignore  TYPE Common-PhysicalChannel-Status-Information          PRESENCE mandatory }
}

RACH-InformationList-ResourceStatusInd ::= SEQUENCE (SIZE (1..maxPRACHCell)) OF ProtocolIE-Single-Container {{ RACH-InformationItemIE-ResourceStatusInd }}

RACH-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
  { ID id-RACH-Information  CRITICALITY ignore  TYPE Common-TransportChannel-Status-Information          PRESENCE mandatory }
}

AICH-InformationList-ResourceStatusInd ::= SEQUENCE (SIZE (1..maxPRACHCell)) OF ProtocolIE-Single-Container {{ AICH-InformationItemIE-ResourceStatusInd }}

AICH-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
  { ID id-AICH-Information  CRITICALITY ignore  TYPE Common-PhysicalChannel-Status-Information          PRESENCE mandatory }
}

PCPCH-InformationList-ResourceStatusInd ::= SEQUENCE (SIZE (1..maxPCPCHCell)) OF ProtocolIE-Single-Container {{ PCPCH-InformationItemIE-ResourceStatusInd }}

PCPCH-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
  { ID id-PCPCH-Information  CRITICALITY ignore  TYPE Common-PhysicalChannel-Status-Information          PRESENCE optional }
}

CPCH-InformationList-ResourceStatusInd ::= SEQUENCE (SIZE (1..maxCPCHCell)) OF ProtocolIE-Single-Container {{ CPCH-InformationItemIE-ResourceStatusInd }}

CPCH-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
  { ID id-CPCH-Information  CRITICALITY ignore  TYPE Common-TransportChannel-Status-Information          PRESENCE optional }
}

AP-AICH-InformationList-ResourceStatusInd ::= SEQUENCE (SIZE (1..maxCPCHCell)) OF ProtocolIE-Single-Container {{ AP-AICH-InformationItemIE-ResourceStatusInd }}

AP-AICH-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
  { ID id-AP-AICH-Information  CRITICALITY ignore  TYPE Common-PhysicalChannel-Status-Information          PRESENCE optional }
}
```

```

CDCA-ICH-InformationList-ResourceStatusInd ::= SEQUENCE (SIZE (1..maxCPCHCell)) OF ProtocolIE-Single-Container {{ CDCA-ICH-InformationItemIE-ResourceStatusInd }}

CDCA-ICH-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
  { ID id-CDCA-ICH-Information  CRITICALITY ignore  TYPE Common-PhysicalChannel-Status-Information  PRESENCE optional }
}

SCH-Information-ResourceStatusInd ::= ProtocolIE-Single-Container {{ SCH-InformationIE-ResourceStatusInd }}

SCH-InformationIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
  { ID id-SCH-Information  CRITICALITY ignore  TYPE Common-PhysicalChannel-Status-Information  PRESENCE mandatory }
}

FPACH-LCR-InformationList-ResourceStatusInd ::= SEQUENCE (SIZE (1..maxFPACHCell)) OF ProtocolIE-Single-Container {{ FPACH-LCR-InformationItemIE-ResourceStatusInd }}

FPACH-LCR-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
  { ID id-FPACH-LCR-Information  CRITICALITY ignore  TYPE Common-PhysicalChannel-Status-Information  PRESENCE mandatory }
}

DwPCH-LCR-Information-ResourceStatusInd ::= ProtocolIE-Single-Container {{ DwPCH-LCR-InformationIE-ResourceStatusInd }}

DwPCH-LCR-InformationIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
  { ID id-DwPCH-LCR-Information  CRITICALITY ignore  TYPE Common-PhysicalChannel-Status-Information  PRESENCE mandatory }
}

-- *****
--
-- SYSTEM INFORMATION UPDATE REQUEST
--
-- *****

SystemInformationUpdateRequest ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container    {{SystemInformationUpdateRequest-IEs}},
  protocolExtensions  ProtocolExtensionContainer {{SystemInformationUpdateRequest-Extensions}}
  ...
  OPTIONAL,
}

SystemInformationUpdateRequest-IEs NBAP-PROTOCOL-IES ::= {
  { ID id-C-ID          CRITICALITY reject  TYPE C-ID          PRESENCE mandatory }|
  { ID id-BCCH-ModificationTime  CRITICALITY reject  TYPE BCCH-ModificationTime  PRESENCE optional }|
  { ID id-MIB-SB-SIB-InformationList-SystemInfoUpdateRqst  CRITICALITY reject  TYPE MIB-SB-SIB-InformationList-SystemInfoUpdateRqst  PRESENCE mandatory },
  ...
}

SystemInformationUpdateRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

MIB-SB-SIB-InformationList-SystemInfoUpdateRqst ::= SEQUENCE (SIZE (1..maxIB)) OF MIB-SB-SIB-InformationItem-SystemInfoUpdateRqst

```

```

MIB-SB-SIB-InformationItem-SystemInfoUpdateRqst ::= SEQUENCE {
    iB-Type                IB-Type,
    iB-OC-ID               IB-OC-ID,
    deletionIndicator      DeletionIndicator-SystemInfoUpdate,
    iE-Extensions          ProtocolExtensionContainer { { MIB-SB-SIB-InformationItem-SystemInfoUpdateRqst-ExtIEs } }    OPTIONAL,
    ...
}

MIB-SB-SIB-InformationItem-SystemInfoUpdateRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DeletionIndicator-SystemInfoUpdate ::= CHOICE {
    no-Deletion            No-Deletion-SystemInfoUpdate,
    yes-Deletion           NULL
}

No-Deletion-SystemInfoUpdate ::= SEQUENCE {
    sIB-Originator         SIB-Originator                OPTIONAL,
    -- This IE shall be present if the IB-Type IE is set to "SIB"
    iB-SG-REP              IB-SG-REP                    OPTIONAL,
    segmentInformationList SegmentInformationList-SystemInfoUpdate,
    iE-Extensions          ProtocolExtensionContainer { { No-DeletionItem-SystemInfoUpdate-ExtIEs } }    OPTIONAL,
    ...
}

No-DeletionItem-SystemInfoUpdate-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

SegmentInformationList-SystemInfoUpdate ::= ProtocolIE-Single-Container { { SegmentInformationListIEs-SystemInfoUpdate } }

SegmentInformationListIEs-SystemInfoUpdate NBAP-PROTOCOL-IES ::= {
    { ID id-SegmentInformationListIE-SystemInfoUpdate    CRITICALITY reject    TYPE SegmentInformationListIE-SystemInfoUpdate    PRESENCE mandatory }
}

SegmentInformationListIE-SystemInfoUpdate ::= SEQUENCE (SIZE (1..maxIBSEG)) OF SegmentInformationItem-SystemInfoUpdate

SegmentInformationItem-SystemInfoUpdate ::= SEQUENCE {
    iB-SG-POS              IB-SG-POS                    OPTIONAL,
    segment-Type           Segment-Type                  OPTIONAL,
    -- This IE shall be present if the SIB Originator IE is set to "CRNC" or the IB-Type IE is set to "MIB", "SB1" or "SB2"
    iB-SG-DATA             IB-SG-DATA                    OPTIONAL,
    -- This IE shall be present if the SIB Originator IE is set to "CRNC" or the IB-Type IE is set to "MIB", "SB1" or "SB2"
    iE-Extensions          ProtocolExtensionContainer { { SegmentInformationItem-SystemInfoUpdate-ExtIEs } } OPTIONAL,
    ...
}

SegmentInformationItem-SystemInfoUpdate-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****

```



```

--
-- SYSTEM INFORMATION UPDATE RESPONSE
--
-- *****

SystemInformationUpdateResponse ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{SystemInformationUpdateResponse-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{SystemInformationUpdateResponse-Extensions}}
    ...
}

SystemInformationUpdateResponse-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-CriticalityDiagnostics    CRITICALITY    ignore          TYPE    CriticalityDiagnostics    PRESENCE optional},
    ...
}

SystemInformationUpdateResponse-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- SYSTEM INFORMATION UPDATE FAILURE
--
-- *****

SystemInformationUpdateFailure ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{SystemInformationUpdateFailure-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{SystemInformationUpdateFailure-Extensions}}
    ...
}

SystemInformationUpdateFailure-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-Cause                    CRITICALITY    ignore          TYPE    Cause                    PRESENCE mandatory
    }|
    { ID    id-CriticalityDiagnostics    CRITICALITY    ignore          TYPE    CriticalityDiagnostics    PRESENCE optional },
    ...
}

SystemInformationUpdateFailure-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK SETUP REQUEST FDD
--
-- *****

RadioLinkSetupRequestFDD ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{RadioLinkSetupRequestFDD-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{RadioLinkSetupRequestFDD-Extensions}}
    ...
}

```

```

RadioLinkSetupRequestFDD-IEs NBAP-PROTOCOL-IES ::= {
  { ID id-CRNC-CommunicationContextID          CRITICALITY reject          TYPE          CRNC-CommunicationContextID
    PRESENCE mandatory }|
  { ID id-UL-DPCH-Information-RL-SetupRqstFDD  CRITICALITY reject          TYPE          UL-DPCH-Information-RL-
    PRESENCE mandatory }|
  SetupRqstFDD
  { ID id-DL-DPCH-Information-RL-SetupRqstFDD  CRITICALITY reject          TYPE          DL-DPCH-Information-RL-
    PRESENCE mandatory }|
  { ID id-DCH-FDD-Information                   CRITICALITY reject          TYPE          DCH-FDD-Information           PRESENCE mandatory }|
  { ID id-DSCH-FDD-Information                 CRITICALITY reject          TYPE          DSCH-FDD-Information         PRESENCE optional }|
  { ID id-TFCI2-Bearer-Information-RL-SetupRqstFDD CRITICALITY ignore          TYPE          TFCI2-Bearer-Information-RL-
    PRESENCE optional }|
  SetupRqstFDD
  { ID id-RL-InformationList-RL-SetupRqstFDD  CRITICALITY notify          TYPE          RL-InformationList-RL-
    PRESENCE mandatory }|
  SetupRqstFDD
  { ID id-Transmission-Gap-Pattern-Sequence-Information CRITICALITY reject          TYPE          Transmission-Gap-Pattern-Sequence-Information
    PRESENCE optional } |
  { ID id-Active-Pattern-Sequence-Information  CRITICALITY reject          TYPE          Active-Pattern-Sequence-Information PRESENCE
    optional },
  ...
}

RadioLinkSetupRequestFDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  { ID id-DSCH-FDD-Common-Information          CRITICALITY ignore EXTENSION DSCH-FDD-Common-Information PRESENCE optional
  },
  ...
}

UL-DPCH-Information-RL-SetupRqstFDD ::= SEQUENCE {
  ul-ScramblingCode          UL-ScramblingCode,
  minUL-ChannelisationCodeLength  MinUL-ChannelisationCodeLength,
  maxNrOfUL-DPDCHs           MaxNrOfUL-DPDCHs          OPTIONAL,
  -- This IE shall be present if Min UL Channelisation Code length IE is set to 4 --
  ul-PunctureLimit          PunctureLimit,
  tFCS                      TFCS,
  ul-DPCCH-SlotFormat       UL-DPCCH-SlotFormat,
  ul-SIR-Target             UL-SIR,
  diversityMode             DiversityMode,
  sSDT-CellID-Length        SSDT-CellID-Length        OPTIONAL,
  s-FieldLength             S-FieldLength           OPTIONAL,
  iE-Extensions             ProtocolExtensionContainer { { UL-DPCH-Information-RL-SetupRqstFDD-ExtIEs } } OPTIONAL,
  ...
}

UL-DPCH-Information-RL-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  {ID id-DPC-Mode            CRITICALITY reject EXTENSION DPC-Mode PRESENCE optional },
  ...
}

DL-DPCH-Information-RL-SetupRqstFDD ::= SEQUENCE {
  tFCS                      TFCS,
  dl-DPCH-SlotFormat        DL-DPCH-SlotFormat,
  tFCI-SignallingMode       TFCI-SignallingMode,
  tFCI-Presence             TFCI-Presence          OPTIONAL,
  -- this IE shall be present if the DL DPCH slot format IE is set to any of the values from 12 to 16 --
}

```

```

multiplexingPosition          MultiplexingPosition,
pDSCH-RL-ID                   RL-ID          OPTIONAL,
-- This IE shall be present if the DSCH Information IE is present --
pDSCH-CodeMapping             PDSCH-CodeMapping  OPTIONAL,
-- This IE shall be present if the DSCH Information IE is present --
powerOffsetInformation        PowerOffsetInformation-RL-SetupRqstFDD,
fdd-TPC-DownlinkStepSize     FDD-TPC-DownlinkStepSize,
limitedPowerIncrease          LimitedPowerIncrease,
innerLoopDLPCStatus          InnerLoopDLPCStatus,
iE-Extensions                 ProtocolExtensionContainer { { DL-DPCH-Information-RL-SetupRqstFDD-ExtIEs } } OPTIONAL,
...
}

DL-DPCH-Information-RL-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PowerOffsetInformation-RL-SetupRqstFDD ::= SEQUENCE {
    p01-ForTFCL-Bits          PowerOffset,
    p02-ForTPC-Bits          PowerOffset,
    p03-ForPilotBits         PowerOffset,
    iE-Extensions            ProtocolExtensionContainer { { PowerOffsetInformation-RL-SetupRqstFDD-ExtIEs } } OPTIONAL,
    ...
}

PowerOffsetInformation-RL-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TFCI2-Bearer-Information-RL-SetupRqstFDD ::= SEQUENCE {
    toAWS                     ToAWS,
    toAWE                     ToAWE,
    iE-Extensions            ProtocolExtensionContainer { { TFCI2-Bearer-Information-RL-SetupRqstFDD-ExtIEs } } OPTIONAL,
    ...
}

TFCI2-Bearer-Information-RL-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-InformationList-RL-SetupRqstFDD ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF
    ProtocolIE-Single-Container{{ RL-InformationItemIE-RL-SetupRqstFDD }}

RL-InformationItemIE-RL-SetupRqstFDD NBAP-PROTOCOL-IES ::= {
    { ID      id-RL-InformationItem-RL-SetupRqstFDD      CRITICALITY    notify          TYPE          RL-InformationItem-RL-
SetupRqstFDD      PRESENCE      mandatory}
}

RL-InformationItem-RL-SetupRqstFDD ::= SEQUENCE {
    rL-ID                    RL-ID,
    c-ID                    C-ID,
    firstRLS-indicator      FirstRLS-Indicator,
    frameOffset             FrameOffset,
    chipOffset              ChipOffset,

```

```

propagationDelay          PropagationDelay          OPTIONAL,
diversityControlField     DiversityControlField     OPTIONAL,
-- This IE shall be present if the RL is not the first one in the RL Information IE
dl-CodeInformation        FDD-DL-CodeInformation,
initialDL-transmissionPower DL-Power,
maximumDL-power           DL-Power,
minimumDL-power           DL-Power,
sSDT-Cell-Identity        SSDT-Cell-Identity        OPTIONAL,
transmitDiversityIndicator TransmitDiversityIndicator OPTIONAL,
-- This IE shall be present if Diversity Mode IE in UL DPCH Information group is not set to 'none'
iE-Extensions             ProtocolExtensionContainer { { RL-InformationItem-RL-SetupRqstFDD-ExtIEs } } OPTIONAL,
...
}

RL-InformationItem-RL-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  { ID id-SSDT-CellIDforEDSCHPC CRITICALITY ignore EXTENSION SSDT-Cell-Identity PRESENCE conditional },
  -- This IE shall be present if Enhanced DSCH PC IE is present in the DSCH Common Information IE.
  ...
}

-- *****
--
-- RADIO LINK SETUP REQUEST TDD
--
-- *****

RadioLinkSetupRequestTDD ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container   {{RadioLinkSetupRequestTDD-IEs}},
  protocolExtensions   ProtocolExtensionContainer {{RadioLinkSetupRequestTDD-Extensions}}
  ...
}

RadioLinkSetupRequestTDD-IEs NBAP-PROTOCOL-IES ::= {
  { ID id-CRNC-CommunicationContextID CRITICALITY reject TYPE CRNC-CommunicationContextID
    PRESENCE mandatory }|
  { ID id-UL-CCTrCH-InformationList-RL-SetupRqstTDD CRITICALITY notify TYPE UL-CCTrCH-InformationList-RL-
    SetupRqstTDD PRESENCE optional }|
  { ID id-DL-CCTrCH-InformationList-RL-SetupRqstTDD CRITICALITY notify TYPE DL-CCTrCH-InformationList-RL-
    SetupRqstTDD PRESENCE optional }|
  { ID id-DCH-TDD-Information CRITICALITY reject TYPE DCH-TDD-Information PRESENCE optional }|
  { ID id-DSCH-TDD-Information CRITICALITY reject TYPE DSCH-TDD-Information PRESENCE optional }|
  { ID id-USCH-Information CRITICALITY reject TYPE USCH-Information PRESENCE optional }|
  { ID id-RL-Information-RL-SetupRqstTDD CRITICALITY reject TYPE RL-Information-RL-SetupRqstTDD
    PRESENCE mandatory },
  ...
}

RadioLinkSetupRequestTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  { ID id-PDSCH-RL-ID CRITICALITY ignore EXTENSION RL-ID PRESENCE optional },
  ...
}

UL-CCTrCH-InformationList-RL-SetupRqstTDD ::= SEQUENCE (SIZE(1..maxNrOfCCTrCHs)) OF
  ProtocolIE-Single-Container{{ UL-CCTrCH-InformationItemIE-RL-SetupRqstTDD }}

```

```

UL-CCTrCH-InformationItemIE-RL-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
  { ID id-UL-CCTrCH-InformationItem-RL-SetupRqstTDD CRITICALITY notify TYPE UL-CCTrCH-InformationItem-RL-
SetupRqstTDD PRESENCE mandatory}
}

UL-CCTrCH-InformationItem-RL-SetupRqstTDD ::= SEQUENCE {
  cCTrCH-ID CCTrCH-ID,
  tFCS TFCS,
  tFCI-Coding TFCI-Coding,
  punctureLimit PunctureLimit,
  uL-DPCH-Information UL-DPCH-Information-RL-SetupRqstTDD OPTIONAL, -- Applicable to 3.84Mcps TDD only
  iE-Extensions ProtocolExtensionContainer { { UL-CCTrCH-InformationItem-RL-SetupRqstTDD-ExtIEs } } OPTIONAL,
  ...
}

UL-CCTrCH-InformationItem-RL-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  { ID id-UL-DPCH-LCR-Information-RL-SetupRqstTDD CRITICALITY notify EXTENSION UL-DPCH-LCR-Information-RL-SetupRqstTDD PRESENCE optional
}| -- Applicable to 1.28Mcps TDD only
  { ID id-UL-SIRTarget CRITICALITY reject EXTENSION UL-SIR PRESENCE optional }|
  -- Mandatory for 1.28Mcps TDD, Not Applicable to 3.84Mcps TDD.
  { ID id-TDD-TPC-UplinkStepSize-LCR-RL-SetupRqstTDD CRITICALITY reject EXTENSION TDD-TPC-UplinkStepSize-LCR PRESENCE optional },
  -- Mandatory for 1.28Mcps TDD, Not Applicable to 3.84Mcps TDD.
  ...
}

UL-DPCH-Information-RL-SetupRqstTDD ::= ProtocolIE-Single-Container{ { UL-DPCH-InformationIE-RL-SetupRqstTDD } }

UL-DPCH-InformationIE-RL-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
  { ID id-UL-DPCH-InformationList-RL-SetupRqstTDD CRITICALITY notify TYPE UL-DPCH-InformationItem-RL-SetupRqstTDD PRESENCE mandatory }
}

UL-DPCH-InformationItem-RL-SetupRqstTDD ::= SEQUENCE {
  repetitionPeriod RepetitionPeriod,
  repetitionLength RepetitionLength,
  tdd-DPCHOffset TDD-DPCHOffset,
  uL-Timeslot-Information UL-Timeslot-Information,
  iE-Extensions ProtocolExtensionContainer { { UL-DPCH-InformationItem-RL-SetupRqstTDD-ExtIEs } } OPTIONAL,
  ...
}

UL-DPCH-InformationItem-RL-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

UL-DPCH-LCR-Information-RL-SetupRqstTDD ::= SEQUENCE {
  repetitionPeriod RepetitionPeriod,
  repetitionLength RepetitionLength,
  tdd-DPCHOffset TDD-DPCHOffset,
  uL-TimeslotLCR-Information UL-TimeslotLCR-Information,
  iE-Extensions ProtocolExtensionContainer { { UL-DPCH-LCR-InformationItem-RL-SetupRqstTDD-ExtIEs } } OPTIONAL,
  ...
}

```

```

UL-DPCH-LCR-InformationItem-RL-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CCTrCH-InformationList-RL-SetupRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container{{ DL-CCTrCH-InformationItemIE-RL-
SetupRqstTDD }}

DL-CCTrCH-InformationItemIE-RL-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID id-DL-CCTrCH-InformationItem-RL-SetupRqstTDD CRITICALITY notify TYPE DL-CCTrCH-InformationItem-
RL-SetupRqstTDD PRESENCE mandatory}
}

DL-CCTrCH-InformationItem-RL-SetupRqstTDD ::= SEQUENCE {
    cCTrCH-ID CTrCH-ID,
    tFCS TFCS,
    tFCI-Coding TFCI-Coding,
    punctureLimit PunctureLimit,
    tdd-TPC-DownlinkStepSize TDD-TPC-DownlinkStepSize,
    cCTrCH-TPCList CTrCH-TPCList-RL-SetupRqstTDD OPTIONAL,
    dL-DPCH-Information DL-DPCH-Information-RL-SetupRqstTDD OPTIONAL, -- Applicable to 3.84Mcps TDD only
    iE-Extensions ProtocolExtensionContainer { { DL-CCTrCH-InformationItem-RL-SetupRqstTDD-ExtIEs } } OPTIONAL,
    ...
}

DL-CCTrCH-InformationItem-RL-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-DL-DPCH-LCR-Information-RL-SetupRqstTDD CRITICALITY notify EXTENSION DL-DPCH-LCR-Information-RL-SetupRqstTDD PRESENCE optional
}, -- Applicable to 1.28Mcps TDD only
    ...
}

CCTrCH-TPCList-RL-SetupRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF CCTrCH-TPCItem-RL-SetupRqstTDD

CCTrCH-TPCItem-RL-SetupRqstTDD ::= SEQUENCE {
    cCTrCH-ID CTrCH-ID,
    iE-Extensions ProtocolExtensionContainer { { CCTrCH-TPCItem-RL-SetupRqstTDD-ExtIEs } } OPTIONAL,
    ...
}

CCTrCH-TPCItem-RL-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-Information-RL-SetupRqstTDD ::= ProtocolIE-Single-Container{{ DL-DPCH-InformationIE-RL-SetupRqstTDD }}

DL-DPCH-InformationIE-RL-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID id-DL-DPCH-InformationList-RL-SetupRqstTDD CRITICALITY notify TYPE DL-DPCH-InformationItem-RL-SetupRqstTDD PRESENCE mandatory }
}

DL-DPCH-InformationItem-RL-SetupRqstTDD ::= SEQUENCE {
    repetitionPeriod RepetitionPeriod,
    repetitionLength RepetitionLength,
    tdd-DPCHOffset TDD-DPCHOffset,
    dL-Timeslot-Information DL-Timeslot-Information,
    iE-Extensions ProtocolExtensionContainer { { DL-DPCH-InformationItem-RL-SetupRqstTDD-ExtIEs } } OPTIONAL,
}

```

```

    ...
}
DL-DPCH-InformationItem-RL-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
DL-DPCH-LCR-Information-RL-SetupRqstTDD ::= SEQUENCE {
    repetitionPeriod          RepetitionPeriod,
    repetitionLength          RepetitionLength,
    tdd-DPCHOffset            TDD-DPCHOffset,
    dL-TimeslotLCR-Information DL-TimeslotLCR-Information,
    tstdIndicator              TSTD-Indicator,
    iE-Extensions              ProtocolExtensionContainer { { DL-DPCH-LCR-InformationItem-RL-SetupRqstTDD-ExtIEs} } OPTIONAL,
    ...
}
DL-DPCH-LCR-InformationItem-RL-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
RL-Information-RL-SetupRqstTDD ::= SEQUENCE {
    rL-ID                      RL-ID,
    c-ID                        C-ID,
    frameOffset                 FrameOffset,
    specialBurstScheduling      SpecialBurstScheduling,
    initialDL-transmissionPower DL-Power,
    maximumDL-power             DL-Power,
    minimumDL-power             DL-Power,
    dL-TimeSlotISCPInfo         DL-TimeslotISCPInfo OPTIONAL, -- Applicable to 3.84Mcps TDD only
    iE-Extensions              ProtocolExtensionContainer { { RL-Information-RL-SetupRqstTDD-ExtIEs} } OPTIONAL,
    ...
}
RL-Information-RL-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-TimeslotISCP-InfoList-RL-SetupRqstTDD CRITICALITY reject EXTENSION DL-TimeslotISCPInfoLCR PRESENCE optional }|
    -- Applicable to 1.28Mcps TDD only
    { ID id-UL-Synchronisation-Parameters-LCR CRITICALITY ignore EXTENSION UL-Synchronisation-Parameters-LCR PRESENCE optional }, -- Mandatory for 1.28Mcps TDD, Not Applicable to 3.84Mcps TDD
    ...
}
-- *****
--
-- RADIO LINK SETUP RESPONSE FDD
--
-- *****

RadioLinkSetupResponseFDD ::= SEQUENCE {
    protocolIEs                ProtocolIE-Container {{RadioLinkSetupResponseFDD-IEs}},
    protocolExtensions          ProtocolExtensionContainer {{RadioLinkSetupResponseFDD-Extensions}}
    ...
}

```

```

RadioLinkSetupResponseFDD-IEs NBAP-PROTOCOL-IES ::= {
  { ID      id-CRNC-CommunicationContextID          CRITICALITY ignore          TYPE          CRNC-CommunicationContextID
    PRESENCE mandatory }|
  { ID      id-NodeB-CommunicationContextID        CRITICALITY ignore          TYPE          NodeB-CommunicationContextID
    PRESENCE mandatory }|
  { ID      id-CommunicationControlPortID          CRITICALITY ignore          TYPE          CommunicationControlPortID
    PRESENCE mandatory }|
  { ID      id-RL-InformationResponseList-RL-SetupRspFDD
    PRESENCE mandatory }|
  { ID      id-TFCI2-BearerInformationResponse     CRITICALITY ignore          TYPE          TFCI2-BearerInformationResponse PRESENCE optional }|
  { ID      id-CriticalityDiagnostics              CRITICALITY ignore          TYPE          CriticalityDiagnostics
    PRESENCE optional },
  ...
}

RadioLinkSetupResponseFDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

RL-InformationResponseList-RL-SetupRspFDD ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container{{ RL-InformationResponseItemIE-RL-SetupRspFDD }}

RL-InformationResponseItemIE-RL-SetupRspFDD NBAP-PROTOCOL-IES ::= {
  { ID      id-RL-InformationResponseItem-RL-SetupRspFDD          CRITICALITY ignore          TYPE          RL-InformationResponseItem-RL-SetupRspFDD
    PRESENCE mandatory }
}

RL-InformationResponseItem-RL-SetupRspFDD ::= SEQUENCE {
  rL-ID                      RL-ID,
  rL-Set-ID                  RL-Set-ID,
  received-total-wide-band-power          Received-total-wide-band-power-Value,
  diversityIndication          DiversityIndication-RL-SetupRspFDD,
  dSCH-InformationResponseList  DSCH-InformationResponseList-RL-SetupRspFDD          OPTIONAL,
  sSDT-SupportIndicator        SSDT-SupportIndicator,
  iE-Extensions                ProtocolExtensionContainer { { RL-InformationResponseItem-RL-SetupRspFDD-ExtIEs } }
  OPTIONAL,
  ...
}

RL-InformationResponseItem-RL-SetupRspFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

DiversityIndication-RL-SetupRspFDD ::= CHOICE {
  combining          Combining-RL-SetupRspFDD,
  nonCombiningOrFirstRL  NonCombiningOrFirstRL-RL-SetupRspFDD
}

Combining-RL-SetupRspFDD ::= SEQUENCE {
  rL-ID                      RL-ID,
  iE-Extensions                ProtocolExtensionContainer { { Combining-RL-SetupRspFDD-ExtIEs } }          OPTIONAL,
  ...
}

```



```

Combining-RL-SetupRspFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

NonCombiningOrFirstRL-RL-SetupRspFDD ::= SEQUENCE {
  dCH-InformationResponse          DCH-InformationResponse,
  iE-Extensions                    ProtocolExtensionContainer { { NonCombiningOrFirstRLItem-RL-SetupRspFDD-ExtIEs } } OPTIONAL,
  ...
}

NonCombiningOrFirstRLItem-RL-SetupRspFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

DSCH-InformationResponseList-RL-SetupRspFDD ::= ProtocolIE-Single-Container { { DSCH-InformationResponseListIEs-RL-SetupRspFDD } }

DSCH-InformationResponseListIEs-RL-SetupRspFDD NBAP-PROTOCOL-IES ::= {
  { ID id-DSCH-InformationResponse CRITICALITY ignore TYPE DSCH-InformationResponse PRESENCE mandatory }
}

-- *****
--
-- RADIO LINK SETUP RESPONSE TDD
--
-- *****

RadioLinkSetupResponseTDD ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container   {{RadioLinkSetupResponseTDD-IEs}},
  protocolExtensions   ProtocolExtensionContainer {{RadioLinkSetupResponseTDD-Extensions}}          OPTIONAL,
  ...
}

RadioLinkSetupResponseTDD-IEs NBAP-PROTOCOL-IES ::= {
  { ID id-CRNC-CommunicationContextID CRITICALITY ignore TYPE CRNC-CommunicationContextID
    PRESENCE mandatory }|
  { ID id-NodeB-CommunicationContextID CRITICALITY ignore TYPE NodeB-CommunicationContextID
    PRESENCE mandatory }|
  { ID id-CommunicationControlPortID CRITICALITY ignore TYPE CommunicationControlPortID
    PRESENCE mandatory }|
  { ID id-RL-InformationResponse-RL-SetupRspTDD CRITICALITY ignore TYPE RL-InformationResponse-RL-
    SetupRspTDD PRESENCE optional }| -- Mandatory for 3.84Mcps TDD, Not Applicable to 1.28Mcps TDD
  { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics
    PRESENCE optional },
  ...
}

RadioLinkSetupResponseTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  { ID id-RL-InformationResponse-LCR-RL-SetupRspTDD CRITICALITY ignore EXTENSION RL-
    InformationResponse-LCR-RL-SetupRspTDD PRESENCE optional }, -- Mandatory for 1.28Mcps TDD, Not Applicable to 3.84Mcps TDD
  ...
}

RL-InformationResponse-RL-SetupRspTDD ::= SEQUENCE {
  rL-ID RL-ID,

```

```

    uL-TimeSlot-ISCP-Info          UL-TimeSlot-ISCP-Info,
    ul-PhysCH-SF-Variation         UL-PhysCH-SF-Variation,
    dCH-InformationResponseList    DCH-InformationResponseList-RL-SetupRspTDD      OPTIONAL,
    dSCH-InformationResponseList    DSCH-InformationResponseList-RL-SetupRspTDD      OPTIONAL,
    uSCH-InformationResponseList    USCH-InformationResponseList-RL-SetupRspTDD      OPTIONAL,
    iE-Extensions                  ProtocolExtensionContainer { { RL-InformationResponseList-RL-SetupRspTDD-ExtIEs } }
    OPTIONAL,
    ...
}

RL-InformationResponseList-RL-SetupRspTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-InformationResponseList-RL-SetupRspTDD ::= ProtocolIE-Single-Container{{ DCH-InformationResponseListIEs-RL-SetupRspTDD }}

DCH-InformationResponseListIEs-RL-SetupRspTDD NBAP-PROTOCOL-IES ::= {
    { ID id-DCH-InformationResponse CRITICALITY ignore TYPE DCH-InformationResponse PRESENCE mandatory }
}

DSCH-InformationResponseList-RL-SetupRspTDD ::= ProtocolIE-Single-Container { { DSCH-InformationResponseListIEs-RL-SetupRspTDD } }

DSCH-InformationResponseListIEs-RL-SetupRspTDD NBAP-PROTOCOL-IES ::= {
    { ID id-DSCH-InformationResponse CRITICALITY ignore TYPE DSCH-InformationResponse PRESENCE mandatory }
}

USCH-InformationResponseList-RL-SetupRspTDD ::= ProtocolIE-Single-Container { { USCH-InformationResponseListIEs-RL-SetupRspTDD } }

USCH-InformationResponseListIEs-RL-SetupRspTDD NBAP-PROTOCOL-IES ::= {
    { ID id-USCH-InformationResponse CRITICALITY ignore TYPE USCH-InformationResponse PRESENCE mandatory }
}

RL-InformationResponse-LCR-RL-SetupRspTDD ::= SEQUENCE {
    rL-ID          RL-ID,
    uL-TimeSlot-ISCP-LCR-Info          UL-TimeSlot-ISCP-LCR-Info,
    ul-PhysCH-SF-Variation         UL-PhysCH-SF-Variation,
    dCH-InformationResponseList    DCH-InformationResponseList-RL-SetupRspTDD      OPTIONAL,
    dSCH-InformationResponseList    DSCH-InformationResponseList-RL-SetupRspTDD      OPTIONAL,
    uSCH-InformationResponseList    USCH-InformationResponseList-RL-SetupRspTDD      OPTIONAL,
    iE-Extensions                  ProtocolExtensionContainer { { RL-InformationResponseList-LCR-RL-SetupRspTDD-ExtIEs } }
    OPTIONAL,
    ...
}

RL-InformationResponseList-LCR-RL-SetupRspTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK SETUP FAILURE FDD
--
-- *****

```

```

RadioLinkSetupFailureFDD ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container  {{RadioLinkSetupFailureFDD-IEs}},
  protocolExtensions  ProtocolExtensionContainer  {{RadioLinkSetupFailureFDD-Extensions}}
  ...
}

RadioLinkSetupFailureFDD-IEs NBAP-PROTOCOL-IES ::= {
  { ID id-CRNC-CommunicationContextID          CRITICALITY ignore          TYPE CRNC-
CommunicationContextID          PRESENCE mandatory }|
  { ID id-NodeB-CommunicationContextID        CRITICALITY ignore          TYPE NodeB-
CommunicationContextID          PRESENCE conditional }|
  -- This IE shall be present if at least one of the radio links has been successfully set up
  { ID id-CommunicationControlPortID          CRITICALITY ignore          TYPE
CommunicationControlPortID          PRESENCE optional }|
  { ID id-CauseLevel-RL-SetupFailureFDD      CRITICALITY ignore          TYPE CauseLevel-RL-
SetupFailureFDD          PRESENCE mandatory }|
  { ID id-CriticalityDiagnostics              CRITICALITY ignore          TYPE
CriticalityDiagnostics          PRESENCE optional },
  ...
}

RadioLinkSetupFailureFDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

CauseLevel-RL-SetupFailureFDD ::= CHOICE {
  generalCause          GeneralCauseList-RL-SetupFailureFDD,
  rLspecificCause       RLspecificCauseList-RL-SetupFailureFDD,
  ...
}

GeneralCauseList-RL-SetupFailureFDD ::= SEQUENCE {
  cause                  Cause,
  iE-Extensions          ProtocolExtensionContainer { { GeneralCauseItem-RL-SetupFailureFDD-ExtIEs} } OPTIONAL,
  ...
}

GeneralCauseItem-RL-SetupFailureFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

RLspecificCauseList-RL-SetupFailureFDD ::= SEQUENCE {
  unsuccessful-RL-InformationRespList-RL-SetupFailureFDD      Unsuccessful-RL-InformationRespList-RL-SetupFailureFDD,
  successful-RL-InformationRespList-RL-SetupFailureFDD        Successful-RL-InformationRespList-RL-SetupFailureFDD OPTIONAL,
  iE-Extensions          ProtocolExtensionContainer { { RLspecificCauseItem-RL-SetupFailureFDD-ExtIEs} } OPTIONAL,
  ...
}

RLspecificCauseItem-RL-SetupFailureFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

Unsuccessful-RL-InformationRespList-RL-SetupFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container {{ Unsuccessful-RL-
InformationRespItemIE-RL-SetupFailureFDD }}

```

```

Unsuccessful-RL-InformationRespItemIE-RL-SetupFailureFDD NBAP-PROTOCOL-IES ::= {
  { ID      id-Unsuccessful-RL-InformationRespItem-RL-SetupFailureFDD
    InformationRespItem-RL-SetupFailureFDD      PRESENCE      mandatory}
    CRITICALITY      ignore
    TYPE      Unsuccessful-RL-
}

Unsuccessful-RL-InformationRespItem-RL-SetupFailureFDD ::= SEQUENCE {
  rL-ID          RL-ID,
  cause          Cause,
  iE-Extensions ProtocolExtensionContainer { { Unsuccessful-RL-InformationRespItem-RL-SetupFailureFDD-ExtIEs } }
  OPTIONAL,
  ...
}

Unsuccessful-RL-InformationRespItem-RL-SetupFailureFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

Successful-RL-InformationRespList-RL-SetupFailureFDD ::= SEQUENCE (SIZE (1.. maxNrOfRLs)) OF ProtocolIE-Single-Container {{ Successful-RL-InformationRespItemIE-RL-SetupFailureFDD }}

Successful-RL-InformationRespItemIE-RL-SetupFailureFDD NBAP-PROTOCOL-IES ::= {
  { ID      id-Successful-RL-InformationRespItem-RL-SetupFailureFDD
    InformationRespItem-RL-SetupFailureFDD      PRESENCE      mandatory}
    CRITICALITY      ignore
    TYPE      Successful-RL-
}

Successful-RL-InformationRespItem-RL-SetupFailureFDD ::= SEQUENCE {
  rL-ID          RL-ID,
  rL-Set-ID      RL-Set-ID,
  received-total-wide-band-power          Received-total-wide-band-power-Value,
  diversityIndication DiversityIndication-RL-SetupFailureFDD,
  dSCH-InformationResponseList DSCH-InformationRespList-RL-SetupFailureFDD      OPTIONAL,
  tFCI2-BearerInformationResponse TFCI2-BearerInformationResponse      OPTIONAL,
  -- There shall be only one TFCI2 bearer per Node B Communication Context.
  sSDT-SupportIndicator SSdT-SupportIndicator,
  iE-Extensions ProtocolExtensionContainer { { Successful-RL-InformationRespItem-RL-SetupFailureFDD-ExtIEs } }
  OPTIONAL,
  ...
}

Successful-RL-InformationRespItem-RL-SetupFailureFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

DiversityIndication-RL-SetupFailureFDD ::= CHOICE {
  combining          Combining-RL-SetupFailureFDD,
  nonCombiningOrFirstRL NonCombiningOrFirstRL-RL-SetupFailureFDD
}

Combining-RL-SetupFailureFDD ::= SEQUENCE {
  rL-ID          RL-ID,
  iE-Extensions ProtocolExtensionContainer { { CombiningItem-RL-SetupFailureFDD-ExtIEs } }      OPTIONAL,
  ...
}

```

```

CombiningItem-RL-SetupFailureFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

NonCombiningOrFirstRL-RL-SetupFailureFDD ::= SEQUENCE {
  dCH-InformationResponse          DCH-InformationResponse,
  iE-Extensions                    ProtocolExtensionContainer { { NonCombiningOrFirstRLItem-RL-SetupFailureFDD-ExtIEs } }
  OPTIONAL,
  ...
}

NonCombiningOrFirstRLItem-RL-SetupFailureFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

DSCH-InformationRespList-RL-SetupFailureFDD ::= ProtocolIE-Single-Container {{ DSCH-InformationRespListIEs-RL-SetupFailureFDD }}

DSCH-InformationRespListIEs-RL-SetupFailureFDD NBAP-PROTOCOL-IES ::= {
  { ID id-DSCH-InformationResponse CRITICALITY ignore TYPE DSCH-InformationResponse PRESENCE mandatory }
}

-- *****
--
-- RADIO LINK SETUP FAILURE TDD
--
-- *****

RadioLinkSetupFailureTDD ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container   {{RadioLinkSetupFailureTDD-IEs}},
  protocolExtensions  ProtocolExtensionContainer {{RadioLinkSetupFailureTDD-Extensions}}          OPTIONAL,
  ...
}

RadioLinkSetupFailureTDD-IEs NBAP-PROTOCOL-IES ::= {
  { ID id-CRNC-CommunicationContextID CRITICALITY ignore TYPE CRNC-CommunicationContextID PRESENCE mandatory }|
  { ID id-CauseLevel-RL-SetupFailureTDD CRITICALITY ignore TYPE CauseLevel-RL-SetupFailureTDD PRESENCE mandatory }|
  { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
  ...
}

RadioLinkSetupFailureTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

CauseLevel-RL-SetupFailureTDD ::= CHOICE {
  generalCause          GeneralCauseList-RL-SetupFailureTDD,
  rLSpecificCause      RLSpecificCauseList-RL-SetupFailureTDD,
  ...
}

```

```

GeneralCauseList-RL-SetupFailureTDD ::= SEQUENCE {
    cause                Cause,
    iE-Extensions        ProtocolExtensionContainer { { GeneralCauseItem-RL-SetupFailureTDD-ExtIEs} } OPTIONAL,
    ...
}

GeneralCauseItem-RL-SetupFailureTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RLSpecificCauseList-RL-SetupFailureTDD ::= SEQUENCE {
    unsuccessful-RL-InformationRespItem-RL-SetupFailureTDD Unsuccessful-RL-InformationRespItem-RL-SetupFailureTDD,
    iE-Extensions        ProtocolExtensionContainer { { RLSpecificCauseItem-RL-SetupFailureTDD-ExtIEs} } OPTIONAL,
    ...
}

RLSpecificCauseItem-RL-SetupFailureTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Unsuccessful-RL-InformationRespItem-RL-SetupFailureTDD ::= ProtocolIE-Single-Container { {Unsuccessful-RL-InformationRespItemIE-RL-SetupFailureTDD}
}

Unsuccessful-RL-InformationRespItemIE-RL-SetupFailureTDD NBAP-PROTOCOL-IES ::= {
    { ID      id-Unsuccessful-RL-InformationResp-RL-SetupFailureTDD      CRITICALITY ignore      TYPE      Unsuccessful-RL-InformationResp-
    RL-SetupFailureTDD      PRESENCE      mandatory      }
}

Unsuccessful-RL-InformationResp-RL-SetupFailureTDD ::= SEQUENCE {
    rL-ID                RL-ID,
    cause                Cause,
    iE-Extensions        ProtocolExtensionContainer { { Unsuccessful-RL-InformationResp-RL-SetupFailureTDD-ExtIEs} } OPTIONAL,
    ...
}

Unsuccessful-RL-InformationResp-RL-SetupFailureTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK ADDITION REQUEST FDD
--
-- *****

RadioLinkAdditionRequestFDD ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{RadioLinkAdditionRequestFDD-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{RadioLinkAdditionRequestFDD-Extensions}} OPTIONAL,
    ...
}

RadioLinkAdditionRequestFDD-IEs NBAP-PROTOCOL-IES ::= {

```

```

    { ID id-NodeB-CommunicationContextID          CRITICALITY reject          TYPE NodeB-CommunicationContextID          PRESENCE
      mandatory } |
    { ID id-Compressed-Mode-Deactivation-Flag      CRITICALITY reject          TYPE Compressed-Mode-Deactivation-Flag    PRESENCE optional } |
    { ID id-RL-InformationList-RL-AdditionRqstFDD  CRITICALITY notify         TYPE RL-InformationList-RL-
      AdditionRqstFDD          PRESENCE mandatory },
    ...
  }

RadioLinkAdditionRequestFDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

RL-InformationList-RL-AdditionRqstFDD ::= SEQUENCE (SIZE (1..maxNrOfRLs-1)) OF ProtocolIE-Single-Container {{ RL-InformationItemIE-RL-
AdditionRqstFDD}}

RL-InformationItemIE-RL-AdditionRqstFDD NBAP-PROTOCOL-IES ::= {
  { ID id-RL-InformationItem-RL-AdditionRqstFDD  CRITICALITY notify         TYPE RL-InformationItem-RL-
      AdditionRqstFDD          PRESENCE mandatory}
}

RL-InformationItem-RL-AdditionRqstFDD ::= SEQUENCE {
  rL-ID                RL-ID,
  c-ID                 C-ID,
  frameOffset          FrameOffset,
  chipOffset           ChipOffset,
  diversityControlField DiversityControlField,
  dl-CodeInformation  FDD-DL-CodeInformation,
  initialDL-TransmissionPower DL-Power OPTIONAL,
  maximumDL-Power     DL-Power OPTIONAL,
  minimumDL-Power     DL-Power OPTIONAL,
  sSDT-CellIdentity   SSDT-Cell-Identity OPTIONAL,
  transmitDiversityIndicator TransmitDiversityIndicator OPTIONAL,
  iE-Extensions       ProtocolExtensionContainer { { RL-InformationItem-RL-AdditionRqstFDD-ExtIEs } } OPTIONAL,
  ...
}

RL-InformationItem-RL-AdditionRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- RADIO LINK ADDITION REQUEST TDD
--
-- *****

RadioLinkAdditionRequestTDD ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container {{RadioLinkAdditionRequestTDD-IEs}},
  protocolExtensions  ProtocolExtensionContainer {{RadioLinkAdditionRequestTDD-Extensions}}
  ...
}

RadioLinkAdditionRequestTDD-IEs NBAP-PROTOCOL-IES ::= {

```

```

    { ID id-NodeB-CommunicationContextID
CommunicationContextID PRESENCE mandatory }|
    { ID id-UL-CCTrCH-InformationList-RL-AdditionRqstTDD
RL-AdditionRqstTDD PRESENCE optional }|
    { ID id-DL-CCTrCH-InformationList-RL-AdditionRqstTDD
RL-AdditionRqstTDD PRESENCE optional }|
    { ID id-RL-Information-RL-AdditionRqstTDD
AdditionRqstTDD PRESENCE mandatory },
    ...
}

RadioLinkAdditionRequestTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-CCTrCH-InformationList-RL-AdditionRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF UL-CCTrCH-InformationItem-RL-AdditionRqstTDD

UL-CCTrCH-InformationItem-RL-AdditionRqstTDD ::= SEQUENCE {
    cCTrCH-ID CCTrCH-ID,
    uL-DPCH-Information UL-DPCH-InformationList-RL-AdditionRqstTDD OPTIONAL, -- Applicable to 3.84cps TDD only
    iE-Extensions ProtocolExtensionContainer { { UL-CCTrCH-InformationItem-RL-AdditionRqstTDD-ExtIEs } } OPTIONAL,
    ...
}

UL-CCTrCH-InformationItem-RL-AdditionRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-UL-DPCH-InformationItem-LCR-RL-AdditionRqstTDD CRITICALITY notify EXTENSION UL-DPCH-InformationItem-LCR-RL-AdditionRqstTDD
PRESENCE optional }| -- Applicable to 1.28cps TDD only
    { ID id-TDD-TPC-UplinkStepSize-LCR-RL-AdditionRqstTDD CRITICALITY reject EXTENSION TDD-TPC-UplinkStepSize-LCR PRESENCE optional },
-- Applicable to 1.28cps TDD only
    ...
}

UL-DPCH-InformationList-RL-AdditionRqstTDD ::= ProtocolIE-Single-Container {{ UL-DPCH-InformationItemIE-RL-AdditionRqstTDD }}

UL-DPCH-InformationItemIE-RL-AdditionRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID id-UL-DPCH-InformationItem-RL-AdditionRqstTDD CRITICALITY notify TYPE UL-DPCH-InformationItem-
RL-AdditionRqstTDD PRESENCE optional} -- For 3.84Mcps TDD only
}

UL-DPCH-InformationItem-RL-AdditionRqstTDD ::= SEQUENCE {
    repetitionPeriod RepetitionPeriod,
    repetitionLength RepetitionLength,
    tdd-DPCHOffset TDD-DPCHOffset,
    uL-Timeslot-Information UL-Timeslot-Information,
    iE-Extensions ProtocolExtensionContainer { { UL-DPCH-InformationItem-RL-AdditionRqstTDD-ExtIEs } } OPTIONAL,
    ...
}

UL-DPCH-InformationItem-RL-AdditionRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CCTrCH-InformationList-RL-AdditionRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF DL-CCTrCH-InformationItem-RL-AdditionRqstTDD

```



```

DL-CCTrCH-InformationItem-RL-AdditionRqstTDD ::= SEQUENCE {
    cCTrCH-ID                CCTrCH-ID,
    dL-DPCH-Information      DL-DPCH-InformationList-RL-AdditionRqstTDD    OPTIONAL,
    iE-Extensions            ProtocolExtensionContainer { { DL-CCTrCH-InformationItem-RL-AdditionRqstTDD-ExtIEs} }    OPTIONAL,
    ...
}

DL-CCTrCH-InformationItem-RL-AdditionRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-DL-DPCH-InformationItem-LCR-RL-AdditionRqstTDD    CRITICALITY    notify                EXTENSION    DL-DPCH-
InformationItem-LCR-RL-AdditionRqstTDD    PRESENCE    optional }| -- Applicable to 1.28Mcps TDD only
    { ID id-TDD-TPC-DownlinkStepSize-RL-AdditionRqstTDD    CRITICALITY    reject                EXTENSION    TDD-TPC-DownlinkStepSize    PRESENCE    optional },
    ...
}

DL-DPCH-InformationList-RL-AdditionRqstTDD ::= ProtocolIE-Single-Container {{ DL-DPCH-InformationItemIE-RL-AdditionRqstTDD }}

DL-DPCH-InformationItemIE-RL-AdditionRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID id-DL-DPCH-InformationItem-RL-AdditionRqstTDD    CRITICALITY    notify                TYPE    DL-DPCH-InformationItem-
RL-AdditionRqstTDD    PRESENCE    mandatory} -- Applicable to 3.84Mcps TDD only
}

DL-DPCH-InformationItem-RL-AdditionRqstTDD ::= SEQUENCE {
    repetitionPeriod          RepetitionPeriod,
    repetitionLength          RepetitionLength,
    tdd-DPCHOffset            TDD-DPCHOffset,
    dL-Timeslot-Information    DL-Timeslot-Information,
    iE-Extensions            ProtocolExtensionContainer { { DL-DPCH-InformationItem-RL-AdditionRqstTDD-ExtIEs} }
    OPTIONAL,
    ...
}

DL-DPCH-InformationItem-RL-AdditionRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-Information-RL-AdditionRqstTDD ::= SEQUENCE {
    rL-ID                    RL-ID,
    c-ID                    C-ID,
    frameOffset              FrameOffset,
    diversityControlField     DiversityControlField,
    initial-DL-Transmission-Power    DL-Power    OPTIONAL,
    maximumDL-Power          DL-Power    OPTIONAL,
    minimumDL-Power          DL-Power    OPTIONAL,
    dL-TimeSlotISCPInfo      DL-TimeSlotISCPInfo    OPTIONAL, -- Applicable to 3.84Mcps TDD only
    iE-Extensions            ProtocolExtensionContainer { { RL-information-RL-AdditionRqstTDD-ExtIEs} }    OPTIONAL,
    ...
}

RL-information-RL-AdditionRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-TimeslotISCP-InformationList-LCR-RL-AdditionRqstTDD    CRITICALITY    reject                EXTENSION    DL-
TimeslotISCPInfoLCR    PRESENCE    optional }| -- Applicable to 1.28Mcps TDD only
    { ID id-UL-Synchronisation-Parameters-LCR    CRITICALITY    ignore                EXTENSION    UL-Synchronisation-Parameters-LCR    PRESENCE
optional }, -- Mandatory for 1.28Mcps TDD, Not Applicable to 3.84Mcps TDD
    ...
}

```

```

}
UL-DPCH-InformationItem-LCR-RL-AdditionRqstTDD ::= SEQUENCE {
    repetitionPeriod          RepetitionPeriod,
    repetitionLength          RepetitionLength,
    tdd-DPCHOffset            TDD-DPCHOffset,
    uL-TimeslotLCR-Information UL-TimeslotLCR-Information,
    iE-Extensions             ProtocolExtensionContainer { { UL-DPCH-InformationItem-LCR-RL-AdditionRqstTDD-ExtIEs} } OPTIONAL,
    ...
}
UL-DPCH-InformationItem-LCR-RL-AdditionRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
DL-DPCH-InformationItem-LCR-RL-AdditionRqstTDD ::= SEQUENCE {
    repetitionPeriod          RepetitionPeriod,
    repetitionLength          RepetitionLength,
    tdd-DPCHOffset            TDD-DPCHOffset,
    dL-TimeslotLCR-Information DL-TimeslotLCR-Information,
    iE-Extensions             ProtocolExtensionContainer { { DL-DPCH-InformationItem-LCR-RL-AdditionRqstTDD-ExtIEs} } OPTIONAL,
    ...
}
DL-DPCH-InformationItem-LCR-RL-AdditionRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
-- *****
--
-- RADIO LINK ADDITION RESPONSE FDD
--
-- *****

RadioLinkAdditionResponseFDD ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container   {{RadioLinkAdditionResponseFDD-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{RadioLinkAdditionResponseFDD-Extensions}} OPTIONAL,
    ...
}
RadioLinkAdditionResponseFDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-CRNC-CommunicationContextID PRESENCE mandatory CRITICALITY ignore TYPE CRNC-
CommunicationContextID }|
    { ID id-RL-InformationResponseList-RL-AdditionRspFDD PRESENCE mandatory CRITICALITY ignore TYPE RL-
InformationResponseList-RL-AdditionRspFDD }|
    { ID id-CriticalityDiagnostics PRESENCE optional CRITICALITY ignore TYPE CriticalityDiagnostics
    ...
}
RadioLinkAdditionResponseFDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```
RL-InformationResponseList-RL-AdditionRspFDD ::= SEQUENCE (SIZE (1..maxNrOfRLs-1)) OF ProtocolIE-Single-Container {{ RL-InformationResponseItemIE-
RL-AdditionRspFDD }}
```

```
RL-InformationResponseItemIE-RL-AdditionRspFDD NBAP-PROTOCOL-IES ::= {
  { ID      id-RL-InformationResponseItem-RL-AdditionRspFDD      CRITICALITY      ignore      TYPE RL-
InformationResponseItem-RL-AdditionRspFDD      PRESENCE      mandatory}
}
```

```
RL-InformationResponseItem-RL-AdditionRspFDD ::= SEQUENCE {
  rL-ID          RL-ID,
  rL-Set-ID      RL-Set-ID,
  received-total-wide-band-power          Received-total-wide-band-power-Value,
  diversityIndication          DiversityIndication-RL-AdditionRspFDD,
  sSDT-SupportIndicator        SSDT-SupportIndicator,
  iE-Extensions                ProtocolExtensionContainer { { RL-InformationResponseItem-RL-AdditionRspFDD-ExtIEs} }
  OPTIONAL,
  ...
}
```

```
RL-InformationResponseItem-RL-AdditionRspFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}
```

```
DiversityIndication-RL-AdditionRspFDD ::= CHOICE {
  combining          Combining-RL-AdditionRspFDD,
  non-combining      Non-Combining-RL-AdditionRspFDD
}
```

```
Combining-RL-AdditionRspFDD ::= SEQUENCE {
  rL-ID          RL-ID,
  iE-Extensions  ProtocolExtensionContainer { { CombiningItem-RL-AdditionRspFDD-ExtIEs} }  OPTIONAL,
  ...
}
```

```
CombiningItem-RL-AdditionRspFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}
```

```
Non-Combining-RL-AdditionRspFDD ::= SEQUENCE {
  dCH-InformationResponse          DCH-InformationResponse,
  iE-Extensions                    ProtocolExtensionContainer { { Non-CombiningItem-RL-AdditionRspFDD-ExtIEs} }  OPTIONAL,
  ...
}
```

```
Non-CombiningItem-RL-AdditionRspFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}
```

```
-- *****
--
-- RADIO LINK ADDITION RESPONSE TDD
--
-- *****
```

```

RadioLinkAdditionResponseTDD ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container    {{RadioLinkAdditionResponseTDD-IEs}},
  protocolExtensions  ProtocolExtensionContainer {{RadioLinkAdditionResponseTDD-Extensions}}
  ...
}

RadioLinkAdditionResponseTDD-IEs NBAP-PROTOCOL-IES ::= {
  { ID id-CRNC-CommunicationContextID          CRITICALITY ignore          TYPE          CRNC-CommunicationContextID
    PRESENCE mandatory }|
  { ID id-RL-InformationResponse-RL-AdditionRspTDD CRITICALITY ignore          TYPE          RL-InformationResponse-RL-
  AdditionRspTDD PRESENCE optional }| -- Mandatory for 3.84Mcps TDD, Not Applicable to 1.28Mcps TDD
  { ID id-CriticalityDiagnostics              CRITICALITY ignore          TYPE          CriticalityDiagnostics
    PRESENCE optional },
  ...
}

RadioLinkAdditionResponseTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  { ID id-RL-InformationResponse-LCR-RL-AdditionRspTDD CRITICALITY ignore          EXTENSION          RL-InformationResponse-LCR-RL-
  AdditionRspTDD PRESENCE optional }, -- Mandatory for 1.28Mcps TDD, Not Applicable to 3.84Mcps TDD
  ...
}

RL-InformationResponse-RL-AdditionRspTDD ::= SEQUENCE {
  rL-ID          RL-ID,
  uL-TimeSlot-ISCP-Info          UL-TimeSlot-ISCP-Info,
  ul-PhysCH-SF-Variation          UL-PhysCH-SF-Variation,
  dCH-Information          DCH-Information-RL-AdditionRspTDD          OPTIONAL,
  dSCH-InformationResponseList          DSCH-InformationResponseList-RL-AdditionRspTDD          OPTIONAL,
  uSCH-InformationResponseList          USCH-InformationResponseList-RL-AdditionRspTDD          OPTIONAL,
  iE-Extensions          ProtocolExtensionContainer { { RL-InformationResponse-RL-AdditionRspTDD-ExtIEs} }          OPTIONAL,
  ...
}

RL-InformationResponse-RL-AdditionRspTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

DCH-Information-RL-AdditionRspTDD ::= SEQUENCE {
  diversityIndication          DiversityIndication-RL-AdditionRspTDD,
  iE-Extensions          ProtocolExtensionContainer { { DCH-Information-RL-AdditionRspTDD-ExtIEs} }          OPTIONAL,
  ...
}

DCH-Information-RL-AdditionRspTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

DiversityIndication-RL-AdditionRspTDD ::= CHOICE {
  combining          Combining-RL-AdditionRspTDD,
  non-Combining          Non-Combining-RL-AdditionRspTDD
}

Combining-RL-AdditionRspTDD ::= SEQUENCE {
  rL-ID          RL-ID,

```

```

    iE-Extensions          ProtocolExtensionContainer { { CombiningItem-RL-AdditionRspTDD-ExtIEs } }    OPTIONAL,
  }
  ...
}

CombiningItem-RL-AdditionRspTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

Non-Combining-RL-AdditionRspTDD ::= SEQUENCE {
  dCH-InformationResponse          DCH-InformationResponse,
  iE-Extensions                    ProtocolExtensionContainer { { Non-CombiningItem-RL-AdditionRspTDD-ExtIEs } }    OPTIONAL,
  ...
}

Non-CombiningItem-RL-AdditionRspTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

DSCH-InformationResponseList-RL-AdditionRspTDD ::= ProtocolIE-Single-Container {{ DSCH-InformationResponseListIEs-RL-AdditionRspTDD }}

DSCH-InformationResponseListIEs-RL-AdditionRspTDD NBAP-PROTOCOL-IES ::= {
  { ID id-DSCH-InformationResponse  CRITICALITY ignore  TYPE DSCH-InformationResponse  PRESENCE mandatory }
}

USCH-InformationResponseList-RL-AdditionRspTDD ::= ProtocolIE-Single-Container {{ USCH-InformationResponseListIEs-RL-AdditionRspTDD }}

USCH-InformationResponseListIEs-RL-AdditionRspTDD NBAP-PROTOCOL-IES ::= {
  { ID id-USCH-InformationResponse  CRITICALITY ignore  TYPE USCH-InformationResponse  PRESENCE mandatory }
}

RL-InformationResponse-LCR-RL-AdditionRspTDD ::= SEQUENCE {
  rL-ID                          RL-ID,
  uL-TimeSlot-ISCP-InfoLCR       UL-TimeSlot-ISCP-LCR-Info,
  ul-PhysCH-SF-Variation         UL-PhysCH-SF-Variation,
  dCH-Information                DCH-Information-RL-AdditionRspTDD          OPTIONAL,
  dSCH-InformationResponseList    DSCH-InformationResponseList-RL-AdditionRspTDD          OPTIONAL,
  uSCH-InformationResponseList    USCH-InformationResponseList-RL-AdditionRspTDD          OPTIONAL,
  iE-Extensions                  ProtocolExtensionContainer { { RL-InformationResponse-LCR-RL-AdditionRspTDD-ExtIEs } }    OPTIONAL,
  ...
}

RL-InformationResponse-LCR-RL-AdditionRspTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- RADIO LINK ADDITION FAILURE FDD
--
-- *****

RadioLinkAdditionFailureFDD ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container  {{RadioLinkAdditionFailureFDD-IEs}},
  protocolExtensions  ProtocolExtensionContainer  {{RadioLinkAdditionFailureFDD-Extensions}}    OPTIONAL,
}

```

```

}
...
}
RadioLinkAdditionFailureFDD-IEs NBAP-PROTOCOL-IES ::= {
  { ID id-CRNC-CommunicationContextID CRITICALITY ignore TYPE CRNC-CommunicationContextID PRESENCE mandatory }|
  { ID id-CauseLevel-RL-AdditionFailureFDD CRITICALITY ignore TYPE CauseLevel-RL-AdditionFailureFDD PRESENCE mandatory }|
  { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional }
},
...
}
RadioLinkAdditionFailureFDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}
CauseLevel-RL-AdditionFailureFDD ::= CHOICE {
  generalCause GeneralCauseList-RL-AdditionFailureFDD,
  rLSpecificCause RLSpecificCauseList-RL-AdditionFailureFDD,
  ...
}
GeneralCauseList-RL-AdditionFailureFDD ::= SEQUENCE {
  cause Cause,
  iE-Extensions ProtocolExtensionContainer { { GeneralCauseItem-RL-AdditionFailureFDD-ExtIEs} } OPTIONAL,
  ...
}
GeneralCauseItem-RL-AdditionFailureFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}
RLSpecificCauseList-RL-AdditionFailureFDD ::= SEQUENCE {
  unsuccessful-RL-InformationRespList-RL-AdditionFailureFDD Unsuccessful-RL-InformationRespList-RL-AdditionFailureFDD,
  successful-RL-InformationRespList-RL-AdditionFailureFDD Successful-RL-InformationRespList-RL-AdditionFailureFDD OPTIONAL,
  iE-Extensions ProtocolExtensionContainer { { RLSpecificCauseItem-RL-AdditionFailureFDD-ExtIEs} } OPTIONAL,
  ...
}
RLSpecificCauseItem-RL-AdditionFailureFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}
Unsuccessful-RL-InformationRespList-RL-AdditionFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfRLs-1)) OF ProtocolIE-Single-Container {{ Unsuccessful-RL-InformationRespItemIE-RL-AdditionFailureFDD }}
Unsuccessful-RL-InformationRespItemIE-RL-AdditionFailureFDD NBAP-PROTOCOL-IES ::= {
  { ID id-Unsuccessful-RL-InformationRespItem-RL-AdditionFailureFDD CRITICALITY ignore TYPE Unsuccessful-RL-InformationRespItem-RL-AdditionFailureFDD PRESENCE mandatory}
}
Unsuccessful-RL-InformationRespItem-RL-AdditionFailureFDD ::= SEQUENCE {
  rL-ID RL-ID,
  cause Cause,

```

```

    iE-Extensions
        OPTIONAL,
    ...
}

Unsuccessful-RL-InformationRespItem-RL-AdditionFailureFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Successful-RL-InformationRespList-RL-AdditionFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfRLs-2)) OF ProtocolIE-Single-Container {{ Successful-RL-
InformationRespItemIE-RL-AdditionFailureFDD }}

Successful-RL-InformationRespItemIE-RL-AdditionFailureFDD NBAP-PROTOCOL-IES ::= {
    { ID      id-Successful-RL-InformationRespItem-RL-AdditionFailureFDD      CRITICALITY      ignore      TYPE      Successful-RL-
InformationRespItem-RL-AdditionFailureFDD      PRESENCE      mandatory}
}

Successful-RL-InformationRespItem-RL-AdditionFailureFDD ::= SEQUENCE {
    rL-ID                RL-ID,
    rL-Set-ID            RL-Set-ID,
    received-total-wide-band-power      Received-total-wide-band-power-Value,
    diversityIndication  DiversityIndication-RL-AdditionFailureFDD,
    sSDT-SupportIndicator      SSDT-SupportIndicator,
    iE-Extensions          ProtocolExtensionContainer { { Successful-RL-InformationRespItem-RL-AdditionFailureFDD-ExtIEs} }
    OPTIONAL,
    ...
}

Successful-RL-InformationRespItem-RL-AdditionFailureFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DiversityIndication-RL-AdditionFailureFDD ::= CHOICE {
    combining      Combining-RL-AdditionFailureFDD,
    non-Combining Non-Combining-RL-AdditionFailureFDD
}

Combining-RL-AdditionFailureFDD ::= SEQUENCE {
    rL-ID                RL-ID,
    iE-Extensions          ProtocolExtensionContainer { { CombiningItem-RL-AdditionFailureFDD-ExtIEs} }      OPTIONAL,
    ...
}

CombiningItem-RL-AdditionFailureFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Non-Combining-RL-AdditionFailureFDD ::= SEQUENCE {
    dCH-InformationResponse      DCH-InformationResponse,
    iE-Extensions          ProtocolExtensionContainer { { Non-CombiningItem-RL-AdditionFailureFDD-ExtIEs} }
    OPTIONAL,
    ...
}

```

```

Non-CombiningItem-RL-AdditionFailureFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- RADIO LINK ADDITION FAILURE TDD
--
-- *****

RadioLinkAdditionFailureTDD ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container    {{RadioLinkAdditionFailureTDD-IEs}},
  protocolExtensions   ProtocolExtensionContainer {{RadioLinkAdditionFailureTDD-Extensions}}          OPTIONAL,
  ...
}

RadioLinkAdditionFailureTDD-IEs NBAP-PROTOCOL-IES ::= {
  { ID   id-CRNC-CommunicationContextID          CRITICALITY   ignore      TYPE      CRNC-CommunicationContextID
  PRESENCE   mandatory }|
  { ID   id-CauseLevel-RL-AdditionFailureTDD     CRITICALITY   ignore      TYPE      CauseLevel-RL-AdditionFailureTDD
  PRESENCE   mandatory }|
  { ID   id-CriticalityDiagnostics              CRITICALITY   ignore      TYPE      CriticalityDiagnostics
  PRESENCE   optional   },
  ...
}

RadioLinkAdditionFailureTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

CauseLevel-RL-AdditionFailureTDD ::= CHOICE {
  generalCause          GeneralCauseList-RL-AdditionFailureTDD,
  rLSpecificCause      RLSpecificCauseList-RL-AdditionFailureTDD,
  ...
}

GeneralCauseList-RL-AdditionFailureTDD ::= SEQUENCE {
  cause                Cause,
  iE-Extensions        ProtocolExtensionContainer { { GeneralCauseItem-RL-AdditionFailureTDD-ExtIEs } }          OPTIONAL,
  ...
}

GeneralCauseItem-RL-AdditionFailureTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

RLSpecificCauseList-RL-AdditionFailureTDD ::= SEQUENCE {
  unsuccessful-RL-InformationRespItem-RL-AdditionFailureTDD Unsuccessful-RL-InformationRespItem-RL-AdditionFailureTDD,
  iE-Extensions        ProtocolExtensionContainer { { RLSpecificCauseItem-RL-AdditionFailureTDD-ExtIEs } }          OPTIONAL,
  ...
}

RLSpecificCauseItem-RL-AdditionFailureTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {

```



```

}
...
}

Unsuccessful-RL-InformationRespItem-RL-AdditionFailureTDD ::= ProtocolIE-Single-Container { {Unsuccessful-RL-InformationRespItemIE-RL-AdditionFailureTDD} }

Unsuccessful-RL-InformationRespItemIE-RL-AdditionFailureTDD NBAP-PROTOCOL-IES ::= {
  { ID id-Unsuccessful-RL-InformationResp-RL-AdditionFailureTDD  CRITICALITY ignore  TYPE Unsuccessful-RL-InformationResp-RL-AdditionFailureTDD
  PRESENCE mandatory }
}

Unsuccessful-RL-InformationResp-RL-AdditionFailureTDD ::= SEQUENCE {
  rL-ID                               RL-ID,
  cause                               Cause,
  iE-Extensions                       ProtocolExtensionContainer { { Unsuccessful-RL-InformationResp-RL-AdditionFailureTDD-ExtIEs} }
  OPTIONAL,
  ...
}

Unsuccessful-RL-InformationResp-RL-AdditionFailureTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- RADIO LINK RECONFIGURATION PREPARE FDD
--
-- *****

RadioLinkReconfigurationPrepareFDD ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container  {{RadioLinkReconfigurationPrepareFDD-IEs}},
  protocolExtensions   ProtocolExtensionContainer  {{RadioLinkReconfigurationPrepareFDD-Extensions}}
  OPTIONAL,
  ...
}

RadioLinkReconfigurationPrepareFDD-IEs NBAP-PROTOCOL-IES ::= {
  { ID id-NodeB-CommunicationContextID  CRITICALITY reject  TYPE NodeB-CommunicationContextID
  PRESENCE mandatory } |
  { ID id-UL-DPCH-Information-RL-ReconfPrepFDD  CRITICALITY reject  TYPE UL-DPCH-Information-RL-
  ReconfPrepFDD PRESENCE optional } |
  { ID id-DL-DPCH-Information-RL-ReconfPrepFDD  CRITICALITY reject  TYPE DL-DPCH-Information-RL-
  ReconfPrepFDD PRESENCE optional } |
  { ID id-FDD-DCHs-to-Modify  CRITICALITY reject  TYPE FDD-DCHs-to-Modify PRESENCE optional } |
  { ID id-DCHs-to-Add-FDD  CRITICALITY reject  TYPE DCH-FDD-Information PRESENCE optional } |
  { ID id-DCH-DeleteList-RL-ReconfPrepFDD  CRITICALITY reject  TYPE DCH-DeleteList-RL-ReconfPrepFDD
  PRESENCE optional } |
  { ID id-DSCH-ModifyList-RL-ReconfPrepFDD  CRITICALITY reject  TYPE DSCH-ModifyList-RL-ReconfPrepFDD
  PRESENCE optional } |
  { ID id-DSCHs-to-Add-FDD  CRITICALITY reject  TYPE DSCH-FDD-Information PRESENCE optional }
  |
  { ID id-DSCH-DeleteList-RL-ReconfPrepFDD  CRITICALITY reject  TYPE DSCH-DeleteList-RL-ReconfPrepFDD
  PRESENCE optional } |
  { ID id-TFCI2-BearerSpecificInformation-RL-ReconfPrepFDD  CRITICALITY reject  TYPE TFCI2-BearerSpecificInformation-
  RL-ReconfPrepFDD
}

```

```

    PRESENCE optional } |
    { ID id-RL-InformationList-RL-ReconfPrepFDD          CRITICALITY reject          TYPE          RL-InformationList-RL-
ReconfPrepFDD          PRESENCE optional    }|
    { ID id-Transmission-Gap-Pattern-Sequence-Information CRITICALITY reject          TYPE Transmission-Gap-Pattern-Sequence-Information
PRESENCE optional },
    ...
}

RadioLinkReconfigurationPrepareFDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-DSCH-FDD-Common-Information          CRITICALITY ignore EXTENSION DSCH-FDD-Common-Information          PRESENCE optional
    },
    ...
}

UL-DPCH-Information-RL-ReconfPrepFDD ::= SEQUENCE {
    ul-ScramblingCode          UL-ScramblingCode          OPTIONAL,
    ul-SIR-Target              UL-SIR          OPTIONAL,
    minUL-ChannelisationCodeLength MinUL-ChannelisationCodeLength OPTIONAL,
    maxNrOfUL-DPDCHs          MaxNrOfUL-DPDCHs          OPTIONAL,
    -- This IE shall be present if minUL-ChannelisationCodeLength Ie is set to 4
    ul-PunctureLimit          PunctureLimit          OPTIONAL,
    tFCS                      TFCS          OPTIONAL,
    ul-DPCCH-SlotFormat        UL-DPCCH-SlotFormat        OPTIONAL,
    diversityMode              DiversityMode          OPTIONAL,
    sSDT-CellIDLength          SSDT-CellID-Length        OPTIONAL,
    s-FieldLength              S-FieldLength          OPTIONAL,
    iE-Extensions              ProtocolExtensionContainer { { UL-DPCH-Information-RL-ReconfPrepFDD-ExtIEs } } OPTIONAL,
    ...
}

UL-DPCH-Information-RL-ReconfPrepFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-Information-RL-ReconfPrepFDD ::= SEQUENCE {
    tFCS                      TFCS          OPTIONAL,
    dl-DPCH-SlotFormat        DL-DPCH-SlotFormat        OPTIONAL,
    tFCI-SignallingMode        TFCI-SignallingMode        OPTIONAL,
    tFCI-Presence              TFCI-Presence          OPTIONAL,
    -- This IE shall be present if the DL DPCH Slot Format IE is set to any of the values from 12 to 16
    multiplexingPosition        MultiplexingPosition        OPTIONAL,
    pDSCH-CodeMapping          PDSCH-CodeMapping          OPTIONAL,
    pDSCH-RL-ID                RL-ID          OPTIONAL,
    limitedPowerIncrease        LimitedPowerIncrease        OPTIONAL,
    iE-Extensions              ProtocolExtensionContainer { { DL-DPCH-Information-RL-ReconfPrepFDD-ExtIEs } } OPTIONAL,
    ...
}

DL-DPCH-Information-RL-ReconfPrepFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-DeleteList-RL-ReconfPrepFDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-DeleteItem-RL-ReconfPrepFDD

```

```

DCH-DeleteItem-RL-ReconfPrepFDD ::= SEQUENCE {
    dCH-ID
    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
    dl-TransportFormatSet
    allocationRetentionPriority
    frameHandlingPriority
    toAWS
    toAWE
    transportBearerRequestIndicator
    iE-Extensions
    ...
    DSCH-ID,
    TransportFormatSet
    AllocationRetentionPriority
    FrameHandlingPriority
    ToAWS
    ToAWE
    TransportBearerRequestIndicator,
    ProtocolExtensionContainer { { DSCH-ModifyItem-RL-ReconfPrepFDD-ExtIEs} }
}

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
    iE-Extensions
    ...
    DSCH-ID,
    ProtocolExtensionContainer { { DSCH-DeleteItem-RL-ReconfPrepFDD-ExtIEs} }
}

DSCH-DeleteItem-RL-ReconfPrepFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TFCI2-BearerSpecificInformation-RL-ReconfPrepFDD ::= CHOICE {
    addOrModify      AddOrModify-TFCI2-RL-ReconfPrepFDD,
    delete           NULL
}

AddOrModify-TFCI2-RL-ReconfPrepFDD ::= SEQUENCE {

```

```

    toAWS                ToAWS,
    toAWE                ToAWE,
    iE-Extensions       ProtocolExtensionContainer { { AddOrModify-TFCI2-RL-ReconfPrepFDD-ExtIEs} }    OPTIONAL,
    ...
}

AddOrModify-TFCI2-RL-ReconfPrepFDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-InformationList-RL-ReconfPrepFDD ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container {{ RL-InformationItemIE-RL-ReconfPrepFDD }}

RL-InformationItemIE-RL-ReconfPrepFDD NBAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationItem-RL-ReconfPrepFDD          CRITICALITY reject          TYPE          RL-InformationItem-RL-
ReconfPrepFDD          PRESENCE mandatory}
}

RL-InformationItem-RL-ReconfPrepFDD ::= SEQUENCE {
    rL-ID                RL-ID,
    dl-CodeInformation   FDD-DL-CodeInformation          OPTIONAL,
    maxDL-Power          DL-Power                      OPTIONAL,
    minDL-Power          DL-Power                      OPTIONAL,
    sSDT-Indication      SSDT-Indication                OPTIONAL,
    sSDT-Cell-Identity   SSDT-Cell-Identity            OPTIONAL,
    -- The IE shall be present if the SSDT Indication IE is set to 'SSDT Active in the UE'
    transmitDiversityIndicator TransmitDiversityIndicator          OPTIONAL,
    -- This IE shall be present if Diversity Mode IE is present in UL DPCH Information IE and it is not set to 'none'
    iE-Extensions       ProtocolExtensionContainer { { RL-InformationItem-RL-ReconfPrepFDD-ExtIEs} }    OPTIONAL,
    ...
}

RL-InformationItem-RL-ReconfPrepFDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-SSDT-CellIDforEDSCHPC CRITICALITY ignore EXTENSION SSDT-Cell-Identity          PRESENCE conditional },
    -- This IE shall be present if Enhanced DSCH PC IE is present in the DSCH Common Information IE.
    ...
}

-- *****
--
-- RADIO LINK RECONFIGURATION PREPARE TDD
--
-- *****

RadioLinkReconfigurationPrepareTDD ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{RadioLinkReconfigurationPrepareTDD-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{RadioLinkReconfigurationPrepareTDD-Extensions}}    OPTIONAL,
    ...
}

RadioLinkReconfigurationPrepareTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-NodeB-CommunicationContextID          CRITICALITY reject          TYPE          NodeB-CommunicationContextID
    PRESENCE mandatory }|
    { ID id-UL-CCTrCH-InformationAddList-RL-ReconfPrepTDD          CRITICALITY reject          TYPE UL-CCTrCH-
InformationAddList-RL-ReconfPrepTDD          PRESENCE optional } |
}

```

```

    { ID id-UL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD
InformationModifyList-RL-ReconfPrepTDD PRESENCE optional CRITICALITY reject TYPE UL-CCTrCH-
    { ID id-UL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD
InformationDeleteList-RL-ReconfPrepTDD PRESENCE optional CRITICALITY reject TYPE UL-CCTrCH-
    { ID id-DL-CCTrCH-InformationAddList-RL-ReconfPrepTDD
InformationAddList-RL-ReconfPrepTDD PRESENCE optional CRITICALITY reject TYPE DL-CCTrCH-
    { ID id-DL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD
InformationModifyList-RL-ReconfPrepTDD PRESENCE optional CRITICALITY reject TYPE DL-CCTrCH-
    { ID id-DL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD
InformationDeleteList-RL-ReconfPrepTDD PRESENCE optional CRITICALITY reject TYPE DL-CCTrCH-
    { ID id-TDD-DCHs-to-Modify
    } | CRITICALITY reject TYPE TDD-DCHs-to-Modify PRESENCE optional
    { ID id-DCHs-to-Add-TDD
    } | CRITICALITY reject TYPE DCH-TDD-Information PRESENCE optional
    { ID id-DCH-DeleteList-RL-ReconfPrepTDD
    PRESENCE optional } | CRITICALITY reject TYPE DCH-DeleteList-RL-ReconfPrepTDD
    { ID id-DSCH-Information-ModifyList-RL-ReconfPrepTDD
ReconfPrepTDD PRESENCE optional } | CRITICALITY reject TYPE DSCH-Information-ModifyList-RL-
    { ID id-DSCHs-to-Add-TDD CRITICALITY reject TYPE DSCH-TDD-Information PRESENCE optional }
|
    { ID id-DSCH-Information-DeleteList-RL-ReconfPrepTDD
ReconfPrepTDD PRESENCE optional } | CRITICALITY reject TYPE DSCH-Information-DeleteList-RL-
    { ID id-USCH-Information-ModifyList-RL-ReconfPrepTDD
ReconfPrepTDD PRESENCE optional } | CRITICALITY reject TYPE USCH-Information-ModifyList-RL-
    { ID id-USCH-Information-Add
    } | CRITICALITY reject TYPE USCH-Information PRESENCE optional }
|
    { ID id-USCH-Information-DeleteList-RL-ReconfPrepTDD
ReconfPrepTDD PRESENCE optional } | CRITICALITY reject TYPE USCH-Information-DeleteList-RL-
    { ID id-RL-Information-RL-ReconfPrepTDD
    PRESENCE optional }, CRITICALITY reject TYPE RL-Information-RL-ReconfPrepTDD
    ...
}

RadioLinkReconfigurationPrepareTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-PDSCH-RL-ID CRITICALITY ignore EXTENSION RL-ID PRESENCE optional },
    ...
}

UL-CCTrCH-InformationAddList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF UL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD

UL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD ::= SEQUENCE {
    cCTrCH-ID CCTrCH-ID,
    tFCS TFCS,
    tFCI-Coding TFCI-Coding,
    punctureLimit PunctureLimit,
    ul-DPCH-InformationList UL-DPCH-InformationAddList-RL-ReconfPrepTDD OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { { UL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD-ExtIEs } }
    OPTIONAL,
    ...
}

UL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-UL-DPCH-LCR-InformationAddListIE-RL-ReconfPrepTDD CRITICALITY reject EXTENSION UL-DPCH-LCR-InformationAddList-RL-ReconfPrepTDD
    PRESENCE optional } | -- Applicable to 1.28Mcps TDD only
}

```

```

    { ID id-UL-SIRTarget          CRITICALITY reject      EXTENSION      UL-SIR      PRESENCE optional      }|
    -- Mandatory for 1.28Mcps TDD, Not Applicable to 3.84Mcps TDD.
    { ID id-TDD-TPC-UplinkStepSize-InformationAdd-LCR-RL-ReconfPrepTDD  CRITICALITY reject  EXTENSION      TDD-TPC-UplinkStepSize-LCR
    PRESENCE optional  },
    -- Mandatory for 1.28Mcps TDD, Not Applicable to 3.84Mcps TDD.
    ...
}

UL-DPCH-InformationAddList-RL-ReconfPrepTDD ::= ProtocolIE-Single-Container { { UL-DPCH-InformationAddListIEs-RL-ReconfPrepTDD } }

UL-DPCH-InformationAddListIEs-RL-ReconfPrepTDD NBAP-PROTOCOL-IES ::= {
  { ID id-UL-DPCH-InformationAddListIE-RL-ReconfPrepTDD  CRITICALITY reject      TYPE UL-DPCH-InformationAddItem-RL-ReconfPrepTDD      PRESENCE
  mandatory }
}

UL-DPCH-InformationAddItem-RL-ReconfPrepTDD ::= SEQUENCE {
  repetitionPeriod          RepetitionPeriod,
  repetitionLength          RepetitionLength,
  tdd-DPCHOffset            TDD-DPCHOffset,
  uL-Timeslot-Information    UL-Timeslot-Information,
  iE-Extensions              ProtocolExtensionContainer { { UL-DPCH-InformationAddItem-RL-ReconfPrepTDD-ExtIEs } }      OPTIONAL,
  ...
}

UL-DPCH-InformationAddItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

UL-DPCH-LCR-InformationAddList-RL-ReconfPrepTDD ::= SEQUENCE {
  repetitionPeriod          RepetitionPeriod,
  repetitionLength          RepetitionLength,
  tdd-DPCHOffset            TDD-DPCHOffset,
  uL-Timeslot-InformationLCR  UL-TimeslotLCR-Information,
  iE-Extensions              ProtocolExtensionContainer { { UL-DPCH-LCR-InformationAddItem-RL-ReconfPrepTDD-ExtIEs } }      OPTIONAL,
  ...
}

UL-DPCH-LCR-InformationAddItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

UL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF UL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD

UL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
  cCTrCH-ID                  CCTrCH-ID,
  tFCS                        TFCS                                OPTIONAL,
  tFCI-Coding                  TFCI-Coding                            OPTIONAL,
  punctureLimit                PunctureLimit                            OPTIONAL,
  ul-DPCH-InformationAddList    UL-DPCH-InformationModify-AddList-RL-ReconfPrepTDD      OPTIONAL,
  ul-DPCH-InformationModifyList  UL-DPCH-InformationModify-ModifyList-RL-ReconfPrepTDD      OPTIONAL,
  ul-DPCH-InformationDeleteList  UL-DPCH-InformationModify-DeleteList-RL-ReconfPrepTDD      OPTIONAL,
  iE-Extensions                ProtocolExtensionContainer { { UL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD-ExtIEs } }
  OPTIONAL,
  ...
}

```

```

}
UL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  { ID id-UL-DPCH-LCR-InformationModify-AddList CRITICALITY reject EXTENSION UL-DPCH-LCR-InformationModify-AddList-RL-ReconfPrepTDD
  PRESENCE optional } | -- Applicable to 1.28Mcps TDD only
  { ID id-UL-SIRTarget CRITICALITY reject EXTENSION UL-SIR PRESENCE optional } |
  -- Applicable to 1.28Mcps TDD only.
  { ID id-TDD-TPC-UplinkStepSize-InformationModify-LCR-RL-ReconfPrepTDD CRITICALITY reject EXTENSION TDD-TPC-UplinkStepSize-LCR
  PRESENCE optional },
  -- Applicable to 1.28Mcps TDD only
  ...
}
UL-DPCH-InformationModify-AddList-RL-ReconfPrepTDD ::= ProtocolIE-Single-Container {{ UL-DPCH-InformationModify-AddListIEs-RL-ReconfPrepTDD }}
UL-DPCH-InformationModify-AddListIEs-RL-ReconfPrepTDD NBAP-PROTOCOL-IES ::= {
  { ID id-UL-DPCH-InformationModify-AddListIE-RL-ReconfPrepTDD CRITICALITY reject TYPE UL-DPCH-InformationModify-AddItem-RL-ReconfPrepTDD
  PRESENCE mandatory }
}
UL-DPCH-InformationModify-AddItem-RL-ReconfPrepTDD ::= SEQUENCE {
  repetitionPeriod RepetitionPeriod,
  repetitionLength RepetitionLength,
  tdd-DPCHOffset TDD-DPCHOffset,
  uL-Timeslot-Information UL-Timeslot-Information,
  iE-Extensions ProtocolExtensionContainer { { UL-DPCH-InformationModify-AddItem-RL-ReconfPrepTDD-ExtIEs } }
  OPTIONAL,
  ...
}
UL-DPCH-InformationModify-AddItem-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}
UL-DPCH-LCR-InformationModify-AddList-RL-ReconfPrepTDD ::= SEQUENCE {
  repetitionPeriod RepetitionPeriod,
  repetitionLength RepetitionLength,
  tdd-DPCHOffset TDD-DPCHOffset,
  uL-Timeslot-InformationLCR UL-TimeslotLCR-Information,
  iE-Extensions ProtocolExtensionContainer { { UL-DPCH-LCR-InformationModify-AddItem-RL-ReconfPrepTDD-ExtIEs } }
  OPTIONAL,
  ...
}
UL-DPCH-LCR-InformationModify-AddItem-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}
UL-DPCH-InformationModify-ModifyList-RL-ReconfPrepTDD ::= ProtocolIE-Single-Container {{ UL-DPCH-InformationModify-ModifyListIEs-RL-ReconfPrepTDD
}}
UL-DPCH-InformationModify-ModifyListIEs-RL-ReconfPrepTDD NBAP-PROTOCOL-IES ::= {
  { ID id-UL-DPCH-InformationModify-ModifyListIE-RL-ReconfPrepTDD CRITICALITY reject TYPE UL-DPCH-InformationModify-ModifyItem-RL-
  ReconfPrepTDD PRESENCE mandatory }
}

```

```

}

UL-DPCH-InformationModify-ModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    repetitionPeriod          RepetitionPeriod    OPTIONAL,
    repetitionLength          RepetitionLength    OPTIONAL,
    tdd-DPCHOffset            TDD-DPCHOffset      OPTIONAL,
    uL-Timeslot-InformationModify-ModifyList-RL-ReconfPrepTDD
    OPTIONAL,
    iE-Extensions              ProtocolExtensionContainer { { UL-DPCH-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}

UL-DPCH-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-UL-TimeslotLCR-Information-RL-ReconfPrepTDD    CRITICALITY reject    EXTENSION    UL-TimeslotLCR-InformationModify-ModifyList-RL-
    ReconfPrepTDD    PRESENCE optional },    -- Applicable to 1.28Mcps TDD only
    ...
}

UL-Timeslot-InformationModify-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfULTSs)) OF UL-Timeslot-InformationModify-ModifyItem-RL-
ReconfPrepTDD    -- Applicable to 3.84Mcps TDD only

UL-Timeslot-InformationModify-ModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    timeSlot                  TimeSlot,
    midambleShiftAndBurstType MidambleShiftAndBurstType    OPTIONAL,
    tFCI-Presence              TFCI-Presence    OPTIONAL,
    uL-Code-InformationModify-ModifyList-RL-ReconfPrepTDD
    OPTIONAL,
    iE-Extensions              ProtocolExtensionContainer { { UL-Timeslot-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}

UL-Timeslot-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-Code-InformationModify-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF UL-Code-InformationModify-ModifyItem-RL-
ReconfPrepTDD

UL-Code-InformationModify-ModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    dPCH-ID                    DPCH-ID,
    tdd-ChannelisationCode      TDD-ChannelisationCode    OPTIONAL,
    iE-Extensions              ProtocolExtensionContainer { { UL-Code-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}

UL-Code-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-TimeslotLCR-InformationModify-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfULTSLCRs)) OF UL-Timeslot-LCR-InformationModify-
ModifyItem-RL-ReconfPrepTDD -- Applicable to 1.28Mcps TDD only

```



```

UL-Timeslot-LCR-InformationModify-ModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    timeSlotLCR                TimeSlotLCR,
    midambleShiftLCR          MidambleShiftLCR    OPTIONAL,
    tFCI-Presence              TFCI-Presence      OPTIONAL,
    uL-Code-InformationModify-ModifyList-RL-ReconfPrepTDDLDCR  UL-Code-InformationModify-ModifyList-RL-ReconfPrepTDDLDCR    OPTIONAL,
    iE-Extensions              ProtocolExtensionContainer { { UL-Timeslot-LCR-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}

UL-Timeslot-LCR-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-Code-InformationModify-ModifyList-RL-ReconfPrepTDDLDCR ::= SEQUENCE (SIZE (1..maxNrOfDPCHLCRs)) OF UL-Code-InformationModify-ModifyItem-RL-ReconfPrepTDDLDCR

UL-Code-InformationModify-ModifyItem-RL-ReconfPrepTDDLDCR ::= SEQUENCE {
    dPCH-ID                    DPCH-ID,
    tdd-ChannelisationCodeLCR  TDD-ChannelisationCodeLCR    OPTIONAL,
    iE-Extensions              ProtocolExtensionContainer { { UL-Code-InformationModify-ModifyItem-RL-ReconfPrepTDDLDCR-ExtIEs} }
    OPTIONAL,
    ...
}

UL-Code-InformationModify-ModifyItem-RL-ReconfPrepTDDLDCR-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-UL-DPCH-TimeSlotFormat-LCR-ModifyItem-RL-ReconfPrepTDD CRITICALITY reject EXTENSION TDD-UL-DPCH-TimeSlotFormat-LCR PRESENCE optional},
    ...
}

UL-DPCH-InformationModify-DeleteList-RL-ReconfPrepTDD ::= ProtocolIE-Single-Container { { UL-DPCH-InformationModify-DeleteListIEs-RL-ReconfPrepTDD } }

UL-DPCH-InformationModify-DeleteListIEs-RL-ReconfPrepTDD NBAP-PROTOCOL-IES ::= {
    { ID id-UL-DPCH-InformationModify-DeleteListIE-RL-ReconfPrepTDD CRITICALITY reject TYPE UL-DPCH-InformationModify-DeleteListIE-RL-ReconfPrepTDD PRESENCE mandatory }
}

UL-DPCH-InformationModify-DeleteListIE-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF UL-DPCH-InformationModify-DeleteItem-RL-ReconfPrepTDD

UL-DPCH-InformationModify-DeleteItem-RL-ReconfPrepTDD ::= SEQUENCE {
    dPCH-ID                    DPCH-ID,
    iE-Extensions              ProtocolExtensionContainer { { UL-DPCH-InformationModify-DeleteItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}

UL-DPCH-InformationModify-DeleteItem-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

UL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF UL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD

UL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD ::= SEQUENCE {
    cCTrCH-ID                CCTrCH-ID,
    iE-Extensions            ProtocolExtensionContainer { { UL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}

UL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CCTrCH-InformationAddList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF DL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD

DL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD ::= SEQUENCE {
    cCTrCH-ID                CCTrCH-ID,
    tFCS                     TFCS,
    tFCI-Coding              TFCI-Coding,
    punctureLimit            PunctureLimit,
    cCTrCH-TPCList           CCTrCH-TPCAddList-RL-ReconfPrepTDD                OPTIONAL,
    dl-DPCH-InformationList  DL-DPCH-InformationAddList-RL-ReconfPrepTDD    OPTIONAL,
    iE-Extensions            ProtocolExtensionContainer { { DL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}

DL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-DL-DPCH-LCR-InformationAddList-RL-ReconfPrepTDD  CRITICALITY reject      EXTENSION          DL-DPCH-LCR-
InformationAddList-RL-ReconfPrepTDD  PRESENCE optional }| -- Applicable to 1.28Mcps TDD only
    { ID id-TDD-TPC-DownlinkStepSize-InformationAdd-RL-ReconfPrepTDD  CRITICALITY reject  EXTENSION TDD-TPC-DownlinkStepSize PRESENCE optional },
    ...
}

CCTrCH-TPCAddList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF CCTrCH-TPCAddItem-RL-ReconfPrepTDD -- Applicable to 3.84Mcps TDD
only

CCTrCH-TPCAddItem-RL-ReconfPrepTDD ::= SEQUENCE {
    cCTrCH-ID                CCTrCH-ID,
    iE-Extensions            ProtocolExtensionContainer { { CCTrCH-TPCAddItem-RL-ReconfPrepTDD-ExtIEs} }    OPTIONAL,
    ...
}

CCTrCH-TPCAddItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-InformationAddList-RL-ReconfPrepTDD ::= ProtocolIE-Single-Container {{ DL-DPCH-InformationAddListIEs-RL-ReconfPrepTDD }}

DL-DPCH-InformationAddListIEs-RL-ReconfPrepTDD NBAP-PROTOCOL-IES ::= {
    { ID id-DL-DPCH-InformationAddListIE-RL-ReconfPrepTDD  CRITICALITY reject      TYPE DL-DPCH-InformationAddItem-RL-ReconfPrepTDD  PRESENCE
mandatory }
}

```

```

DL-DPCH-InformationAddItem-RL-ReconfPrepTDD ::= SEQUENCE {
    repetitionPeriod          RepetitionPeriod,
    repetitionLength          RepetitionLength,
    tdd-DPCHOffset            TDD-DPCHOffset,
    dl-Timeslot-Information    DL-Timeslot-Information,
    iE-Extensions              ProtocolExtensionContainer { { DL-DPCH-InformationAddItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
    ...
}

DL-DPCH-InformationAddItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-LCR-InformationAddList-RL-ReconfPrepTDD ::= SEQUENCE {
    repetitionPeriod          RepetitionPeriod,
    repetitionLength          RepetitionLength,
    tdd-DPCHOffset            TDD-DPCHOffset,
    dl-Timeslot-InformationLCR DL-TimeslotLCR-Information,
    iE-Extensions              ProtocolExtensionContainer { { DL-DPCH-LCR-InformationAddItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
    ...
}

DL-DPCH-LCR-InformationAddItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF DL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD

DL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    cCTrCH-ID                  CCTrCH-ID,
    tFCS                        TFCS OPTIONAL,
    tFCI-Coding                 TFCI-Coding OPTIONAL,
    punctureLimit               PunctureLimit OPTIONAL,
    cCTrCH-TPCList              CCTrCH-TPCModifyList-RL-ReconfPrepTDD OPTIONAL,
    dl-DPCH-InformationAddList  DL-DPCH-InformationModify-AddList-RL-ReconfPrepTDD OPTIONAL,
    dl-DPCH-InformationModifyList DL-DPCH-InformationModify-ModifyList-RL-ReconfPrepTDD OPTIONAL,
    dl-DPCH-InformationDeleteList DL-DPCH-InformationModify-DeleteList-RL-ReconfPrepTDD OPTIONAL,
    iE-Extensions              ProtocolExtensionContainer { { DL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
    ...
}

DL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-DL-DPCH-LCR-InformationModify-AddList-RL-ReconfPrepTDD CRITICALITY reject EXTENSION DL-DPCH-LCR-InformationModify-AddList-RL-ReconfPrepTDD PRESENCE optional } | -- Applicable to 1.28Mcps TDD only
    { ID id-TDD-TPC-DownlinkStepSize-InformationModify-RL-ReconfPrepTDD CRITICALITY reject EXTENSION TDD-TPC-DownlinkStepSize PRESENCE optional },
    ...
}

CCTrCH-TPCModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF CCTrCH-TPCModifyItem-RL-ReconfPrepTDD

CCTrCH-TPCModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    cCTrCH-ID                  CCTrCH-ID,

```

```

    iE-Extensions          ProtocolExtensionContainer { { CCTrCH-TPCModifyItem-RL-ReconfPrepTDD-ExtIEs } }    OPTIONAL,
    ...
}

CCTrCH-TPCModifyItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-InformationModify-AddList-RL-ReconfPrepTDD ::= ProtocolIE-Single-Container {{ DL-DPCH-InformationModify-AddListIEs-RL-ReconfPrepTDD }}
-- Applicable to 3.84Mcps TDD only

DL-DPCH-InformationModify-AddListIEs-RL-ReconfPrepTDD NBAP-PROTOCOL-IES ::= {
    { ID id-DL-DPCH-InformationModify-AddListIE-RL-ReconfPrepTDD    CRITICALITY reject          TYPE DL-DPCH-InformationModify-AddItem-RL-ReconfPrepTDD
      PRESENCE mandatory }
}

DL-DPCH-InformationModify-AddItem-RL-ReconfPrepTDD ::= SEQUENCE {
    repetitionPeriod          RepetitionPeriod,
    repetitionLength          RepetitionLength,
    tdd-DPCHOffset            TDD-DPCHOffset,
    dL-Timeslot-Information    DL-Timeslot-Information,
    iE-Extensions             ProtocolExtensionContainer { { DL-DPCH-InformationModify-AddItem-RL-ReconfPrepTDD-ExtIEs } }
    OPTIONAL,
    ...
}

DL-DPCH-InformationModify-AddItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-LCR-InformationModify-AddList-RL-ReconfPrepTDD ::= SEQUENCE {
    repetitionPeriod          RepetitionPeriod,
    repetitionLength          RepetitionLength,
    tdd-DPCHOffset            TDD-DPCHOffset,
    dL-Timeslot-InformationLCR DL-TimeslotLCR-Information,
    iE-Extensions             ProtocolExtensionContainer { { DL-DPCH-LCR-InformationModify-AddItem-RL-ReconfPrepTDD-ExtIEs } }
    OPTIONAL,
    ...
}

DL-DPCH-LCR-InformationModify-AddItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-InformationModify-ModifyList-RL-ReconfPrepTDD ::= ProtocolIE-Single-Container {{ DL-DPCH-InformationModify-ModifyListIEs-RL-ReconfPrepTDD }}

DL-DPCH-InformationModify-ModifyListIEs-RL-ReconfPrepTDD NBAP-PROTOCOL-IES ::= {
    { ID id-DL-DPCH-InformationModify-ModifyListIE-RL-ReconfPrepTDD    CRITICALITY reject          TYPE DL-DPCH-InformationModify-ModifyItem-RL-
ReconfPrepTDD          PRESENCE mandatory }
}

DL-DPCH-InformationModify-ModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    repetitionPeriod          RepetitionPeriod          OPTIONAL,

```

```

    repetitionLength                RepetitionLength                OPTIONAL,
    tdd-DPCHOffset                  TDD-DPCHOffset            OPTIONAL,
    dL-Timeslot-InformationAddModify-ModifyList-RL-ReconfPrepTDD  DL-Timeslot-InformationModify-ModifyList-RL-ReconfPrepTDD  OPTIONAL,
    iE-Extensions                    ProtocolExtensionContainer { { DL-DPCH-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}

DL-DPCH-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-DL-Timeslot-LCR-InformationModify-ModifyList-RL-ReconfPrepTDD  CRITICALITY reject          EXTENSION          DL-Timeslot-
LCR-InformationModify-ModifyList-RL-ReconfPrepTDD          PRESENCE optional },
    ...
}

DL-Timeslot-InformationModify-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfDLTSs)) OF DL-Timeslot-InformationModify-ModifyItem-RL-
ReconfPrepTDD

DL-Timeslot-InformationModify-ModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    timeSlot                        TimeSlot,
    midambleShiftAndBurstType       MidambleShiftAndBurstType          OPTIONAL,
    tFCI-Presence                   TFCI-Presence                      OPTIONAL,
    dL-Code-InformationModify-ModifyList-RL-ReconfPrepTDD  DL-Code-InformationModify-ModifyList-RL-ReconfPrepTDD  OPTIONAL,
    iE-Extensions                    ProtocolExtensionContainer { { DL-Timeslot-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}

DL-Timeslot-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-Code-InformationModify-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (0..maxNrOfDPCHs)) OF DL-Code-InformationModify-ModifyItem-RL-
ReconfPrepTDD

DL-Code-InformationModify-ModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    dPCH-ID                         DPCH-ID,
    tdd-ChannelisationCode           TDD-ChannelisationCode            OPTIONAL,
    iE-Extensions                    ProtocolExtensionContainer { { DL-Code-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}

DL-Code-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-Timeslot-LCR-InformationModify-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfDLTSLCRs)) OF DL-Timeslot-LCR-InformationModify-
ModifyItem-RL-ReconfPrepTDD

DL-Timeslot-LCR-InformationModify-ModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    timeSlotLCR                     TimeSlotLCR,
    midambleShiftLCR                 MidambleShiftLCR                  OPTIONAL,
    tFCI-Presence                    TFCI-Presence                     OPTIONAL,
    dL-Code-LCR-InformationModify-ModifyList-RL-ReconfPrepTDD  DL-Code-LCR-InformationModify-ModifyList-RL-ReconfPrepTDD
    OPTIONAL,

```

```

    iE-Extensions
      OPTIONAL,
    ...
  }
DL-Timeslot-LCR-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}
DL-Code-LCR-InformationModify-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHLCRs)) OF DL-Code-LCR-InformationModify-ModifyItem-RL-
ReconfPrepTDD
DL-Code-LCR-InformationModify-ModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
  dPCH-ID
    DPCH-ID,
  tdd-ChannelisationCodeLCR
    TDD-ChannelisationCodeLCR
      OPTIONAL,
  iE-Extensions
    ProtocolExtensionContainer { { DL-Code-LCR-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
  ...
}
DL-Code-LCR-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  { ID id-DL-DPCH-TimeSlotFormat-LCR-ModifyItem-RL-ReconfPrepTDD
    CRITICALITY reject
    EXTENSION TDD-DL-DPCH-TimeSlotFormat-LCR
    PRESENCE optional},
  ...
}
DL-DPCH-InformationModify-DeleteList-RL-ReconfPrepTDD ::= ProtocolIE-Single-Container { { DL-DPCH-InformationModify-DeleteListIEs-RL-ReconfPrepTDD
}}
DL-DPCH-InformationModify-DeleteListIEs-RL-ReconfPrepTDD NBAP-PROTOCOL-IES ::= {
  { ID id-DL-DPCH-InformationModify-DeleteListIE-RL-ReconfPrepTDD
    CRITICALITY reject
    TYPE DL-DPCH-InformationModify-DeleteListIE-RL-
    ReconfPrepTDD
    PRESENCE mandatory }
}
DL-DPCH-InformationModify-DeleteListIE-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF DL-DPCH-InformationModify-DeleteItem-RL-
ReconfPrepTDD
DL-DPCH-InformationModify-DeleteItem-RL-ReconfPrepTDD ::= SEQUENCE {
  dPCH-ID
    DPCH-ID,
  iE-Extensions
    ProtocolExtensionContainer { { DL-DPCH-InformationModify-DeleteItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
  ...
}
DL-DPCH-InformationModify-DeleteItem-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}
DL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF DL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD
DL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD ::= SEQUENCE {
  cCtRch-ID
    CCTrCH-ID,
  iE-Extensions
    ProtocolExtensionContainer { { DL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
}

```

```

}
...
}
DL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
...
}
DCH-DeleteList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-DeleteItem-RL-ReconfPrepTDD
DCH-DeleteItem-RL-ReconfPrepTDD ::= SEQUENCE {
  dCH-ID                DCH-ID,
  iE-Extensions         ProtocolExtensionContainer { { DCH-DeleteItem-RL-ReconfPrepTDD-ExtIEs } }    OPTIONAL,
  ...
}
DCH-DeleteItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
...
}
DSCH-Information-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfDSCHs)) OF DSCH-Information-ModifyItem-RL-ReconfPrepTDD
DSCH-Information-ModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
  dSCH-ID                DSCH-ID,
  cCTrCH-ID              CCTrCH-ID                OPTIONAL,
  transportFormatSet     TransportFormatSet        OPTIONAL,
  allocationRetentionPriority AllocationRetentionPriority OPTIONAL,
  frameHandlingPriority  FrameHandlingPriority   OPTIONAL,
  toAWS                  ToAWS                  OPTIONAL,
  toAWE                  ToAWE                  OPTIONAL,
  transportBearerRequestIndicator TransportBearerRequestIndicator,
  iE-Extensions         ProtocolExtensionContainer { { DSCH-Information-ModifyItem-RL-ReconfPrepTDD-ExtIEs } }    OPTIONAL,
  ...
}
DSCH-Information-ModifyItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
...
}
DSCH-Information-DeleteList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfDSCHs)) OF DSCH-Information-DeleteItem-RL-ReconfPrepTDD
DSCH-Information-DeleteItem-RL-ReconfPrepTDD ::= SEQUENCE {
  dSCH-ID                DSCH-ID,
  iE-Extensions         ProtocolExtensionContainer { { DSCH-Information-DeleteItem-RL-ReconfPrepTDD-ExtIEs } }    OPTIONAL,
  ...
}
DSCH-Information-DeleteItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
...
}
USCH-Information-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfUSCHs)) OF USCH-Information-ModifyItem-RL-ReconfPrepTDD
USCH-Information-ModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
  uSCH-ID                USCH-ID,

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```

transportFormatSet          TransportFormatSet          OPTIONAL,
allocationRetentionPriority AllocationRetentionPriority OPTIONAL,
cCTrCH-ID                   CCTrCH-ID                   OPTIONAL,
transportBearerRequestIndicator TransportBearerRequestIndicator,
iE-Extensions               ProtocolExtensionContainer { { USCH-Information-ModifyItem-RL-ReconfPrepTDD-ExtIEs } } OPTIONAL,
...
}

USCH-Information-ModifyItem-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

USCH-Information-DeleteList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfUSCHs)) OF USCH-Information-DeleteItem-RL-ReconfPrepTDD

USCH-Information-DeleteItem-RL-ReconfPrepTDD ::= SEQUENCE {
  uSCH-ID                   USCH-ID,
  iE-Extensions             ProtocolExtensionContainer { { USCH-Information-DeleteItem-RL-ReconfPrepTDD-ExtIEs } } OPTIONAL,
  ...
}

USCH-Information-DeleteItem-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

RL-Information-RL-ReconfPrepTDD ::= SEQUENCE {
  rL-ID                     RL-ID,
  maxDL-Power               DL-Power          OPTIONAL,
  minDL-Power               DL-Power          OPTIONAL,
  iE-Extensions             ProtocolExtensionContainer { { RL-Information-RL-ReconfPrepTDD-ExtIEs } } OPTIONAL,
  ...
}

RL-Information-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  { ID id-InitDL-Power      CRITICALITY ignore      EXTENSION DL-Power      PRESENCE optional      }|
  { ID id-UL-Synchronisation-Parameters-LCR CRITICALITY ignore      EXTENSION UL-Synchronisation-Parameters-LCR PRESENCE optional }, -- Mandatory for 1.28Mcps TDD, Not Applicable to 3.84Mcps TDD
  ...
}

-- *****
--
-- RADIO LINK RECONFIGURATION READY
--
-- *****

RadioLinkReconfigurationReady ::= SEQUENCE {
  protocolIEs               ProtocolIE-Container  {{RadioLinkReconfigurationReady-IEs}},
  protocolExtensions        ProtocolExtensionContainer {{RadioLinkReconfigurationReady-Extensions}}
  ...
}

RadioLinkReconfigurationReady-IEs NBAP-PROTOCOL-IES ::= {

```



```

    { ID id-CRNC-CommunicationContextID
      PRESENCE mandatory } |
    { ID id-RL-InformationResponseList-RL-ReconfReady
      PRESENCE optional } |
    { ID id-CriticalityDiagnostics
      PRESENCE optional },
    ...
  }

RadioLinkReconfigurationReady-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

RL-InformationResponseList-RL-ReconfReady ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container {{ RL-InformationResponseItemIE-RL-ReconfReady}}

RL-InformationResponseItemIE-RL-ReconfReady NBAP-PROTOCOL-IES ::= {
  { ID id-RL-InformationResponseItem-RL-ReconfReady
    PRESENCE mandatory }
  CRITICALITY ignore
  TYPE RL-InformationResponseItem-RL-ReconfReady
}

RL-InformationResponseItem-RL-ReconfReady ::= SEQUENCE {
  rL-ID RL-ID,
  dCH-InformationResponseList-RL-ReconfReady DCH-InformationResponseList-RL-ReconfReady OPTIONAL,
  dSCH-InformationResponseList-RL-ReconfReady DSCH-InformationResponseList-RL-ReconfReady OPTIONAL,
  uSCH-InformationResponseList-RL-ReconfReady USCH-InformationResponseList-RL-ReconfReady OPTIONAL, -- TDD only
  tFCI2-BearerInformationResponse TFCI2-BearerInformationResponse OPTIONAL,
  -- FDD only. There shall be only one TFCI2 bearer per Node B Communication Context.
  iE-Extensions ProtocolExtensionContainer { { RL-InformationResponseItem-RL-ReconfReady-ExtIEs } }
  OPTIONAL,
  ...
}

RL-InformationResponseItem-RL-ReconfReady-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

DCH-InformationResponseList-RL-ReconfReady ::= ProtocolIE-Single-Container {{ DCH-InformationResponseListIEs-RL-ReconfReady }}

DCH-InformationResponseListIEs-RL-ReconfReady NBAP-PROTOCOL-IES ::= {
  { ID id-DCH-InformationResponse
    CRITICALITY ignore
    TYPE DCH-InformationResponse
    PRESENCE mandatory }
}

DSCH-InformationResponseList-RL-ReconfReady ::= ProtocolIE-Single-Container {{ DSCH-InformationResponseListIEs-RL-ReconfReady }}

DSCH-InformationResponseListIEs-RL-ReconfReady NBAP-PROTOCOL-IES ::= {
  { ID id-DSCH-InformationResponse
    CRITICALITY ignore
    TYPE DSCH-InformationResponse
    PRESENCE mandatory }
}

USCH-InformationResponseList-RL-ReconfReady ::= ProtocolIE-Single-Container {{ USCH-InformationResponseListIEs-RL-ReconfReady }}

USCH-InformationResponseListIEs-RL-ReconfReady NBAP-PROTOCOL-IES ::= {
  { ID id-USCH-InformationResponse
    CRITICALITY ignore
    TYPE USCH-InformationResponse
    PRESENCE mandatory }
}

```

```

-- *****
--
-- RADIO LINK RECONFIGURATION FAILURE
--
-- *****

RadioLinkReconfigurationFailure ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{RadioLinkReconfigurationFailure-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{RadioLinkReconfigurationFailure-Extensions}}    OPTIONAL,
    ...
}

RadioLinkReconfigurationFailure-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-CRNC-CommunicationContextID          CRITICALITY   ignore      TYPE          CRNC-CommunicationContextID
      PRESENCE   mandatory } |
    { ID      id-CauseLevel-RL-ReconfFailure          CRITICALITY   ignore      TYPE          CauseLevel-RL-ReconfFailure          PRESENCE mandatory } |
    { ID      id-CriticalityDiagnostics                CRITICALITY   ignore      TYPE          CriticalityDiagnostics
      PRESENCE   optional },
    ...
}

RadioLinkReconfigurationFailure-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CauseLevel-RL-ReconfFailure ::= CHOICE {
    generalCause          GeneralCauseList-RL-ReconfFailure,
    rLSpecificCause       RLSpecificCauseList-RL-ReconfFailure,
    ...
}

GeneralCauseList-RL-ReconfFailure ::= SEQUENCE {
    cause                  Cause,
    iE-Extensions          ProtocolExtensionContainer { { GeneralCauseItem-RL-ReconfFailure-ExtIEs} }    OPTIONAL,
    ...
}

GeneralCauseItem-RL-ReconfFailure-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RLSpecificCauseList-RL-ReconfFailure ::= SEQUENCE {
    rL-ReconfigurationFailureList-RL-ReconfFailure          RL-ReconfigurationFailureList-RL-ReconfFailure          OPTIONAL,
    iE-Extensions          ProtocolExtensionContainer { { RLSpecificCauseItem-RL-ReconfFailure-ExtIEs} }
    OPTIONAL,
    ...
}

RLSpecificCauseItem-RL-ReconfFailure-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

RL-ReconfigurationFailureList-RL-ReconfFailure ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container {{ RL-
ReconfigurationFailureItemIE-RL-ReconfFailure}}

RL-ReconfigurationFailureItemIE-RL-ReconfFailure NBAP-PROTOCOL-IES ::= {
  { ID      id-RL-ReconfigurationFailureItem-RL-ReconfFailure      CRITICALITY      ignore      TYPE      RL-
ReconfigurationFailureItem-RL-ReconfFailure      PRESENCE      mandatory}
}

RL-ReconfigurationFailureItem-RL-ReconfFailure ::= SEQUENCE {
  rL-ID      RL-ID,
  cause      Cause,
  iE-Extensions      ProtocolExtensionContainer { { RL-ReconfigurationFailureItem-RL-ReconfFailure-ExtIEs} }
  OPTIONAL,
  ...
}

RL-ReconfigurationFailureItem-RL-ReconfFailure-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- RADIO LINK RECONFIGURATION COMMIT
--
-- *****

RadioLinkReconfigurationCommit ::= SEQUENCE {
  protocolIEs      ProtocolIE-Container      {{RadioLinkReconfigurationCommit-IEs}},
  protocolExtensions      ProtocolExtensionContainer      {{RadioLinkReconfigurationCommit-Extensions}}      OPTIONAL,
  ...
}

RadioLinkReconfigurationCommit-IEs NBAP-PROTOCOL-IES ::= {
  { ID      id-NodeB-CommunicationContextID      CRITICALITY      ignore      TYPE      NodeB-CommunicationContextID      PRESENCE      mandatory } |
  { ID      id-CFN      CRITICALITY      ignore      TYPE      CFN      PRESENCE      mandatory } |
  { ID      id-Active-Pattern-Sequence-Information      CRITICALITY      ignore      TYPE      Active-Pattern-Sequence-Information      PRESENCE      optional },
  ...
}

RadioLinkReconfigurationCommit-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- RADIO LINK RECONFIGURATION CANCEL
--
-- *****

RadioLinkReconfigurationCancel ::= SEQUENCE {
  protocolIEs      ProtocolIE-Container      {{RadioLinkReconfigurationCancel-IEs}},
  protocolExtensions      ProtocolExtensionContainer      {{RadioLinkReconfigurationCancel-Extensions}}      OPTIONAL,
  ...
}

```

```

}

RadioLinkReconfigurationCancel-IEs NBAP-PROTOCOL-IES ::= {
  { ID      id-NodeB-CommunicationContextID      CRITICALITY  ignore      TYPE      NodeB-CommunicationContextID      PRESENCE mandatory  },
  ...
}

RadioLinkReconfigurationCancel-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- RADIO LINK RECONFIGURATION REQUEST FDD
--
-- *****

RadioLinkReconfigurationRequestFDD ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container    {{RadioLinkReconfigurationRequestFDD-IEs}},
  protocolExtensions  ProtocolExtensionContainer {{RadioLinkReconfigurationRequestFDD-Extensions}}      OPTIONAL,
  ...
}

RadioLinkReconfigurationRequestFDD-IEs NBAP-PROTOCOL-IES ::= {
  { ID      id-NodeB-CommunicationContextID      CRITICALITY  reject      TYPE      NodeB-CommunicationContextID      PRESENCE
  mandatory  } |
  { ID      id-UL-DPCH-Information-RL-ReconfRqstFDD      CRITICALITY  reject      TYPE      UL-DPCH-Information-RL-ReconfRqstFDD      PRESENCE
  optional  } |
  { ID      id-DL-DPCH-Information-RL-ReconfRqstFDD      CRITICALITY  reject      TYPE      DL-DPCH-Information-RL-ReconfRqstFDD      PRESENCE
  optional  } |
  { ID      id-FDD-DCHs-to-Modify          CRITICALITY  reject      TYPE      FDD-DCHs-to-Modify          PRESENCE optional } |
  { ID      id-DCHs-to-Add-FDD            CRITICALITY  reject      TYPE      DCH-FDD-Information          PRESENCE optional }
  |
  { ID      id-DCH-DeleteList-RL-ReconfRqstFDD      CRITICALITY  reject      TYPE      DCH-DeleteList-RL-ReconfRqstFDD      PRESENCE
  optional  } |
  { ID      id-RL-InformationList-RL-ReconfRqstFDD      CRITICALITY  reject      TYPE      RL-InformationList-RL-ReconfRqstFDD      PRESENCE
  optional  } |
  { ID      id-Transmission-Gap-Pattern-Sequence-Information      CRITICALITY  reject      TYPE      Transmission-Gap-Pattern-Sequence-Information
  PRESENCE optional },
  ...
}

RadioLinkReconfigurationRequestFDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

UL-DPCH-Information-RL-ReconfRqstFDD ::= SEQUENCE {
  ul-TFCS          TFCS          OPTIONAL,
  iE-Extensions    ProtocolExtensionContainer { { UL-DPCH-Information-RL-ReconfRqstFDD-ExtIEs } }      OPTIONAL,
  ...
}

UL-DPCH-Information-RL-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {

```

```

}
...
DL-DPCH-Information-RL-ReconfRqstFDD ::= SEQUENCE {
    dl-TFCS                TFCS                OPTIONAL,
    tFCI-SignallingMode    TFCI-SignallingMode    OPTIONAL,
    limitedPowerIncrease    LimitedPowerIncrease    OPTIONAL,
    iE-Extensions          ProtocolExtensionContainer { { DL-DPCH-Information-RL-ReconfRqstFDD-ExtIEs } }    OPTIONAL,
    ...
}

DL-DPCH-Information-RL-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-DeleteList-RL-ReconfRqstFDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-DeleteItem-RL-ReconfRqstFDD

DCH-DeleteItem-RL-ReconfRqstFDD ::= SEQUENCE {
    dCH-ID                DCH-ID,
    iE-Extensions          ProtocolExtensionContainer { { DCH-DeleteItem-RL-ReconfRqstFDD-ExtIEs } }    OPTIONAL,
    ...
}

DCH-DeleteItem-RL-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-InformationList-RL-ReconfRqstFDD ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container {{ RL-InformationItemIE-RL-ReconfRqstFDD}}

RL-InformationItemIE-RL-ReconfRqstFDD NBAP-PROTOCOL-IES ::= {
    { ID      id-RL-InformationItem-RL-ReconfRqstFDD      CRITICALITY    reject          TYPE          RL-InformationItem-RL-
ReconfRqstFDD      PRESENCE      mandatory}
}

RL-InformationItem-RL-ReconfRqstFDD ::= SEQUENCE {
    rL-ID                RL-ID,
    maxDL-Power          DL-Power                OPTIONAL,
    minDL-Power          DL-Power                OPTIONAL,
    dl-CodeInformation    FDD-DL-CodeInformation    OPTIONAL,
    -- The IE shall be present if the Transmission Gap Pattern Sequence Information IE is included and the indicated Downlink Compressed Mode method
for at least one of the included Transmission Gap Pattern Sequence is set to "SF/2".
    iE-Extensions          ProtocolExtensionContainer { { RL-InformationItem-RL-ReconfRqstFDD-ExtIEs } }    OPTIONAL,
    ...
}

RL-InformationItem-RL-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK RECONFIGURATION REQUEST TDD
--

```

-- \*\*\*\*\*

```

RadioLinkReconfigurationRequestTDD ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container  {{RadioLinkReconfigurationRequestTDD-IEs}},
  protocolExtensions  ProtocolExtensionContainer {{RadioLinkReconfigurationRequestTDD-Extensions}}
  ...
}

RadioLinkReconfigurationRequestTDD-IEs NBAP-PROTOCOL-IES ::= {
  { ID id-NodeB-CommunicationContextID          CRITICALITY reject          TYPE NodeB-
  CommunicationContextID          PRESENCE mandatory } |
  { ID id-UL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD          CRITICALITY notify          TYPE UL-CCTrCH-
  InformationModifyList-RL-ReconfRqstTDD          PRESENCE optional } |
  { ID id-UL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD          CRITICALITY notify          TYPE UL-CCTrCH-
  InformationDeleteList-RL-ReconfRqstTDD          PRESENCE optional } |
  { ID id-DL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD          CRITICALITY notify          TYPE DL-CCTrCH-
  InformationModifyList-RL-ReconfRqstTDD          PRESENCE optional } |
  { ID id-DL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD          CRITICALITY notify          TYPE DL-CCTrCH-
  InformationDeleteList-RL-ReconfRqstTDD          PRESENCE optional } |
  { ID id-TDD-DCHs-to-Modify          CRITICALITY reject          TYPE TDD-DCHs-to-Modify          PRESENCE optional }
  |
  { ID id-DCHs-to-Add-TDD          CRITICALITY reject          TYPE          DCH-TDD-Information
  PRESENCE optional } |
  { ID id-DCH-DeleteList-RL-ReconfRqstTDD          CRITICALITY reject          TYPE DCH-DeleteList-RL-
  ReconfRqstTDD          PRESENCE optional } |
  { ID id-RL-Information-RL-ReconfRqstTDD          CRITICALITY reject          TYPE          RL-Information-RL-ReconfRqstTDD
  PRESENCE optional },
  ...
}

RadioLinkReconfigurationRequestTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

UL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container {{ UL-CCTrCH-
InformationModifyItemIE-RL-ReconfRqstTDD}}

UL-CCTrCH-InformationModifyItemIE-RL-ReconfRqstTDD NBAP-PROTOCOL-IES ::= {
  { ID id-UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD          CRITICALITY notify          TYPE UL-CCTrCH-
  InformationModifyItem-RL-ReconfRqstTDD          PRESENCE mandatory }
}

UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD ::= SEQUENCE {
  cCTrCH-ID          CCTrCH-ID,
  tFCS          TFCS          OPTIONAL,
  punctureLimit          PunctureLimit          OPTIONAL,
  iE-Extensions          ProtocolExtensionContainer { { UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD-ExtIEs } }
  OPTIONAL,
  ...
}

UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  { ID id-UL-SIRTarget          CRITICALITY reject          EXTENSION          UL-SIR          PRESENCE          optional },
  -- Applicable to 1.28Mcps TDD only
}

```

```

}
...
}
UL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container {{ UL-CCTrCH-
InformationDeleteItemIE-RL-ReconfRqstTDD}}

UL-CCTrCH-InformationDeleteItemIE-RL-ReconfRqstTDD NBAP-PROTOCOL-IES ::= {
  { ID id-UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD CRITICALITY notify TYPE UL-CCTrCH-
InformationDeleteItem-RL-ReconfRqstTDD PRESENCE mandatory}
}

UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD ::= SEQUENCE {
  cCTrCH-ID CCTrCH-ID,
  iE-Extensions ProtocolExtensionContainer { { UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD-ExtIEs} }
  OPTIONAL,
  ...
}

UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

DL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container {{ DL-CCTrCH-
InformationModifyItemIE-RL-ReconfRqstTDD}}

DL-CCTrCH-InformationModifyItemIE-RL-ReconfRqstTDD NBAP-PROTOCOL-IES ::= {
  { ID id-DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD CRITICALITY notify TYPE DL-CCTrCH-
InformationModifyItem-RL-ReconfRqstTDD PRESENCE mandatory}
}

DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD ::= SEQUENCE {
  cCTrCH-ID CCTrCH-ID,
  tFCS TFCS OPTIONAL,
  punctureLimit PunctureLimit OPTIONAL,
  iE-Extensions ProtocolExtensionContainer { { DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD-ExtIEs} }
  OPTIONAL,
  ...
}

DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

DL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container {{ DL-CCTrCH-
InformationDeleteItemIE-RL-ReconfRqstTDD}}

DL-CCTrCH-InformationDeleteItemIE-RL-ReconfRqstTDD NBAP-PROTOCOL-IES ::= {
  { ID id-DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD CRITICALITY notify TYPE DL-CCTrCH-
InformationDeleteItem-RL-ReconfRqstTDD PRESENCE mandatory}
}

DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD ::= SEQUENCE {
  cCTrCH-ID CCTrCH-ID,

```

```

    iE-Extensions          ProtocolExtensionContainer { { DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD-ExtIEs} }
    OPTIONAL,
    ...
}

DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-DeleteList-RL-ReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-DeleteItem-RL-ReconfRqstTDD

DCH-DeleteItem-RL-ReconfRqstTDD ::= SEQUENCE {
    dCH-ID                DCH-ID,
    iE-Extensions        ProtocolExtensionContainer { { DCH-DeleteItem-RL-ReconfRqstTDD-ExtIEs} }      OPTIONAL,
    ...
}

DCH-DeleteItem-RL-ReconfRqstTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-Information-RL-ReconfRqstTDD ::= SEQUENCE {
    rL-ID                RL-ID,
    maxDL-Power          DL-Power          OPTIONAL,
    minDL-Power          DL-Power          OPTIONAL,
    iE-Extensions        ProtocolExtensionContainer { { RL-InformationItem-RL-ReconfRqstTDD-ExtIEs} }      OPTIONAL,
    ...
}

RL-InformationItem-RL-ReconfRqstTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-UL-Synchronisation-Parameters-LCR          CRITICALITY ignore          EXTENSION  UL-Synchronisation-Parameters-LCR          PRESENCE
    optional      }, -- Mandatory for 1.28Mcps TDD, Not Applicable to 3.84Mcps TDD
    ...
}

-- *****
--
-- RADIO LINK RECONFIGURATION RESPONSE
--
-- *****

RadioLinkReconfigurationResponse ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container  {{RadioLinkReconfigurationResponse-IEs}},
    protocolExtensions   ProtocolExtensionContainer  {{RadioLinkReconfigurationResponse-Extensions}}      OPTIONAL,
    ...
}

RadioLinkReconfigurationResponse-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-CRNC-CommunicationContextID          CRITICALITY ignore          TYPE          CRNC-CommunicationContextID          PRESENCE
    mandatory  } |
    { ID id-RL-InformationResponseList-RL-ReconfRsp          CRITICALITY ignore          TYPE          RL-InformationResponseList-RL-ReconfRsp          PRESENCE
    optional   } |
    { ID id-CriticalityDiagnostics          CRITICALITY ignore          TYPE          CriticalityDiagnostics          PRESENCE
    optional   },

```



```

}
...
}
RadioLinkReconfigurationResponse-Extensions NBAP-PROTOCOL-EXTENSION ::= {
...
}
RL-InformationResponseList-RL-ReconfRsp ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container {{RL-InformationResponseItemIE-RL-
ReconfRsp}}
RL-InformationResponseItemIE-RL-ReconfRsp NBAP-PROTOCOL-IES ::= {
{ ID id-RL-InformationResponseItem-RL-ReconfRsp CRITICALITY ignore TYPE RL-InformationResponseItem-RL-
ReconfRsp PRESENCE mandatory}
}
RL-InformationResponseItem-RL-ReconfRsp ::= SEQUENCE {
rL-ID RL-ID,
dCH-InformationResponseList-RL-ReconfRsp DCH-InformationResponseList-RL-ReconfRsp OPTIONAL,
iE-Extensions ProtocolExtensionContainer { { RL-InformationResponseItem-RL-ReconfRsp-ExtIEs } } OPTIONAL,
...
}
RL-InformationResponseItem-RL-ReconfRsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}
DCH-InformationResponseList-RL-ReconfRsp ::= ProtocolIE-Single-Container { { DCH-InformationResponseListIEs-RL-ReconfRsp } }
DCH-InformationResponseListIEs-RL-ReconfRsp NBAP-PROTOCOL-IES ::= {
{ ID id-DCH-InformationResponse CRITICALITY ignore TYPE DCH-InformationResponse PRESENCE mandatory }
}
-- *****
--
-- RADIO LINK DELETION REQUEST
--
-- *****
RadioLinkDeletionRequest ::= SEQUENCE {
protocolIEs ProtocolIE-Container {{RadioLinkDeletionRequest-IEs}},
protocolExtensions ProtocolExtensionContainer {{RadioLinkDeletionRequest-Extensions}} OPTIONAL,
...
}
RadioLinkDeletionRequest-IEs NBAP-PROTOCOL-IES ::= {
{ ID id-NodeB-CommunicationContextID CRITICALITY reject TYPE NodeB-CommunicationContextID
PRESENCE mandatory } |
{ ID id-CRNC-CommunicationContextID CRITICALITY reject TYPE CRNC-CommunicationContextID
PRESENCE mandatory } |
{ ID id-RL-informationList-RL-DeletionRqst CRITICALITY notify TYPE RL-informationList-RL-
DeletionRqst PRESENCE mandatory } ,
...
}

```

```

}

RadioLinkDeletionRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

RL-informationList-RL-DeletionRqst ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container {{RL-informationItemIE-RL-DeletionRqst}}

RL-informationItemIE-RL-DeletionRqst NBAP-PROTOCOL-IES ::= {
  { ID      id-RL-informationItem-RL-DeletionRqst      CRITICALITY  notify          TYPE          RL-informationItem-RL-DeletionRqst
  PRESENCE  mandatory}
}

RL-informationItem-RL-DeletionRqst ::= SEQUENCE {
  rL-ID          RL-ID,
  iE-Extensions ProtocolExtensionContainer { { RL-informationItem-RL-DeletionRqst-ExtIEs} } OPTIONAL,
  ...
}

RL-informationItem-RL-DeletionRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- RADIO LINK DELETION RESPONSE
--
-- *****

RadioLinkDeletionResponse ::= SEQUENCE {
  protocolIEs      ProtocolIE-Container  {{RadioLinkDeletionResponse-IEs}},
  protocolExtensions ProtocolExtensionContainer {{RadioLinkDeletionResponse-Extensions}} OPTIONAL,
  ...
}

RadioLinkDeletionResponse-IEs NBAP-PROTOCOL-IES ::= {
  { ID      id-CRNC-CommunicationContextID      CRITICALITY  ignore          TYPE          CRNC-CommunicationContextID      PRESENCE
  mandatory }|
  { ID      id-CriticalityDiagnostics           CRITICALITY  ignore          TYPE          CriticalityDiagnostics             PRESENCE optional },
  ...
}

RadioLinkDeletionResponse-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- DL POWER CONTROL REQUEST FDD
--
-- *****

DL-PowerControlRequest ::= SEQUENCE {

```

```

    protocolIEs          ProtocolIE-Container    {{DL-PowerControlRequest-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{DL-PowerControlRequest-Extensions}}
    ...
}

DL-PowerControlRequest-IEs NBAP-PROTOCOL-IES ::= {
  { ID id-NodeB-CommunicationContextID          CRITICALITY ignore          TYPE          NodeB-CommunicationContextID          PRESENCE mandatory }
  |
  { ID id-PowerAdjustmentType                  CRITICALITY ignore          TYPE          PowerAdjustmentType                  PRESENCE mandatory } |
  { ID id-DLReferencePower                    CRITICALITY ignore          TYPE          DL-Power                              PRESENCE conditional } |
  -- This IE shall be present if the Adjustment Type IE is set to 'Common'
  { ID id-InnerLoopDLPCStatus                 CRITICALITY ignore          TYPE          InnerLoopDLPCStatus                  PRESENCE optional } |
  { ID id-DLReferencePowerList-DL-PC-Rqst     CRITICALITY ignore          TYPE          DL-ReferencePowerInformationList-DL-PC-Rqst PRESENCE conditional } |
  -- This IE shall be present if the Adjustment Type IE is set to 'Individual'
  { ID id-MaxAdjustmentStep                   CRITICALITY ignore          TYPE          MaxAdjustmentStep                    PRESENCE conditional } |
  -- This IE shall be present if the Adjustment Type IE is set to 'Common' or 'Individual'
  { ID id-AdjustmentPeriod                    CRITICALITY ignore          TYPE          AdjustmentPeriod                     PRESENCE conditional } |
  -- This IE shall be present if the Adjustment Type IE is set to 'Common' or 'Individual'
  { ID id-AdjustmentRatio                     CRITICALITY ignore          TYPE          ScaledAdjustmentRatio                PRESENCE conditional },
  ...
}

DL-PowerControlRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

DL-ReferencePowerInformationList-DL-PC-Rqst ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container {{DL-ReferencePowerInformationItemIE-DL-PC-Rqst }}

DL-ReferencePowerInformationItemIE-DL-PC-Rqst NBAP-PROTOCOL-IES ::= {
  { ID id-DL-ReferencePowerInformationItem-DL-PC-Rqst          CRITICALITY          ignore          TYPE          DL-ReferencePowerInformationItem-DL-PC-Rqst
  PRESENCE          mandatory
  }
}

DL-ReferencePowerInformationItem-DL-PC-Rqst ::= SEQUENCE {
  rL-ID              RL-ID,
  dl-ReferencePower  DL-Power,
  iE-Extensions     ProtocolExtensionContainer { { DL-ReferencePowerInformationItem-DL-PC-Rqst-ExtIEs } }
  ...
}

DL-ReferencePowerInformationItem-DL-PC-Rqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- DL POWER TIMESLOT CONTROL REQUEST TDD
--
-- *****

DL-PowerTimeslotControlRequest ::= SEQUENCE {

```

```

    protocolIEs          ProtocolIE-Container    {{DL-PowerTimeslotControlRequest-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{DL-PowerTimeslotControlRequest-Extensions}}
    ...
}

DL-PowerTimeslotControlRequest-IEs NBAP-PROTOCOL-IES ::= {
  { ID id-NodeB-CommunicationContextID          CRITICALITY ignore          TYPE      NodeB-CommunicationContextID          PRESENCE mandatory
  } |
  { ID id-TimeslotISCPInfo                      CRITICALITY ignore          TYPE      DL-TimeslotISCPInfo          PRESENCE optional },
  -- Mandatory for 3.84Mcps TDD, Not Applicable to 1.28Mcps TDD
  ...
}

DL-PowerTimeslotControlRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  { ID id-TimeslotISCPInfoList-LCR-DL-PC-RqstTDD          CRITICALITY ignore          EXTENSION DL-TimeslotISCPInfoLCR          PRESENCE optional },
  -- Mandatory for 1.28Mcps TDD, Not Applicable to 3.84Mcps TDD
  ...
}

-- *****
--
-- DEDICATED MEASUREMENT INITIATION REQUEST
--
-- *****

DedicatedMeasurementInitiationRequest ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container    {{DedicatedMeasurementInitiationRequest-IEs}},
  protocolExtensions   ProtocolExtensionContainer {{DedicatedMeasurementInitiationRequest-Extensions}}
  ...
}

DedicatedMeasurementInitiationRequest-IEs NBAP-PROTOCOL-IES ::= {
  { ID id-NodeB-CommunicationContextID          CRITICALITY reject          TYPE      NodeB-CommunicationContextID          PRESENCE
  mandatory } |
  { ID id-MeasurementID                        CRITICALITY reject          TYPE      MeasurementID                        PRESENCE
  mandatory } |
  { ID id-DedicatedMeasurementObjectType-DM-Rqst          CRITICALITY reject          TYPE      DedicatedMeasurementObjectType-DM-Rqst          PRESENCE
  mandatory } |
  { ID id-DedicatedMeasurementType              CRITICALITY reject          TYPE      DedicatedMeasurementType              PRESENCE
  mandatory } |
  { ID id-MeasurementFilterCoefficient          CRITICALITY reject          TYPE      MeasurementFilterCoefficient          PRESENCE
  optional } |
  { ID id-ReportCharacteristics                  CRITICALITY reject          TYPE      ReportCharacteristics                  PRESENCE
  mandatory } |
  { ID id-CFNReportingIndicator                  CRITICALITY reject          TYPE      CFNReportingIndicator                  PRESENCE
  mandatory } |
  { ID id-CFN                                    CRITICALITY reject          TYPE      CFN                                    PRESENCE
  optional } ,
  ...
}

DedicatedMeasurementInitiationRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

```

```

}
DedicatedMeasurementObjectType-DM-Rqst ::= CHOICE {
    rL                RL-DM-Rqst,
    rLS               RL-Set-DM-Rqst,    -- for FDD only
    all-RL            AllRL-DM-Rqst,
    all-RLS           AllRL-Set-DM-Rqst,  -- for FDD only
    ...
}
RL-DM-Rqst ::= SEQUENCE {
    rL-InformationList      RL-InformationList-DM-Rqst,
    iE-Extensions          ProtocolExtensionContainer { { RLItem-DM-Rqst-ExtIEs } }    OPTIONAL,
    ...
}
RLItem-DM-Rqst-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
RL-InformationList-DM-Rqst ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container { { RL-InformationItemIE-DM-Rqst } }
RL-InformationItemIE-DM-Rqst NBAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationItem-DM-Rqst  CRITICALITY reject TYPE RL-InformationItem-DM-Rqst  PRESENCE mandatory }
}
RL-InformationItem-DM-Rqst ::= SEQUENCE {
    rL-ID                RL-ID,
    dPCH-ID              DPCH-ID          OPTIONAL,    -- for TDD only
    iE-Extensions        ProtocolExtensionContainer { { RL-InformationItem-DM-Rqst-ExtIEs } }    OPTIONAL,
    ...
}
RL-InformationItem-DM-Rqst-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-PUSCH-Info-DM-Rqst  CRITICALITY reject          EXTENSION  PUSCH-Info-DM-Rqst  PRESENCE optional},
    -- TDD only
    ...
}
PUSCH-Info-DM-Rqst ::= SEQUENCE (SIZE (1..maxNrOfPUSCHs)) OF PUSCH-ID
RL-Set-DM-Rqst ::= SEQUENCE {
    rL-Set-InformationList-DM-Rqst      RL-Set-InformationList-DM-Rqst,
    iE-Extensions                      ProtocolExtensionContainer { { RL-SetItem-DM-Rqst-ExtIEs } }    OPTIONAL,
    ...
}
RL-SetItem-DM-Rqst-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
RL-Set-InformationList-DM-Rqst ::= SEQUENCE (SIZE(1..maxNrOfRLSets)) OF RL-Set-InformationItem-DM-Rqst
RL-Set-InformationItem-DM-Rqst ::= SEQUENCE {

```

```

    rL-Set-ID                RL-Set-ID,
    iE-Extensions            ProtocolExtensionContainer { { RL-Set-InformationItem-DM-Rqst-ExtIEs } } OPTIONAL,
    ...
}

RL-Set-InformationItem-DM-Rqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

AllRL-DM-Rqst ::= NULL

AllRL-Set-DM-Rqst ::= NULL

-- *****
--
-- DEDICATED MEASUREMENT INITIATION RESPONSE
--
-- *****

DedicatedMeasurementInitiationResponse ::= SEQUENCE {
    protocolIEs                ProtocolIE-Container    {{DedicatedMeasurementInitiationResponse-IEs}},
    protocolExtensions        ProtocolExtensionContainer {{DedicatedMeasurementInitiationResponse-Extensions}}    OPTIONAL,
    ...
}

DedicatedMeasurementInitiationResponse-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-CRNC-CommunicationContextID          CRITICALITY    ignore    TYPE    CRNC-CommunicationContextID          PRESENCE
    mandatory } |
    { ID    id-MeasurementID                        CRITICALITY    ignore    TYPE    MeasurementID                          PRESENCE
    mandatory } |
    { ID    id-DedicatedMeasurementObjectType-DM-Rsp  CRITICALITY    ignore    TYPE    DedicatedMeasurementObjectType-DM-Rsp    PRESENCE
    optional } |
    { ID    id-CriticalityDiagnostics                CRITICALITY    ignore    TYPE    CriticalityDiagnostics                    PRESENCE
    optional },
    ...
}

DedicatedMeasurementInitiationResponse-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DedicatedMeasurementObjectType-DM-Rsp ::= CHOICE {
    rL                RL-DM-Rsp,
    rLS               RL-Set-DM-Rsp,    -- for FDD only
    all-RL            RL-DM-Rsp,
    all-RLS           RL-Set-DM-Rsp,    -- for FDD only
    ...
}

RL-DM-Rsp ::= SEQUENCE {
    rL-InformationList-DM-Rsp    RL-InformationList-DM-Rsp,
    iE-Extensions                ProtocolExtensionContainer { { RLItem-DM-Rsp-ExtIEs } }    OPTIONAL,
    ...
}

```

```

}
RLItem-DM-Rsp-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
RL-InformationList-DM-Rsp ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container {{ RL-InformationItemIE-DM-Rsp }}
RL-InformationItemIE-DM-Rsp NBAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationItem-DM-Rsp  CRITICALITY ignore  TYPE RL-InformationItem-DM-Rsp  PRESENCE mandatory }
}
RL-InformationItem-DM-Rsp ::= SEQUENCE {
    rL-ID                RL-ID,
    dPCH-ID              DPCH-ID                OPTIONAL,    -- for TDD only
    dedicatedMeasurementValue  DedicatedMeasurementValue,
    cFN                  CFN                    OPTIONAL,
    iE-Extensions       ProtocolExtensionContainer { { RL-InformationItem-DM-Rsp-ExtIEs } }  OPTIONAL,
    ...
}
RL-InformationItem-DM-Rsp-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    {ID id-PUSCH-Info-DM-Rsp  CRITICALITY reject  EXTENSION  PUSCH-Info-DM-Rsp  PRESENCE optional},
    -- TDD only
    ...
}
PUSCH-Info-DM-Rsp ::= SEQUENCE (SIZE (1..maxNrOfPUSCHs)) OF PUSCH-ID
RL-Set-DM-Rsp ::= SEQUENCE {
    rL-Set-InformationList-DM-Rsp  RL-Set-InformationList-DM-Rsp,
    iE-Extensions                  ProtocolExtensionContainer { { RL-SetItem-DM-Rsp-ExtIEs } }  OPTIONAL,
    ...
}
RL-SetItem-DM-Rsp-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
RL-Set-InformationList-DM-Rsp ::= SEQUENCE (SIZE (1..maxNrOfRLSets)) OF ProtocolIE-Single-Container {{ RL-Set-InformationItemIE-DM-Rsp }}
RL-Set-InformationItemIE-DM-Rsp NBAP-PROTOCOL-IES ::= {
    { ID id-RL-Set-InformationItem-DM-Rsp  CRITICALITY ignore  TYPE  RL-Set-InformationItem-DM-Rsp  PRESENCE mandatory}
}
RL-Set-InformationItem-DM-Rsp ::= SEQUENCE {
    rL-Set-ID                RL-Set-ID,
    dedicatedMeasurementValue  DedicatedMeasurementValue,
    cFN                      CFN                    OPTIONAL,
    iE-Extensions            ProtocolExtensionContainer { { RL-Set-InformationItem-DM-Rsp-ExtIEs } }  OPTIONAL,
    ...
}
RL-Set-InformationItem-DM-Rsp-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {

```

```

}
...
}
-- *****
--
-- DEDICATED MEASUREMENT INITIATION FAILURE
--
-- *****

DedicatedMeasurementInitiationFailure ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{DedicatedMeasurementInitiationFailure-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{DedicatedMeasurementInitiationFailure-Extensions}}    OPTIONAL,
    ...
}

DedicatedMeasurementInitiationFailure-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-CRNC-CommunicationContextID      CRITICALITY  ignore      TYPE      CRNC-CommunicationContextID      PRESENCE mandatory }
    |
    { ID      id-MeasurementID                    CRITICALITY  ignore      TYPE      MeasurementID                    PRESENCE mandatory }
    } |
    { ID      id-Cause                            CRITICALITY  ignore      TYPE      Cause                            PRESENCE mandatory }
    { ID      id-CriticalityDiagnostics           CRITICALITY  ignore      TYPE      CriticalityDiagnostics           PRESENCE optional },
    ...
}

DedicatedMeasurementInitiationFailure-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- DEDICATED MEASUREMENT REPORT
--
-- *****

DedicatedMeasurementReport ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{DedicatedMeasurementReport-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{DedicatedMeasurementReport-Extensions}}    OPTIONAL,
    ...
}

DedicatedMeasurementReport-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-CRNC-CommunicationContextID      CRITICALITY  ignore      TYPE      CRNC-CommunicationContextID      PRESENCE mandatory }
    { ID      id-MeasurementID                    CRITICALITY  ignore      TYPE      MeasurementID                    PRESENCE mandatory }
    { ID      id-DedicatedMeasurementObjectType-DM-Rprt  CRITICALITY  ignore      TYPE      DedicatedMeasurementObjectType-DM-Rprt  PRESENCE mandatory },
    ...
}

DedicatedMeasurementReport-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

```



```

}

DedicatedMeasurementObjectType-DM-Rprt ::= CHOICE {
    rL                RL-DM-Rprt,
    rLS               RL-Set-DM-Rprt,    -- for FDD only
    all-RL            RL-DM-Rprt,
    all-RLS           RL-Set-DM-Rprt,    -- for FDD only
    ...
}

RL-DM-Rprt ::= SEQUENCE {
    rL-InformationList-DM-Rprt    RL-InformationList-DM-Rprt,
    iE-Extensions                 ProtocolExtensionContainer { { RLItem-DM-Rprt-ExtIEs } }    OPTIONAL,
    ...
}

RLItem-DM-Rprt-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-InformationList-DM-Rprt ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container {{ RL-InformationItemIE-DM-Rprt }}

RL-InformationItemIE-DM-Rprt NBAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationItem-DM-Rprt    CRITICALITY ignore TYPE RL-InformationItem-DM-Rprt    PRESENCE mandatory }
}

RL-InformationItem-DM-Rprt ::= SEQUENCE {
    rL-ID                RL-ID,
    dPCH-ID              DPCH-ID    OPTIONAL,    -- for TDD only
    dedicatedMeasurementValueInformation    DedicatedMeasurementValueInformation,
    iE-Extensions        ProtocolExtensionContainer { { RL-InformationItem-DM-Rprt-ExtIEs } }    OPTIONAL,
    ...
}

RL-InformationItem-DM-Rprt-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    {ID id-PUSCH-Info-DM-Rprt    CRITICALITY reject    EXTENSION    PUSCH-Info-DM-Rprt    PRESENCE optional},
    -- TDD only
    ...
}

PUSCH-Info-DM-Rprt ::= SEQUENCE (SIZE (0..maxNrOfPUSCHs)) OF PUSCH-ID

RL-Set-DM-Rprt ::= SEQUENCE {
    rL-Set-InformationList-DM-Rprt    RL-Set-InformationList-DM-Rprt,
    iE-Extensions                     ProtocolExtensionContainer { { RL-SetItem-DM-Rprt-ExtIEs } }    OPTIONAL,
    ...
}

RL-SetItem-DM-Rprt-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-Set-InformationList-DM-Rprt ::= SEQUENCE (SIZE (1..maxNrOfRLSets)) OF ProtocolIE-Single-Container {{ RL-Set-InformationItemIE-DM-Rprt }}

```

```

RL-Set-InformationItemIE-DM-Rprt NBAP-PROTOCOL-IES ::= {
  { ID id-RL-Set-InformationItem-DM-Rprt CRITICALITY ignore TYPE RL-Set-InformationItem-DM-Rprt PRESENCE mandatory }
}

RL-Set-InformationItem-DM-Rprt ::= SEQUENCE {
  rL-Set-ID RL-Set-ID,
  dedicatedMeasurementValueInformation DedicatedMeasurementValueInformation,
  iE-Extensions ProtocolExtensionContainer { { RL-Set-InformationItem-DM-Rprt-ExtIEs } } OPTIONAL,
  ...
}

RL-Set-InformationItem-DM-Rprt-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- DEDICATED MEASUREMENT TERMINATION REQUEST
--
-- *****

DedicatedMeasurementTerminationRequest ::= SEQUENCE {
  protocolIEs ProtocolIE-Container {{DedicatedMeasurementTerminationRequest-IEs}},
  protocolExtensions ProtocolExtensionContainer {{DedicatedMeasurementTerminationRequest-Extensions}} OPTIONAL,
  ...
}

DedicatedMeasurementTerminationRequest-IEs NBAP-PROTOCOL-IES ::= {
  { ID id-NodeB-CommunicationContextID CRITICALITY ignore TYPE NodeB-CommunicationContextID PRESENCE mandatory }
  |
  { ID id-MeasurementID CRITICALITY ignore TYPE MeasurementID PRESENCE mandatory },
  ...
}

DedicatedMeasurementTerminationRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- DEDICATED MEASUREMENT FAILURE INDICATION
--
-- *****

DedicatedMeasurementFailureIndication ::= SEQUENCE {
  protocolIEs ProtocolIE-Container {{DedicatedMeasurementFailureIndication-IEs}},
  protocolExtensions ProtocolExtensionContainer {{DedicatedMeasurementFailureIndication-Extensions}} OPTIONAL,
  ...
}

DedicatedMeasurementFailureIndication-IEs NBAP-PROTOCOL-IES ::= {
  { ID id-CRNC-CommunicationContextID CRITICALITY ignore TYPE CRNC-CommunicationContextID PRESENCE mandatory } |

```

```

    { ID      id-MeasurementID          CRITICALITY  ignore      TYPE      MeasurementID          PRESENCE mandatory
    } |
    { ID      id-Cause                  CRITICALITY  ignore      TYPE      Cause                  PRESENCE mandatory
    },
    ...
}

DedicatedMeasurementFailureIndication-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK FAILURE INDICATION
--
-- *****

RadioLinkFailureIndication ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{RadioLinkFailureIndication-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{RadioLinkFailureIndication-Extensions}}          OPTIONAL,
    ...
}

RadioLinkFailureIndication-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-CRNC-CommunicationContextID          CRITICALITY  ignore      TYPE      CRNC-CommunicationContextID          PRESENCE
    mandatory } |
    { ID      id-Reporting-Object-RL-FailureInd       CRITICALITY  ignore      TYPE      Reporting-Object-RL-FailureInd       PRESENCE
    mandatory } ,
    ...
}

RadioLinkFailureIndication-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Reporting-Object-RL-FailureInd ::= CHOICE {
    rL                  RL-RL-FailureInd,
    rL-Set              RL-Set-RL-FailureInd, --FDD only
    ...,
    cCTrCH              CCTrCH-RL-FailureInd --TDD only
}

RL-RL-FailureInd ::= SEQUENCE {
    rL-InformationList-RL-FailureInd    RL-InformationList-RL-FailureInd,
    IE-Extensions                       ProtocolExtensionContainer { { RLItem-RL-FailureInd-ExtIEs } }          OPTIONAL,
    ...
}

RLItem-RL-FailureInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-InformationList-RL-FailureInd ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container {{ RL-InformationItemIE-RL-FailureInd}}

```

```

RL-InformationItemIE-RL-FailureInd NBAP-PROTOCOL-IES ::= {
  { ID id-RL-InformationItem-RL-FailureInd      CRITICALITY ignore          TYPE RL-InformationItem-RL-FailureInd      PRESENCE
    mandatory}
}

RL-InformationItem-RL-FailureInd ::= SEQUENCE {
  rL-ID          RL-ID,
  cause          Cause,
  iE-Extensions ProtocolExtensionContainer { { RL-InformationItem-RL-FailureInd-ExtIEs } } OPTIONAL,
  ...
}

RL-InformationItem-RL-FailureInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

RL-Set-RL-FailureInd ::= SEQUENCE {
  rL-Set-InformationList-RL-FailureInd      RL-Set-InformationList-RL-FailureInd,
  iE-Extensions ProtocolExtensionContainer { { RL-SetItem-RL-FailureInd-ExtIEs } } OPTIONAL,
  ...
}

RL-SetItem-RL-FailureInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

RL-Set-InformationList-RL-FailureInd ::= SEQUENCE (SIZE (1..maxNrOfRLSets)) OF ProtocolIE-Single-Container {{ RL-Set-InformationItemIE-RL-FailureInd }}

RL-Set-InformationItemIE-RL-FailureInd NBAP-PROTOCOL-IES ::= {
  { ID id-RL-Set-InformationItem-RL-FailureInd      CRITICALITY ignore          TYPE RL-Set-InformationItem-RL-FailureInd      PRESENCE mandatory }
}

RL-Set-InformationItem-RL-FailureInd ::= SEQUENCE {
  rL-Set-ID          RL-Set-ID,
  cause          Cause,
  iE-Extensions ProtocolExtensionContainer { { RL-Set-InformationItem-RL-FailureInd-ExtIEs } } OPTIONAL,
  ...
}

RL-Set-InformationItem-RL-FailureInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

CCTrCH-RL-FailureInd ::= SEQUENCE {
  rL-ID          RL-ID,
  cCTrCH-InformationList-RL-FailureInd      CCTrCH-InformationList-RL-FailureInd,
  iE-Extensions ProtocolExtensionContainer { { CCTrCHItem-RL-FailureInd-ExtIEs } } OPTIONAL,
  ...
}

CCTrCHItem-RL-FailureInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

```

```
CCTrCH-InformationList-RL-FailureInd ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container {{ CCTrCH-InformationItemIE-RL-FailureInd}}
```

```
CCTrCH-InformationItemIE-RL-FailureInd NBAP-PROTOCOL-IES ::= {
  { ID id-CCTrCH-InformationItem-RL-FailureInd CRITICALITY ignore TYPE CCTrCH-InformationItem-RL-FailureInd PRESENCE mandatory}
}
```

```
CCTrCH-InformationItem-RL-FailureInd ::= SEQUENCE {
  cCTrCH-ID CCTrCH-ID,
  cause Cause,
  iE-Extensions ProtocolExtensionContainer { { CCTrCH-InformationItem-RL-FailureInd-ExtIEs } } OPTIONAL,
  ...
}
```

```
CCTrCH-InformationItem-RL-FailureInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}
```

```
-- *****
--
-- RADIO LINK PREEMPTION REQUIRED INDICATION
--
-- *****
```

```
RadioLinkPreemptionRequiredIndication ::= SEQUENCE {
  protocolIEs ProtocolIE-Container {{RadioLinkPreemptionRequiredIndication-IEs}},
  protocolExtensions ProtocolExtensionContainer {{RadioLinkPreemptionRequiredIndication-Extensions}} OPTIONAL,
  ...
}
```

```
RadioLinkPreemptionRequiredIndication-IEs NBAP-PROTOCOL-IES ::= {
  { ID id-CRNC-CommunicationContextID CRITICALITY ignore TYPE CRNC-CommunicationContextID PRESENCE mandatory } |
  { ID id-RL-InformationList-RL-PreemptRequiredInd CRITICALITY ignore TYPE RL-InformationList-RL-PreemptRequiredInd PRESENCE optional },
  ...
}
```

```
RadioLinkPreemptionRequiredIndication-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}
```

```
RL-InformationList-RL-PreemptRequiredInd ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container { {RL-InformationItemIE-RL-PreemptRequiredInd}}
```

```
RL-InformationItemIE-RL-PreemptRequiredInd NBAP-PROTOCOL-IES ::= {
  { ID id-RL-InformationItem-RL-PreemptRequiredInd CRITICALITY ignore TYPE RL-InformationItem-RL-PreemptRequiredInd PRESENCE mandatory },
  ...
}
```

```
RL-InformationItem-RL-PreemptRequiredInd ::= SEQUENCE {
  rL-ID RL-ID,
```

```

    iE-Extensions          ProtocolExtensionContainer { {RL-InformationItem-RL-PreemptRequiredInd-ExtIEs} } OPTIONAL,
  }
  ...
}

RL-InformationItem-RL-PreemptRequiredInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- RADIO LINK RESTORE INDICATION
--
-- *****

RadioLinkRestoreIndication ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container    {{RadioLinkRestoreIndication-IEs}},
  protocolExtensions  ProtocolExtensionContainer {{RadioLinkRestoreIndication-Extensions}}          OPTIONAL,
  ...
}

RadioLinkRestoreIndication-IEs NBAP-PROTOCOL-IES ::= {
  { ID      id-CRNC-CommunicationContextID          CRITICALITY  ignore          TYPE  CRNC-CommunicationContextID          PRESENCE
    mandatory } |
  { ID      id-Reporting-Object-RL-RestoreInd      CRITICALITY  ignore          TYPE  Reporting-Object-RL-RestoreInd          PRESENCE
    mandatory },
  ...
}

RadioLinkRestoreIndication-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

Reporting-Object-RL-RestoreInd ::= CHOICE {
  rL              RL-RL-RestoreInd, --TDD only
  rL-Set          RL-Set-RL-RestoreInd, --FDD only
  ...,
  cCTrCH         CCTrCH-RL-RestoreInd --TDD only
}

RL-RL-RestoreInd ::= SEQUENCE {
  rL-InformationList-RL-RestoreInd      RL-InformationList-RL-RestoreInd,
  iE-Extensions                        ProtocolExtensionContainer { { RLItem-RL-RestoreInd-ExtIEs } }          OPTIONAL,
  ...
}

RLItem-RL-RestoreInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

RL-InformationList-RL-RestoreInd ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container {{RL-InformationItemIE-RL-RestoreInd}}

RL-InformationItemIE-RL-RestoreInd NBAP-PROTOCOL-IES ::= {
  { ID      id-RL-InformationItem-RL-RestoreInd      CRITICALITY  ignore          TYPE  RL-InformationItem-RL-RestoreInd          PRESENCE
    mandatory}
}

```

```

}
RL-InformationItem-RL-RestoreInd ::= SEQUENCE {
    rL-ID                RL-ID,
    iE-Extensions        ProtocolExtensionContainer { { RL-InformationItem-RL-RestoreInd-ExtIEs } } OPTIONAL,
    ...
}
RL-InformationItem-RL-RestoreInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
RL-Set-RL-RestoreInd ::= SEQUENCE {
    rL-Set-InformationList-RL-RestoreInd    RL-Set-InformationList-RL-RestoreInd,
    iE-Extensions                          ProtocolExtensionContainer { { RL-SetItem-RL-RestoreInd-ExtIEs } } OPTIONAL,
    ...
}
RL-SetItem-RL-RestoreInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
RL-Set-InformationList-RL-RestoreInd ::= SEQUENCE (SIZE (1..maxNrOfRLSets)) OF ProtocolIE-Single-Container {{ RL-Set-InformationItemIE-RL-RestoreInd }}
RL-Set-InformationItemIE-RL-RestoreInd NBAP-PROTOCOL-IES ::= {
    { ID id-RL-Set-InformationItem-RL-RestoreInd    CRITICALITY ignore          TYPE RL-Set-InformationItem-RL-RestoreInd PRESENCE mandatory }
}
RL-Set-InformationItem-RL-RestoreInd ::= SEQUENCE {
    rL-Set-ID                RL-Set-ID,
    iE-Extensions            ProtocolExtensionContainer { { RL-Set-InformationItem-RL-RestoreInd-ExtIEs } } OPTIONAL,
    ...
}
RL-Set-InformationItem-RL-RestoreInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
CCTrCH-RL-RestoreInd ::= SEQUENCE {
    rL-ID                RL-ID,
    cCTrCH-InformationList-RL-RestoreInd    CCTrCH-InformationList-RL-RestoreInd,
    iE-Extensions        ProtocolExtensionContainer { { CCTrCHItem-RL-RestoreInd-ExtIEs } } OPTIONAL,
    ...
}
CCTrCHItem-RL-RestoreInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
CCTrCH-InformationList-RL-RestoreInd ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container {{ CCTrCH-InformationItemIE-RL-RestoreInd }}
CCTrCH-InformationItemIE-RL-RestoreInd NBAP-PROTOCOL-IES ::= {

```

```

    { ID      id-CCTrCH-InformationItem-RL-RestoreInd      CRITICALITY  ignore      TYPE      CCTrCH-InformationItem-RL-
RestoreInd      PRESENCE      mandatory}
}

CCTrCH-InformationItem-RL-RestoreInd ::= SEQUENCE {
    cCCTrCH-ID      CCTrCH-ID,
    iE-Extensions      ProtocolExtensionContainer { { CCTrCH-InformationItem-RL-RestoreInd-ExtIEs } }      OPTIONAL,
    ...
}

CCTrCH-InformationItem-RL-RestoreInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- COMPRESSED MODE COMMAND FDD
--
-- *****

CompressedModeCommand ::= SEQUENCE {
    protocolIEs      ProtocolIE-Container      {{CompressedModeCommand-IEs}},
    protocolExtensions      ProtocolExtensionContainer      {{CompressedModeCommand-Extensions}}      OPTIONAL,
    ...
}

CompressedModeCommand-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-NodeB-CommunicationContextID      CRITICALITY      ignore      TYPE      NodeB-CommunicationContextID      PRESENCE
mandatory } |
    { ID      id-Active-Pattern-Sequence-Information      CRITICALITY      ignore      TYPE      Active-Pattern-Sequence-Information      PRESENCE
mandatory },
    ...
}

CompressedModeCommand-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- ERROR INDICATION
--
-- *****

ErrorIndication ::= SEQUENCE {
    protocolIEs      ProtocolIE-Container      {{ErrorIndication-IEs}},

```



```

    protocolExtensions      ProtocolExtensionContainer {{ErrorIndication-Extensions}}      OPTIONAL,
    ...
}

ErrorIndication-IEs NBAP-PROTOCOL-IES ::= {
  { ID      id-CRNC-CommunicationContextID      CRITICALITY      ignore      TYPE      CRNC-CommunicationContextID      PRESENCE optional } |
  { ID      id-NodeB-CommunicationContextID      CRITICALITY      ignore      TYPE      NodeB-CommunicationContextID      PRESENCE optional } |
  { ID      id-Cause                              CRITICALITY      ignore      TYPE      Cause                              PRESENCE
optional    } |
  { ID      id-CriticalityDiagnostics            CRITICALITY      ignore      TYPE      CriticalityDiagnostics              PRESENCE optional },
  ...
}

ErrorIndication-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- PRIVATE MESSAGE
--
-- *****

PrivateMessage ::= SEQUENCE {
  privateIEs      PrivateIE-Container {{PrivateMessage-IEs}},
  ...
}

PrivateMessage-IEs NBAP-PRIVATE-IES ::= {
  ...
}

-- *****
--
-- PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST TDD
--
-- *****

PhysicalSharedChannelReconfigurationRequestTDD ::= SEQUENCE {
  protocolIEs      ProtocolIE-Container {{PhysicalSharedChannelReconfigurationRequestTDD-IEs}},
  protocolExtensions      ProtocolExtensionContainer {{PhysicalSharedChannelReconfigurationRequestTDD-Extensions}}      OPTIONAL,
  ...
}

PhysicalSharedChannelReconfigurationRequestTDD-IEs NBAP-PROTOCOL-IES ::= {
  { ID      id-C-ID                              CRITICALITY      reject      TYPE      C-ID
PRESENCE      mandatory    } |
  { ID      id-SFN                              CRITICALITY      reject      TYPE      SFN
PRESENCE      optional    } |
  { ID      id-PDSCHSets-AddList-PSCH-ReconfRqst      CRITICALITY      reject      TYPE      PDSCHSets-AddList-PSCH-ReconfRqst      PRESENCE
optional    } |
  { ID      id-PDSCHSets-ModifyList-PSCH-ReconfRqst      CRITICALITY      reject      TYPE      PDSCHSets-ModifyList-PSCH-ReconfRqst      PRESENCE
optional    } |

```

```

    { ID id-PDSCHSets-DeleteList-PSCH-ReconfRqst CRITICALITY reject TYPE PDSCHSets-DeleteList-PSCH-ReconfRqst PRESENCE
      optional } |
    { ID id-PUSCHSets-AddList-PSCH-ReconfRqst CRITICALITY reject TYPE PUSCHSets-AddList-PSCH-ReconfRqst PRESENCE
      optional } |
    { ID id-PUSCHSets-ModifyList-PSCH-ReconfRqst CRITICALITY reject TYPE PUSCHSets-ModifyList-PSCH-ReconfRqst PRESENCE
      optional } |
    { ID id-PUSCHSets-DeleteList-PSCH-ReconfRqst CRITICALITY reject TYPE PUSCHSets-DeleteList-PSCH-ReconfRqst PRESENCE
      optional },
    ...
  }
}

PhysicalSharedChannelReconfigurationRequestTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

PDSCHSets-AddList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfPDSCHSets)) OF PDSCHSets-AddItem-PSCH-ReconfRqst

PDSCHSets-AddItem-PSCH-ReconfRqst ::= SEQUENCE {
  pDSCHSet-ID PDSCHSet-ID,
  pDSCH-InformationList PDSCH-Information-AddList-PSCH-ReconfRqst OPTIONAL,
  iE-Extensions ProtocolExtensionContainer { {PDSCHSets-AddItem-PSCH-ReconfRqst-ExtIEs} } OPTIONAL,
  ...
}

PDSCHSets-AddItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  {ID id-PDSCH-AddInformation-LCR-PSCH-ReconfRqst CRITICALITY reject EXTENSION PDSCH-AddInformation-LCR-AddItem-PSCH-ReconfRqst
  PRESENCE optional}, -- Mandatory for 1.28Mcps TDD only
  ...
}

PDSCH-Information-AddList-PSCH-ReconfRqst ::= ProtocolIE-Single-Container {{ PDSCH-Information-AddListIEs-PSCH-ReconfRqst }}
-- Mandatory for 3.84Mcps TDD, Not Applicable to 1.28Mcps TDD

PDSCH-Information-AddListIEs-PSCH-ReconfRqst NBAP-PROTOCOL-IES ::= {
  {ID id-PDSCH-Information-AddListIE-PSCH-ReconfRqst CRITICALITY reject TYPE PDSCH-Information-AddItem-PSCH-ReconfRqst PRESENCE
  mandatory}
}

PDSCH-Information-AddItem-PSCH-ReconfRqst ::= SEQUENCE {
  repetitionPeriod RepetitionPeriod,
  repetitionLength RepetitionLength,
  tdd-PhysicalChannelOffset TDD-PhysicalChannelOffset,
  dL-Timeslot-InformationAddList-PSCH-ReconfRqst DL-Timeslot-InformationAddList-PSCH-ReconfRqst,
  iE-Extensions ProtocolExtensionContainer { {PDSCH-Information-AddItem-PSCH-ReconfRqst-ExtIEs} } OPTIONAL,
  ...
}

PDSCH-Information-AddItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

DL-Timeslot-InformationAddList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1.. maxNrOfDLTSs)) OF DL-Timeslot-InformationAddItem-PSCH-ReconfRqst

DL-Timeslot-InformationAddItem-PSCH-ReconfRqst ::= SEQUENCE {

```

```

    timeSlot                TimeSlot,
    midambleShiftAndBurstType MidambleShiftAndBurstType,
    tFCI-Presence           TFCI-Presence,
    dL-Code-InformationAddList-PSCH-ReconfRqst DL-Code-InformationAddList-PSCH-ReconfRqst,
    iE-Extensions           ProtocolExtensionContainer { { DL-Timeslot-InformationAddItem-PSCH-ReconfRqst-ExtIEs } } OPTIONAL,
    ...
}

DL-Timeslot-InformationAddItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-Code-InformationAddList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfPDSCHs)) OF DL-Code-InformationAddItem-PSCH-ReconfRqst

DL-Code-InformationAddItem-PSCH-ReconfRqst ::= SEQUENCE {
    pDSCH-ID                PDSCH-ID,
    tdd-ChannelisationCode  TDD-ChannelisationCode,
    iE-Extensions           ProtocolExtensionContainer { { DL-Code-InformationAddItem-PSCH-ReconfRqst-ExtIEs } } OPTIONAL,
    ...
}

DL-Code-InformationAddItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PDSCH-AddInformation-LCR-AddItem-PSCH-ReconfRqst ::= SEQUENCE {
    repetitionPeriod        RepetitionPeriod,
    repetitionLength        RepetitionLength,
    tdd-PhysicalChannelOffset TDD-PhysicalChannelOffset,
    dL-Timeslot-InformationAddList-LCR-PSCH-ReconfRqst DL-Timeslot-InformationAddList-LCR-PSCH-ReconfRqst,
    iE-Extensions           ProtocolExtensionContainer { { PDSCH-AddInformation-LCR-AddItem-PSCH-ReconfRqst-ExtIEs } } OPTIONAL,
    ...
}

PDSCH-AddInformation-LCR-AddItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-Timeslot-InformationAddList-LCR-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1.. maxNrOfDLTSLCRs)) OF DL-Timeslot-InformationAddItem-LCR-PSCH-ReconfRqst

DL-Timeslot-InformationAddItem-LCR-PSCH-ReconfRqst ::= SEQUENCE {
    timeSlotLCR             TimeSlotLCR,
    midambleShiftLCR        MidambleShiftLCR,
    tFCI-Presence           TFCI-Presence,
    dL-Code-InformationAddList-LCR-PSCH-ReconfRqst DL-Code-InformationAddList-LCR-PSCH-ReconfRqst,
    iE-Extensions           ProtocolExtensionContainer { { DL-Timeslot-InformationAddItem-LCR-PSCH-ReconfRqst-ExtIEs } } OPTIONAL,
    ...
}

DL-Timeslot-InformationAddItem-LCR-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

DL-Code-InformationAddList-LCR-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfPDSCHs)) OF DL-Code-InformationAddItem-LCR-PSCH-ReconfRqst

DL-Code-InformationAddItem-LCR-PSCH-ReconfRqst ::= SEQUENCE {
    pDSCH-ID                PDSCH-ID,
    tdd-ChannelisationCodeLCR TDD-ChannelisationCodeLCR,
    iE-Extensions           ProtocolExtensionContainer { { DL-Code-InformationAddItem-LCR-PSCH-ReconfRqst-ExtIEs } } OPTIONAL,
    ...
}

DL-Code-InformationAddItem-LCR-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PDSCHSets-ModifyList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfPDSCHSets)) OF PDSCHSets-ModifyItem-PSCH-ReconfRqst

PDSCHSets-ModifyItem-PSCH-ReconfRqst ::= SEQUENCE {
    pDSCHSet-ID                PDSCHSet-ID,
    pDSCH-InformationList      PDSCH-Information-ModifyList-PSCH-ReconfRqst,
    iE-Extensions             ProtocolExtensionContainer { {PDSCHSets-ModifyItem-PSCH-ReconfRqst-ExtIEs} } OPTIONAL,
    ...
}

PDSCHSets-ModifyItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PDSCH-Information-ModifyList-PSCH-ReconfRqst ::= ProtocolIE-Single-Container {{ PDSCH-Information-ModifyListIEs-PSCH-ReconfRqst }}

PDSCH-Information-ModifyListIEs-PSCH-ReconfRqst NBAP-PROTOCOL-IES ::= {
    {ID id-PDSCH-Information-ModifyListIE-PSCH-ReconfRqst CRITICALITY reject TYPE PDSCH-Information-ModifyItem-PSCH-ReconfRqst
    PRESENCE optional}|
    {ID id-PDSCH-ModifyInformation-LCR-PSCH-ReconfRqst CRITICALITY reject TYPE PDSCH-ModifyInformation-LCR-ModifyItem-PSCH-ReconfRqst
    PRESENCE optional}
}

PDSCH-Information-ModifyItem-PSCH-ReconfRqst ::= SEQUENCE {
    repetitionPeriod          RepetitionPeriod OPTIONAL,
    repetitionLength          RepetitionLength OPTIONAL,
    tdd-PhysicalChannelOffset TDD-PhysicalChannelOffset OPTIONAL,
    dL-Timeslot-InformationModifyList-PSCH-ReconfRqst DL-Timeslot-InformationModifyList-PSCH-ReconfRqst OPTIONAL,
    iE-Extensions             ProtocolExtensionContainer { {PDSCH-Information-ModifyItem-PSCH-ReconfRqst-ExtIEs} } OPTIONAL,
    ...
}

PDSCH-Information-ModifyItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-Timeslot-InformationModifyList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1.. maxNrOfDLTSs)) OF DL-Timeslot-InformationModifyItem-PSCH-ReconfRqst

DL-Timeslot-InformationModifyItem-PSCH-ReconfRqst ::= SEQUENCE {
    timeSlot                  TimeSlot,
    midambleShiftAndBurstType MidambleShiftAndBurstType OPTIONAL,

```

```

tFCI-Presence                TFCI-Presence    OPTIONAL,
dL-Code-InformationModifyList-PSCH-ReconfRqst    DL-Code-InformationModifyList-PSCH-ReconfRqst    OPTIONAL,
iE-Extensions                ProtocolExtensionContainer { { DL-Timeslot-InformationModifyItem-PSCH-ReconfRqst-ExtIEs } }
OPTIONAL,
...
}

DL-Timeslot-InformationModifyItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

DL-Code-InformationModifyList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfPDSCHs)) OF DL-Code-InformationModifyItem-PSCH-ReconfRqst

DL-Code-InformationModifyItem-PSCH-ReconfRqst ::= SEQUENCE {
pDSCH-ID                    PDSCH-ID,
tdd-ChannelisationCode      TDD-ChannelisationCode,
iE-Extensions                ProtocolExtensionContainer { { DL-Code-InformationModifyItem-PSCH-ReconfRqst-ExtIEs } }    OPTIONAL,
...
}

DL-Code-InformationModifyItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

PDSCH-ModifyInformation-LCR-ModifyItem-PSCH-ReconfRqst ::= SEQUENCE {
repetitionPeriod            RepetitionPeriod                OPTIONAL,
repetitionLength            RepetitionLength                OPTIONAL,
tdd-PhysicalChannelOffset   TDD-PhysicalChannelOffset    OPTIONAL,
dL-Timeslot-LCR-InformationModifyList-PSCH-ReconfRqst    DL-Timeslot-LCR-InformationModifyList-PSCH-ReconfRqst    OPTIONAL,
iE-Extensions                ProtocolExtensionContainer { {PDSCH-ModifyInformation-LCR-ModifyListIE-PSCH-ReconfRqst-ExtIEs} }
OPTIONAL,
...
}

PDSCH-ModifyInformation-LCR-ModifyListIE-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

DL-Timeslot-LCR-InformationModifyList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1.. maxNrOfDLTSLCRs)) OF DL-Timeslot-LCR-InformationModifyItem-PSCH-
ReconfRqst

DL-Timeslot-LCR-InformationModifyItem-PSCH-ReconfRqst ::= SEQUENCE {
timeSlotLCR                TimeSlotLCR,
midambleShiftLCR            MidambleShiftLCR    OPTIONAL,
tFCI-Presence                TFCI-Presence    OPTIONAL,
dL-Code-LCR-InformationModifyList-PSCH-ReconfRqst    DL-Code-LCR-InformationModifyList-PSCH-ReconfRqst    OPTIONAL,
iE-Extensions                ProtocolExtensionContainer { { DL-Timeslot-LCR-InformationModifyItem-PSCH-ReconfRqst-ExtIEs } }
OPTIONAL,
...
}

DL-Timeslot-LCR-InformationModifyItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

```

```

DL-Code-LCR-InformationModifyList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfPDSCHs)) OF DL-Code-LCR-InformationModifyItem-PSCH-ReconfRqst

DL-Code-LCR-InformationModifyItem-PSCH-ReconfRqst ::= SEQUENCE {
    pDSCH-ID                PDSCH-ID,
    tdd-ChannelisationCodeLCR    TDD-ChannelisationCodeLCR,
    iE-Extensions            ProtocolExtensionContainer { { DL-Code-LCR-InformationModifyItem-PSCH-ReconfRqst-ExtIEs } }
    OPTIONAL,
    ...
}

DL-Code-LCR-InformationModifyItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PDSCHSets-DeleteList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfPDSCHSets)) OF PDSCHSets-DeleteItem-PSCH-ReconfRqst

PDSCHSets-DeleteItem-PSCH-ReconfRqst ::= SEQUENCE {
    pDSCHSet-ID            PDSCHSet-ID,
    iE-Extensions            ProtocolExtensionContainer { { PDSCHSets-DeleteItem-PSCH-ReconfRqst-ExtIEs } }    OPTIONAL,
    ...
}

PDSCHSets-DeleteItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PUSCHSets-AddList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfPUSCHSets)) OF PUSCHSets-AddItem-PSCH-ReconfRqst

PUSCHSets-AddItem-PSCH-ReconfRqst ::= SEQUENCE {
    pUSCHSet-ID            PUSCHSet-ID,
    pUSCH-InformationList    PUSCH-Information-AddList-PSCH-ReconfRqst    OPTIONAL,
    -- Mandatory for 3.84Mcps TDD, Not Applicable to 1.28Mcps TDD
    iE-Extensions            ProtocolExtensionContainer { { PUSCHSets-AddItem-PSCH-ReconfRqst-ExtIEs } }    OPTIONAL,
    ...
}

PUSCHSets-AddItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    {ID id-PUSCH-AddInformation-LCR-PSCH-ReconfRqst    CRITICALITY reject    EXTENSION    PUSCH-AddInformation-LCR-AddItem-PSCH-ReconfRqst
    PRESENCE    optional}, -- Mandatory for 1.28Mcps TDD, Not Applicable to 3.84Mcps TDD
    ...
}

PUSCH-Information-AddList-PSCH-ReconfRqst ::= ProtocolIE-Single-Container {{ PUSCH-Information-AddListIEs-PSCH-ReconfRqst }}

PUSCH-Information-AddListIEs-PSCH-ReconfRqst NBAP-PROTOCOL-IES ::= {
    {ID id-PUSCH-Information-AddListIE-PSCH-ReconfRqst    CRITICALITY reject    TYPE    PUSCH-Information-AddItem-PSCH-ReconfRqst    PRESENCE
    mandatory}
}

PUSCH-Information-AddItem-PSCH-ReconfRqst ::= SEQUENCE {
    repetitionPeriod        RepetitionPeriod,
    repetitionLength        RepetitionLength,
    tdd-PhysicalChannelOffset    TDD-PhysicalChannelOffset,
}

```

```

    uL-Timeslot-InformationAddList-PSCH-ReconfRqst          UL-Timeslot-InformationAddList-PSCH-ReconfRqst,
    iE-Extensions                                          ProtocolExtensionContainer { {PUSCH-Information-AddItem-PSCH-ReconfRqst-ExtIEs} }    OPTIONAL,
    ...
  }

PUSCH-Information-AddItem-PSCH-ReconfRqst-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

UL-Timeslot-InformationAddList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfULTSs)) OF UL-Timeslot-InformationAddItem-PSCH-ReconfRqst

UL-Timeslot-InformationAddItem-PSCH-ReconfRqst ::= SEQUENCE {
  timeSlot                TimeSlot,
  midambleShiftAndBurstType  MidambleShiftAndBurstType,
  tFCI-Presence            TFCI-Presence,
  uL-Code-InformationAddList-PSCH-ReconfRqst          UL-Code-InformationAddList-PSCH-ReconfRqst,
  iE-Extensions                                          ProtocolExtensionContainer { { UL-Timeslot-InformationAddItem-PSCH-ReconfRqst-ExtIEs} }    OPTIONAL,
  ...
}

UL-Timeslot-InformationAddItem-PSCH-ReconfRqst-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

UL-Code-InformationAddList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfPUSCHs)) OF UL-Code-InformationAddItem-PSCH-ReconfRqst

UL-Code-InformationAddItem-PSCH-ReconfRqst ::= SEQUENCE {
  pUSCH-ID                PUSCH-ID,
  tdd-ChannelisationCode  TDD-ChannelisationCode,
  iE-Extensions           ProtocolExtensionContainer { { UL-Code-InformationAddItem-PSCH-ReconfRqst-ExtIEs} }    OPTIONAL,
  ...
}

UL-Code-InformationAddItem-PSCH-ReconfRqst-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

PUSCH-AddInformation-LCR-AddItem-PSCH-ReconfRqst ::= SEQUENCE {
  repetitionPeriod          RepetitionPeriod,
  repetitionLength          RepetitionLength,
  tdd-PhysicalChannelOffset TDD-PhysicalChannelOffset,
  uL-Timeslot-InformationAddList-LCR-PSCH-ReconfRqst          UL-Timeslot-InformationAddList-LCR-PSCH-ReconfRqst,
  iE-Extensions          ProtocolExtensionContainer { {PUSCH-AddInformation-LCR-AddItem-PSCH-ReconfRqst-ExtIEs} }    OPTIONAL,
  ...
}

PUSCH-AddInformation-LCR-AddItem-PSCH-ReconfRqst-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

UL-Timeslot-InformationAddList-LCR-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1.. maxNrOfULTSLCRs)) OF UL-Timeslot-InformationAddItem-LCR-PSCH-ReconfRqst

UL-Timeslot-InformationAddItem-LCR-PSCH-ReconfRqst ::= SEQUENCE {

```

```

    timeSlotLCR                TimeSlotLCR,
    midambleShiftLCR           MidambleShiftLCR,
    tFCI-Presence              TFCI-Presence,
    uL-Code-InformationAddList-LCR-PSCH-ReconfRqst      UL-Code-InformationAddList-LCR-PSCH-ReconfRqst,
    iE-Extensions              ProtocolExtensionContainer { { UL-Timeslot-InformationAddItem-LCR-PSCH-ReconfRqst-ExtIEs } }
    OPTIONAL,
    ...
}

UL-Timeslot-InformationAddItem-LCR-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-Code-InformationAddList-LCR-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfPUSCHs)) OF UL-Code-InformationAddItem-LCR-PSCH-ReconfRqst

UL-Code-InformationAddItem-LCR-PSCH-ReconfRqst ::= SEQUENCE {
    pUSCH-ID                    PUSCH-ID,
    tdd-ChannelisationCodeLCR   TDD-ChannelisationCodeLCR,
    iE-Extensions              ProtocolExtensionContainer { { UL-Code-InformationAddItem-LCR-PSCH-ReconfRqst-ExtIEs } }    OPTIONAL,
    ...
}

UL-Code-InformationAddItem-LCR-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PUSCHSets-ModifyList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfPUSCHSets)) OF PUSCHSets-ModifyItem-PSCH-ReconfRqst

PUSCHSets-ModifyItem-PSCH-ReconfRqst ::= SEQUENCE {
    pUSCHSet-ID                PUSCHSet-ID,
    pUSCH-InformationList      PUSCH-InformationModifyList-PSCH-ReconfRqst,
    iE-Extensions              ProtocolExtensionContainer { { PUSCHSets-ModifyItem-PSCH-ReconfRqst-ExtIEs } }    OPTIONAL,
    ...
}

PUSCHSets-ModifyItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PUSCH-Information-ModifyList-PSCH-ReconfRqst ::= ProtocolIE-Single-Container { { PUSCH-Information-ModifyListIEs-PSCH-ReconfRqst } }

PUSCH-Information-ModifyListIEs-PSCH-ReconfRqst NBAP-PROTOCOL-IES ::= {
    {ID id-PUSCH-Information-ModifyListIE-PSCH-ReconfRqst    CRITICALITY reject        TYPE        PUSCH-Information-ModifyItem-PSCH-ReconfRqst
    PRESENCE optional}|
    {ID id-PUSCH-ModifyInformation-LCR-PSCH-ReconfRqst    CRITICALITY reject        TYPE        PUSCH-ModifyInformation-LCR-ModifyItem-PSCH-ReconfRqst
    PRESENCE optional}
}

PUSCH-Information-ModifyItem-PSCH-ReconfRqst ::= SEQUENCE {
    repetitionPeriod           RepetitionPeriod                OPTIONAL,
    repetitionLength           RepetitionLength                OPTIONAL,
    tdd-PhysicalChannelOffset   TDD-PhysicalChannelOffset    OPTIONAL,
    uL-Timeslot-InformationModifyList-PSCH-ReconfRqst      UL-Timeslot-InformationModifyList-PSCH-ReconfRqst    OPTIONAL,
    iE-Extensions              ProtocolExtensionContainer { { PUSCH-Information-ModifyItem-PSCH-ReconfRqst-ExtIEs } }    OPTIONAL,
}

```



```

    }
    ...
}

PUSCH-Information-ModifyItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-Timeslot-InformationModifyList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfULTSs)) OF UL-Timeslot-InformationModifyItem-PSCH-ReconfRqst

UL-Timeslot-InformationModifyItem-PSCH-ReconfRqst ::= SEQUENCE {
    timeSlot                TimeSlot,
    midambleShiftAndBurstType MidambleShiftAndBurstType OPTIONAL,
    tFCI-Presence           TFCI-Presence OPTIONAL,
    uL-Code-InformationModifyList-PSCH-ReconfRqst UL-Code-InformationModifyList-PSCH-ReconfRqst OPTIONAL,
    iE-Extensions           ProtocolExtensionContainer { { UL-Timeslot-InformationModifyItem-PSCH-ReconfRqst-ExtIEs } }
    OPTIONAL,
    ...
}

UL-Timeslot-InformationModifyItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-Code-InformationModifyList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfPUSCHs)) OF UL-Code-InformationModifyItem-PSCH-ReconfRqst

UL-Code-InformationModifyItem-PSCH-ReconfRqst ::= SEQUENCE {
    pUSCH-ID                PUSCH-ID,
    tdd-ChannelisationCode  TDD-ChannelisationCode,
    iE-Extensions           ProtocolExtensionContainer { { UL-Code-InformationModifyItem-PSCH-ReconfRqst-ExtIEs } } OPTIONAL,
    ...
}

UL-Code-InformationModifyItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PUSCH-ModifyInformation-LCR-ModifyItem-PSCH-ReconfRqst ::= SEQUENCE {
    repetitionPeriod        RepetitionPeriod OPTIONAL,
    repetitionLength        RepetitionLength OPTIONAL,
    tdd-PhysicalChannelOffset TDD-PhysicalChannelOffset OPTIONAL,
    uL-Timeslot-InformationModifyList-LCR-PSCH-ReconfRqst UL-Timeslot-LCR-InformationModifyList-PSCH-ReconfRqst OPTIONAL,
    iE-Extensions           ProtocolExtensionContainer { { PUSCH-ModifyInformation-LCR-ModifyItem-PSCH-ReconfRqst-ExtIEs } }
    OPTIONAL,
    ...
}

PUSCH-ModifyInformation-LCR-ModifyItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-Timeslot-LCR-InformationModifyList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfULTSLCRs)) OF UL-Timeslot-LCR-InformationModifyItem-PSCH-ReconfRqst

UL-Timeslot-LCR-InformationModifyItem-PSCH-ReconfRqst ::= SEQUENCE {

```

```

    timeSlotLCR                TimeSlotLCR,
    midambleShiftLCR           MidambleShiftLCR    OPTIONAL,
    tFCI-Presence              TFCI-Presence      OPTIONAL,
    uL-Code-InformationModifyList-PSCH-ReconfRqst    UL-Code-InformationModifyList-PSCH-ReconfRqst    OPTIONAL,
    iE-Extensions              ProtocolExtensionContainer { { UL-Timeslot-LCR-InformationModifyItem-PSCH-ReconfRqst-ExtIEs } }
    OPTIONAL,
    ...
}

UL-Timeslot-LCR-InformationModifyItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-Code-LCR-InformationModifyList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfPUSCHs)) OF UL-Code-LCR-InformationModifyItem-PSCH-ReconfRqst

UL-Code-LCR-InformationModifyItem-PSCH-ReconfRqst ::= SEQUENCE {
    pUSCH-ID                    PUSCH-ID,
    tdd-ChannelisationCodeLCR   TDD-ChannelisationCodeLCR,
    iE-Extensions              ProtocolExtensionContainer { { UL-Code-LCR-InformationModifyItem-PSCH-ReconfRqst-ExtIEs } }
    OPTIONAL,
    ...
}

UL-Code-LCR-InformationModifyItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PUSCHSets-DeleteList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfPUSCHSets)) OF PUSCHSets-DeleteItem-PSCH-ReconfRqst

PUSCHSets-DeleteItem-PSCH-ReconfRqst ::= SEQUENCE {
    pUSCHSet-ID                PUSCHSet-ID,
    iE-Extensions              ProtocolExtensionContainer { { PUSCHSets-DeleteItem-PSCH-ReconfRqst-ExtIEs } }    OPTIONAL,
    ...
}

PUSCHSets-DeleteItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- PHYSICAL SHARED CHANNEL RECONFIGURATION RESPONSE TDD
--
-- *****

PhysicalSharedChannelReconfigurationResponseTDD ::= SEQUENCE {
    protocolIEs                ProtocolIE-Container {{PhysicalSharedChannelReconfigurationResponseTDD-IEs}},
    protocolExtensions         ProtocolExtensionContainer {{PhysicalSharedChannelReconfigurationResponseTDD-Extensions}}    OPTIONAL,
    ...
}

PhysicalSharedChannelReconfigurationResponseTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-CriticalityDiagnostics    CRITICALITY    ignore    TYPE          CriticalityDiagnostics    PRESENCE optional },
    ...
}

```

```

}

PhysicalSharedChannelReconfigurationResponseTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- PHYSICAL SHARED CHANNEL RECONFIGURATION FAILURE TDD
--
-- *****

PhysicalSharedChannelReconfigurationFailureTDD ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container  {{PhysicalSharedChannelReconfigurationFailureTDD-IEs}},
  protocolExtensions  ProtocolExtensionContainer {{PhysicalSharedChannelReconfigurationFailureTDD-Extensions}}
  ...
}

PhysicalSharedChannelReconfigurationFailureTDD-IEs NBAP-PROTOCOL-IES ::= {
  { ID      id-CauseLevel-PSCH-ReconfFailureTDD      CRITICALITY ignore TYPE CauseLevel-PSCH-ReconfFailureTDD      PRESENCE mandatory }|
  { ID      id-CriticalityDiagnostics                CRITICALITY ignore TYPE CriticalityDiagnostics                PRESENCE optional },
  ...
}

PhysicalSharedChannelReconfigurationFailureTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

CauseLevel-PSCH-ReconfFailureTDD ::= CHOICE {
  generalCause          GeneralCauseList-PSCH-ReconfFailureTDD,
  setSpecificCause      SetSpecificCauseList-PSCH-ReconfFailureTDD,
  ...
}

GeneralCauseList-PSCH-ReconfFailureTDD ::= SEQUENCE {
  cause                Cause,
  iE-Extensions        ProtocolExtensionContainer { { GeneralCauseItem-PSCH-ReconfFailureTDD-ExtIEs } }
  ...
}

GeneralCauseItem-PSCH-ReconfFailureTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

SetSpecificCauseList-PSCH-ReconfFailureTDD ::= SEQUENCE {
  unsuccessful-PDSCHSetList-PSCH-ReconfFailureTDD Unsuccessful-PDSCHSetList-PSCH-ReconfFailureTDD      OPTIONAL,
  unsuccessful-PUSCHSetList-PSCH-ReconfFailureTDD Unsuccessful-PUSCHSetList-PSCH-ReconfFailureTDD      OPTIONAL,
  iE-Extensions        ProtocolExtensionContainer { { SetSpecificCauseItem-PSCH-ReconfFailureTDD-ExtIEs } }
  OPTIONAL,
  ...
}

SetSpecificCauseItem-PSCH-ReconfFailureTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {

```

```

}
...
}

Unsuccessful-PDSCHSetList-PSCH-ReconfFailureTDD ::= SEQUENCE (SIZE (0.. maxNrOfPDSCHSets)) OF ProtocolIE-Single-Container {{ Unsuccessful-
PDSCHSetItemIE-PSCH-ReconfFailureTDD }}

Unsuccessful-PDSCHSetItemIE-PSCH-ReconfFailureTDD NBAP-PROTOCOL-IES ::= {
  { ID      id-Unsuccessful-PDSCHSetItem-PSCH-ReconfFailureTDD  CRITICALITY ignore  TYPE Unsuccessful-PDSCHSetItem-PSCH-ReconfFailureTDDPRESENCE
mandatory}
}

Unsuccessful-PDSCHSetItem-PSCH-ReconfFailureTDD ::= SEQUENCE {
  pDSCHSet-ID          PDSCHSet-ID,
  cause                Cause,
  iE-Extensions        ProtocolExtensionContainer { {Unsuccessful-PDSCHSetItem-PSCH-ReconfFailureTDD-ExtIEs} }  OPTIONAL,
  ...
}

Unsuccessful-PDSCHSetItem-PSCH-ReconfFailureTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

Unsuccessful-PUSCHSetList-PSCH-ReconfFailureTDD ::= SEQUENCE (SIZE (0.. maxNrOfPUSCHSets)) OF ProtocolIE-Single-Container {{ Unsuccessful-
PUSCHSetItemIE-PSCH-ReconfFailureTDD }}

Unsuccessful-PUSCHSetItemIE-PSCH-ReconfFailureTDD NBAP-PROTOCOL-IES ::= {
  { ID      id-Unsuccessful-PUSCHSetItem-PSCH-ReconfFailureTDD  CRITICALITY ignore  TYPE Unsuccessful-PUSCHSetItem-PSCH-ReconfFailureTDDPRESENCE
mandatory}
}

Unsuccessful-PUSCHSetItem-PSCH-ReconfFailureTDD ::= SEQUENCE {
  pUSCHSet-ID          PUSCHSet-ID,
  cause                Cause,
  iE-Extensions        ProtocolExtensionContainer { {Unsuccessful-PUSCHSetItem-PSCH-ReconfFailureTDD-ExtIEs} }  OPTIONAL,
  ...
}

Unsuccessful-PUSCHSetItem-PSCH-ReconfFailureTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- RESET REQUEST
--
-- *****

ResetRequest ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container   {{ResetRequest-IEs}},
  protocolExtensions   ProtocolExtensionContainer {{ResetRequest-Extensions}}  OPTIONAL,
  ...
}

```

```

}

ResetRequest-IEs NBAP-PROTOCOL-IES ::= {
  {ID id-ResetIndicator      CRITICALITY ignore      TYPE      ResetIndicator      PRESENCE      mandatory},
  ...
}

ResetRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

ResetIndicator ::= CHOICE {
  communicationContext      CommunicationContextList-Reset,
  communicationControlPort  CommunicationControlPortList-Reset,
  nodeB                      NULL,
  ...
}

CommunicationContextList-Reset ::= SEQUENCE {
  communicationContextInfoList-Reset      CommunicationContextInfoList-Reset,
  iE-Extensions                          ProtocolExtensionContainer { {CommunicationContextItem-Reset-ExtIEs} }  OPTIONAL,
  ...
}

CommunicationContextItem-Reset-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

CommunicationContextInfoList-Reset ::= SEQUENCE (SIZE (1.. maxCommunicationContext)) OF ProtocolIE-Single-Container {{
  CommunicationContextInfoItemIE-Reset }}

CommunicationContextInfoItemIE-Reset NBAP-PROTOCOL-IES ::= {
  {ID id-CommunicationContextInfoItem-Reset      CRITICALITY reject      TYPE      CommunicationContextInfoItem-Reset      PRESENCE      mandatory}
}

CommunicationContextInfoItem-Reset ::= SEQUENCE {
  communicationContextType-Reset      CommunicationContextType-Reset,
  iE-Extensions                          ProtocolExtensionContainer { { CommunicationContextInfoItem-Reset-ExtIEs} }  OPTIONAL,
  ...
}

```

```

CommunicationContextInfoItem-Reset-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CommunicationContextType-Reset ::= CHOICE {
    cRNC-CommunicationContextID          CRNC-CommunicationContextID,
    nodeB-CommunicationContextID        NodeB-CommunicationContextID,
    ...
}

CommunicationControlPortList-Reset ::= SEQUENCE {
    communicationControlPortInfoList-Reset      CommunicationControlPortInfoList-Reset,
    iE-Extensions                               ProtocolExtensionContainer { {CommunicationControlPortItem-Reset-ExtIEs} } OPTIONAL,
    ...
}

CommunicationControlPortItem-Reset-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CommunicationControlPortInfoList-Reset ::= SEQUENCE (SIZE (1.. maxCCPinNodeB)) OF ProtocolIE-Single-Container
{{CommunicationControlPortInfoItemIE-Reset }}

CommunicationControlPortInfoItemIE-Reset NBAP-PROTOCOL-IES ::= {
    {ID id-CommunicationControlPortInfoItem-Reset          CRITICALITY reject          TYPE CommunicationControlPortInfoItem-Reset          PRESENCE mandatory}
}

CommunicationControlPortInfoItem-Reset ::= SEQUENCE {
    communicationControlPortID          CommunicationControlPortID,
    iE-Extensions                       ProtocolExtensionContainer { {CommunicationControlPortInfoItem-Reset-ExtIEs} } OPTIONAL,
    ...
}

CommunicationControlPortInfoItem-Reset-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RESET RESPONSE
--

```

```

-- *****
ResetResponse ::= SEQUENCE {
  protocolIEs      ProtocolIE-Container    {{ResetResponse-IEs}},
  protocolExtensions ProtocolExtensionContainer {{ResetResponse-Extensions}}      OPTIONAL,
  ...
}

ResetResponse-IEs NBAP-PROTOCOL-IES ::= {
  {ID id-CriticalityDiagnostics      CRITICALITY      ignore      TYPE      CriticalityDiagnostics      PRESENCE optional},
  ...
}

ResetResponse-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- INFORMATION EXCHANGE INITIATION REQUEST
--
-- *****

InformationExchangeInitiationRequest ::= SEQUENCE {
  protocolIEs      ProtocolIE-Container    {{InformationExchangeInitiationRequest-IEs}},
  protocolExtensions ProtocolExtensionContainer {{InformationExchangeInitiationRequest-Extensions}}      OPTIONAL,
  ...
}

InformationExchangeInitiationRequest-IEs NBAP-PROTOCOL-IES ::= {
  { ID      id-InformationExchangeID      CRITICALITY reject      TYPE      InformationExchangeID
    PRESENCE mandatory }|
  { ID      id-InformationExchangeObjectType-InfEx-Rqst      CRITICALITY reject      TYPE      InformationExchangeObjectType-
InfEx-Rqst      PRESENCE mandatory }|
  { ID      id-InformationType      CRITICALITY reject      TYPE      InformationType      PRESENCE mandatory
  }|
  { ID      id-InformationReportCharacteristics      CRITICALITY reject      TYPE      InformationReportCharacteristics
    PRESENCE mandatory},
  ...
}

InformationExchangeInitiationRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

InformationExchangeObjectType-InfEx-Rqst ::= CHOICE {
  cell      Cell-InfEx-Rqst,
  ...
}

Cell-InfEx-Rqst ::= SEQUENCE {
  c-ID      C-ID,
  iE-Extensions ProtocolExtensionContainer { { CellItem-InfEx-Rqst-ExtIEs } }      OPTIONAL,
  ...
}

```

```

}
CellItem-InfEx-Rqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}
-- *****
--
-- INFORMATION EXCHANGE INITIATION RESPONSE
--
-- *****

InformationExchangeInitiationResponse ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container    {{InformationExchangeInitiationResponse-IEs}},
  protocolExtensions  ProtocolExtensionContainer {{InformationExchangeInitiationResponse-Extensions}}    OPTIONAL,
  ...
}

InformationExchangeInitiationResponse-IEs NBAP-PROTOCOL-IES ::= {
  { ID      id-InformationExchangeID          CRITICALITY ignore          TYPE          InformationExchangeID
    PRESENCE mandatory }|
  { ID      id-InformationExchangeObjectType-InfEx-Rsp    CRITICALITY ignore          TYPE          InformationExchangeObjectType-InfEx-Rsp    PRESENCE
    optional }|
  { ID      id-CriticalityDiagnostics          CRITICALITY ignore          TYPE          CriticalityDiagnostics          PRESENCE optional },
  ...
}

InformationExchangeInitiationResponse-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

InformationExchangeObjectType-InfEx-Rsp ::= CHOICE {
  cell                Cell-InfEx-Rsp,
  ...
}

Cell-InfEx-Rsp ::= SEQUENCE {
  requestedDataValue  RequestedDataValue,
  iE-Extensions       ProtocolExtensionContainer { { CellItem-InfEx-Rsp-ExtIEs } }    OPTIONAL,
  ...
}

CellItem-InfEx-Rsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}
-- *****
--
-- INFORMATION EXCHANGE INITIATION FAILURE
--
-- *****

InformationExchangeInitiationFailure ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container    {{InformationExchangeInitiationFailure-IEs}},

```



```

    protocolExtensions      ProtocolExtensionContainer  {{InformationExchangeInitiationFailure-Extensions}}
    ...
}

InformationExchangeInitiationFailure-IEs NBAP-PROTOCOL-IES ::= {
  { ID      id-InformationExchangeID          CRITICALITY  ignore          TYPE      InformationExchangeID          PRESENCE mandatory }|
  { ID      id-Cause                          CRITICALITY  ignore          TYPE      Cause                          PRESENCE mandatory }|
  { ID      id-CriticalityDiagnostics          CRITICALITY  ignore          TYPE      CriticalityDiagnostics          PRESENCE optional },
  ...
}

InformationExchangeInitiationFailure-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- INFORMATION REPORT
--
-- *****

InformationReport ::= SEQUENCE {
  protocolIEs      ProtocolIE-Container  {{InformationReport-IEs}},
  protocolExtensions      ProtocolExtensionContainer  {{InformationReport-Extensions}}      OPTIONAL,
  ...
}

InformationReport-IEs NBAP-PROTOCOL-IES ::= {
  { ID      id-InformationExchangeID          CRITICALITY  ignore          TYPE      InformationExchangeID          PRESENCE mandatory }|
  { ID      id-InformationExchangeObjectType-InfEx-Rprt  CRITICALITY  ignore          TYPE      InformationExchangeObjectType-InfEx-Rprt  PRESENCE mandatory },
  ...
}

InformationReport-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

InformationExchangeObjectType-InfEx-Rprt ::= CHOICE {
  cell      Cell-Inf-Rprt,
  ...
}

Cell-Inf-Rprt ::= SEQUENCE {
  requestedDataValueInformation      RequestedDataValueInformation,
  iE-Extensions      ProtocolExtensionContainer  {{ CellItem-Inf-Rprt-ExtIEs }}      OPTIONAL,
  ...
}

CellItem-Inf-Rprt-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

```

```

-- *****
--
-- INFORMATION EXCHANGE TERMINATION REQUEST
--
-- *****

InformationExchangeTerminationRequest ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{InformationExchangeTerminationRequest-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{InformationExchangeTerminationRequest-Extensions}}    OPTIONAL,
    ...
}

InformationExchangeTerminationRequest-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-InformationExchangeID          CRITICALITY ignore          TYPE      InformationExchangeID          PRESENCE mandatory },
    ...
}

InformationExchangeTerminationRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- INFORMATION EXCHANGE FAILURE INDICATION
--
-- *****

InformationExchangeFailureIndication ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{InformationExchangeFailureIndication-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{InformationExchangeFailureIndication-Extensions}}    OPTIONAL,
    ...
}

InformationExchangeFailureIndication-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-InformationExchangeID          CRITICALITY ignore          TYPE      InformationExchangeID          PRESENCE mandatory },
    { ID      id-Cause                          CRITICALITY ignore          TYPE      Cause                          PRESENCE mandatory },
    ...
}

InformationExchangeFailureIndication-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- CELL SYNCHRONISATION INITIATION REQUEST 3.84Mcps TDD
--
-- *****

CellSynchronisationInitiationRequestTDD ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{CellSynchronisationInitiationRequestTDD-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{CellSynchronisationInitiationRequestTDD-Extensions}}    OPTIONAL,
    ...
}

```

```

}

CellSynchronisationInitiationRequestTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

CellSynchronisationInitiationRequestTDD-IEs NBAP-PROTOCOL-IES ::= {
  { ID      id-C-ID                CRITICALITY  reject      TYPE      C-ID                PRESENCE mandatory }|
  { ID      id-cellSyncBurstRepetitionPeriod  CRITICALITY  reject      TYPE      CellSyncBurstRepetitionPeriod  PRESENCE mandatory }|
  { ID      id-timeslotInfo-CellSyncInitiationRqstTDD  CRITICALITY  reject      TYPE      TimeslotInfo-CellSyncInitiationRqstTDD  PRESENCE
  mandatory }|
  { ID      id-CellSyncBurstTransInit-CellSyncInitiationRqstTDD  CRITICALITY  reject      TYPE                CellSyncBurstTransInit-
CellSyncInitiationRqstTDD  PRESENCE  optional }|
  { ID      id-CellSyncBurstMeasureInit-CellSyncInitiationRqstTDD  CRITICALITY  reject      TYPE      CellSyncBurstMeasureInit-
CellSyncInitiationRqstTDD  PRESENCE  optional },
  ...
}

CellSyncBurstTransInit-CellSyncInitiationRqstTDD ::= SEQUENCE {
  cSBTransmissionID          CSBTransmissionID,
  sfn                        SFN,
  cellSyncBurstCode          CellSyncBurstCode,
  cellSyncBurstCodeShift    CellSyncBurstCodeShift,
  initialDLTransPower       DL-Power,
  iE-Extensions              ProtocolExtensionContainer { { CellSyncBurstTransInit-CellSyncInitiationRqstTDD-ExtIEs} }  OPTIONAL,
  ...
}

CellSyncBurstTransInit-CellSyncInitiationRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

TimeslotInfo-CellSyncInitiationRqstTDD ::= SEQUENCE (SIZE (1..15)) OF TimeSlot

CellSyncBurstMeasureInit-CellSyncInitiationRqstTDD ::= SEQUENCE {
  cSBMeasurementID          CSBMeasurementID,
  cellSyncBurstCode          CellSyncBurstCode,
  cellSyncBurstCodeShift    CellSyncBurstCodeShift,
  synchronisationReportType SynchronisationReportType,
  sfn                        SFN  OPTIONAL,
  synchronisationReportCharacteristics SynchronisationReportCharacteristics,
  iE-Extensions              ProtocolExtensionContainer { { CellSyncBurstMeasureInit-CellSyncInitiationRqstTDD-ExtIEs} }
  OPTIONAL,
  ...
}

CellSyncBurstMeasureInit-CellSyncInitiationRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- CELL SYNCHRONISATION INITIATION RESPONSE 3.84Mcps TDD
--

```

-- \*\*\*\*\*

```
CellSynchronisationInitiationResponseTDD ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container  {{CellSynchronisationInitiationResponseTDD-IEs}},
    protocolExtensions  ProtocolExtensionContainer  {{CellSynchronisationInitiationResponseTDD-Extensions}}
    ...
}
```

OPTIONAL,

```
CellSynchronisationInitiationResponseTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

```
CellSynchronisationInitiationResponseTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-CriticalityDiagnostics          CRITICALITY  ignore      TYPE      CriticalityDiagnostics          PRESENCE
      optional },
    ...
}
```

-- \*\*\*\*\*

--

-- CELL SYNCHRONISATION INITIATION FAILURE 3.84Mcps TDD

--

-- \*\*\*\*\*

```
CellSynchronisationInitiationFailureTDD ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container  {{CellSynchronisationInitiationFailureTDD-IEs}},
    protocolExtensions  ProtocolExtensionContainer  {{CellSynchronisationInitiationFailureTDD-Extensions}}
    ...
}
```

OPTIONAL,

```
CellSynchronisationInitiationFailureTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

```
CellSynchronisationInitiationFailureTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-Cause          CRITICALITY  ignore      TYPE      Cause          PRESENCE mandatory
    }|
    { ID      id-CriticalityDiagnostics          CRITICALITY  ignore      TYPE      CriticalityDiagnostics          PRESENCE optional },
    ...
}
```

-- \*\*\*\*\*

--

-- CELL SYNCHRONISATION RECONFIGURATION REQUEST 3.84Mcps TDD

--

-- \*\*\*\*\*

```
CellSynchronisationReconfigurationRequestTDD ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container  {{CellSynchronisationReconfigurationRequestTDD-IEs}},
    protocolExtensions  ProtocolExtensionContainer  {{CellSynchronisationReconfigurationRequestTDD-Extensions}}
    ...
}
```

OPTIONAL,

```
CellSynchronisationReconfigurationRequestTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
```

```

}
...
}
CellSynchronisationReconfigurationRequestTDD-IEs NBAP-PROTOCOL-IES ::= {
  { ID id-C-ID CRITICALITY reject TYPE C-ID PRESENCE mandatory
  }|
  { ID id-TimeSlot CRITICALITY reject TYPE TimeSlot PRESENCE mandatory }|
  { ID id-NCyclesPerSFNperiod CRITICALITY reject TYPE NCyclesPerSFNperiod PRESENCE mandatory }|
  { ID id-NRepetitionsPerCyclePeriod CRITICALITY reject TYPE NRepetitionsPerCyclePeriod PRESENCE mandatory }|
  { ID id-CellSyncBurstTransReconfInfo-CellSyncReconfRqstTDD CRITICALITY reject TYPE
  CellSyncBurstTransReconfInfo-CellSyncReconfRqstTDD PRESENCE optional }|
  { ID id-CellSyncBurstMeasReconfiguration-CellSyncReconfRqstTDD CRITICALITY reject TYPE CellSyncBurstMeasInfo-
  CellSyncReconfRqstTDD PRESENCE optional },
  ...
}

CellSyncBurstTransReconfInfo-CellSyncReconfRqstTDD ::= SEQUENCE (SIZE (1.. maxNrOfCellSyncBursts)) OF CellSyncBurstTransInfoItem-
CellSyncReconfRqstTDD

CellSyncBurstTransInfoItem-CellSyncReconfRqstTDD ::= SEQUENCE {
  cSBTransmissionID CSBTransmissionID,
  syncFrameNumberToTransmit SyncFrameNumber,
  cellSyncBurstCode CellSyncBurstCode OPTIONAL,
  cellSyncBurstCodeShift CellSyncBurstCodeShift OPTIONAL,
  dlTransPower DL-Power OPTIONAL,
  iE-Extensions ProtocolExtensionContainer { { CellSyncBurstTransInfoItem-CellSyncReconfRqstTDD-ExtIEs} }
  OPTIONAL,
  ...
}

CellSyncBurstTransInfoItem-CellSyncReconfRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

CellSyncBurstMeasInfo-CellSyncReconfRqstTDD ::= SEQUENCE {
  cellSyncBurstMeasInfoList-CellSyncReconfRqstTDD CellSyncBurstMeasInfoList-CellSyncReconfRqstTDD,
  synchronisationReportType SynchronisationReportTypeIE OPTIONAL,
  synchronisationReportCharacteristics SynchronisationReportCharacteristicsIE OPTIONAL,
  iE-Extensions ProtocolExtensionContainer { { SYNCd1CodeIdMeasInfoLCR-CellSyncReconfRqstTDD-ExtIEs} }
  OPTIONAL,
  ...
}

SYNCd1CodeIdMeasInfoLCR-CellSyncReconfRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

CellSyncBurstMeasInfoList-CellSyncReconfRqstTDD ::= ProtocolIE-Single-Container {{ CellSyncBurstMeasInfoListIEs-CellSyncReconfRqstTDD }}

CellSyncBurstMeasInfoListIEs-CellSyncReconfRqstTDD NBAP-PROTOCOL-IES ::= {
  { ID id-CellSyncBurstMeasInfoList-CellSyncReconfRqstTDD CRITICALITY reject TYPE CellSyncBurstMeasInfoListIE-CellSyncReconfRqstTDD
  PRESENCE mandatory }
}

```

```

SynchronisationReportTypeIE ::= ProtocolIE-Single-Container {{ SynchronisationReportTypeIEs }}

SynchronisationReportTypeIEs NBAP-PROTOCOL-IES ::= {
  { ID id-SynchronisationReportType          CRITICALITY reject  TYPE SynchronisationReportType          PRESENCE
    mandatory }

SynchronisationReportCharacteristicsIE ::= ProtocolIE-Single-Container {{ SynchronisationReportCharacteristicsIEs }}

SynchronisationReportCharacteristicsIEs NBAP-PROTOCOL-IES ::= {
  { ID id-SynchronisationReportCharacteristics          CRITICALITY reject  TYPE SynchronisationReportCharacteristics          PRESENCE mandatory } }

CellSyncBurstMeasInfoListIE-CellSyncReconfRqstTDD ::= SEQUENCE (SIZE (1.. maxNrOfCellSyncBursts)) OF CellSyncBurstMeasInfoItem-
CellSyncReconfRqstTDD

CellSyncBurstMeasInfoItem-CellSyncReconfRqstTDD ::= SEQUENCE {
  syncFrameNrToReceive          SyncFrameNumber,
  syncBurstInfo                 CellSyncBurstInfoList-CellSyncReconfRqstTDD,
  iE-Extensions                 ProtocolExtensionContainer { { CellSyncBurstMeasInfoItem-CellSyncReconfRqstTDD-ExtIEs} }    OPTIONAL,
  ...
}

CellSyncBurstMeasInfoItem-CellSyncReconfRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

CellSyncBurstInfoList-CellSyncReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfReceptsPerSyncFrame)) OF CellSyncBurstInfoItem-CellSyncReconfRqstTDD

CellSyncBurstInfoItem-CellSyncReconfRqstTDD ::= SEQUENCE {
  cSBMeasurementID             CSBMeasurementID,
  cellSyncBurstCode            CellSyncBurstCode,
  cellSyncBurstCodeShift       CellSyncBurstCodeShift,
  iE-Extensions                 ProtocolExtensionContainer { { CellSyncBurstMeasInfo-CellSyncReconfRqstTDD-ExtIEs} }    OPTIONAL,
  ...
}

CellSyncBurstMeasInfo-CellSyncReconfRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- CELL SYNCHRONISATION RECONFIGURATION RESPONSE 3.84Mcps TDD
--
-- *****

CellSynchronisationReconfigurationResponseTDD ::= SEQUENCE {
  protocolIEs                   ProtocolIE-Container  {{CellSynchronisationReconfigurationResponseTDD-IEs}},
  protocolExtensions            ProtocolExtensionContainer  {{CellSynchronisationReconfigurationResponseTDD-Extensions}}    OPTIONAL,
  ...
}

```

```

CellSynchronisationReconfigurationResponseTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

CellSynchronisationReconfigurationResponseTDD-IEs NBAP-PROTOCOL-IES ::= {
  { ID      id-CriticalityDiagnostics          CRITICALITY  ignore      TYPE      CriticalityDiagnostics          PRESENCE optional },
  ...
}

-- *****
--
-- CELL SYNCHRONISATION RECONFIGURATION FAILURE 3.84Mcps TDD
--
-- *****

CellSynchronisationReconfigurationFailureTDD ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container      {{CellSynchronisationReconfigurationFailureTDD-IEs}},
  protocolExtensions   ProtocolExtensionContainer  {{CellSynchronisationReconfigurationFailureTDD-Extensions}}  OPTIONAL,
  ...
}

CellSynchronisationReconfigurationFailureTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

CellSynchronisationReconfigurationFailureTDD-IEs NBAP-PROTOCOL-IES ::= {
  { ID      id-Cause          CRITICALITY  ignore      TYPE      Cause          PRESENCE mandatory
  }|
  { ID      id-CriticalityDiagnostics          CRITICALITY  ignore      TYPE      CriticalityDiagnostics          PRESENCE optional },
  ...
}

-- *****
--
-- CELL SYNCHRONISATION ADJUSTMENT REQUEST 3.84Mcps TDD
--
-- *****

CellSynchronisationAdjustmentRequestTDD ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container      {{CellSynchronisationAdjustmentRequestTDD-IEs}},
  protocolExtensions   ProtocolExtensionContainer  {{CellSynchronisationAdjustmentRequestTDD-Extensions}}  OPTIONAL,
  ...
}

CellSynchronisationAdjustmentRequestTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

CellSynchronisationAdjustmentRequestTDD-IEs NBAP-PROTOCOL-IES ::= {
  { ID      id-CellAdjustmentInfo-SyncAdjustmntRqstTDD  CRITICALITY  ignore      TYPE      CellAdjustmentInfo-SyncAdjustmentRqstTDD  PRESENCE mandatory  },
  ...
}

```

```
CellAdjustmentInfo-SyncAdjustmentRqstTDD ::= SEQUENCE (SIZE (1..maxCellinNodeB)) OF ProtocolIE-Single-Container {{ CellAdjustmentInfoItemIE-
SyncAdjustmntRqstTDD }}
```

```
CellAdjustmentInfoItemIE-SyncAdjustmntRqstTDD NBAP-PROTOCOL-IES ::= {
  { ID id-CellAdjustmentInfoItem-SyncAdjustmentRqstTDD CRITICALITY ignore TYPE CellAdjustmentInfoItem-
  SyncAdjustmentRqstTDD PRESENCE mandatory }
}
```

```
CellAdjustmentInfoItem-SyncAdjustmentRqstTDD ::= SEQUENCE {
  c-ID C-ID,
  frameAdjustmentValue FrameAdjustmentValue OPTIONAL,
  timingAdjustmentValue TimingAdjustmentValue OPTIONAL,
  dlTransPower DL-Power OPTIONAL,
  sfn SFN OPTIONAL,
  iE-Extensions ProtocolExtensionContainer { { CellAdjustmentInfoItem-SyncAdjustmntRqstTDD-ExtIEs} } OPTIONAL,
  ...
}
```

```
CellAdjustmentInfoItem-SyncAdjustmntRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}
```

```
-- *****
--
-- CELL SYNCHRONISATION ADJUSTMENT RESPONSE 3.84Mcps TDD
--
-- *****
```

```
CellSynchronisationAdjustmentResponseTDD ::= SEQUENCE {
  protocolIEs ProtocolIE-Container {{CellSynchronisationAdjustmentResponseTDD-IEs}},
  protocolExtensions ProtocolExtensionContainer {{CellSynchronisationAdjustmentResponseTDD-Extensions}} OPTIONAL,
  ...
}
```

```
CellSynchronisationAdjustmentResponseTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}
```

```
CellSynchronisationAdjustmentResponseTDD-IEs NBAP-PROTOCOL-IES ::= {
  { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
  ...
}
```

```
-- *****
--
-- CELL SYNCHRONISATION ADJUSTMENT FAILURE 3.84Mcps TDD
--
-- *****
```

```
CellSynchronisationAdjustmentFailureTDD ::= SEQUENCE {
  protocolIEs ProtocolIE-Container {{CellSynchronisationAdjustmentFailureTDD-IEs}},
  protocolExtensions ProtocolExtensionContainer {{CellSynchronisationAdjustmentFailureTDD-Extensions}} OPTIONAL,
  ...
}
```



```

CellSynchronisationAdjustmentFailureTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CellSynchronisationAdjustmentFailureTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-CauseLevel-SyncAdjustmntFailureTDD  CRITICALITY ignore      TYPE      CauseLevel-SyncAdjustmntFailureTDD  PRESENCE mandatory  } |
    { ID      id-CriticalityDiagnostics              CRITICALITY ignore      TYPE      CriticalityDiagnostics                PRESENCE optional  }
    },
    ...
}

CauseLevel-SyncAdjustmntFailureTDD ::= CHOICE {
    generalCause      GeneralCauseList-SyncAdjustmntFailureTDD,
    cellSpecificCause CellSpecificCauseList-SyncAdjustmntFailureTDD,
    ...
}

GeneralCauseList-SyncAdjustmntFailureTDD ::= SEQUENCE {
    cause              Cause,
    iE-Extensions     ProtocolExtensionContainer { { GeneralCauseList-SyncAdjustmntFailureTDD-ExtIEs } } OPTIONAL,
    ...
}

GeneralCauseList-SyncAdjustmntFailureTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CellSpecificCauseList-SyncAdjustmntFailureTDD ::= SEQUENCE {
    unsuccessful-cell-InformationRespList-SyncAdjustmntFailureTDD      Unsuccessful-cell-InformationRespList-SyncAdjustmntFailureTDD,
    iE-Extensions              ProtocolExtensionContainer { { CellSpecificCauseList-SyncAdjustmntFailureTDD-ExtIEs } }
    OPTIONAL,
    ...
}

CellSpecificCauseList-SyncAdjustmntFailureTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Unsuccessful-cell-InformationRespList-SyncAdjustmntFailureTDD ::= SEQUENCE (SIZE (1..maxCellinNodeB)) OF ProtocolIE-Single-Container
{{ Unsuccessful-cell-InformationRespItemIE-SyncAdjustmntFailureTDD }}

Unsuccessful-cell-InformationRespItemIE-SyncAdjustmntFailureTDD NBAP-PROTOCOL-IES ::= {
    { ID      id-Unsuccessful-cell-InformationRespItem-SyncAdjustmntFailureTDD      CRITICALITY      ignore      TYPE      Unsuccessful-
cell-InformationRespItem-SyncAdjustmntFailureTDD      PRESENCE      mandatory},
    ...
}

Unsuccessful-cell-InformationRespItem-SyncAdjustmntFailureTDD ::= SEQUENCE {
    c-ID              C-ID,
    cause              Cause,
    iE-Extensions     ProtocolExtensionContainer { { Unsuccessful-cell-InformationRespItem-SyncAdjustmntFailureTDD-
ExtIEs } } OPTIONAL,
    ...
}

```

```

}

Unsuccessful-cell-InformationRespItem-SyncAdjustmntFailureTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- CELL SYNCHRONISATION TERMINATION REQUEST 3.84Mcps TDD
--
-- *****

CellSynchronisationTerminationRequestTDD ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container    {{CellSynchronisationTerminationRequestTDD-IEs}},
  protocolExtensions  ProtocolExtensionContainer {{CellSynchronisationTerminationRequestTDD-Extensions}}  OPTIONAL,
  ...
}

CellSynchronisationTerminationRequestTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

CellSynchronisationTerminationRequestTDD-IEs NBAP-PROTOCOL-IES ::= {
  { ID      id-C-ID          CRITICALITY  ignore    TYPE  C-ID          PRESENCE mandatory }|
  { ID      id-CSBTransmissionID  CRITICALITY  ignore    TYPE  CSBTransmissionID  PRESENCE optional  }|
  { ID      id-CSBMeasurementID  CRITICALITY  ignore    TYPE  CSBMeasurementID  PRESENCE optional  }|
  ...
}

-- *****
--
-- CELL SYNCHRONISATION FAILURE INDICATION 3.84Mcps TDD
--
-- *****

CellSynchronisationFailureIndicationTDD ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container    {{CellSynchronisationFailureIndicationTDD-IEs}},
  protocolExtensions  ProtocolExtensionContainer {{CellSynchronisationFailureIndicationTDD-Extensions}}  OPTIONAL,
  ...
}

CellSynchronisationFailureIndicationTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

CellSynchronisationFailureIndicationTDD-IEs NBAP-PROTOCOL-IES ::= {
  { ID      id-C-ID          CRITICALITY  ignore    TYPE  C-ID          PRESENCE mandatory }|
  { ID      id-CSBTransmissionID  CRITICALITY  ignore    TYPE  CSBTransmissionID  PRESENCE optional  }|
  { ID      id-CSBMeasurementID  CRITICALITY  ignore    TYPE  CSBMeasurementID  PRESENCE optional  }|
  { ID      id-Cause          CRITICALITY  ignore    TYPE  Cause          PRESENCE mandatory }|
  ...
}

-- *****

```

```

--
-- CELL SYNCHRONISATION REPORT 3.84Mcps TDD
--
-- *****
CellSynchronisationReportTDD ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{CellSynchronisationReportTDD-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{CellSynchronisationReportTDD-Extensions}}    OPTIONAL,
    ...
}

CellSynchronisationReportTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CellSynchronisationReportTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-CellSyncInfo-CellSyncReprtTDD      CRITICALITY ignore      TYPE      CellSyncInfo-CellSyncReprtTDD      PRESENCE mandatory  },
    ...
}

CellSyncInfo-CellSyncReprtTDD ::= SEQUENCE (SIZE (1..maxCellinNodeB)) OF CellSyncInfoItemIE-CellSyncReprtTDD

CellSyncInfoItemIE-CellSyncReprtTDD ::= SEQUENCE {
    c-ID-CellSyncReprtTDD      C-ID-IE-CellSyncReprtTDD,
    syncReportType-CellSyncReprtTDD      SyncReportTypeIE-CellSyncReprtTDD      OPTIONAL,
    iE-Extensions              ProtocolExtensionContainer { { CellSyncInfoItemIE-CellSyncReprtTDD-ExtIEs } }    OPTIONAL,
    ...
}

CellSyncInfoItemIE-CellSyncReprtTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

C-ID-IE-CellSyncReprtTDD ::= ProtocolIE-Single-Container {{ C-ID-IEs-CellSyncReprtTDD }}

C-ID-IEs-CellSyncReprtTDD NBAP-PROTOCOL-IES ::= {
    { ID      id-C-ID              CRITICALITY ignore      TYPE C-ID
    PRESENCE      mandatory}
}

SyncReportTypeIE-CellSyncReprtTDD ::= ProtocolIE-Single-Container {{ SyncReportTypeIEs-CellSyncReprtTDD }}

SyncReportTypeIEs-CellSyncReprtTDD NBAP-PROTOCOL-IES ::= {
    { ID      id-SyncReportType-CellSyncReprtTDD      CRITICALITY ignore      TYPE SyncReportType-CellSyncReprtTDD      PRESENCE mandatory}
}

SyncReportType-CellSyncReprtTDD ::= CHOICE {
    intStdPhSyncInfo-CellSyncReprtTDD      IntStdPhCellSyncInfo-CellSyncReprtTDD,
    lateEntrantCell              NULL,
    frequencyAcquisition          NULL,
    ...
}

```

```

IntStdPhCellSyncInfo-CellSyncReprtTDD ::= SEQUENCE {
    cellSyncBurstMeasuredInfo      CellSyncBurstMeasInfoList-CellSyncReprtTDD,
    iE-Extensions                  ProtocolExtensionContainer { { IntStdPhCellSyncInfoList-CellSyncReprtTDD-ExtIEs} } OPTIONAL,
    ...
}

IntStdPhCellSyncInfoList-CellSyncReprtTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CellSyncBurstMeasInfoList-CellSyncReprtTDD ::= SEQUENCE (SIZE (1.. maxNrOfCellSyncBursts)) OF CellSyncBurstMeasInfoItem-CellSyncReprtTDD

CellSyncBurstMeasInfoItem-CellSyncReprtTDD ::= SEQUENCE {
    sFN                            SFN,
    cellSyncBurstInfo-CellSyncReprtTDD SEQUENCE (SIZE (1..maxNrOfReceptsPerSyncFrame)) OF CellSyncBurstInfo-CellSyncReprtTDD,
    iE-Extensions                  ProtocolExtensionContainer { { CellSyncBurstMeasInfoItem-CellSyncReprtTDD-ExtIEs} } OPTIONAL,
    ...
}

CellSyncBurstMeasInfoItem-CellSyncReprtTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CellSyncBurstInfo-CellSyncReprtTDD ::= CHOICE {
    cellSyncBurstAvailable      CellSyncBurstAvailable-CellSyncReprtTDD,
    cellSyncBurstNotAvailable   NULL,
    ...
}

CellSyncBurstAvailable-CellSyncReprtTDD ::= SEQUENCE {
    cellSyncBurstTiming         CellSyncBurstTiming,
    cellSyncBurstSIR            CellSyncBurstSIR,
    iE-Extensions               ProtocolExtensionContainer { { CellSyncBurstAvailable-CellSyncReprtTDD-ExtIEs} } OPTIONAL,
    ...
}

CellSyncBurstAvailable-CellSyncReprtTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

END

```

## 9.3.4 Information Elements Definitions

```

--*****
--
-- Information Element Definitions
--
--*****

NBAP-IEs {
itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
umts-Access (20) modules (3) nbap (2) version1 (1) nbap-IEs (2) }

```

```
DEFINITIONS AUTOMATIC TAGS ::=
BEGIN
```

```
IMPORTS
```

```
    maxNrOfTFCs,
    maxNrOfErrors,
    maxCTFC,
    maxNrOfTFs,
    maxTTI-count,
    maxRateMatching,
    maxCodeNrComp-1,
    maxNrOfCellSyncBursts,
    maxNrOfCodeGroups,
    maxNrOfMeasNCell,
    maxNrOfMeasNCell-1,
    maxNrOfReceptsPerSyncFrame,
    maxNrOfTFCIGroups,
    maxNrOfTFCI1Combs,
    maxNrOfTFCI2Combs,
    maxNrOfTFCI2Combs-1,
    maxNrOfSF,
    maxTGPS,
    maxNrOfUSCHs,
    maxNrOfULTSs,
    maxNrOfULTSLCRs,
    maxNrOfDPCHs,
    maxNrOfDPCHLCRs,
    maxNrOfCodes,
    maxNrOfDSCHs,
    maxNrOfDLTSs,
    maxNrOfDLTSLCRs,
    maxNrOfDCHs,
    maxNrOfLevels,
    maxNoGPSItems,
    maxNoSat,
```

```
    id-MessageStructure,
    id-ReportCharacteristicsType-OnModification,
    id-Rx-Timing-Deviation-Value-LCR,
    id-SFNsFNMeasurementValueInformation,
    id-SFNsFNMeasurementThresholdInformation,
    id-TUTRANGPSMeasurementValueInformation,
    id-TUTRANGPSMeasurementThresholdInformation,
    id-TypeOfError
```

```
FROM NBAP-Constants
```

```
    Criticality,
    ProcedureID,
    ProtocolIE-ID,
    TransactionID,
    TriggeringMessage
```

```
FROM NBAP-CommonDataTypes
```

```

    NBAP-PROTOCOL-IES,
    ProtocolExtensionContainer{},
    ProtocolIE-Single-Container{},
    NBAP-PROTOCOL-EXTENSION
FROM NBAP-Containers;

-- =====
-- A
-- =====

Acknowledged-PCPCH-access-preambles ::= INTEGER (0..15,...)
-- According to mapping in [22].

Acknowledged-PRACH-preambles-Value ::= INTEGER(0..240,...)
-- According to mapping in [22].

AddorDeleteIndicator ::= ENUMERATED {
    add,
    delete
}

Active-Pattern-Sequence-Information ::= SEQUENCE {
    cmConfigurationChangeCFN                CFN,
    transmission-Gap-Pattern-Sequence-Status  Transmission-Gap-Pattern-Sequence-Status-List  OPTIONAL,
    iE-Extensions                            ProtocolExtensionContainer { {Active-Pattern-Sequence-Information-ExtIEs} } OPTIONAL,
    ...
}

Active-Pattern-Sequence-Information-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Transmission-Gap-Pattern-Sequence-Status-List ::= SEQUENCE (SIZE (0..maxTGPS)) OF
    SEQUENCE {
        tGPSID          TGPSID,
        tGPRC           TGPRC,
        tGCFN           CFN,
        iE-Extensions   ProtocolExtensionContainer { { Transmission-Gap-Pattern-Sequence-Status-List-ExtIEs } } OPTIONAL,
        ...
    }

Transmission-Gap-Pattern-Sequence-Status-List-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

AICH-Power ::= INTEGER (-22..5)
-- Offset in dB.

```

```
AICH-TransmissionTiming ::= ENUMERATED {
    v0,
    v1
}

AllocationRetentionPriority ::= SEQUENCE {
    priorityLevel          PriorityLevel,
    pre-emptionCapability  Pre-emptionCapability,
    pre-emptionVulnerability Pre-emptionVulnerability,
    iE-Extensions         ProtocolExtensionContainer { {AllocationRetentionPriority-ExtIEs} } OPTIONAL,
    ...
}

AllocationRetentionPriority-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

APPreambleSignature ::= INTEGER (0..15)

APSubChannelNumber ::= INTEGER (0..11)

AvailabilityStatus ::= ENUMERATED {
    empty,
    in-test,
    failed,
    power-off,
    off-line,
    off-duty,
    dependency,
    degraded,
    not-installed,
    log-full,
    ...
}

-- =====
-- B
-- =====

BCCH-ModificationTime ::= INTEGER (0..511)
-- Time = BCCH-ModificationTime * 8
-- Range 0 to 4088, step 8
-- All SFN values in which MIB may be mapped are allowed

BindingID ::= OCTET STRING (SIZE (1..4, ...))

BetaCD ::= INTEGER (0..15)

BlockingPriorityIndicator ::= ENUMERATED {
    high,
    normal,
    low,
    ...
}
```

```
-- High priority: Block resource immediately.  
-- Normal priority: Block resource when idle or upon timer expiry.  
-- Low priority: Block resource when idle.
```

```
SCTD-Indicator ::= ENUMERATED {  
    active,  
    inactive  
}
```

```
-- =====  
-- C  
-- =====
```

```
Cause ::= CHOICE {  
    radioNetwork          CauseRadioNetwork,  
    transport            CauseTransport,  
    protocol              CauseProtocol,  
    misc                  CauseMisc,  
    ...  
}
```

```
CauseMisc ::= ENUMERATED {  
    control-processing-overload,  
    hardware-failure,  
    oam-intervention,  
    not-enough-user-plane-processing-resources,  
    unspecified,  
    ...  
}
```

```
CauseProtocol ::= ENUMERATED {  
    transfer-syntax-error,  
    abstract-syntax-error-reject,  
    abstract-syntax-error-ignore-and-notify,  
    message-not-compatible-with-receiver-state,  
    semantic-error,  
    unspecified,  
    abstract-syntax-error-falsely-constructed-message,  
    ...  
}
```

```
CauseRadioNetwork ::= ENUMERATED {  
    unknown-C-ID,  
    cell-not-available,  
    power-level-not-supported,  
    dl-radio-resources-not-available,  
    ul-radio-resources-not-available,  
    rl-already-ActivatedOrAllocated,  
    nodeB-Resources-unavailable,  
    measurement-not-supported-for-the-object,  
    combining-resources-not-available,  
    requested-configuration-not-supported,  
    synchronisation-failure,  
    priority-transport-channel-established,
```



```
sIB-Origination-in-Node-B-not-Supported,  
requested-tx-diversity-mode-not-supported,  
unspecified,  
bCCH-scheduling-error,  
measurement-temporarily-not-available,  
invalid-CM-settings,  
reconfiguration-CFN-not-elapsed,  
number-of-DL-codes-not-supported,  
s-cipch-not-supported,  
combining-not-supported,  
ul-sf-not-supported,  
dl-SF-not-supported,  
common-transport-channel-type-not-supported,  
dedicated-transport-channel-type-not-supported,  
downlink-shared-channel-type-not-supported,  
uplink-shared-channel-type-not-supported,  
cm-not-supported,  
tx-diversity-no-longer-supported,  
unknown-Local-Cell-ID,  
...,  
number-of-UL-codes-not-supported,  
information-temporarily-not-available,  
information-provision-not-supported-for-the-object,  
cell-synchronisation-not-supported,  
cell-synchronisation-adjustment-not-supported,  
dpc-mode-change-not-supported,  
iPDL-already-activated,  
iPDL-not-supported,  
iPDL-parameters-not-available,  
frequency-acquisition-not-supported  
}  
  
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,...)
CellSyncBurstCode ::= INTEGER(0..7, ...)
CellSyncBurstCodeShift ::= INTEGER(0..7)
CellSyncBurstRepetitionPeriod ::= INTEGER (0..4095)
CellSyncBurstSIR ::= INTEGER (0..31)
CellSyncBurstTiming ::= CHOICE {
    initialPhase      INTEGER (0..1048575,...),
    steadyStatePhase  INTEGER (0..255,...)
}
CellSyncBurstTimingThreshold ::= INTEGER(0..254)
CFN ::= INTEGER (0..255)
Channel-Assignment-Indication ::= ENUMERATED {
    cA-Active,
    cA-Inactive
}
ChipOffset ::= INTEGER (0..38399)
-- Unit Chip
C-ID ::= INTEGER (0..65535)
Closedlooptimingadjustmentmode ::= ENUMERATED {
    adj-1-slot,
    adj-2-slot,
    ...
}
CommonChannelsCapacityConsumptionLaw ::= SEQUENCE (SIZE(1..maxNrOfSF)) OF
    SEQUENCE {
        dl-Cost      INTEGER (0..65535),
        ul-Cost      INTEGER (0..65535),
        iE-Extensions  ProtocolExtensionContainer { { CommonChannelsCapacityConsumptionLaw-ExtIEs } }
        ...
    }
CommonChannelsCapacityConsumptionLaw-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
CommonMeasurementAccuracy ::= CHOICE {
    tUTRANGPSMeasurementAccuracyClass  TUTRANGPSAccuracyClass,
    ...
}
CommonMeasurementType ::= ENUMERATED {

```

```

    received-total-wide-band-power,
    transmitted-carrier-power,
    acknowledged-prach-preambles,
    ul-timeslot-iscp,
    acknowledged-PCPCH-access-preambles,
    detected-PCPCH-access-preambles,
    ...,
    uTRAN-GPS-Timing-of-Cell-Frames-for-UE-Positioning,
    sFN-SFN-Observed-Time-Difference
}

CommonMeasurementValue ::= CHOICE {
    transmitted-carrier-power          Transmitted-Carrier-Power-Value,
    received-total-wide-band-power     Received-total-wide-band-power-Value,
    acknowledged-prach-preambles       Acknowledged-PRACH-preambles-Value,
    uL-TimeslotISCP                    UL-TimeslotISCP-Value,
    acknowledged-PCPCH-access-preambles Acknowledged-PCPCH-access-preambles,
    detected-PCPCH-access-preambles     Detected-PCPCH-access-preambles,
    ...,
    extension-CommonMeasurementValue   Extension-CommonMeasurementValue
}

Extension-CommonMeasurementValue ::= ProtocolIE-Single-Container {{ Extension-CommonMeasurementValueIE }}

Extension-CommonMeasurementValueIE NBAP-PROTOCOL-IES ::= {
    { ID id-TUTRANGPSMeasurementValueInformation CRITICALITY ignore TYPE TUTRANGPSMeasurementValueInformation PRESENCE mandatory }|
    { ID id-SFN-SFNMeasurementValueInformation CRITICALITY ignore TYPE SFN-SFNMeasurementValueInformation PRESENCE mandatory }
}

CommonMeasurementValueInformation ::= CHOICE {
    measurementAvailable          CommonMeasurementAvailable,
    measurementnotAvailable       CommonMeasurementnotAvailable
}

CommonMeasurementAvailable ::= SEQUENCE {
    commonmeasurementValue        CommonMeasurementValue,
    ie-Extensions                  ProtocolExtensionContainer { { CommonMeasurementAvailableItem-ExtIEs } } OPTIONAL,
    ...
}

CommonMeasurementAvailableItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CommonMeasurementnotAvailable ::= NULL

CommonPhysicalChannelID ::= INTEGER (0..255)

Common-PhysicalChannel-Status-Information ::= SEQUENCE {
    commonPhysicalChannelID        CommonPhysicalChannelID,
    resourceOperationalState        ResourceOperationalState,
}

```

```

    availabilityStatus      AvailabilityStatus,
    iE-Extensions           ProtocolExtensionContainer { { Common-PhysicalChannel-Status-Information-ExtIEs} }    OPTIONAL,
    ...
}

Common-PhysicalChannel-Status-Information-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CommonTransportChannelID ::= INTEGER (0..255)

CommonTransportChannel-InformationResponse ::= SEQUENCE {
    commonTransportChannelID      CommonTransportChannelID,
    bindingID                     BindingID                OPTIONAL,
    transportLayerAddress         TransportLayerAddress  OPTIONAL,
    iE-Extensions                 ProtocolExtensionContainer { { CommonTransportChannel-InformationResponse-ExtIEs} }    OPTIONAL,
    ...
}

CommonTransportChannel-InformationResponse-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Common-TransportChannel-Status-Information ::= SEQUENCE {
    commonTransportChannelID      CommonTransportChannelID,
    resourceOperationalState     ResourceOperationalState,
    availabilityStatus           AvailabilityStatus,
    iE-Extensions                 ProtocolExtensionContainer { { Common-TransportChannel-Status-Information-ExtIEs} }    OPTIONAL,
    ...
}

Common-TransportChannel-Status-Information-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CommunicationControlPortID ::= INTEGER (0..65535)

Compressed-Mode-Deactivation-Flag ::= ENUMERATED {
    deactivate,
    maintain-Active
}

ConfigurationGenerationID ::= INTEGER (0..255)
-- Value '0' means "No configuration"

ConstantValue ::= INTEGER (-10..10,...)
-- -10 dB - +10 dB
-- unit dB
-- step 1 dB

CPCH-Allowed-Total-Rate ::= ENUMERATED {
    v15,
    v30,

```

```

v60,
v120,
v240,
v480,
v960,
v1920,
v2880,
v3840,
v4800,
v5760,
...
}

CPCHScramblingCodeNumber ::= INTEGER (0..79)

CPCH-UL-DPCCH-SlotFormat ::= INTEGER (0..2,...)

CriticalityDiagnostics ::= SEQUENCE {
    procedureID          ProcedureID          OPTIONAL,
    triggeringMessage    TriggeringMessage    OPTIONAL,
    procedureCriticality Criticality          OPTIONAL,
    transactionID       TransactionID        OPTIONAL,
    iEsCriticalityDiagnostics CriticalityDiagnostics-IE-List OPTIONAL,
    iE-Extensions       ProtocolExtensionContainer { {CriticalityDiagnostics-ExtIEs} } OPTIONAL,
    ...
}

CriticalityDiagnostics-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CriticalityDiagnostics-IE-List ::= SEQUENCE (SIZE (1..maxNrOfErrors)) OF
    SEQUENCE {
        iECriticality    Criticality,
        iE-ID            ProtocolIE-ID,
        repetitionNumber RepetitionNumber0 OPTIONAL,
        iE-Extensions    ProtocolExtensionContainer { {CriticalityDiagnostics-IE-List-ExtIEs} } OPTIONAL,
        ...
    }

CriticalityDiagnostics-IE-List-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-MessageStructure    CRITICALITY ignore    EXTENSION MessageStructure    PRESENCE optional    }|
    { ID id-TypeOfError         CRITICALITY ignore    EXTENSION TypeOfError        PRESENCE mandatory   }|
    ...
}

CRNC-CommunicationContextID ::= INTEGER (0..1048575)

CSBMeasurementID ::= INTEGER (0..65535)

CSBTransmissionID ::= INTEGER (0..65535)

-- =====
-- D

```

```

-- =====
DATA-ID ::= INTEGER (0..3)

DCH-ID ::= INTEGER (0..255)

DCH-FDD-Information ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-FDD-InformationItem

DCH-FDD-InformationItem ::= SEQUENCE {
    payloadCRC-PresenceIndicator      PayloadCRC-PresenceIndicator,
    ul-FP-Mode                        UL-FP-Mode,
    toAWS                              ToAWS,
    toAWE                              ToAWE,
    dCH-SpecificInformationList       DCH-Specific-FDD-InformationList,
    iE-Extensions                     ProtocolExtensionContainer { { DCH-FDD-InformationItem-ExtIEs } }    OPTIONAL,
    ...
}

DCH-FDD-InformationItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-Specific-FDD-InformationList ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-Specific-FDD-Item

DCH-Specific-FDD-Item ::= SEQUENCE {
    dCH-ID                            DCH-ID,
    ul-TransportFormatSet             TransportFormatSet,
    dl-TransportFormatSet             TransportFormatSet,
    allocationRetentionPriority       AllocationRetentionPriority,
    frameHandlingPriority             FrameHandlingPriority,
    qE-Selector                       QE-Selector,
    iE-Extensions                     ProtocolExtensionContainer { { DCH-Specific-FDD-Item-ExtIEs } }    OPTIONAL,
    ...
}

DCH-Specific-FDD-Item-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-InformationResponse ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-InformationResponseItem

DCH-InformationResponseItem ::= SEQUENCE {
    dCH-ID                            DCH-ID,
    bindingID                          BindingID OPTIONAL,
    transportLayerAddress              TransportLayerAddress OPTIONAL,
    iE-Extensions                     ProtocolExtensionContainer { { DCH-InformationResponseItem-ExtIEs } }    OPTIONAL,
    ...
}

DCH-InformationResponseItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-TDD-Information ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-TDD-InformationItem

```

```

DCH-TDD-InformationItem ::= SEQUENCE {
    payloadCRC-PresenceIndicator    PayloadCRC-PresenceIndicator,
    ul-FP-Mode                      UL-FP-Mode,
    toAWS                           ToAWS,
    toAWE                            ToAWE,
    dCH-SpecificInformationList     DCH-Specific-TDD-InformationList,
    iE-Extensions                   ProtocolExtensionContainer { { DCH-TDD-InformationItem-ExtIEs } }
    ...
}

DCH-TDD-InformationItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-Specific-TDD-InformationList ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-Specific-TDD-Item

DCH-Specific-TDD-Item ::= SEQUENCE {
    dCH-ID                          DCH-ID,
    ul-CCTrCH-ID                   CCTrCH-ID,
    dl-CCTrCH-ID                   CCTrCH-ID,
    ul-TransportFormatSet          TransportFormatSet,
    dl-TransportFormatSet          TransportFormatSet,
    allocationRetentionPriority     AllocationRetentionPriority,
    frameHandlingPriority           FrameHandlingPriority,
    qE-Selector                    QE-Selector                    OPTIONAL,
    -- This IE shall be present if DCH is part of set of Coordinated DCHs
    iE-Extensions                  ProtocolExtensionContainer { { DCH-Specific-TDD-Item-ExtIEs } }
    ...
}

DCH-Specific-TDD-Item-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

FDD-DCHs-to-Modify ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF FDD-DCHs-to-ModifyItem

FDD-DCHs-to-ModifyItem ::= SEQUENCE {
    ul-FP-Mode                      UL-FP-Mode          OPTIONAL,
    toAWS                           ToAWS              OPTIONAL,
    toAWE                            ToAWE              OPTIONAL,
    transportBearerRequestIndicator  TransportBearerRequestIndicator,
    dCH-SpecificInformationList     DCH-ModifySpecificInformation-FDD,
    iE-Extensions                   ProtocolExtensionContainer { { FDD-DCHs-to-ModifyItem-ExtIEs } }
    ...
}

FDD-DCHs-to-ModifyItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-ModifySpecificInformation-FDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-ModifySpecificItem-FDD

DCH-ModifySpecificItem-FDD ::= SEQUENCE {

```

```

dCH-ID                DCH-ID,
ul-TransportFormatSet TransportFormatSet    OPTIONAL,
dl-TransportFormatSet TransportFormatSet    OPTIONAL,
allocationRetentionPriority AllocationRetentionPriority OPTIONAL,
frameHandlingPriority  FrameHandlingPriority  OPTIONAL,
iE-Extensions         ProtocolExtensionContainer { { DCH-ModifySpecificItem-FDD-ExtIEs } }    OPTIONAL,
...
}

DCH-ModifySpecificItem-FDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
...
}

TDD-DCHs-to-Modify ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-ModifyItem-TDD

DCH-ModifyItem-TDD ::= SEQUENCE {
ul-FP-Mode            UL-FP-Mode            OPTIONAL,
toAWS                 ToAWS                 OPTIONAL,
toAWE                 ToAWE                 OPTIONAL,
transportBearerRequestIndicator TransportBearerRequestIndicator,
dCH-SpecificInformationList DCH-ModifySpecificInformation-TDD,
iE-Extensions         ProtocolExtensionContainer { { TDD-DCHs-to-ModifyItem-ExtIEs } }    OPTIONAL,
...
}

TDD-DCHs-to-ModifyItem-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
...
}

DCH-ModifySpecificInformation-TDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-ModifySpecificItem-TDD

DCH-ModifySpecificItem-TDD ::= SEQUENCE {
dCH-ID                DCH-ID,
ul-CCTrCH-ID          CCTrCH-ID          OPTIONAL,
dl-CCTrCH-ID          CCTrCH-ID          OPTIONAL,
ul-TransportFormatSet TransportFormatSet    OPTIONAL,
dl-TransportFormatSet TransportFormatSet    OPTIONAL,
allocationRetentionPriority AllocationRetentionPriority OPTIONAL,
frameHandlingPriority  FrameHandlingPriority  OPTIONAL,
iE-Extensions         ProtocolExtensionContainer { { DCH-ModifySpecificItem-TDD-ExtIEs } }    OPTIONAL,
...
}

DCH-ModifySpecificItem-TDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
...
}

DedicatedChannelsCapacityConsumptionLaw ::= SEQUENCE ( SIZE(1..maxNrOfSF) ) OF
SEQUENCE {
dl-Cost-1            INTEGER (0..65535),
dl-Cost-2            INTEGER (0..65535),
ul-Cost-1            INTEGER (0..65535),
ul-Cost-2            INTEGER (0..65535),

```



```

        iE-Extensions      ProtocolExtensionContainer { { DedicatedChannelsCapacityConsumptionLaw-ExtIEs } }
    }
    ...
}

DedicatedChannelsCapacityConsumptionLaw-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DedicatedMeasurementType ::= ENUMERATED {
    sir,
    sir-error,
    transmitted-code-power,
    rscp,
    rx-timing-deviation,
    round-trip-time,
    ...,
    rx-timing-deviation-LCR
}

DedicatedMeasurementValue ::= CHOICE {
    sIR-Value                SIR-Value,
    sIR-ErrorValue          SIR-Error-Value,
    transmittedCodePowerValue Transmitted-Code-Power-Value,
    rSCP                    RSCP-Value,
    rxTimingDeviationValue  Rx-Timing-Deviation-Value,
    roundTripTime          Round-Trip-Time-Value,
    ...,
    extension-DedicatedMeasurementValue Extension-DedicatedMeasurementValue
}

Extension-DedicatedMeasurementValue ::= ProtocolIE-Single-Container {{ Extension-DedicatedMeasurementValueIE }}

Extension-DedicatedMeasurementValueIE NBAP-PROTOCOL-IES ::= {
    { ID id-Rx-Timing-Deviation-Value-LCR CRITICALITY reject TYPE Rx-Timing-Deviation-Value-LCR PRESENCE mandatory }
}

DedicatedMeasurementValueInformation ::= CHOICE {
    measurementAvailable      DedicatedMeasurementAvailable,
    measurementnotAvailable   DedicatedMeasurementnotAvailable
}

DedicatedMeasurementAvailable ::= SEQUENCE {
    dedicatedmeasurementValue DedicatedMeasurementValue,
    cFN                        CFN OPTIONAL,
    ie-Extensions              ProtocolExtensionContainer { { DedicatedMeasurementAvailableItem-ExtIEs } } OPTIONAL,
    ...
}

DedicatedMeasurementAvailableItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {

```

```

    ...
}

DedicatedMeasurementnotAvailable ::= NULL

Detected-PCPCH-access-preambles ::= INTEGER (0..240,...)
-- According to mapping in [22].

DeltaSIR ::= INTEGER (0..30)
-- Unit dB, Step 0.1 dB, Range 0..3 dB.

DGPSCorrections ::= SEQUENCE {
    gpstow                GPSTOW,
    status-health        GPS-Status-Health,
    satelliteinfo        SAT-Info-DGPSCorrections,
    ie-Extensions        ProtocolExtensionContainer { { DGPSCorrections-ExtIEs } }    OPTIONAL,
    ...
}

DGPSCorrections-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DGPSThresholds ::= SEQUENCE {
    prcdeviation         PRCDeviation,
    ie-Extensions        ProtocolExtensionContainer { { DGPSThresholds-ExtIEs } }    OPTIONAL,
    ...
}

DGPSThresholds-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DiversityControlField ::= ENUMERATED {
    may,
    must,
    must-not,
    ...
}

DiversityMode ::= ENUMERATED {
    none,
    sTTD,
    closed-loop-mode1,
    closed-loop-mode2,
    ...
}

DL-DPCH-SlotFormat ::= INTEGER (0..16,...)

```

```

DL-Timeslot-Information ::= SEQUENCE (SIZE (1.. maxNrOfDLTSs)) OF DL-Timeslot-InformationItem

DL-Timeslot-InformationItem ::= SEQUENCE {
    timeSlot                TimeSlot,
    midambleShiftAndBurstType MidambleShiftAndBurstType,
    tFCI-Presence            TFCI-Presence,
    dL-Code-Information      TDD-DL-Code-Information,
    iE-Extensions            ProtocolExtensionContainer { { DL-Timeslot-InformationItem-ExtIEs } } OPTIONAL,
    ...
}

DL-Timeslot-InformationItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-TimeslotLCR-Information ::= SEQUENCE (SIZE (1.. maxNrOfDLTSLCRs)) OF DL-TimeslotLCR-InformationItem

DL-TimeslotLCR-InformationItem ::= SEQUENCE {
    timeSlotLCR              TimeSlotLCR,
    midambleShiftLCR         MidambleShiftLCR,
    tFCI-Presence            TFCI-Presence,
    dL-Code-LCR-Information  TDD-DL-Code-LCR-Information,
    iE-Extensions            ProtocolExtensionContainer { { DL-TimeslotLCR-InformationItem-ExtIEs } } OPTIONAL,
    ...
}

DL-TimeslotLCR-InformationItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-FrameType ::= ENUMERATED {
    typeA,
    typeB,
    ...
}

DL-or-Global-CapacityCredit ::= INTEGER (0..65535)

DL-Power ::= INTEGER (-350..150)
-- Value = DL-Power/10
-- Unit dB, Range -35dB .. +15dB, Step +0.1dB

DLPowerAveragingWindowSize ::= INTEGER (1..60)

DL-ScramblingCode ::= INTEGER (0..15)
-- 0= Primary scrambling code of the cell, 1..15= Secondary scrambling code --

DL-TimeslotISCP ::= INTEGER (0..91)

DL-TimeslotISCPInfo ::= SEQUENCE (SIZE (1..maxNrOfDLTSs)) OF DL-TimeslotISCPInfoItem

DL-TimeslotISCPInfoItem ::= SEQUENCE {
    timeSlot                TimeSlot,
    dL-TimeslotISCP          DL-TimeslotISCP,
}

```

```

    iE-Extensions          ProtocolExtensionContainer { {DL-TimeslotISCPInfoItem-ExtIEs} }
    ...
  }
  OPTIONAL,

DL-TimeslotISCPInfoItem-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

DL-TimeslotISCPInfoLCR ::= SEQUENCE (SIZE (1..maxNrOfDLTSLCRs)) OF DL-TimeslotISCPInfoItemLCR

DL-TimeslotISCPInfoItemLCR ::= SEQUENCE {
  timeSlotLCR              TimeSlotLCR,
  dL-TimeslotISCP          DL-TimeslotISCP,
  iE-Extensions            ProtocolExtensionContainer { {DL-TimeslotISCPInfoItemLCR-ExtIEs} }
  ...
}
OPTIONAL,

DL-TimeslotISCPInfoItemLCR-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

DL-TPC-Pattern01Count ::= INTEGER (0..30,...)

Downlink-Compressed-Mode-Method ::= ENUMERATED {
  puncturing,
  sFdiv2,
  higher-layer-scheduling,
  ...
}

DPC-Mode ::= ENUMERATED {
  mode0,
  mode1,
  ...
}

DPCH-ID ::= INTEGER (0..239)

DSCH-ID ::= INTEGER (0..255)

DSCH-InformationResponse ::= SEQUENCE (SIZE (1..maxNrOfDSCHs)) OF DSCH-InformationResponseItem

DSCH-InformationResponseItem ::= SEQUENCE {
  dSCH-ID                  DSCH-ID,
  bindingID                BindingID              OPTIONAL,
  transportLayerAddress    TransportLayerAddress  OPTIONAL,
  iE-Extensions            ProtocolExtensionContainer { { DSCH-InformationResponseItem-ExtIEs } }
  ...
}
OPTIONAL,

DSCH-InformationResponseItem-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

```

```

DSCH-FDD-Common-Information ::= SEQUENCE {
    enhancedDSCHPCIndicator      EnhancedDSCHPCIndicator      OPTIONAL,
    enhancedDSCHPC                EnhancedDSCHPC                OPTIONAL,
    -- The IE shall be present if the Enhanced DSCH PC Indicator IE is set to "Enhanced DSCH PC Active in the UE".
    iE-Extensions                ProtocolExtensionContainer { { DSCH-FDD-Common-Information-ExtIEs} }    OPTIONAL,
    ...
}

```

```

DSCH-FDD-Common-Information-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

DSCH-FDD-Information ::= SEQUENCE (SIZE (1..maxNrOfDSCHs)) OF DSCH-FDD-InformationItem

```

```

DSCH-FDD-InformationItem ::= SEQUENCE {
    dSCH-ID                      DSCH-ID,
    transportFormatSet           TransportFormatSet,
    allocationRetentionPriority   AllocationRetentionPriority,
    frameHandlingPriority        FrameHandlingPriority,
    toAWS                        ToAWS,
    toAWE                        ToAWE,
    iE-Extensions                ProtocolExtensionContainer { { DSCH-FDD-InformationItem-ExtIEs} }    OPTIONAL,
    ...
}

```

```

DSCH-FDD-InformationItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

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 ::= {
    ...
}

```

```

DwPCH-Power ::= INTEGER (-150..400,...)
-- DwPCH-power = power * 10
-- If power <= -15 DwPCH shall be set to -150
-- If power >= 40 DwPCH shall be set to 400
-- Unit dBm, Range -15dBm .. +40 dBm, Step +0.1dB

```

```

-- =====
-- E
-- =====

End-Of-Audit-Sequence-Indicator ::= ENUMERATED {
    end-of-audit-sequence,
    not-end-of-audit-sequence
}

EnhancedDSCHPC ::= SEQUENCE {
    enhancedDSCHPCWnd EnhancedDSCHPCWnd,
    enhancedDSCHPCCounter EnhancedDSCHPCCounter,
    enhancedDSCHPowerOffset EnhancedDSCHPowerOffset,
    ...
}

EnhancedDSCHPCCounter ::= INTEGER (1..50)

EnhancedDSCHPCIndicator ::= ENUMERATED {
    enhancedDSCHPCActiveInTheUE,
    enhancedDSCHPCNotActiveInTheUE
}

EnhancedDSCHPCWnd ::= INTEGER (1..10)

EnhancedDSCHPowerOffset ::= INTEGER (-15..0)

-- =====
-- F
-- =====

FDD-DL-ChannelisationCodeNumber ::= INTEGER(0.. 511)
-- According to the mapping in [9]. The maximum value is equal to the DL spreading factor -1--

FDD-DL-CodeInformation ::= SEQUENCE (SIZE (1..maxNrOfCodes)) OF FDD-DL-CodeInformationItem

FDD-DL-CodeInformationItem ::= SEQUENCE {
    dl-ScramblingCode DL-ScramblingCode,
    fdd-DL-ChannelisationCodeNumber FDD-DL-ChannelisationCodeNumber,
    transmissionGapPatternSequenceCodeInformation TransmissionGapPatternSequenceCodeInformation OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { { FDD-DL-CodeInformationItem-ExtIEs } } OPTIONAL,
    ...
}

FDD-DL-CodeInformationItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

FDD-S-CCPCH-Offset ::= INTEGER (0..149)
-- 0: 0 chip, 1: 256 chip, 2: 512 chip, .. ,149: 38144 chip [7] --

FDD-TPC-DownlinkStepSize ::= ENUMERATED {
    step-size0-5,

```

```

    step-size1,
    step-size1-5,
    step-size2,
    ...
}

FirstRLS-Indicator ::= ENUMERATED {
    first-RLS,
    not-first-RLS,
    ...
}

FNReportingIndicator ::= ENUMERATED {
    fN-reporting-required,
    fN-reporting-not-required
}

FrameHandlingPriority ::= INTEGER (0..15)
-- 0=lower priority, 15=higher priority --

FrameAdjustmentValue ::= INTEGER(0..4095)

FrameOffset ::= INTEGER (0..255)

FPACH-Power ::= INTEGER (-150..400,...) -- FPACH-power = power * 10
-- If power <= -15 FPACH shall be set to -150
-- If power >= 40 FPACH shall be set to 400
-- Unit dBm, Range -15dBm .. +40 dBm, Step +0.1dB

-- =====
-- G
-- =====

GapLength                ::= INTEGER (1..14)
-- Unit slot

GapDuration              ::= INTEGER (1..144,...)
-- Unit frame

GPS-Almanac ::= SEQUENCE {
    wna-alm          BIT STRING (SIZE (8)),
    sat-info-almanac    SAT-Info-Almanac,
    sVGlobalHealth-alm BIT STRING (SIZE (364)) OPTIONAL,
    ie-Extensions       ProtocolExtensionContainer { { GPS-Almanac-ExtIEs} }     OPTIONAL,
    ...
}

GPS-Almanac-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

GPS-Ionospheric-Model ::= SEQUENCE {
    alpha-zero-ionos      BIT STRING (SIZE (8)),
    alpha-one-ionos      BIT STRING (SIZE (8)),
    alpha-two-ionos      BIT STRING (SIZE (8)),
    alpha-three-ionos    BIT STRING (SIZE (8)),
    beta-zero-ionos      BIT STRING (SIZE (8)),
    beta-one-ionos       BIT STRING (SIZE (8)),
    beta-two-ionos       BIT STRING (SIZE (8)),
    beta-three-ionos     BIT STRING (SIZE (8)),
    ie-Extensions        ProtocolExtensionContainer { { GPS-Ionospheric-Model-ExtIEs} }    OPTIONAL,
    ...
}

GPS-Ionospheric-Model-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

GPS-Information ::= SEQUENCE (SIZE (0..maxNoGPSItems)) OF GPS-Information-Item

GPS-Information-Item ::= ENUMERATED {
    gps-navigation-model-and-time-recovery,
    gps-ionospheric-model,
    gps-utc-model,
    gps-almanac,
    gps-rt-integrity,
    ...
}

GPS-RealTime-Integrity ::= CHOICE {
    bad-satellites        GPSBadSat-Info-RealTime-Integrity,
    no-bad-satellites     NULL
}

GPSBadSat-Info-RealTime-Integrity ::= SEQUENCE {
    sat-info              SATInfo-RealTime-Integrity,
    ie-Extensions         ProtocolExtensionContainer { { GPSBadSat-Info-RealTime-Integrity-ExtIEs} }    OPTIONAL,
    ...
}

GPSBadSat-Info-RealTime-Integrity-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

GPS-NavigationModel-and-TimeRecovery ::= SEQUENCE (SIZE (1..maxNoSat)) OF GPS-NavandRecovery-Item

GPS-NavandRecovery-Item ::= SEQUENCE {
    tx-tow-nav            INTEGER (0..1048575),

```



```

sat-id-nav                SAT-ID,
t1m-message-nav          BIT STRING (SIZE (14)),
t1m-revd-c-nav           BIT STRING (SIZE (2)),
ho-word-nav              BIT STRING (SIZE (22)),
w-n-nav                  BIT STRING (SIZE (10)),
ca-or-p-on-l2-nav       BIT STRING (SIZE (2)),
user-range-accuracy-index-nav BIT STRING (SIZE (4)),
sv-health-nav           BIT STRING (SIZE (6)),
iodc-nav                 BIT STRING (SIZE (10)),
l2-p-dataflag-nav       BIT STRING (SIZE (1)),
sfl-reserved-nav        BIT STRING (SIZE (87)),
t-gd-nav                 BIT STRING (SIZE (8)),
t-oc-nav                 BIT STRING (SIZE (16)),
a-f-2-nav                BIT STRING (SIZE (8)),
a-f-1-nav                BIT STRING (SIZE (16)),
a-f-zero-nav            BIT STRING (SIZE (22)),
c-rs-nav                 BIT STRING (SIZE (16)),
delta-n-nav              BIT STRING (SIZE (16)),
m-zero-nav               BIT STRING (SIZE (32)),
c-uc-nav                 BIT STRING (SIZE (16)),
gps-e-nav                BIT STRING (SIZE (32)),
c-us-nav                 BIT STRING (SIZE (16)),
a-sqrt-nav               BIT STRING (SIZE (32)),
t-oe-nav                 BIT STRING (SIZE (16)),
fit-interval-flag-nav   BIT STRING (SIZE (1)),
aodo-nav                 BIT STRING (SIZE (5)),
c-ic-nav                 BIT STRING (SIZE (16)),
omega-zero-nav           BIT STRING (SIZE (32)),
c-is-nav                 BIT STRING (SIZE (16)),
i-zero-nav               BIT STRING (SIZE (32)),
c-rc-nav                 BIT STRING (SIZE (16)),
gps-omega-nav            BIT STRING (SIZE (32)),
omegadot-nav            BIT STRING (SIZE (24)),
idot-nav                 BIT STRING (SIZE (14)),
spare-zero-fill         BIT STRING (SIZE (20)),
ie-Extensions            ProtocolExtensionContainer { { GPS-NavandRecovery-Item-ExtIEs } } OPTIONAL,
...
}

GPS-NavandRecovery-Item-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

GPS-RX-POS ::= SEQUENCE {
latitudeSign              ENUMERATED {north, south},
latitude                  INTEGER (0..8388607),
longitude                 INTEGER (-8388608..8388607),
directionOfAltitude      ENUMERATED {height, depth},
altitude                  INTEGER (0..32767),
iE-Extensions            ProtocolExtensionContainer { { GPS-RX-POS-ExtIEs } } OPTIONAL,
...
}

```

```

}

GPS-RX-POS-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

GPS-Status-Health ::= ENUMERATED {
    udre-scale-1dot0,
    udre-scale-0dot75,
    udre-scale-0dot5,
    udre-scale-0dot3,
    udre-scale-0dot1,
    no-data,
    invalid-data
}

GPSTOW ::= INTEGER (0..604799)

GPS-UTC-Model ::= SEQUENCE {
    a-one-utc          BIT STRING (SIZE (24)),
    a-zero-utc         BIT STRING (SIZE (32)),
    t-ot-utc           BIT STRING (SIZE (8)),
    delta-t-ls-utc     BIT STRING (SIZE (8)),
    w-n-t-utc          BIT STRING (SIZE (8)),
    w-n-lsf-utc        BIT STRING (SIZE (8)),
    dn-utc             BIT STRING (SIZE (8)),
    delta-t-lsf-utc    BIT STRING (SIZE (8)),
    ie-Extensions      ProtocolExtensionContainer { { GPS-UTC-Model-ExtIEs} }    OPTIONAL,
    ...
}

GPS-UTC-Model-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- =====
-- H
-- =====

-- =====
-- I
-- =====

IB-OC-ID ::= INTEGER (1..16)

IB-SG-DATA ::= BIT STRING
-- Contains SIB data fixed" or "SIB data variable" in segment as encoded in ref.[18].

IB-SG-POS ::= INTEGER (0..4094)
-- Only even positions allowed

```

IB-SG-REP ::= ENUMERATED {rep4, rep8, rep16, rep32, rep64, rep128, rep256, rep512, rep1024, rep2048, rep4096}

IB-Type ::= ENUMERATED {

mIB,  
 sB1,  
 sB2,  
 sIB1,  
 sIB2,  
 sIB3,  
 sIB4,  
 sIB5,  
 sIB6,  
 sIB7,  
 sIB8,  
 sIB9,  
 sIB10,  
 sIB11,  
 sIB12,  
 sIB13,  
 sIB13dot1,  
 sIB13dot2,  
 sIB13dot3,  
 sIB13dot4,  
 sIB14,  
 sIB15,  
 sIB15dot1,  
 sIB15dot2,  
 sIB15dot3,  
 sIB16,  
 ...,  
 sIB17,  
 sIB15dot4,  
 sIB18,  
 sIB15dot5

}

InformationReportCharacteristics ::= CHOICE {

onDemand NULL,  
 periodic InformationReportCharacteristicsType-ReportPeriodicity,  
 onModification InformationReportCharacteristicsType-OnModification,  
 ...

}

InformationReportCharacteristicsType-ReportPeriodicity ::= CHOICE {

min ReportPeriodicity-Scaledmin,  
 hours ReportPeriodicity-Scaledhour,  
 ...

}

InformationReportCharacteristicsType-OnModification ::= SEQUENCE {

information-thresholds InformationThresholds OPTIONAL,  
 ie-Extensions ProtocolExtensionContainer { { InformationReportCharacteristicsType-OnModification-ExtIEs } } OPTIONAL,  
 ...

...

```

}

InformationReportCharacteristicsType-OnModification-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

InformationThresholds ::= CHOICE {
    dgps                DGPSThresholds,
    ...
}

InformationExchangeID ::= INTEGER (0..1048575)

InformationType ::= SEQUENCE {
    information-Type-Item      Information-Type-Item,
    gpsInformation             GPS-Information OPTIONAL,
    -- The IE shall be present if the Information Type Item IE indicates "GPS Information".
    iE-Extensions             ProtocolExtensionContainer { { Information-Type-ExtIEs } } OPTIONAL,
    ...
}

Information-Type-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Information-Type-Item ::= ENUMERATED {
    gpsinformation,
    dgpscorrections,
    gpsrxpos,
    ...
}

InnerLoopDLPCStatus ::= ENUMERATED {
    active,
    inactive
}

IPDL-Indicator ::= ENUMERATED {
    active,
    inactive
}

IPDL-FDD-Parameters ::= SEQUENCE {
    iP-SpacingFDD             ENUMERATED{sp5, sp7, sp10, sp15, sp20, sp30, sp40, sp50, ...},
    iP-Length                 ENUMERATED{len5, len10},
    seed                       INTEGER(0..63),
    burstModeParams           BurstModeParams OPTIONAL,

```

```

    iP-Offset                INTEGER(0..9),
    iE-Extensions            ProtocolExtensionContainer { { IPDLFDDParameter-ExtIEs } } OPTIONAL,
    ...
}

IPDLFDDParameter-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

IPDL-TDD-Parameters ::= SEQUENCE {
    iP-SpacingTDD            ENUMERATED{sp30,sp40,sp50,sp70,sp100,...},
    iP-Start                INTEGER(0..4095),
    iP-Slot                 INTEGER(0..14),
    iP-PCCPCH               ENUMERATED{switchOff-1-Frame,switchOff-2-Frames},
    burstModeParams         BurstModeParams OPTIONAL,
    iE-Extensions            ProtocolExtensionContainer { { IPDLTDDParameter-ExtIEs } } OPTIONAL,
    ...
}

BurstModeParams ::= SEQUENCE {
    burstStart              INTEGER(0..15),
    burstLenth              INTEGER(10..25),
    burstFreq               INTEGER(1..16),
    ...
}

IPDLTDDParameter-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- =====
-- J
-- =====

-- =====
-- K
-- =====

-- =====
-- L
-- =====

LimitedPowerIncrease ::= ENUMERATED {
    used,
    not-used
}

Local-Cell-ID ::= INTEGER (0..268435455)

-- =====
-- M
-- =====

MaximumDL-PowerCapability ::= INTEGER(0..500)

```

```

-- Unit dBm, Range 0dBm .. 50dBm, Step +0.1dB

MaximumTransmissionPower ::= INTEGER(0..500)
-- Unit dBm, Range 0dBm .. 50dBm, Step +0.1dB

MaxNrOfUL-DPDCHs ::= INTEGER (1..6)

Max-Number-of-PCPCHes ::= INTEGER (1..64,...)

MaxPRACH-MidambleShifts ::= ENUMERATED {
    shift4,
    shift8,
    ...
}

MeasurementFilterCoefficient ::= ENUMERATED {k0, k1, k2, k3, k4, k5, k6, k7, k8, k9, k11, k13, k15, k17, k19,...}
-- Measurement Filter Coefficient to be used for measurement

MeasurementID ::= INTEGER (0..1048575)

MessageStructure ::= SEQUENCE (SIZE (1..maxNrOfLevels)) OF
    SEQUENCE {
        iE-ID                ProtocolIE-ID,
        repetitionNumber     RepetitionNumber1     OPTIONAL,
        iE-Extensions        ProtocolExtensionContainer { {MessageStructure-ExtIEs} } OPTIONAL,
        ...
    }

MessageStructure-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

MidambleConfigurationLCR ::=    ENUMERATED {v2, v4, v6, v8, v10, v12, v14, v16, ...}

MidambleConfigurationBurstType1And3 ::=    ENUMERATED {v4, v8, v16}

MidambleConfigurationBurstType2 ::=    ENUMERATED {v3, v6}

MidambleShiftAndBurstType ::=    CHOICE {
    type1                SEQUENCE {
        midambleConfigurationBurstType1And3 MidambleConfigurationBurstType1And3,
        midambleAllocationMode                CHOICE {
            defaultMidamble                NULL,
            commonMidamble                NULL,
            ueSpecificMidamble                MidambleShiftLong,
            ...
        },
        ...
    },
    type2                SEQUENCE {
        midambleConfigurationBurstType2                MidambleConfigurationBurstType2,
        midambleAllocationMode                CHOICE {
            defaultMidamble                NULL,
            commonMidamble                NULL,

```

```

        ueSpecificMidamble          MidambleShiftShort,
        ...
    },
    ...
},
type3                               SEQUENCE {
    midambleConfigurationBurstType1And3 MidambleConfigurationBurstType1And3,
    midambleAllocationMode             CHOICE {
        defaultMidamble                NULL,
        ueSpecificMidamble             MidambleShiftLong,
        ...
    },
    ...
},
...
}

MidambleShiftLong ::= INTEGER (0..15)

MidambleShiftShort ::= INTEGER (0..5)

MidambleShiftLCR ::= SEQUENCE {
    midambleAllocationMode MidambleAllocationMode,
    midambleShift           MidambleShiftLong OPTIONAL,
    -- The IE shall be present if the Midamble Allocation Mode IE is set to "UE specific midamble".
    midambleConfigurationLCR MidambleConfigurationLCR,
    iE-Extensions            ProtocolExtensionContainer { {MidambleShiftLCR-ExtIEs} } OPTIONAL,
    ...
}

MidambleAllocationMode ::= ENUMERATED {
    defaultMidamble,
    commonMidamble,
    uESpecificMidamble,
    ...
}

MidambleShiftLCR-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

MinimumDL-PowerCapability ::= INTEGER(0..800)
-- Unit dBm, Range -30dBm .. 50dBm, Step +0.1dB

MinSpreadingFactor ::= ENUMERATED {
    v4,
    v8,
    v16,
    v32,
    v64,
    v128,
    v256,
    v512
}

```

```

-- TDD Mapping scheme for the minimum spreading factor 1 and 2: "256" means 1, "512" means 2

Modulation ::= ENUMERATED {
    qPSK,
    eightPSK,
    ...
}

MinUL-ChannelisationCodeLength ::= ENUMERATED {
    v4,
    v8,
    v16,
    v32,
    v64,
    v128,
    v256,
    ...
}

MultiplexingPosition ::= ENUMERATED {
    fixed,
    flexible
}

-- =====
-- N
-- =====

NCyclesPerSFNperiod ::= ENUMERATED {
    v1,
    v2,
    v4,
    v8,
    ...
}

NEOT ::= INTEGER (0..8)

NFmax ::= INTEGER (1..64,...)

NRRepetitionsPerCyclePeriod ::= INTEGER (2..10)

N-INSYNC-IND ::= INTEGER (1..256)

N-OUTSYNC-IND ::= INTEGER (1..256)

NeighbouringCellMeasurementInformation ::= SEQUENCE (SIZE (1..maxNrOfMeasNCell)) OF
    CHOICE {
        neighbouringFDDCellMeasurementInformation    NeighbouringFDDCellMeasurementInformation, -- FDD only
        neighbouringTDDCellMeasurementInformation    NeighbouringTDDCellMeasurementInformation,
        -- Applicable to 3.84Mcps TDD only
        ...
    }
}

```



```

NeighbouringFDDCellMeasurementInformation ::= SEQUENCE {
    uC-Id                UC-Id,
    uARFCN               UARFCN,
    primaryScramblingCode PrimaryScramblingCode,
    iE-Extensions       ProtocolExtensionContainer { { NeighbouringFDDCellMeasurementInformationItem-ExtIEs } } OPTIONAL,
    ...
}

NeighbouringFDDCellMeasurementInformationItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

NeighbouringTDDCellMeasurementInformation ::= SEQUENCE {
    uC-Id                UC-Id,
    uARFCN               UARFCN,
    cellParameterID     CellParameterID,
    timeSlot             TimeSlot OPTIONAL,
    midambleShiftAndBurstType MidambleShiftAndBurstType OPTIONAL,
    iE-Extensions       ProtocolExtensionContainer { { NeighbouringTDDCellMeasurementInformationItem-ExtIEs } } OPTIONAL,
    ...
}

NeighbouringTDDCellMeasurementInformationItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

NodeB-CommunicationContextID ::= INTEGER (0..1048575)

NStartMessage ::= INTEGER (1..8)

-- =====
-- O
-- =====

-- =====
-- P
-- =====

PagingIndicatorLength ::= ENUMERATED {
    v2,
    v4,
    v8,
    ...
}

PayloadCRC-PresenceIndicator ::= ENUMERATED {
    CRC-Included,
    CRC-NotIncluded,
    ...
}

PCCPCH-Power ::= INTEGER (-150..400,...)
-- PCCPCH-power = power * 10

```

```
-- If power <= -15 PCCPCH shall be set to -150
-- If power >= 40 PCCPCH shall be set to 400
-- Unit dBm, Range -15dBm .. +40 dBm, Step +0.1dB
```

```
PCP-Length ::= ENUMERATED{
    v0,
    v8
}
```

```
PDSCH-CodeMapping ::= SEQUENCE {
    dl-ScramblingCode          DL-ScramblingCode,
    signallingMethod          CHOICE {
        code-Range            PDSCH-CodeMapping-PDSCH-CodeMappingInformationList,
        tFCI-Range            PDSCH-CodeMapping-DSCH-MappingInformationList,
        explicit               PDSCH-CodeMapping-PDSCH-CodeInformationList,
        ...,
        replace                PDSCH-CodeMapping-ReplacedPDSCH-CodeInformationList
    },
    iE-Extensions              ProtocolExtensionContainer { { PDSCH-CodeMapping-ExtIEs} } OPTIONAL,
    ...
}
```

```
PDSCH-CodeMapping-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

```
PDSCH-CodeMapping-CodeNumberComp ::= INTEGER (0..maxCodeNrComp-1)
```

```
PDSCH-CodeMapping-SpreadingFactor ::= ENUMERATED {
    v4,
    v8,
    v16,
    v32,
    v64,
    v128,
    v256,
    ...
}
```

```
PDSCH-CodeMapping-PDSCH-CodeMappingInformationList ::= SEQUENCE (SIZE (1..maxNrOfCodeGroups)) OF
SEQUENCE {
    spreadingFactor            PDSCH-CodeMapping-SpreadingFactor,
    multi-CodeInfo             PDSCH-Multi-CodeInfo,
    start-CodeNumber           PDSCH-CodeMapping-CodeNumberComp,
    stop-CodeNumber            PDSCH-CodeMapping-CodeNumberComp,
    iE-Extensions              ProtocolExtensionContainer { { PDSCH-CodeMapping-PDSCH-CodeMappingInformationList-ExtIEs} } OPTIONAL,
    ...
}
```

```
PDSCH-CodeMapping-PDSCH-CodeMappingInformationList-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

```
PDSCH-CodeMapping-DSCH-MappingInformationList ::= SEQUENCE (SIZE (1..maxNrOfTFCIGroups)) OF
```

```

SEQUENCE {
    maxTFCI-field2-Value          PDSCH-CodeMapping-MaxTFCI-Field2-Value,
    spreadingFactor              PDSCH-CodeMapping-SpreadingFactor,
    multi-CodeInfo              PDSCH-Multi-CodeInfo,
    codeNumber                  PDSCH-CodeMapping-CodeNumberComp,
    iE-Extensions                ProtocolExtensionContainer { { PDSCH-CodeMapping-DSCH-MappingInformationList-ExtIEs } } OPTIONAL,
    ...
}

PDSCH-CodeMapping-DSCH-MappingInformationList-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PDSCH-CodeMapping-MaxTFCI-Field2-Value ::= INTEGER (1..1023)

PDSCH-CodeMapping-PDSCH-CodeInformationList ::= SEQUENCE (SIZE (1..maxNrOfTFCI2Combs)) OF
    SEQUENCE {
        spreadingFactor          PDSCH-CodeMapping-SpreadingFactor,
        multi-CodeInfo          PDSCH-Multi-CodeInfo,
        codeNumber              PDSCH-CodeMapping-CodeNumberComp,
        iE-Extensions          ProtocolExtensionContainer { { PDSCH-CodeMapping-PDSCH-CodeInformationList-ExtIEs } } OPTIONAL,
        ...
    }

PDSCH-CodeMapping-PDSCH-CodeInformationList-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PDSCH-CodeMapping-ReplacedPDSCH-CodeInformationList ::= SEQUENCE (SIZE (1..maxNrOfTFCI2Combs)) OF
    SEQUENCE {
        tfci-Field2              TFCS-MaxTFCI-field2-Value,
        spreadingFactor          PDSCH-CodeMapping-SpreadingFactor,
        multi-CodeInfo          PDSCH-Multi-CodeInfo,
        codeNumber              PDSCH-CodeMapping-CodeNumberComp,
        iE-Extensions          ProtocolExtensionContainer { { PDSCH-CodeMapping-ReplacedPDSCH-CodeInformationList-ExtIEs } } OPTIONAL,
        ...
    }

PDSCH-CodeMapping-ReplacedPDSCH-CodeInformationList-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PDSCH-Multi-CodeInfo ::= INTEGER (1..16)

PDSCH-ID ::= INTEGER (0..255)

PDSCHSet-ID ::= INTEGER (0..255)

PICH-Mode ::= ENUMERATED {
    v18,
    v36,
    v72,
    v144,
    ...
}

```

```
}

PICH-Power ::= INTEGER (-10..5)
-- Unit dB, Range -10dB .. +5dB, Step +1dB

PowerAdjustmentType ::= ENUMERATED {
    none,
    common,
    individual
}

PowerOffset ::= INTEGER (0..24)
-- PowerOffset = offset * 0.25
-- Unit dB, Range 0dB .. +6dB, Step +0.25dB

PowerRaiseLimit ::= INTEGER (0..10)

PRACH-Midamble ::= ENUMERATED {
    inverted,
    direct,
    ...
}

PRC ::= INTEGER (-2047..2047)
--pseudo range correction; scaling factor 0.32 meters

PRCDeviation ::= ENUMERATED {
    one,
    two,
    five,
    ten,
    ...
}

PreambleSignatures ::= BIT STRING {
    signature15(0),
    signature14(1),
    signature13(2),
    signature12(3),
    signature11(4),
    signature10(5),
    signature9(6),
    signature8(7),
    signature7(8),
    signature6(9),
    signature5(10),
    signature4(11),
    signature3(12),
    signature2(13),
    signature1(14),
    signature0(15)
} (SIZE (16))

PreambleThreshold ::= INTEGER (0..72)
```

```
-- 0= -36.0dB, 1= -35.5dB, ... , 72= 0.0dB

PredictedSFNSFNDeviationLimit ::=INTEGER (1..256)
-- Unit chip, Step 1/16 chip, Range 1/16..16 chip

PredictedTUTRANGPSDeviationLimit ::= INTEGER (1..256)
-- Unit chip, Step 1/16 chip, Range 1/16..16 chip

Pre-emptionCapability ::= ENUMERATED {
    shall-not-trigger-pre-emption,
    may-trigger-pre-emption
}

Pre-emptionVulnerability ::= ENUMERATED {
    not-pre-emptable,
    pre-emptable
}

PrimaryCPICH-Power ::= INTEGER(-100..500)
-- step 0.1 (Range -10.0..50.0) Unit is dBm

PrimaryScramblingCode ::= INTEGER (0..511)

PriorityLevel           ::= INTEGER (0..15)
-- 0 = spare, 1 = highest priority, ...14 = lowest priority and 15 = no priority

PropagationDelay ::= INTEGER (0..255)
-- Unit: chips, step size 3 chips
-- example: 0 = 0chip, 1 = 3chips

SCH-TimeSlot ::= INTEGER (0..6)

PunctureLimit ::= INTEGER (0..15)
-- 0: 40%; 1: 44%; ... 14: 96%; 15: 100%

PUSCH-ID ::= INTEGER (0..255)

PUSCHSet-ID ::= INTEGER (0..255)

-- =====
-- Q
-- =====

QE-Selector ::= ENUMERATED {
    selected,
    non-selected
}

-- =====
-- R
-- =====

RACH-SlotFormat ::= ENUMERATED {
    v0,
```

```
v1,  
v2,  
v3,  
...  
}  
  
RACH-SubChannelNumbers ::= BIT STRING {  
    subCh11(0),  
    subCh10(1),  
    subCh9(2),  
    subCh8(3),  
    subCh7(4),  
    subCh6(5),  
    subCh5(6),  
    subCh4(7),  
    subCh3(8),  
    subCh2(9),  
    subCh1(10),  
    subCh0(11)  
} (SIZE (12))  
  
Range-Correction-Rate ::= INTEGER (-127..127)  
-- scaling factor 0.032 m/s  
  
ReferenceClockAvailability ::= ENUMERATED {  
    available,  
    notAvailable  
}  
  
ReferenceSFNoffset ::= INTEGER (0..255)  
  
RepetitionLength ::= INTEGER (1..63)  
  
RepetitionPeriod ::= ENUMERATED {  
    v1,  
    v2,  
    v4,  
    v8,  
    v16,  
    v32,  
    v64,  
    ...  
}  
  
RepetitionNumber0 ::= INTEGER (0..255)  
  
RepetitionNumber1 ::= INTEGER (1..256)  
  
RefTFCNumber ::= INTEGER (0..3)  
  
ReportCharacteristics ::= CHOICE {  
    onDemand          NULL,  
    periodic          ReportCharacteristicsType-ReportPeriodicity,  
    event-a          ReportCharacteristicsType-EventA,  
}
```

```

event-b          ReportCharacteristicsType-EventB,
event-c          ReportCharacteristicsType-EventC,
event-d          ReportCharacteristicsType-EventD,
event-e          ReportCharacteristicsType-EventE,
event-f          ReportCharacteristicsType-EventF,
...
extension-ReportCharacteristics  Extension-ReportCharacteristics
}

Extension-ReportCharacteristics ::= ProtocolIE-Single-Container {{ Extension-ReportCharacteristicsIE }}

Extension-ReportCharacteristicsIE NBAP-PROTOCOL-IES ::= {
  { ID id-ReportCharacteristicsType-OnModification  CRITICALITY reject  TYPE ReportCharacteristicsType-OnModification  PRESENCE mandatory }
}

ReportCharacteristicsType-EventA ::= SEQUENCE {
  measurementThreshold          ReportCharacteristicsType-MeasurementThreshold,
  measurementHysteresisTime     ReportCharacteristicsType-ScaledMeasurementHysteresisTime           OPTIONAL,
  iE-Extensions                 ProtocolExtensionContainer { { ReportCharacteristicsType-EventA-ExtIEs } }  OPTIONAL,
  ...
}

ReportCharacteristicsType-EventA-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

ReportCharacteristicsType-EventB ::= SEQUENCE {
  measurementThreshold          ReportCharacteristicsType-MeasurementThreshold,
  measurementHysteresisTime     ReportCharacteristicsType-ScaledMeasurementHysteresisTime           OPTIONAL,
  iE-Extensions                 ProtocolExtensionContainer { { ReportCharacteristicsType-EventB-ExtIEs } }  OPTIONAL,
  ...
}

ReportCharacteristicsType-EventB-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

ReportCharacteristicsType-EventC ::= SEQUENCE {
  measurementIncreaseThreshold  ReportCharacteristicsType-MeasurementIncreaseDecreaseThreshold,
  measurementChangeTime         ReportCharacteristicsType-ScaledMeasurementChangeTime,
  iE-Extensions                 ProtocolExtensionContainer { { ReportCharacteristicsType-EventC-ExtIEs } }  OPTIONAL,
  ...
}

ReportCharacteristicsType-EventC-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

ReportCharacteristicsType-EventD ::= SEQUENCE {
  measurementDecreaseThreshold  ReportCharacteristicsType-MeasurementIncreaseDecreaseThreshold,
  measurementChangeTime         ReportCharacteristicsType-ScaledMeasurementChangeTime,
  iE-Extensions                 ProtocolExtensionContainer { { ReportCharacteristicsType-EventD-ExtIEs } }  OPTIONAL,
  ...
}

```

```

ReportCharacteristicsType-EventD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

ReportCharacteristicsType-EventE ::= SEQUENCE {
  measurementThreshold1      ReportCharacteristicsType-MeasurementThreshold,
  measurementThreshold2      ReportCharacteristicsType-MeasurementThreshold      OPTIONAL,
  measurementHysteresisTime  ReportCharacteristicsType-ScaledMeasurementHysteresisTime  OPTIONAL,
  reportPeriodicity          ReportCharacteristicsType-ReportPeriodicity      OPTIONAL,
  iE-Extensions              ProtocolExtensionContainer { { ReportCharacteristicsType-EventE-ExtIEs } }      OPTIONAL,
  ...
}

ReportCharacteristicsType-EventE-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

ReportCharacteristicsType-EventF ::= SEQUENCE {
  measurementThreshold1      ReportCharacteristicsType-MeasurementThreshold,
  measurementThreshold2      ReportCharacteristicsType-MeasurementThreshold      OPTIONAL,
  measurementHysteresisTime  ReportCharacteristicsType-ScaledMeasurementHysteresisTime  OPTIONAL,
  reportPeriodicity          ReportCharacteristicsType-ReportPeriodicity      OPTIONAL,
  iE-Extensions              ProtocolExtensionContainer { { ReportCharacteristicsType-EventF-ExtIEs } }      OPTIONAL,
  ...
}

ReportCharacteristicsType-EventF-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

ReportCharacteristicsType-OnModification ::= SEQUENCE {
  measurementThreshold      ReportCharacteristicsType-MeasurementThreshold,
  iE-Extensions              ProtocolExtensionContainer { { ReportCharacteristicsType-OnModification-ExtIEs } }      OPTIONAL,
  ...
}

ReportCharacteristicsType-OnModification-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

ReportCharacteristicsType-MeasurementIncreaseDecreaseThreshold ::= CHOICE {
  received-total-wide-band-power      Received-total-wide-band-power-Value-IncrDecrThres,
  transmitted-carrier-power            Transmitted-Carrier-Power-Value,
  acknowledged-prach-preambles        Acknowledged-PRACH-preambles-Value,
  uL-TimeslotISCP                      UL-TimeslotISCP-Value-IncrDecrThres,
  sir                                  SIR-Value-IncrDecrThres,
  sir-error                            SIR-Error-Value-IncrDecrThres,
  transmitted-code-power               Transmitted-Code-Power-Value-IncrDecrThres,
  rscp                                  RSCP-Value-IncrDecrThres,
  round-trip-time                      Round-Trip-Time-IncrDecrThres,
  acknowledged-PCPCH-access-preambles Acknowledged-PCPCH-access-preambles,
  detected-PCPCH-access-preambles      Detected-PCPCH-access-preambles,
  ...
}

```



```

}

ReportCharacteristicsType-MeasurementThreshold ::= CHOICE {
    received-total-wide-band-power          Received-total-wide-band-power-Value,
    transmitted-carrier-power                Transmitted-Carrier-Power-Value,
    acknowledged-prach-preambles            Acknowledged-PRACH-preambles-Value,
    uL-TimeslotISCP                          UL-TimeslotISCP-Value,
    sir                                       SIR-Value,
    sir-error                                SIR-Error-Value,
    transmitted-code-power                  Transmitted-Code-Power-Value,
    rscp                                     RSCP-Value,
    rx-timing-deviation                     Rx-Timing-Deviation-Value,
    round-trip-time                         Round-Trip-Time-Value,
    acknowledged-PCPCH-access-preambles     Acknowledged-PCPCH-access-preambles,
    detected-PCPCH-access-preambles         Detected-PCPCH-access-preambles,
    ...,
    extension-ReportCharacteristicsType-MeasurementThreshold      Extension-ReportCharacteristicsType-MeasurementThreshold
}

Extension-ReportCharacteristicsType-MeasurementThreshold ::= ProtocolIE-Single-Container {{ Extension-ReportCharacteristicsType-
MeasurementThresholdIE }}

Extension-ReportCharacteristicsType-MeasurementThresholdIE NBAP-PROTOCOL-IES ::= {
    { ID id-TUTRANGPSMeasurementThresholdInformation    CRITICALITY reject TYPE TUTRANGPSMeasurementThresholdInformation    PRESENCE mandatory }|
    { ID id-SFNFSNMeasurementThresholdInformation       CRITICALITY reject TYPE SFNFSNMeasurementThresholdInformation    PRESENCE mandatory }|
    { ID id-Rx-Timing-Deviation-Value-LCR              CRITICALITY reject TYPE Rx-Timing-Deviation-Value-LCR              PRESENCE mandatory}
}

ReportCharacteristicsType-ScaledMeasurementChangeTime ::= CHOICE {
    msec          MeasurementChangeTime-Scaledmsec,
    ...
}

MeasurementChangeTime-Scaledmsec ::= INTEGER (1..6000,...)
-- MeasurementChangeTime-Scaledmsec = Time * 10
-- Unit ms, Range 10ms .. 60000ms(1min), Step 10ms

ReportCharacteristicsType-ScaledMeasurementHysteresisTime ::= CHOICE {
    msec          MeasurementHysteresisTime-Scaledmsec,
    ...
}

MeasurementHysteresisTime-Scaledmsec ::= INTEGER (1..6000,...)
-- MeasurementHysteresisTime-Scaledmsec = Time * 10
-- Unit ms, Range 10ms .. 60000ms(1min), Step 10ms

ReportCharacteristicsType-ReportPeriodicity ::= CHOICE {
    msec          ReportPeriodicity-Scaledmsec,
    min           ReportPeriodicity-Scaledmin,
    ...
}

ReportPeriodicity-Scaledmsec ::= INTEGER (1..6000,...)
-- ReportPeriodicity-msec = ReportPeriodicity * 10

```

```

-- Unit ms, Range 10ms .. 60000ms(1min), Step 10ms

ReportPeriodicity-Scaledmin ::= INTEGER (1..60,...)
-- Unit min, Range 1min .. 60min(hour), Step 1min

ReportPeriodicity-Scaledhour ::= INTEGER (1..24,...)
-- Unit hour, Range 1hour .. 24hours(day), Step 1hour

ResourceOperationalState ::= ENUMERATED {
    enabled,
    disabled
}

RL-ID ::= INTEGER (0..31)

RL-Set-ID ::= INTEGER (0..31)

Round-Trip-Time-IncrDecrThres ::= INTEGER(0..32766)

RNC-ID ::= INTEGER (0..4095)

Round-Trip-Time-Value ::= INTEGER(0..32767)
-- According to mapping in [22]

RSCP-Value ::= INTEGER (0..127)
-- According to mapping in [23]

RSCP-Value-IncrDecrThres ::= INTEGER (0..126)

Received-total-wide-band-power-Value ::= INTEGER(0..621)
-- According to mapping in [22]/[23]

Received-total-wide-band-power-Value-IncrDecrThres ::= INTEGER (0..620)

RequestedDataValueInformation ::= CHOICE {
    informationAvailable      InformationAvailable,
    informationnotAvailable   InformationnotAvailable
}

InformationAvailable ::= SEQUENCE {
    requesteddataValue      RequestedDataValue,
    ie-Extensions           ProtocolExtensionContainer { { InformationAvailableItem-ExtIEs} }
    ...
}

InformationAvailableItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

InformationnotAvailable ::= NULL

```

```

RequestedDataValue ::= SEQUENCE {
    dgps-corrections          DGPSCorrections          OPTIONAL,
    gps-navandrecovery        GPS-NavigationModel-and-TimeRecovery  OPTIONAL,
    gps-ionos-model           GPS-Ionospheric-Model       OPTIONAL,
    gps-utc-model             GPS-UTC-Model           OPTIONAL,
    gps-almanac               GPS-Almanac             OPTIONAL,
    gps-rt-integrity          GPS-RealTime-Integrity        OPTIONAL,
    gpsrxpos                  GPS-RX-POS             OPTIONAL,
    iE-Extensions            ProtocolExtensionContainer { { RequestedDataValue-ExtIEs } }  OPTIONAL,
    ...
}

```

```

RequestedDataValue-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

Rx-Timing-Deviation-Value ::= INTEGER (0..8191)
-- According to mapping in [23]

```

```

Rx-Timing-Deviation-Value-LCR ::= INTEGER (0..511)
-- According to mapping in [23]

```

```

-- =====
-- S
-- =====

```

```

AdjustmentPeriod          ::= INTEGER(1..256)
-- Unit Frame

```

```

SAT-ID ::= INTEGER (0..63)

```

```

SAT-Info-Almanac ::= SEQUENCE (SIZE (1..maxNoSat)) OF SAT-Info-Almanac-Item

```

```

SAT-Info-Almanac-Item ::= SEQUENCE {
    data-id          DATA-ID,
    sat-id           SAT-ID,
    gps-e-alm        BIT STRING (SIZE (16)),
    gps-toa-alm      BIT STRING (SIZE (8)),
    gps-delta-I-alm  BIT STRING (SIZE (16)),
    omegadot-alm     BIT STRING (SIZE (16)),
    svhealth-alm     BIT STRING (SIZE (8)),
    gps-a-sqrt-alm   BIT STRING (SIZE (24)),
    omegazero-alm    BIT STRING (SIZE (24)),
    m-zero-alm       BIT STRING (SIZE (24)),
    gps-omega-alm    BIT STRING (SIZE (24)),
    gps-af-zero-alm  BIT STRING (SIZE (11)),
    gps-af-one-alm   BIT STRING (SIZE (11)),
    ie-Extensions    ProtocolExtensionContainer { { SAT-Info-Almanac-Item-ExtIEs } }  OPTIONAL,
    ...
}

```

```

SAT-Info-Almanac-Item-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

}

SAT-Info-DGPSCorrections ::= SEQUENCE (SIZE (1..maxNoSat)) OF SAT-Info-DGPSCorrections-Item

SAT-Info-DGPSCorrections-Item ::= SEQUENCE {
    sat-id                SAT-ID,
    iode-dgps             BIT STRING (SIZE (8)),
    udre                  UDRE,
    prc                   PRC,
    range-correction-rate Range-Correction-Rate,
    ie-Extensions         ProtocolExtensionContainer { { SAT-Info-DGPSCorrections-Item-ExtIEs } } OPTIONAL,
    ...
}

SAT-Info-DGPSCorrections-Item-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

SATInfo-RealTime-Integrity ::= SEQUENCE (SIZE (1..maxNoSat)) OF SAT-Info-RealTime-Integrity-Item

SAT-Info-RealTime-Integrity-Item ::= SEQUENCE {
    bad-sat-id           SAT-ID,
    ie-Extensions        ProtocolExtensionContainer { { SAT-Info-RealTime-Integrity-Item-ExtIEs } } OPTIONAL,
    ...
}

SAT-Info-RealTime-Integrity-Item-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

ScaledAdjustmentRatio ::= INTEGER(0..100)
-- AdjustmentRatio = ScaledAdjustmentRatio / 100

MaxAdjustmentStep ::= INTEGER(1..10)
-- Unit Slot

ScramblingCodeNumber ::= INTEGER (0..15)

SecondaryCCPCH-SlotFormat ::= INTEGER(0..17,...)

Segment-Type ::= ENUMERATED {
    first-segment,
    first-segment-short,
    subsequent-segment,
    last-segment,
    last-segment-short,
    complete-SIB,
    complete-SIB-short,
    ...
}

S-FieldLength ::= ENUMERATED {

```

```

    v1,
    v2,
    ...
}

SFN ::= INTEGER (0..4095)

SFNSFN-FDD ::= INTEGER (0..614399)

SFNSFN-TDD ::= INTEGER (0..40961)

SFNSFNChangeLimit ::= INTEGER (1..256)
-- Unit chip, Step 1/16 chip, Range 1/16..16 chip

SFNSFNDriftRate ::= INTEGER (-100..100)
-- Unit chip/s, Step 1/256 chip/s, Range -100/256..+100/256 chip/s

SFNSFNDriftRateQuality ::= INTEGER (0..100)
-- Unit chip/s, Step 1/256 chip/s, Range 0..100/256 chip/s

SFNSFNMeasurementThresholdInformation ::= SEQUENCE {
    sFNSFNChangeLimit          SFNSFNChangeLimit          OPTIONAL,
    predictedSFNSFNDeviationLimit  PredictedSFNSFNDeviationLimit  OPTIONAL,
    iE-Extensions              ProtocolExtensionContainer { { SFNSFNMeasurementThresholdInformation-ExtIEs } }  OPTIONAL,
    ...
}

SFNSFNMeasurementThresholdInformation-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

SFNSFNMeasurementValueInformation ::= SEQUENCE {
    successfullNeighbouringCellSFNSFNObservedTimeDifferenceMeasurementInformation  SEQUENCE (SIZE(1..maxNrOfMeasNCell)) OF
        SEQUENCE {
            uC-Id          UC-Id,
            sFNSFNValue    SFNSFNValue,
            sFNSFNQuality  SFNSFNQuality          OPTIONAL,
            sFNSFNDriftRate  SFNSFNDriftRate,
            sFNSFNDriftRateQuality  SFNSFNDriftRateQuality  OPTIONAL,
            sFNSFNTimeStampInformation  SFNSFNTimeStampInformation,
            iE-Extensions  ProtocolExtensionContainer { { SuccessfullNeighbouringCellSFNSFNObservedTimeDifferenceMeasurementInformationItem-
ExtIEs } }  OPTIONAL,
            ...
        },
    unsuccessfullNeighbouringCellSFNSFNObservedTimeDifferenceMeasurementInformation  SEQUENCE (SIZE(0..maxNrOfMeasNCell-1)) OF
        SEQUENCE {
            uC-Id          UC-Id,
            iE-Extensions  ProtocolExtensionContainer { { UnsuccessfullNeighbouringCellSFNSFNObservedTimeDifferenceMeasurementInformationItem-
ExtIEs } }  OPTIONAL,
            ...
        },
    iE-Extensions  ProtocolExtensionContainer { { SFNSFNMeasurementValueInformationItem-ExtIEs } }  OPTIONAL,
    ...
}

```

```

}

SFNSFNMeasurementValueInformationItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

SuccessfullNeighbouringCellSFNSFNObservedTimeDifferenceMeasurementInformationItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UnsuccessfullNeighbouringCellSFNSFNObservedTimeDifferenceMeasurementInformationItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

SFNSFNQuality ::= INTEGER (0..255)
-- Unit chip, Step 1/16 chip, Range 0.. 255/16 chip

ShutdownTimer ::= INTEGER (1..3600)
-- Unit sec

SIB-Originator ::= ENUMERATED {
    nodeB,
    cRNC,
    ...
}

SIR-Error-Value ::= INTEGER (0..125)
-- According to mapping in [22]

SFNSFNTimeStampInformation ::= CHOICE {
    sFNSFNTimeStamp-FDD      SFN,
    sFNSFNTimeStamp-TDD     SFNSFNTimeStamp-TDD,
    ...}

SFNSFNTimeStamp-TDD ::= SEQUENCE {
    sFN                      SFN,
    timeSlot                 TimeSlot,
    iE-Extensions           ProtocolExtensionContainer { { SFNSFNTimeStamp-ExtIEs} } OPTIONAL,
    ...
}

SFNSFNTimeStamp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

SFNSFNValue ::= CHOICE {
    sFNSFN-FDD              SFNSFN-FDD,
    sFNSFN-TDD              SFNSFN-TDD,

```

```

    ...
}

SIR-Error-Value-IncrDecrThres ::= INTEGER (0..124)

SIR-Value ::= INTEGER (0..63)
-- According to mapping in [22]/[23]

SIR-Value-IncrDecrThres ::= INTEGER (0..62)

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,...)

SyncFrameNumber ::= INTEGER (1..10)

SynchronisationReportCharacteristics ::= SEQUENCE {
    synchronisationReportCharacteristicsType SynchronisationReportCharacteristicsType,
    synchronisationReportCharactThreExc SynchronisationReportCharactThreExc OPTIONAL,
    -- This IE shall be included if the synchronisationReportCharacteristicsType IE is set to 'thresholdExceeding'.
    iE-Extensions ProtocolExtensionContainer { { SynchronisationReportCharacteristics-ExtIEs } } OPTIONAL,
    ...
}

```

```

SynchronisationReportCharacteristics-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

SynchronisationReportCharactThreExc ::= SEQUENCE (SIZE (1..maxNrOfCellSyncBursts)) OF SynchronisationReportCharactThreInfoItem

SynchronisationReportCharactThreInfoItem ::= SEQUENCE {
    syncFrameNumber          SyncFrameNumber,
    cellSyncBurstInformation SEQUENCE (SIZE (1.. maxNrOfReceptsPerSyncFrame)) OF SynchronisationReportCharactCellSyncBurstInfoItem,
    iE-Extensions           ProtocolExtensionContainer { { SynchronisationReportCharactThreInfoItem-ExtIEs } } OPTIONAL,
    ...
}

SynchronisationReportCharactThreInfoItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

SynchronisationReportCharactCellSyncBurstInfoItem ::= SEQUENCE {
    cellSyncBurstCode          CellSyncBurstCode,
    cellSyncBurstCodeShift    CellSyncBurstCodeShift,
    cellSyncBurstTiming        CellSyncBurstTiming          OPTIONAL,
    cellSyncBurstTimingThreshold CellSyncBurstTimingThreshold OPTIONAL,
    iE-Extensions             ProtocolExtensionContainer { { SynchronisationReportCharactCellSyncBurstInfoItem-ExtIEs } } OPTIONAL,
    ...
}

SynchronisationReportCharactCellSyncBurstInfoItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

SynchronisationReportCharacteristicsType ::= ENUMERATED {
    frameRelated,
    sFNperiodRelated,
    cycleLengthRelated,
    thresholdExceeding,
    frequencyAcquisitionCompleted,
    ...
}

SynchronisationReportType ::= ENUMERATED {
    initialPhase,
    steadyStatePhase,
    lateEntrantCell,
    frequencyAcquisition,
    ...
}

-- =====
-- T
-- =====

T-Cell ::= ENUMERATED {
    v0,
    v1,

```



```

    v2,
    v3,
    v4,
    v5,
    v6,
    v7,
    v8,
    v9
}

T-RLFFAILURE ::= INTEGER (0..255)
-- Unit seconds, Range 0s .. 25.5s, Step 0.1s

TDD-ChannelisationCode ::= ENUMERATED {
    chCode1div1,
    chCode2div1,
    chCode2div2,
    chCode4div1,
    chCode4div2,
    chCode4div3,
    chCode4div4,
    chCode8div1,
    chCode8div2,
    chCode8div3,
    chCode8div4,
    chCode8div5,
    chCode8div6,
    chCode8div7,
    chCode8div8,
    chCode16div1,
    chCode16div2,
    chCode16div3,
    chCode16div4,
    chCode16div5,
    chCode16div6,
    chCode16div7,
    chCode16div8,
    chCode16div9,
    chCode16div10,
    chCode16div11,
    chCode16div12,
    chCode16div13,
    chCode16div14,
    chCode16div15,
    chCode16div16,
    ...
}

TDD-ChannelisationCodeLCR ::= SEQUENCE {
    tDD-ChannelisationCode      TDD-ChannelisationCode,
    modulation                  Modulation, -- Modulation options for 1.28Mcps TDD in contrast to 3.84Mcps TDD
    iE-Extensions               ProtocolExtensionContainer { { TDD-ChannelisationCodeLCR-ExtIEs } } OPTIONAL,
    ...
}

```

```

TDD-ChannelisationCodeLCR-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TDD-DL-Code-Information ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF TDD-DL-Code-InformationItem

TDD-DL-Code-InformationItem ::= SEQUENCE {
    dPCH-ID                DPCH-ID,
    tdd-ChannelisationCode TDD-ChannelisationCode,
    iE-Extensions          ProtocolExtensionContainer { { TDD-DL-Code-InformationItem-ExtIEs} } OPTIONAL,
    ...
}

TDD-DL-Code-InformationItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TDD-DL-Code-LCR-Information ::= SEQUENCE (SIZE (1..maxNrOfDPCHLCRs)) OF TDD-DL-Code-LCR-InformationItem

TDD-DL-Code-LCR-InformationItem ::= SEQUENCE {
    dPCH-ID                DPCH-ID,
    tdd-ChannelisationCodeLCR TDD-ChannelisationCodeLCR,
    tdd-DL-DPCH-TimeSlotFormat-LCR TDD-DL-DPCH-TimeSlotFormat-LCR,
    iE-Extensions          ProtocolExtensionContainer { { TDD-DL-Code-LCR-InformationItem-ExtIEs} } OPTIONAL,
    ...
}

TDD-DL-Code-LCR-InformationItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TDD-DL-DPCH-TimeSlotFormat-LCR ::= CHOICE {
    qPSK                QPSK-DL-DPCH-TimeSlotFormatTDD-LCR,
    eightPSK            EightPSK-DL-DPCH-TimeSlotFormatTDD-LCR,
    ...
}

QPSK-DL-DPCH-TimeSlotFormatTDD-LCR ::= INTEGER(0..24,...)

EightPSK-DL-DPCH-TimeSlotFormatTDD-LCR ::= INTEGER(0..24,...)

TDD-DPCHOffset ::= CHOICE {
    initialOffset    INTEGER (0..255),
    noinitialOffset  INTEGER (0..63)
}

TDD-PhysicalChannelOffset ::= INTEGER (0..63)

TDD-TPC-DownlinkStepSize ::= ENUMERATED {
    step-size1,
    step-size2,
    step-size3,
    ...
}

```

```

}

TDD-TPC-UplinkStepSize-LCR ::= ENUMERATED {
    step-size1,
    step-size2,
    step-size3,
    ...
}

TransportFormatCombination-Beta ::= CHOICE {
    signalledGainFactors SEQUENCE {
        gainFactor CHOICE {
            fdd SEQUENCE {
                betaC BetaCD,
                betaD BetaCD,
                iE-Extensions ProtocolExtensionContainer { { GainFactorFDD-ExtIEs } } OPTIONAL,
                ...
            },
            tdd BetaCD,
            ...
        },
        refTFCNumber RefTFCNumber OPTIONAL,
        iE-Extensions ProtocolExtensionContainer { { SignalledGainFactors-ExtIEs } } OPTIONAL,
        ...
    },
    computedGainFactors RefTFCNumber,
    ...
}

GainFactorFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

SignalledGainFactors-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TDD-UL-Code-Information ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF TDD-UL-Code-InformationItem

TDD-UL-Code-InformationItem ::= SEQUENCE {
    dPCH-ID DPCH-ID,
    tdd-ChannelisationCode TDD-ChannelisationCode,
    iE-Extensions ProtocolExtensionContainer { { TDD-UL-Code-InformationItem-ExtIEs } } OPTIONAL,
    ...
}

TDD-UL-Code-InformationItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TDD-UL-Code-LCR-Information ::= SEQUENCE (SIZE (1..maxNrOfDPCHLCRs)) OF TDD-UL-Code-LCR-InformationItem

TDD-UL-Code-LCR-InformationItem ::= SEQUENCE {
    dPCH-ID DPCH-ID,

```

```

    tdd-ChannelisationCodeLCR          TDD-ChannelisationCodeLCR,
    tdd-UL-DPCH-TimeSlotFormat-LCR     TDD-UL-DPCH-TimeSlotFormat-LCR,
    iE-Extensions                      ProtocolExtensionContainer { { TDD-UL-Code-LCR-InformationItem-ExtIEs } } OPTIONAL,
    ...
}

TDD-UL-Code-LCR-InformationItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TDD-UL-DPCH-TimeSlotFormat-LCR ::= CHOICE {
    qPSK                QPSK-UL-DPCH-TimeSlotFormatTDD-LCR,
    eightPSK            EightPSK-UL-DPCH-TimeSlotFormatTDD-LCR,
    ...
}

QPSK-UL-DPCH-TimeSlotFormatTDD-LCR ::= INTEGER(0..69,...)

EightPSK-UL-DPCH-TimeSlotFormatTDD-LCR ::= INTEGER(0..24,...)

TFCI-Coding ::= ENUMERATED {
    v4,
    v8,
    v16,
    v32,
    ...
}

TFCI-Presence ::= ENUMERATED {
    present,
    not-present
}

TFCI-SignallingMode ::= SEQUENCE {
    tFCI-SignallingOption      TFCI-SignallingMode-TFCI-SignallingOption,
    splitType                 TFCI-SignallingMode-SplitType                OPTIONAL,
    -- This IE shall be present if the TFCI signalling option is split --
    lengthOfTFCI2             TFCI-SignallingMode-LengthOfTFCI2          OPTIONAL,
    -- This IE shall be present if the split type is logical --
    iE-Extensions            ProtocolExtensionContainer { { TFCI-SignallingMode-ExtIEs } } OPTIONAL,
    ...
}

TFCI-SignallingMode-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TFCI-SignallingMode-LengthOfTFCI2 ::= INTEGER (1..10)

TFCI-SignallingMode-SplitType ::= ENUMERATED {
    hard,
    logical
}

```

```
TFCI-SignallingMode-TFCI-SignallingOption ::= ENUMERATED {
    normal,
    split
}

TFCI2-BearerInformationResponse ::= SEQUENCE {
    bindingID                BindingID,
    transportLayerAddress    TransportLayerAddress,
    iE-Extensions            ProtocolExtensionContainer { { TFCI2-BearerInformationResponse-ExtIEs} } OPTIONAL,
    ...
}

TFCI2-BearerInformationResponse-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TGD                        ::= INTEGER (0|15..269)
-- 0 = Undefined, only one transmission gap in the transmission gap pattern sequence

TGPRC                      ::= INTEGER (0..511)
-- 0 = infinity

TGPSID                     ::= INTEGER (1.. maxTGPS)

TGSN                       ::= INTEGER (0..14)

TimeSlot ::= INTEGER (0..14)

TimeSlotDirection ::= ENUMERATED {
    ul,
    dl,
    ...
}

TimeSlotLCR ::= INTEGER (0..6)

TimeSlotStatus ::= ENUMERATED {
    active,
    not-active,
    ...
}

TimingAdjustmentValue ::= CHOICE {
    initialPhase    INTEGER (0..1048575,...),
    steadyStatePhase    INTEGER (0..255,...)
}

TimingAdvanceApplied ::= ENUMERATED {
    yes,
    no
}
```

```
ToAWE ::= INTEGER (0..2559)
-- Unit ms
```

```
ToAWS ::= INTEGER (0..1279)
-- Unit ms
```

```
Transmission-Gap-Pattern-Sequence-Information ::= SEQUENCE (SIZE (1..maxTGPS)) OF
```

```
SEQUENCE {
    tGPSID          TGPSID,
    tGSN            TGSN,
    tGL1            GapLength,
    tGL2            GapLength  OPTIONAL,
    tGD             TGD,
    tGPL1           GapDuration,
    tGPL2           GapDuration OPTIONAL,
    uL-DL-mode      UL-DL-mode,
    downlink-Compressed-Mode-Method Downlink-Compressed-Mode-Method  OPTIONAL,
    -- This IE shall be present if the UL/DL mode IE is set to "DL only" or "UL/DL"
    uplink-Compressed-Mode-Method Uplink-Compressed-Mode-Method  OPTIONAL,
    -- This IE shall be present if the UL/DL mode IE is set to "UL only" or "UL/DL"
    dL-FrameType    DL-FrameType,
    delta-SIR1      DeltaSIR,
    delta-SIR-after1 DeltaSIR,
    delta-SIR2      DeltaSIR  OPTIONAL,
    delta-SIR-after2 DeltaSIR  OPTIONAL,
    iE-Extensions   ProtocolExtensionContainer { {Transmission-Gap-Pattern-Sequence-Information-ExtIEs} } OPTIONAL,
    ...
}
```

```
Transmission-Gap-Pattern-Sequence-Information-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
```

```
...
}
```

```
TransmissionGapPatternSequenceCodeInformation ::= ENUMERATED{
```

```
code-change,
nocode-change
}
```

```
Transmitted-Carrier-Power-Value ::= INTEGER(0..100)
-- According to mapping in [22]/[23]
```

```
Transmitted-Code-Power-Value ::= INTEGER (0..127)
-- According to mapping in [22]/[23]
```

```

Transmitted-Code-Power-Value-IncrDecrThres ::= INTEGER (0..112,...)

TransmissionDiversityApplied ::= BOOLEAN
-- true: applied, false: not applied

TransmitDiversityIndicator ::= ENUMERATED {
    active,
    inactive
}

TFCS ::= SEQUENCE {
    tFCSvalues CHOICE {
        no-Split-in-TFCI TFCS-TFCSList,
        split-in-TFCI SEQUENCE {
            transportFormatCombination-DCH TFCS-DCHList,
            signallingMethod CHOICE {
                tFCI-Range TFCS-MappingOnDSCHList,
                explicit TFCS-DSCHList,
                ...
            },
            iE-Extensions ProtocolExtensionContainer { { Split-in-TFCI-ExtIEs } } OPTIONAL,
            ...
        },
        ...
    },
    iE-Extensions ProtocolExtensionContainer { { TFCS-ExtIEs } } OPTIONAL,
    ...
}

Split-in-TFCI-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TFCS-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TFCS-TFCSList ::= SEQUENCE (SIZE (1..maxNrOfTFCS)) OF
SEQUENCE {
    cTFC TFCS-CTFC,
    tFC-Beta TransportFormatCombination-Beta OPTIONAL,
    -- The IE shall be present if the TFCS concerns a UL DPCH or PRACH channel [FDD - or PCPCH channel].
    iE-Extensions ProtocolExtensionContainer { { TFCS-TFCSList-ExtIEs } } OPTIONAL,
    ...
}

TFCS-TFCSList-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TFCS-CTFC ::= CHOICE {
    ctfc2bit INTEGER (0..3),
    ctfc4bit INTEGER (0..15),
    ctfc6bit INTEGER (0..63),
}

```

```

ctfc8bit                INTEGER (0..255),
ctfc12bit               INTEGER (0..4095),
ctfc16bit               INTEGER (0..65535),
ctfcmaxbit              INTEGER (0..maxCTFC)
}

TFCS-DCHList ::= SEQUENCE (SIZE (1..maxNrOfTFCI1Combs)) OF
  SEQUENCE {
    cTFC                TFCS-CTFC,
    iE-Extensions       ProtocolExtensionContainer { { TFCS-DCHList-ExtIEs } } OPTIONAL,
    ...
  }

TFCS-DCHList-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

TFCS-MappingOnDSCHList ::= SEQUENCE (SIZE (1..maxNrOfTFCI2Groups)) OF
  SEQUENCE {
    maxTFCI-field2-Value    TFCS-MaxTFCI-field2-Value,
    cTFC-DSCH               TFCS-CTFC,
    iE-Extensions           ProtocolExtensionContainer { { TFCS-MappingOnDSCHList-ExtIEs } } OPTIONAL,
    ...
  }

TFCS-MappingOnDSCHList-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

TFCS-MaxTFCI-field2-Value ::= INTEGER (1..maxNrOfTFCI2Combs-1)

TFCS-DSCHList ::= SEQUENCE (SIZE (1..maxNrOfTFCI2Combs)) OF
  SEQUENCE {
    cTFC-DSCH              TFCS-CTFC,
    iE-Extensions          ProtocolExtensionContainer { { TFCS-DSCHList-ExtIEs } } OPTIONAL,
    ...
  }

TFCS-DSCHList-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

TransportBearerRequestIndicator ::= ENUMERATED {
  bearerRequested,
  bearerNotRequested,
  ...
}

TransportFormatSet ::= SEQUENCE {
  dynamicParts             TransportFormatSet-DynamicPartList,
  semi-staticPart          TransportFormatSet-Semi-staticPart,
  iE-Extensions            ProtocolExtensionContainer { { TransportFormatSet-ExtIEs } } OPTIONAL,
  ...
}

```



```

TransportFormatSet-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

TransportFormatSet-DynamicPartList ::= SEQUENCE (SIZE (1..maxNrOfTFs)) OF
  SEQUENCE {
    nrOfTransportBlocks      TransportFormatSet-NrOfTransportBlocks,
    transportBlockSize      TransportFormatSet-TransportBlockSize      OPTIONAL,
    -- This IE shall be present if the Number of Transport Blocks IE is set to a value greater than 0
    mode                    TransportFormatSet-ModeDP,
    iE-Extensions          ProtocolExtensionContainer { { TransportFormatSet-DynamicPartList-ExtIEs } }      OPTIONAL,
    ...
  }

TransportFormatSet-DynamicPartList-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

TDD-TransportFormatSet-ModeDP ::= SEQUENCE {
  transmissionTimeIntervalInformation      TransmissionTimeIntervalInformation      OPTIONAL,
  -- This IE shall be present if the Transmission Time Interval IE in the Semi-static Transport Format Information IE is set to 'dynamic'
  iE-Extensions          ProtocolExtensionContainer { {TDD-TransportFormatSet-ModeDP-ExtIEs} }      OPTIONAL,
  ...
}

TDD-TransportFormatSet-ModeDP-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

TransmissionTimeIntervalInformation ::= SEQUENCE (SIZE (1..maxTTI-count)) OF
  SEQUENCE {
    transmissionTimeInterval      TransportFormatSet-TransmissionTimeIntervalDynamic,
    iE-Extensions          ProtocolExtensionContainer { { TransmissionTimeIntervalInformation-ExtIEs } }      OPTIONAL,
    ...
  }

TransmissionTimeIntervalInformation-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

TransportFormatSet-Semi-staticPart ::= SEQUENCE {
  transmissionTimeInterval      TransportFormatSet-TransmissionTimeIntervalSemiStatic,
  channelCoding                TransportFormatSet-ChannelCodingType,
  codingRate                    TransportFormatSet-CodingRate      OPTIONAL,
  -- This IE shall be present if the Type of channel coding IE is set to 'convolutional' or 'turbo'
  rateMatchingAttribute        TransportFormatSet-RateMatchingAttribute,
  crcSize                      TransportFormatSet-CRC-Size,
  mode                          TransportFormatSet-ModeSSP,
  iE-Extensions          ProtocolExtensionContainer { { TransportFormatSet-Semi-staticPart-ExtIEs } }      OPTIONAL,
  ...
}

TransportFormatSet-Semi-staticPart-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {

```

```
    ...
}

TransportFormatSet-ChannelCodingType ::= ENUMERATED {
    no-codingTDD,
    convolutional-coding,
    turbo-coding,
    ...
}

TransportFormatSet-CodingRate ::= ENUMERATED {
    half,
    third,
    ...
}

TransportFormatSet-CRC-Size ::= ENUMERATED {
    v0,
    v8,
    v12,
    v16,
    v24,
    ...
}

TransportFormatSet-ModeDP ::= CHOICE {
    tdd                TDD-TransportFormatSet-ModeDP,
    notApplicable     NULL,
    ...
}

TransportFormatSet-ModeSSP ::= CHOICE {
    tdd                TransportFormatSet-SecondInterleavingMode,
    notApplicable     NULL,
    ...
}

TransportFormatSet-NrOfTransportBlocks ::= INTEGER (0..512)

TransportFormatSet-RateMatchingAttribute ::= INTEGER (1..maxRateMatching)

TransportFormatSet-SecondInterleavingMode ::= ENUMERATED {
    frame-related,
    timeSlot-related,
    ...
}

TransportFormatSet-TransmissionTimeIntervalDynamic ::= ENUMERATED {
    msec-10,
    msec-20,
    msec-40,
    msec-80,
    ...
}
```

```

TransportFormatSet-TransmissionTimeIntervalSemiStatic ::= ENUMERATED {
    msec-10,
    msec-20,
    msec-40,
    msec-80,
    dynamic,
    ...,
    msec-5
}

TransportFormatSet-TransportBlockSize ::= INTEGER (0..5000)

TransportLayerAddress ::= BIT STRING (SIZE (1..160, ...))

TSTD-Indicator ::= ENUMERATED {
    active,
    inactive
}

TUTRANGPS ::= SEQUENCE {
    ms-part    INTEGER (0..16383),
    ls-part    INTEGER (0..4294967295)
}

TUTRANGPSChangeLimit ::= INTEGER (1..256)
-- Unit chip, Step 1/16 chip, Range 1/16..16 chip

TUTRANGPSDriftRate ::= INTEGER (-50..50)
-- Unit chip/s, Step 1/256 chip/s, Range -50/256..+50/256 chip/s

TUTRANGPSDriftRateQuality ::= INTEGER (0..50)
-- Unit chip/s, Step 1/256 chip/s, Range 0..50/256 chip/s

TUTRANGPSAccuracyClass ::= ENUMERATED {
    accuracy-class-A,
    accuracy-class-B,
    accuracy-class-C,
    ...
}

TUTRANGPSMeasurementThresholdInformation ::= SEQUENCE {
    tTUTRANGPSChangeLimit          TUTRANGPSChangeLimit          OPTIONAL,
    predictedTUTRANGPSDeviationLimit PredictedTUTRANGPSDeviationLimit OPTIONAL,
    iE-Extensions                   ProtocolExtensionContainer { { TUTRANGPSMeasurementThresholdInformation-ExtIEs} } OPTIONAL,
    ...
}

TUTRANGPSMeasurementThresholdInformation-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TUTRANGPSMeasurementValueInformation ::= SEQUENCE {

```

```

    tUTRANGPS                TUTRANGPS,
    tUTRANGPSQuality         TUTRANGPSQuality         OPTIONAL,
    tUTRANGPSDriftRate       TUTRANGPSDriftRate,
    tUTRANGPSDriftRateQuality TUTRANGPSDriftRateQuality OPTIONAL,
    iE-Extensions            ProtocolExtensionContainer { {TUTRANGPSMeasurementValueInformationItem-ExtIEs} } OPTIONAL,
    ...
}

TUTRANGPSMeasurementValueInformationItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TUTRANGPSQuality ::= INTEGER (0..255)
-- Unit chip, Step 1/16 chip, Range 0.. 255/16 chip

TypeOfError ::= ENUMERATED {
    not-understood,
    missing,
    ...
}

-- =====
-- U
-- =====

UARFCN ::= INTEGER (0..16383, ...)
-- corresponds to 0MHz .. 3276.6MHz

UC-Id ::= SEQUENCE {
    rNC-ID          RNC-ID,
    c-ID            C-ID,
    iE-Extensions   ProtocolExtensionContainer { {UC-Id-ExtIEs} } OPTIONAL,
    ...
}
UC-Id-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UDRE ::= ENUMERATED {
    udre-minusequal-one-m,
    udre-betweenoneandfour-m,
    udre-betweenfourandeight-m,
    udre-greaterequaleight-m
}

UL-CapacityCredit ::= INTEGER (0..65535)

UL-DL-mode ::= ENUMERATED {
    ul-only,
    dl-only,
    both-ul-and-dl
}

```

```

Uplink-Compressed-Mode-Method ::= ENUMERATED {
    sFdiv2,
    higher-layer-scheduling,
    ...
}

UL-Timeslot-Information ::= SEQUENCE (SIZE (1..maxNrOfULTSs)) OF UL-Timeslot-InformationItem

UL-Timeslot-InformationItem ::= SEQUENCE {
    timeSlot                TimeSlot,
    midambleShiftAndBurstType MidambleShiftAndBurstType,
    tFCI-Presence           TFCI-Presence,
    uL-Code-InformationList TDD-UL-Code-Information,
    iE-Extensions           ProtocolExtensionContainer { { UL-Timeslot-InformationItem-ExtIEs} } OPTIONAL,
    ...
}

UL-Timeslot-InformationItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-TimeslotLCR-Information ::= SEQUENCE (SIZE (1..maxNrOfULTSLCRs)) OF UL-TimeslotLCR-InformationItem

UL-TimeslotLCR-InformationItem ::= SEQUENCE {
    timeSlotLCR                TimeSlotLCR,
    midambleShiftLCR           MidambleShiftLCR,
    tFCI-Presence              TFCI-Presence,
    uL-Code-InformationList     TDD-UL-Code-LCR-Information,
    iE-Extensions              ProtocolExtensionContainer { { UL-TimeslotLCR-InformationItem-ExtIEs} } OPTIONAL,
    ...
}

UL-TimeslotLCR-InformationItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-DPCCH-SlotFormat ::= INTEGER (0..5,...)

UL-SIR ::= INTEGER (-82..173)
-- According to mapping in [16]

UL-FP-Mode ::= ENUMERATED {
    normal,
    silent,
    ...
}

UL-PhysCH-SF-Variation ::= ENUMERATED {
    sf-variation-supported,
    sf-variation-not-supported
}

```

```

UL-ScramblingCode ::= SEQUENCE {
    uL-ScramblingCodeNumber      UL-ScramblingCodeNumber,
    uL-ScramblingCodeLength      UL-ScramblingCodeLength,
    iE-Extensions                 ProtocolExtensionContainer { { UL-ScramblingCode-ExtIEs } }
    ...
}
OPTIONAL,

UL-ScramblingCode-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-ScramblingCodeNumber ::= INTEGER (0..16777215)

UL-ScramblingCodeLength ::= ENUMERATED {
    short,
    long
}

UL-TimeSlot-ISCP-Info ::= SEQUENCE (SIZE (1..maxNrOfULTSs)) OF UL-TimeSlot-ISCP-InfoItem

UL-TimeSlot-ISCP-InfoItem ::= SEQUENCE {
    timeSlot                      TimeSlot,
    iSCP                          UL-TimeslotISCP-Value,
    iE-Extensions                 ProtocolExtensionContainer { { UL-TimeSlot-ISCP-InfoItem-ExtIEs } }
    ...
}
OPTIONAL,

UL-TimeSlot-ISCP-InfoItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-TimeSlot-ISCP-LCR-Info ::= SEQUENCE (SIZE (1..maxNrOfULTSLCRs)) OF UL-TimeSlot-ISCP-LCR-InfoItem

UL-TimeSlot-ISCP-LCR-InfoItem ::= SEQUENCE {
    timeSlotLCR                  TimeSlotLCR,
    iSCP                          UL-TimeslotISCP-Value,
    iE-Extensions                 ProtocolExtensionContainer { { UL-TimeSlot-ISCP-LCR-InfoItem-ExtIEs } }
    ...
}
OPTIONAL,

UL-TimeSlot-ISCP-LCR-InfoItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

USCH-Information ::= SEQUENCE (SIZE (1..maxNrOfUSCHs)) OF USCH-InformationItem

USCH-InformationItem ::= SEQUENCE {
    uSCH-ID                      USCH-ID,
    cCTrCH-ID                    CCTrCH-ID,
    transportFormatSet           TransportFormatSet,
    allocationRetentionPriority   AllocationRetentionPriority,
    iE-Extensions                 ProtocolExtensionContainer { { USCH-InformationItem-ExtIEs } }
    ...
}
OPTIONAL,

```

```

USCH-InformationItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

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)

UL-Synchronisation-Parameters-LCR ::= SEQUENCE {
    uL-Synchronisation-StepSize      UL-Synchronisation-StepSize,
    uL-Synchronisation-Frequency     UL-Synchronisation-Frequency,
    iE-Extensions                    ProtocolExtensionContainer { { UL-Synchronisation-Parameters-LCR-ExtIEs } } OPTIONAL,
    ...
}

UL-Synchronisation-Parameters-LCR-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-Synchronisation-StepSize ::= INTEGER (1..8)

UL-Synchronisation-Frequency ::= INTEGER (1..8)

-- =====
-- V
-- =====

-- =====
-- W
-- =====

-- =====
-- X
-- =====

```

```

-- Y
-- =====
--
-- =====
-- Z
-- =====

END

```

### 9.3.5 Common Definitions

```

-- *****
--
-- Common definitions
--
-- *****

NBAP-CommonDataTypes {
itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
umts-Access (20) modules (3) nbap (2) version1 (1) nbap-CommonDataTypes (3) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

-- *****
--
-- Extension constants
--
-- *****

maxPrivateIEs          INTEGER ::= 65535
maxProtocolExtensions  INTEGER ::= 65535
maxProtocolIEs         INTEGER ::= 65535

-- *****
--
-- Common Data Types
--
-- *****

Criticality      ::= ENUMERATED { reject, ignore, notify }

MessageDiscriminator ::= ENUMERATED { common, dedicated }

Presence        ::= ENUMERATED { optional, conditional, mandatory }

PrivateIE-ID    ::= CHOICE {
    local          INTEGER (0..maxPrivateIEs),
    global         OBJECT IDENTIFIER
}

ProcedureCode   ::= INTEGER (0..255)

```



```

ProcedureID ::= SEQUENCE {
    procedureCode      ProcedureCode,
    ddMode             ENUMERATED { tdd, fdd, common, ... }
}

ProtocolIE-ID ::= INTEGER (0..maxProtocolIEs)

TransactionID ::= CHOICE {
    shortTransActionId  INTEGER (0..127),
    longTransActionId   INTEGER (0..32767)
}

TriggeringMessage ::= ENUMERATED { initiating-message, successful-outcome, unsuccessful-outcome, outcome }

END

```

## 9.3.6 Constant Definitions

```

-- *****
--
-- Constant definitions
--
-- *****

NBAP-Constants {
itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
umts-Access (20) modules (3) nbap (2) version1 (1) nbap-Constants (4)}

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

IMPORTS
    ProcedureCode,
    ProtocolIE-ID
FROM NBAP-CommonDataTypes;

-- *****
--
-- Elementary Procedures
--
-- *****

id-audit                ProcedureCode ::= 0
id-auditRequired        ProcedureCode ::= 1
id-blockResource        ProcedureCode ::= 2
id-cellDeletion         ProcedureCode ::= 3
id-cellReconfiguration  ProcedureCode ::= 4
id-cellSetup            ProcedureCode ::= 5
id-cellSynchronisationInitiation ProcedureCode ::= 45
id-cellSynchronisationReconfiguration ProcedureCode ::= 46
id-cellSynchronisationReporting ProcedureCode ::= 47

```

id-cellSynchronisationTermination	ProcedureCode ::= 48
id-cellSynchronisationFailure	ProcedureCode ::= 49
id-commonMeasurementFailure	ProcedureCode ::= 6
id-commonMeasurementInitiation	ProcedureCode ::= 7
id-commonMeasurementReport	ProcedureCode ::= 8
id-commonMeasurementTermination	ProcedureCode ::= 9
id-commonTransportChannelDelete	ProcedureCode ::= 10
id-commonTransportChannelReconfigure	ProcedureCode ::= 11
id-commonTransportChannelSetup	ProcedureCode ::= 12
id-compressedModeCommand	ProcedureCode ::= 14
id-dedicatedMeasurementFailure	ProcedureCode ::= 16
id-dedicatedMeasurementInitiation	ProcedureCode ::= 17
id-dedicatedMeasurementReport	ProcedureCode ::= 18
id-dedicatedMeasurementTermination	ProcedureCode ::= 19
id-downlinkPowerControl	ProcedureCode ::= 20
id-downlinkPowerTimeslotControl	ProcedureCode ::= 38
id-errorIndicationForCommon	ProcedureCode ::= 35
id-errorIndicationForDedicated	ProcedureCode ::= 21
id-informationExchangeFailure	ProcedureCode ::= 40
id-informationExchangeInitiation	ProcedureCode ::= 41
id-informationExchangeTermination	ProcedureCode ::= 42
id-informationReporting	ProcedureCode ::= 43
id-physicalSharedChannelReconfiguration	ProcedureCode ::= 37
id-privateMessageForCommon	ProcedureCode ::= 36
id-privateMessageForDedicated	ProcedureCode ::= 22
id-radioLinkAddition	ProcedureCode ::= 23
id-radioLinkDeletion	ProcedureCode ::= 24
id-radioLinkFailure	ProcedureCode ::= 25
id-radioLinkPreemption	ProcedureCode ::= 39
id-radioLinkRestoration	ProcedureCode ::= 26
id-radioLinkSetup	ProcedureCode ::= 27
id-reset	ProcedureCode ::= 13
id-resourceStatusIndication	ProcedureCode ::= 28
id-cellSynchronisationAdjustment	ProcedureCode ::= 44
id-synchronisedRadioLinkReconfigurationCancellation	ProcedureCode ::= 29
id-synchronisedRadioLinkReconfigurationCommit	ProcedureCode ::= 30
id-synchronisedRadioLinkReconfigurationPreparation	ProcedureCode ::= 31
id-systemInformationUpdate	ProcedureCode ::= 32
id-unblockResource	ProcedureCode ::= 33
id-unSynchronisedRadioLinkReconfiguration	ProcedureCode ::= 34

```
-- *****
--
-- Lists
--
-- *****
```

maxNrOfCodes	INTEGER ::= 10
maxNrOfDLTSs	INTEGER ::= 15
maxNrOfDLTSLCRs	INTEGER ::= 6
maxNrOfErrors	INTEGER ::= 256
maxNrOfTFs	INTEGER ::= 32
maxNrOfTFCs	INTEGER ::= 1024
maxNrOfRLs	INTEGER ::= 16

maxNrOfRLs-1	INTEGER ::= 15 -- maxNrOfRLs - 1
maxNrOfRLs-2	INTEGER ::= 14 -- maxNrOfRLs - 2
maxNrOfRLSets	INTEGER ::= maxNrOfRLs
maxNrOfDPCHs	INTEGER ::= 240
maxNrOfDPCHLCRs	INTEGER ::= 240
maxNrOfSCCPCHs	INTEGER ::= 8
maxNrOfCPCHs	INTEGER ::= 16
maxNrOfPCPCHs	INTEGER ::= 64
maxNrOfDCHs	INTEGER ::= 128
maxNrOfDSCHs	INTEGER ::= 32
maxNrOfFACHs	INTEGER ::= 8
maxNrOfCCTrCHs	INTEGER ::= 16
maxNrOfPDSCHs	INTEGER ::= 256
maxNrOfPUSCHs	INTEGER ::= 256
maxNrOfPDSCHSets	INTEGER ::= 256
maxNrOfPRACHLCRs	INTEGER ::= 8
maxNrOfPUSCHSets	INTEGER ::= 256
maxNrOfSCCPCHLCRs	INTEGER ::= 8
maxNrOfULTSs	INTEGER ::= 15
maxNrOfULTSLCRs	INTEGER ::= 6
maxNrOfUSCHs	INTEGER ::= 32
maxAPSigNum	INTEGER ::= 16
maxNrOfSlotFormatsPRACH	INTEGER ::= 8
maxCellinNodeB	INTEGER ::= 256
maxCCPinNodeB	INTEGER ::= 256
maxCPCHCell	INTEGER ::= maxNrOfCPCHs
maxCTFC	INTEGER ::= 16777215
maxLocalCellinNodeB	INTEGER ::= maxCellinNodeB
maxNoofLen	INTEGER ::= 7
maxFPACHCell	INTEGER ::= 8
maxRACHCell	INTEGER ::= maxPRACHCell
maxPRACHCell	INTEGER ::= 16
maxPCPCHCell	INTEGER ::= 64
maxSCCPCHCell	INTEGER ::= 32
maxSCPICHCell	INTEGER ::= 32
maxTTI-count	INTEGER ::= 4
maxIBSEG	INTEGER ::= 16
maxIB	INTEGER ::= 64
maxFACHCell	INTEGER ::= 256 -- maxNrOfFACHs * maxSCCPCHCell
maxRateMatching	INTEGER ::= 256
maxCodeNrComp-1	INTEGER ::= 256
maxNrOfCellSyncBursts	INTEGER ::= 10
maxNrOfCodeGroups	INTEGER ::= 256
maxNrOfReceptsPerSyncFrame	INTEGER ::= 16
maxNrOfMeasNCell	INTEGER ::= 96
maxNrOfMeasNCell-1	INTEGER ::= 95 -- maxNrOfMeasNCell - 1
maxNrOfTFCIGroups	INTEGER ::= 256
maxNrOfTFCI1Combs	INTEGER ::= 512
maxNrOfTFCI2Combs	INTEGER ::= 1024
maxNrOfTFCI2Combs-1	INTEGER ::= 1023
maxNrOfSF	INTEGER ::= 8
maxTGPS	INTEGER ::= 6
maxCommunicationContext	INTEGER ::= 1048575
maxNrOfLevels	INTEGER ::= 256

```

maxNoSat                INTEGER ::= 16
maxNoGPSItems           INTEGER ::= 8

-- *****
--
-- IEs
--
-- *****

id-AICH-Information                ProtocolIE-ID ::= 0
id-AICH-InformationItem-ResourceStatusInd ProtocolIE-ID ::= 1
id-BCH-Information                ProtocolIE-ID ::= 7
id-BCH-InformationItem-ResourceStatusInd ProtocolIE-ID ::= 8
id-BCCH-ModificationTime         ProtocolIE-ID ::= 9
id-BlockingPriorityIndicator      ProtocolIE-ID ::= 10
id-Cause                          ProtocolIE-ID ::= 13
id-CCP-InformationItem-AuditRsp   ProtocolIE-ID ::= 14
id-CCP-InformationList-AuditRsp  ProtocolIE-ID ::= 15
id-CCP-InformationItem-ResourceStatusInd ProtocolIE-ID ::= 16
id-Cell-InformationItem-AuditRsp  ProtocolIE-ID ::= 17
id-Cell-InformationItem-ResourceStatusInd ProtocolIE-ID ::= 18
id-Cell-InformationList-AuditRsp  ProtocolIE-ID ::= 19
id-CellParameterID              ProtocolIE-ID ::= 23
id-CFN                           ProtocolIE-ID ::= 24
id-C-ID                           ProtocolIE-ID ::= 25
id-CommonMeasurementAccuracy      ProtocolIE-ID ::= 39
id-CommonMeasurementObjectType-CM-Rprt ProtocolIE-ID ::= 31
id-CommonMeasurementObjectType-CM-Rqst ProtocolIE-ID ::= 32
id-CommonMeasurementObjectType-CM-Rsp ProtocolIE-ID ::= 33
id-CommonMeasurementType         ProtocolIE-ID ::= 34
id-CommonPhysicalChannelID       ProtocolIE-ID ::= 35
id-CommonPhysicalChannelType-CTCH-SetupRqstFDD ProtocolIE-ID ::= 36
id-CommonPhysicalChannelType-CTCH-SetupRqstTDD ProtocolIE-ID ::= 37
id-CommunicationControlPortID    ProtocolIE-ID ::= 40
id-ConfigurationGenerationID     ProtocolIE-ID ::= 43
id-CRNC-CommunicationContextID   ProtocolIE-ID ::= 44
id-CriticalityDiagnostics        ProtocolIE-ID ::= 45
id-DCHs-to-Add-FDD              ProtocolIE-ID ::= 48
id-DCH-AddList-RL-ReconfPrepTDD ProtocolIE-ID ::= 49
id-DCHs-to-Add-TDD              ProtocolIE-ID ::= 50
id-DCH-DeleteList-RL-ReconfPrepFDD ProtocolIE-ID ::= 52
id-DCH-DeleteList-RL-ReconfPrepTDD ProtocolIE-ID ::= 53
id-DCH-DeleteList-RL-ReconfRqstFDD ProtocolIE-ID ::= 54
id-DCH-DeleteList-RL-ReconfRqstTDD ProtocolIE-ID ::= 55
id-DCH-FDD-Information           ProtocolIE-ID ::= 56
id-DCH-TDD-Information           ProtocolIE-ID ::= 57
id-DCH-InformationResponse       ProtocolIE-ID ::= 59
id-FDD-DCHs-to-Modify            ProtocolIE-ID ::= 62
id-TDD-DCHs-to-Modify            ProtocolIE-ID ::= 63
id-DCH-ModifyList-RL-ReconfRqstTDD ProtocolIE-ID ::= 65
id-DedicatedMeasurementObjectType-DM-Rprt ProtocolIE-ID ::= 67
id-DedicatedMeasurementObjectType-DM-Rqst ProtocolIE-ID ::= 68
id-DedicatedMeasurementObjectType-DM-Rsp ProtocolIE-ID ::= 69
id-DedicatedMeasurementType      ProtocolIE-ID ::= 70

```

id-DL-CCTrCH-InformationItem-RL-SetupRqstTDD	ProtocolIE-ID ::= 72
id-DL-CCTrCH-InformationList-RL-AdditionRqstTDD	ProtocolIE-ID ::= 73
id-DL-CCTrCH-InformationList-RL-SetupRqstTDD	ProtocolIE-ID ::= 76
id-DL-DPCH-InformationItem-RL-AdditionRqstTDD	ProtocolIE-ID ::= 77
id-DL-DPCH-InformationList-RL-SetupRqstTDD	ProtocolIE-ID ::= 79
id-DL-DPCH-Information-RL-ReconfPrepFDD	ProtocolIE-ID ::= 81
id-DL-DPCH-Information-RL-ReconfRqstFDD	ProtocolIE-ID ::= 82
id-DL-DPCH-Information-RL-SetupRqstFDD	ProtocolIE-ID ::= 83
id-DL-ReferencePowerInformationItem-DL-PC-Rqst	ProtocolIE-ID ::= 84
id-DLReferencePower	ProtocolIE-ID ::= 85
id-DLReferencePowerList-DL-PC-Rqst	ProtocolIE-ID ::= 86
id-DSCH-AddItem-RL-ReconfPrepFDD	ProtocolIE-ID ::= 87
id-DSCHs-to-Add-FDD	ProtocolIE-ID ::= 89
id-DSCH-DeleteItem-RL-ReconfPrepFDD	ProtocolIE-ID ::= 91
id-DSCH-DeleteList-RL-ReconfPrepFDD	ProtocolIE-ID ::= 93
id-DSCHs-to-Add-TDD	ProtocolIE-ID ::= 96
id-DSCH-Information-DeleteList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 98
id-DSCH-Information-ModifyList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 100
id-DSCH-InformationResponse	ProtocolIE-ID ::= 105
id-DSCH-FDD-Information	ProtocolIE-ID ::= 106
id-DSCH-TDD-Information	ProtocolIE-ID ::= 107
id-DSCH-ModifyItem-RL-ReconfPrepFDD	ProtocolIE-ID ::= 108
id-DSCH-ModifyList-RL-ReconfPrepFDD	ProtocolIE-ID ::= 112
id-End-Of-Audit-Sequence-Indicator	ProtocolIE-ID ::= 113
id-FACH-Information	ProtocolIE-ID ::= 116
id-FACH-InformationItem-ResourceStatusInd	ProtocolIE-ID ::= 117
id-FACH-ParametersList-CTCH-ReconfRqstTDD	ProtocolIE-ID ::= 120
id-FACH-ParametersListIE-CTCH-SetupRqstFDD	ProtocolIE-ID ::= 121
id-FACH-ParametersListIE-CTCH-SetupRqstTDD	ProtocolIE-ID ::= 122
id-IndicationType-ResourceStatusInd	ProtocolIE-ID ::= 123
id-Local-Cell-ID	ProtocolIE-ID ::= 124
id-Local-Cell-Group-InformationItem-AuditRsp	ProtocolIE-ID ::= 2
id-Local-Cell-Group-InformationItem-ResourceStatusInd	ProtocolIE-ID ::= 3
id-Local-Cell-Group-InformationItem2-ResourceStatusInd	ProtocolIE-ID ::= 4
id-Local-Cell-Group-InformationList-AuditRsp	ProtocolIE-ID ::= 5
id-Local-Cell-InformationItem-AuditRsp	ProtocolIE-ID ::= 125
id-Local-Cell-InformationItem-ResourceStatusInd	ProtocolIE-ID ::= 126
id-Local-Cell-InformationItem2-ResourceStatusInd	ProtocolIE-ID ::= 127
id-Local-Cell-InformationList-AuditRsp	ProtocolIE-ID ::= 128
id-AdjustmentPeriod	ProtocolIE-ID ::= 129
id-MaxAdjustmentStep	ProtocolIE-ID ::= 130
id-MaximumTransmissionPower	ProtocolIE-ID ::= 131
id-MeasurementFilterCoefficient	ProtocolIE-ID ::= 132
id-MeasurementID	ProtocolIE-ID ::= 133
id-MessageStructure	ProtocolIE-ID ::= 115
id-MIB-SB-SIB-InformationList-SystemInfoUpdateRqst	ProtocolIE-ID ::= 134
id-NodeB-CommunicationContextID	ProtocolIE-ID ::= 143
id-NeighbouringCellMeasurementInformation	ProtocolIE-ID ::= 455
id-P-CCPCH-Information	ProtocolIE-ID ::= 144
id-P-CCPCH-InformationItem-ResourceStatusInd	ProtocolIE-ID ::= 145
id-P-CPICH-Information	ProtocolIE-ID ::= 146
id-P-CPICH-InformationItem-ResourceStatusInd	ProtocolIE-ID ::= 147
id-P-SCH-Information	ProtocolIE-ID ::= 148
id-PCCPCH-Information-Cell-ReconfRqstTDD	ProtocolIE-ID ::= 150

id-PCCPCH-Information-Cell-SetupRqstTDD	ProtocolIE-ID ::= 151
id-PCH-Parameters-CTCH-ReconfRqstTDD	ProtocolIE-ID ::= 155
id-PCH-ParametersItem-CTCH-SetupRqstFDD	ProtocolIE-ID ::= 156
id-PCH-ParametersItem-CTCH-SetupRqstTDD	ProtocolIE-ID ::= 157
id-PCH-Information	ProtocolIE-ID ::= 158
id-PDSCH-Information-AddListIE-PSCH-ReconfRqst	ProtocolIE-ID ::= 161
id-PDSCH-Information-ModifyListIE-PSCH-ReconfRqst	ProtocolIE-ID ::= 162
id-PDSCHSets-AddList-PSCH-ReconfRqst	ProtocolIE-ID ::= 163
id-PDSCHSets-DeleteList-PSCH-ReconfRqst	ProtocolIE-ID ::= 164
id-PDSCHSets-ModifyList-PSCH-ReconfRqst	ProtocolIE-ID ::= 165
id-PICH-Information	ProtocolIE-ID ::= 166
id-PICH-Parameters-CTCH-ReconfRqstTDD	ProtocolIE-ID ::= 168
id-PowerAdjustmentType	ProtocolIE-ID ::= 169
id-PRACH-Information	ProtocolIE-ID ::= 170
id-PrimaryCCPCH-Information-Cell-ReconfRqstFDD	ProtocolIE-ID ::= 175
id-PrimaryCCPCH-Information-Cell-SetupRqstFDD	ProtocolIE-ID ::= 176
id-PrimaryCPICH-Information-Cell-ReconfRqstFDD	ProtocolIE-ID ::= 177
id-PrimaryCPICH-Information-Cell-SetupRqstFDD	ProtocolIE-ID ::= 178
id-PrimarySCH-Information-Cell-ReconfRqstFDD	ProtocolIE-ID ::= 179
id-PrimarySCH-Information-Cell-SetupRqstFDD	ProtocolIE-ID ::= 180
id-PrimaryScramblingCode	ProtocolIE-ID ::= 181
id-SCH-Information-Cell-ReconfRqstTDD	ProtocolIE-ID ::= 183
id-SCH-Information-Cell-SetupRqstTDD	ProtocolIE-ID ::= 184
id-PUSCH-Information-AddListIE-PSCH-ReconfRqst	ProtocolIE-ID ::= 185
id-PUSCH-Information-ModifyListIE-PSCH-ReconfRqst	ProtocolIE-ID ::= 186
id-PUSCHSets-AddList-PSCH-ReconfRqst	ProtocolIE-ID ::= 187
id-PUSCHSets-DeleteList-PSCH-ReconfRqst	ProtocolIE-ID ::= 188
id-PUSCHSets-ModifyList-PSCH-ReconfRqst	ProtocolIE-ID ::= 189
id-RACH-Information	ProtocolIE-ID ::= 190
id-RACH-ParametersItem-CTCH-SetupRqstFDD	ProtocolIE-ID ::= 196
id-RACH-ParameterItem-CTCH-SetupRqstTDD	ProtocolIE-ID ::= 197
id-ReportCharacteristics	ProtocolIE-ID ::= 198
id-Reporting-Object-RL-FailureInd	ProtocolIE-ID ::= 199
id-Reporting-Object-RL-RestoreInd	ProtocolIE-ID ::= 200
id-RL-InformationItem-DM-Rprt	ProtocolIE-ID ::= 202
id-RL-InformationItem-DM-Rqst	ProtocolIE-ID ::= 203
id-RL-InformationItem-DM-Rsp	ProtocolIE-ID ::= 204
id-RL-InformationItem-RL-AdditionRqstFDD	ProtocolIE-ID ::= 205
id-RL-informationItem-RL-DeletionRqst	ProtocolIE-ID ::= 206
id-RL-InformationItem-RL-FailureInd	ProtocolIE-ID ::= 207
id-RL-InformationItem-RL-PreemptRequiredInd	ProtocolIE-ID ::= 286
id-RL-InformationItem-RL-ReconfPrepFDD	ProtocolIE-ID ::= 208
id-RL-InformationItem-RL-ReconfRqstFDD	ProtocolIE-ID ::= 209
id-RL-InformationItem-RL-RestoreInd	ProtocolIE-ID ::= 210
id-RL-InformationItem-RL-SetupRqstFDD	ProtocolIE-ID ::= 211
id-RL-InformationList-RL-AdditionRqstFDD	ProtocolIE-ID ::= 212
id-RL-informationList-RL-DeletionRqst	ProtocolIE-ID ::= 213
id-RL-InformationList-RL-PreemptRequiredInd	ProtocolIE-ID ::= 237
id-RL-InformationList-RL-ReconfPrepFDD	ProtocolIE-ID ::= 214
id-RL-InformationList-RL-ReconfRqstFDD	ProtocolIE-ID ::= 215
id-RL-InformationList-RL-SetupRqstFDD	ProtocolIE-ID ::= 216
id-RL-InformationResponseItem-RL-AdditionRspFDD	ProtocolIE-ID ::= 217
id-RL-InformationResponseItem-RL-ReconfReady	ProtocolIE-ID ::= 218
id-RL-InformationResponseItem-RL-ReconfRsp	ProtocolIE-ID ::= 219

id-RL-InformationResponseItem-RL-SetupRspFDD	ProtocolIE-ID ::= 220
id-RL-InformationResponseList-RL-AdditionRspFDD	ProtocolIE-ID ::= 221
id-RL-InformationResponseList-RL-ReconfReady	ProtocolIE-ID ::= 222
id-RL-InformationResponseList-RL-ReconfRsp	ProtocolIE-ID ::= 223
id-RL-InformationResponseList-RL-SetupRspFDD	ProtocolIE-ID ::= 224
id-RL-InformationResponse-RL-AdditionRspTDD	ProtocolIE-ID ::= 225
id-RL-InformationResponse-RL-SetupRspTDD	ProtocolIE-ID ::= 226
id-RL-Information-RL-AdditionRqstTDD	ProtocolIE-ID ::= 227
id-RL-Information-RL-ReconfRqstTDD	ProtocolIE-ID ::= 228
id-RL-Information-RL-ReconfPrepTDD	ProtocolIE-ID ::= 229
id-RL-Information-RL-SetupRqstTDD	ProtocolIE-ID ::= 230
id-RL-ReconfigurationFailureItem-RL-ReconfFailure	ProtocolIE-ID ::= 236
id-RL-Set-InformationItem-DM-Rprt	ProtocolIE-ID ::= 238
id-RL-Set-InformationItem-DM-Rsp	ProtocolIE-ID ::= 240
id-RL-Set-InformationItem-RL-FailureInd	ProtocolIE-ID ::= 241
id-RL-Set-InformationItem-RL-RestoreInd	ProtocolIE-ID ::= 242
id-S-CCPCH-Information	ProtocolIE-ID ::= 247
id-S-CPICH-Information	ProtocolIE-ID ::= 249
id-SCH-Information	ProtocolIE-ID ::= 251
id-S-SCH-Information	ProtocolIE-ID ::= 253
id-Secondary-CCPCHListIE-CTCH-ReconfRqstTDD	ProtocolIE-ID ::= 257
id-Secondary-CCPCH-parameterListIE-CTCH-SetupRqstTDD	ProtocolIE-ID ::= 258
id-Secondary-CCPCH-Parameters-CTCH-ReconfRqstTDD	ProtocolIE-ID ::= 259
id-SecondaryCPICH-InformationItem-Cell-ReconfRqstFDD	ProtocolIE-ID ::= 260
id-SecondaryCPICH-InformationItem-Cell-SetupRqstFDD	ProtocolIE-ID ::= 261
id-SecondaryCPICH-InformationList-Cell-ReconfRqstFDD	ProtocolIE-ID ::= 262
id-SecondaryCPICH-InformationList-Cell-SetupRqstFDD	ProtocolIE-ID ::= 263
id-SecondarySCH-Information-Cell-ReconfRqstFDD	ProtocolIE-ID ::= 264
id-SecondarySCH-Information-Cell-SetupRqstFDD	ProtocolIE-ID ::= 265
id-SegmentInformationListIE-SystemInfoUpdate	ProtocolIE-ID ::= 266
id-SFN	ProtocolIE-ID ::= 268
id-ShutdownTimer	ProtocolIE-ID ::= 269
id-Start-Of-Audit-Sequence-Indicator	ProtocolIE-ID ::= 114
id-Successful-RL-InformationRespItem-RL-AdditionFailureFDD	ProtocolIE-ID ::= 270
id-Successful-RL-InformationRespItem-RL-SetupFailureFDD	ProtocolIE-ID ::= 271
id-SyncCase	ProtocolIE-ID ::= 274
id-SyncCaseIndicatorItem-Cell-SetupRqstTDD-PSCH	ProtocolIE-ID ::= 275
id-T-Cell	ProtocolIE-ID ::= 276
id-TimeSlotConfigurationList-Cell-ReconfRqstTDD	ProtocolIE-ID ::= 277
id-TimeSlotConfigurationList-Cell-SetupRqstTDD	ProtocolIE-ID ::= 278
id-TransmissionDiversityApplied	ProtocolIE-ID ::= 279
id-TypeOfError	ProtocolIE-ID ::= 508
id-UARFCNforNt	ProtocolIE-ID ::= 280
id-UARFCNforNd	ProtocolIE-ID ::= 281
id-UARFCNforNu	ProtocolIE-ID ::= 282
id-UL-CCTrCH-InformationItem-RL-SetupRqstTDD	ProtocolIE-ID ::= 284
id-UL-CCTrCH-InformationList-RL-AdditionRqstTDD	ProtocolIE-ID ::= 285
id-UL-CCTrCH-InformationList-RL-SetupRqstTDD	ProtocolIE-ID ::= 288
id-UL-DPCH-InformationItem-RL-AdditionRqstTDD	ProtocolIE-ID ::= 289
id-UL-DPCH-InformationList-RL-SetupRqstTDD	ProtocolIE-ID ::= 291
id-UL-DPCH-Information-RL-ReconfPrepFDD	ProtocolIE-ID ::= 293
id-UL-DPCH-Information-RL-ReconfRqstFDD	ProtocolIE-ID ::= 294
id-UL-DPCH-Information-RL-SetupRqstFDD	ProtocolIE-ID ::= 295
id-Unsuccessful-RL-InformationRespItem-RL-AdditionFailureFDD	ProtocolIE-ID ::= 296

id-Unsuccessful-RL-InformationRespItem-RL-SetupFailureFDD	ProtocolIE-ID ::= 297
id-Unsuccessful-RL-InformationResp-RL-AdditionFailureTDD	ProtocolIE-ID ::= 300
id-Unsuccessful-RL-InformationResp-RL-SetupFailureTDD	ProtocolIE-ID ::= 301
id-USCH-Information-Add	ProtocolIE-ID ::= 302
id-USCH-Information-DeleteList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 304
id-USCH-Information-ModifyList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 306
id-USCH-InformationResponse	ProtocolIE-ID ::= 309
id-USCH-Information	ProtocolIE-ID ::= 310
id-Active-Pattern-Sequence-Information	ProtocolIE-ID ::= 315
id-AICH-ParametersListIE-CTCH-ReconfRqstFDD	ProtocolIE-ID ::= 316
id-AdjustmentRatio	ProtocolIE-ID ::= 317
id-AP-AICH-Information	ProtocolIE-ID ::= 320
id-AP-AICH-ParametersListIE-CTCH-ReconfRqstFDD	ProtocolIE-ID ::= 322
id-FACH-ParametersListIE-CTCH-ReconfRqstFDD	ProtocolIE-ID ::= 323
id-CauseLevel-PSCH-ReconfFailureTDD	ProtocolIE-ID ::= 324
id-CauseLevel-RL-AdditionFailureFDD	ProtocolIE-ID ::= 325
id-CauseLevel-RL-AdditionFailureTDD	ProtocolIE-ID ::= 326
id-CauseLevel-RL-ReconfFailure	ProtocolIE-ID ::= 327
id-CauseLevel-RL-SetupFailureFDD	ProtocolIE-ID ::= 328
id-CauseLevel-RL-SetupFailureTDD	ProtocolIE-ID ::= 329
id-CDCA-ICH-Information	ProtocolIE-ID ::= 330
id-CDCA-ICH-ParametersListIE-CTCH-ReconfRqstFDD	ProtocolIE-ID ::= 332
id-Closed-Loop-Timing-Adjustment-Mode	ProtocolIE-ID ::= 333
id-CommonPhysicalChannelType-CTCH-ReconfRqstFDD	ProtocolIE-ID ::= 334
id-Compressed-Mode-Deactivation-Flag	ProtocolIE-ID ::= 335
id-CPCH-Information	ProtocolIE-ID ::= 336
id-CPCH-Parameters-CTCH-SetupRsp	ProtocolIE-ID ::= 342
id-CPCH-ParametersListIE-CTCH-ReconfRqstFDD	ProtocolIE-ID ::= 343
id-DL-CCTrCH-InformationAddList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 346
id-DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD	ProtocolIE-ID ::= 347
id-DL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 348
id-DL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD	ProtocolIE-ID ::= 349
id-DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD	ProtocolIE-ID ::= 350
id-DL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 351
id-DL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD	ProtocolIE-ID ::= 352
id-DL-DPCH-InformationAddListIE-RL-ReconfPrepTDD	ProtocolIE-ID ::= 353
id-DL-DPCH-InformationModify-AddListIE-RL-ReconfPrepTDD	ProtocolIE-ID ::= 355
id-DL-DPCH-InformationModify-DeleteListIE-RL-ReconfPrepTDD	ProtocolIE-ID ::= 356
id-DL-DPCH-InformationModify-ModifyListIE-RL-ReconfPrepTDD	ProtocolIE-ID ::= 357
id-DL-TPC-Pattern01Count	ProtocolIE-ID ::= 358
id-DPC-Mode	ProtocolIE-ID ::= 450
id-DPCHConstant	ProtocolIE-ID ::= 359
id-DSCH-FDD-Common-Information	ProtocolIE-ID ::= 94
id-EnhancedDSCHPC	ProtocolIE-ID ::= 110
id-EnhancedDSCHPCIndicator	ProtocolIE-ID ::= 111
id-FACH-ParametersList-CTCH-SetupRsp	ProtocolIE-ID ::= 362
id-Limited-power-increase-information-Cell-SetupRqstFDD	ProtocolIE-ID ::= 369
id-PCH-Parameters-CTCH-SetupRsp	ProtocolIE-ID ::= 374
id-PCH-ParametersItem-CTCH-ReconfRqstFDD	ProtocolIE-ID ::= 375
id-PCPCH-Information	ProtocolIE-ID ::= 376
id-PICH-ParametersItem-CTCH-ReconfRqstFDD	ProtocolIE-ID ::= 380
id-PRACHConstant	ProtocolIE-ID ::= 381
id-PRACH-ParametersListIE-CTCH-ReconfRqstFDD	ProtocolIE-ID ::= 383
id-PUSCHConstant	ProtocolIE-ID ::= 384



id-RACH-Parameters-CTCH-SetupRsp	ProtocolIE-ID ::= 385
id-SSDT-CellIDforEDSCHPC	ProtocolIE-ID ::= 443
id-Synchronisation-Configuration-Cell-ReconfRqst	ProtocolIE-ID ::= 393
id-Synchronisation-Configuration-Cell-SetupRqst	ProtocolIE-ID ::= 394
id-Transmission-Gap-Pattern-Sequence-Information	ProtocolIE-ID ::= 395
id-UL-CCTrCH-InformationAddList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 396
id-UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD	ProtocolIE-ID ::= 397
id-UL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 398
id-UL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD	ProtocolIE-ID ::= 399
id-UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD	ProtocolIE-ID ::= 400
id-UL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 401
id-UL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD	ProtocolIE-ID ::= 402
id-UL-DPCH-InformationAddListIE-RL-ReconfPrepTDD	ProtocolIE-ID ::= 403
id-UL-DPCH-InformationModify-AddListIE-RL-ReconfPrepTDD	ProtocolIE-ID ::= 405
id-UL-DPCH-InformationModify-DeleteListIE-RL-ReconfPrepTDD	ProtocolIE-ID ::= 406
id-UL-DPCH-InformationModify-ModifyListIE-RL-ReconfPrepTDD	ProtocolIE-ID ::= 407
id-Unsuccessful-PDSCHSetItem-PSCH-ReconfFailureTDD	ProtocolIE-ID ::= 408
id-Unsuccessful-PUSCHSetItem-PSCH-ReconfFailureTDD	ProtocolIE-ID ::= 409
id-CommunicationContextInfoItem-Reset	ProtocolIE-ID ::= 412
id-CommunicationControlPortInfoItem-Reset	ProtocolIE-ID ::= 414
id-ResetIndicator	ProtocolIE-ID ::= 416
id-TFCI2-Bearer-Information-RL-SetupRqstFDD	ProtocolIE-ID ::= 417
id-TFCI2-BearerSpecificInformation-RL-ReconfPrepFDD	ProtocolIE-ID ::= 418
id-TFCI2-BearerInformationResponse	ProtocolIE-ID ::= 419
id-TimingAdvanceApplied	ProtocolIE-ID ::= 287
id-CFNReportingIndicator	ProtocolIE-ID ::= 6
id-SFNReportingIndicator	ProtocolIE-ID ::= 11
id-InnerLoopDLPCStatus	ProtocolIE-ID ::= 12
id-TimeslotISCPInfo	ProtocolIE-ID ::= 283
id-PICH-ParametersItem-CTCH-SetupRqstTDD	ProtocolIE-ID ::= 167
id-PRACH-ParametersItem-CTCH-SetupRqstTDD	ProtocolIE-ID ::= 20
id-CCTrCH-InformationItem-RL-FailureInd	ProtocolIE-ID ::= 46
id-CCTrCH-InformationItem-RL-RestoreInd	ProtocolIE-ID ::= 47
id-CauseLevel-SyncAdjustmntFailureTDD	ProtocolIE-ID ::= 420
id-CellAdjustmentInfo-SyncAdjustmntRqstTDD	ProtocolIE-ID ::= 421
id-CellAdjustmentInfoItem-SyncAdjustmntRqstTDD	ProtocolIE-ID ::= 494
id-CellSyncBurstInfoList-CellSyncReconfRqstTDD	ProtocolIE-ID ::= 482
id-CellSyncBurstTransInit-CellSyncInitiationRqstTDD	ProtocolIE-ID ::= 422
id-CellSyncBurstMeasureInit-CellSyncInitiationRqstTDD	ProtocolIE-ID ::= 423
id-CellSyncBurstTransReconfiguration-CellSyncReconfRqstTDD	ProtocolIE-ID ::= 424
id-CellSyncBurstMeasReconfiguration-CellSyncReconfRqstTDD	ProtocolIE-ID ::= 425
id-CellSyncBurstTransInfoList-CellSyncReconfRqstTDD	ProtocolIE-ID ::= 426
id-CellSyncBurstMeasInfoList-CellSyncReconfRqstTDD	ProtocolIE-ID ::= 427
id-CellSyncBurstTransReconfInfo-CellSyncReconfRqstTDD	ProtocolIE-ID ::= 428
id-CellSyncInfo-CellSyncReprtTDD	ProtocolIE-ID ::= 429
id-CSBTransmissionID	ProtocolIE-ID ::= 430
id-CSBMeasurementID	ProtocolIE-ID ::= 431
id-IntStdPhCellSyncInfoItem-CellSyncReprtTDD	ProtocolIE-ID ::= 432
id-NCyclesPerSFNperiod	ProtocolIE-ID ::= 433
id-NRepetitionsPerCyclePeriod	ProtocolIE-ID ::= 434
id-SyncFrameNumber	ProtocolIE-ID ::= 437
id-SynchronisationReportType	ProtocolIE-ID ::= 438
id-SynchronisationReportCharacteristics	ProtocolIE-ID ::= 439
id-Unsuccessful-cell-InformationRespItem-SyncAdjustmntFailureTDD	ProtocolIE-ID ::= 440

id-LateEntranceCellSyncInfoItem-CellSyncReprtTDD	ProtocolIE-ID ::= 119
id-ReferenceClockAvailability	ProtocolIE-ID ::= 435
id-ReferenceSFNoffset	ProtocolIE-ID ::= 436
id-InformationExchangeID	ProtocolIE-ID ::= 444
id-InformationExchangeObjectType-InfEx-Rqst	ProtocolIE-ID ::= 445
id-InformationType	ProtocolIE-ID ::= 446
id-InformationReportCharacteristics	ProtocolIE-ID ::= 447
id-InformationExchangeObjectType-InfEx-Rsp	ProtocolIE-ID ::= 448
id-InformationExchangeObjectType-InfEx-Rprt	ProtocolIE-ID ::= 449
id-IPDLParameter-Information-Cell-ReconfRqstFDD	ProtocolIE-ID ::= 451
id-IPDLParameter-Information-Cell-SetupRqstFDD	ProtocolIE-ID ::= 452
id-IPDLParameter-Information-Cell-ReconfRqstTDD	ProtocolIE-ID ::= 453
id-IPDLParameter-Information-Cell-SetupRqstTDD	ProtocolIE-ID ::= 454
id-DL-DPCH-LCR-Information-RL-SetupRqstTDD	ProtocolIE-ID ::= 74
id-DwPCH-LCR-Information	ProtocolIE-ID ::= 78
id-DwPCH-LCR-InformationList-AuditRsp	ProtocolIE-ID ::= 90
id-DwPCH-LCR-Information-Cell-SetupRqstTDD	ProtocolIE-ID ::= 97
id-DwPCH-LCR-Information-Cell-ReconfRqstTDD	ProtocolIE-ID ::= 99
id-DwPCH-LCR-Information-ResourceStatusInd	ProtocolIE-ID ::= 101
id-maxFACH-Power-LCR-CTCH-SetupRqstTDD	ProtocolIE-ID ::= 154
id-maxFACH-Power-LCR-CTCH-ReconfRqstTDD	ProtocolIE-ID ::= 174
id-FPACH-LCR-Information	ProtocolIE-ID ::= 290
id-FPACH-LCR-Information-AuditRsp	ProtocolIE-ID ::= 292
id-FPACH-LCR-InformationList-AuditRsp	ProtocolIE-ID ::= 22
id-FPACH-LCR-InformationList-ResourceStatusInd	ProtocolIE-ID ::= 311
id-FPACH-LCR-Parameters-CTCH-SetupRqstTDD	ProtocolIE-ID ::= 312
id-FPACH-LCR-Parameters-CTCH-ReconfRqstTDD	ProtocolIE-ID ::= 314
id-PCCPCH-LCR-Information-Cell-SetupRqstTDD	ProtocolIE-ID ::= 456
id-PCH-Power-LCR-CTCH-SetupRqstTDD	ProtocolIE-ID ::= 457
id-PCH-Power-LCR-CTCH-ReconfRqstTDD	ProtocolIE-ID ::= 458
id-PICH-LCR-Parameters-CTCH-SetupRqstTDD	ProtocolIE-ID ::= 459
id-PRACH-LCR-ParametersList-CTCH-SetupRqstTDD	ProtocolIE-ID ::= 461
id-RL-InformationResponse-LCR-RL-SetupRspTDD	ProtocolIE-ID ::= 463
id-Secondary-CCPCH-LCR-parameterList-CTCH-SetupRqstTDD	ProtocolIE-ID ::= 465
id-TimeSlot	ProtocolIE-ID ::= 495
id-TimeSlotConfigurationList-LCR-Cell-ReconfRqstTDD	ProtocolIE-ID ::= 466
id-TimeSlotConfigurationList-LCR-Cell-SetupRqstTDD	ProtocolIE-ID ::= 467
id-TimeslotISCP-LCR-InfoList-RL-SetupRqstTDD	ProtocolIE-ID ::= 468
id-TimeSlotLCR-CM-Rqst	ProtocolIE-ID ::= 469
id-UL-DPCH-LCR-Information-RL-SetupRqstTDD	ProtocolIE-ID ::= 470
id-DL-DPCH-InformationItem-LCR-RL-AdditionRqstTDD	ProtocolIE-ID ::= 472
id-UL-DPCH-InformationItem-LCR-RL-AdditionRqstTDD	ProtocolIE-ID ::= 473
id-TimeslotISCP-InformationList-LCR-RL-AdditionRqstTDD	ProtocolIE-ID ::= 474
id-DL-DPCH-LCR-InformationAddList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 475
id-DL-DPCH-LCR-InformationModify-AddList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 477
id-DL-Timeslot-LCR-InformationModify-ModifyList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 479
id-TimeslotISCPInfoList-LCR-DL-PC-RqstTDD	ProtocolIE-ID ::= 480
id-UL-DPCH-LCR-InformationAddListIE-RL-ReconfPrepTDD	ProtocolIE-ID ::= 481
id-UL-DPCH-LCR-InformationModify-AddList	ProtocolIE-ID ::= 483
id-UL-TimeslotLCR-Information-RL-ReconfPrepTDD	ProtocolIE-ID ::= 485
id-UL-SIRTarget	ProtocolIE-ID ::= 510
id-PDSCH-AddInformation-LCR-PSCH-ReconfRqst	ProtocolIE-ID ::= 486
id-PDSCH-AddInformation-LCR-AddListIE-PSCH-ReconfRqst	ProtocolIE-ID ::= 487
id-PDSCH-ModifyInformation-LCR-PSCH-ReconfRqst	ProtocolIE-ID ::= 488

id-PDSCH-ModifyInformation-LCR-ModifyListIE-PSCH-ReconfRqst	ProtocolIE-ID ::= 489
id-PUSCH-AddInformation-LCR-PSCH-ReconfRqst	ProtocolIE-ID ::= 490
id-PUSCH-AddInformation-LCR-AddListIE-PSCH-ReconfRqst	ProtocolIE-ID ::= 491
id-PUSCH-ModifyInformation-LCR-PSCH-ReconfRqst	ProtocolIE-ID ::= 492
id-PUSCH-ModifyInformation-LCR-ModifyListIE-PSCH-ReconfRqst	ProtocolIE-ID ::= 493
id-timeslotInfo-CellSyncInitiationRqstTDD	ProtocolIE-ID ::= 496
id-SyncReportType-CellSyncReprtTDD	ProtocolIE-ID ::= 497
id-PUSCH-Info-DM-Rqst	ProtocolIE-ID ::= 505
id-PUSCH-Info-DM-Rsp	ProtocolIE-ID ::= 506
id-PUSCH-Info-DM-Rprt	ProtocolIE-ID ::= 507
id-InitDL-Power	ProtocolIE-ID ::= 509
id-cellSyncBurstRepetitionPeriod	ProtocolIE-ID ::= 511
id-ReportCharacteristicsType-OnModification	ProtocolIE-ID ::= 512
id-SFNFSNMeasurementValueInformation	ProtocolIE-ID ::= 513
id-SFNFSNMeasurementThresholdInformation	ProtocolIE-ID ::= 514
id-TUTRANGPSMeasurementValueInformation	ProtocolIE-ID ::= 515
id-TUTRANGPSMeasurementThresholdInformation	ProtocolIE-ID ::= 516
id-Rx-Timing-Deviation-Value-LCR	ProtocolIE-ID ::= 520
id-RL-InformationResponse-LCR-RL-AdditionRspTDD	ProtocolIE-ID ::= 51
id-PDSCH-RL-ID	ProtocolIE-ID ::= 66
id-UL-Synchronisation-Parameters-LCR	ProtocolIE-ID ::= 554
id-DL-DPCH-TimeSlotFormat-LCR-ModifyItem-RL-ReconfPrepTDD	ProtocolIE-ID ::= 558
id-UL-DPCH-TimeSlotFormat-LCR-ModifyItem-RL-ReconfPrepTDD	ProtocolIE-ID ::= 559
id-TDD-TPC-UplinkStepSize-LCR-RL-SetupRqstTDD	ProtocolIE-ID ::= 560
id-TDD-TPC-UplinkStepSize-LCR-RL-AdditionRqstTDD	ProtocolIE-ID ::= 561
id-TDD-TPC-DownlinkStepSize-RL-AdditionRqstTDD	ProtocolIE-ID ::= 562
id-TDD-TPC-UplinkStepSize-InformationAdd-LCR-RL-ReconfPrepTDD	ProtocolIE-ID ::= 563
id-TDD-TPC-UplinkStepSize-InformationModify-LCR-RL-ReconfPrepTDD	ProtocolIE-ID ::= 564
id-TDD-TPC-DownlinkStepSize-InformationModify-RL-ReconfPrepTDD	ProtocolIE-ID ::= 565
id-TDD-TPC-DownlinkStepSize-InformationAdd-RL-ReconfPrepTDD	ProtocolIE-ID ::= 566

END

## 9.3.7 Container Definitions

```
-- *****
--
-- Container definitions
--
-- *****

NBAP-Containers {
itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
umts-Access (20) modules (3) nbap (2) version1 (1) nbap-Containers (5) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

-- *****
--
-- IE parameter types from other modules.
--
```

```

-- *****
IMPORTS
    maxProtocolExtensions,
    maxPrivateIEs,
    maxProtocolIEs,
    Criticality,
    Presence,
    PrivateIE-ID,
    ProtocolIE-ID
FROM NBAP-CommonDataTypes;

-- *****
--
-- Class Definition for Protocol IEs
--
-- *****

NBAP-PROTOCOL-IES ::= CLASS {
    &id      ProtocolIE-ID          UNIQUE,
    &criticality  Criticality,
    &Value,
    &presence  Presence
}
WITH SYNTAX {
    ID      &id
    CRITICALITY &criticality
    TYPE      &Value
    PRESENCE  &presence
}

-- *****
--
-- Class Definition for Protocol IEs
--
-- *****

NBAP-PROTOCOL-IES-PAIR ::= CLASS {
    &id      ProtocolIE-ID          UNIQUE,
    &firstCriticality  Criticality,
    &FirstValue,
    &secondCriticality  Criticality,
    &SecondValue,
    &presence          Presence
}
WITH SYNTAX {
    ID      &id
    FIRST CRITICALITY  &firstCriticality
    FIRST TYPE          &FirstValue
    SECOND CRITICALITY &secondCriticality
    SECOND TYPE        &SecondValue
    PRESENCE           &presence
}

```

```

-- *****
--
-- Class Definition for Protocol Extensions
--
-- *****

NBAP-PROTOCOL-EXTENSION ::= CLASS {
    &id      ProtocolIE-ID      UNIQUE,
    &criticality  Criticality,
    &Extension,
    &presence      Presence
}
WITH SYNTAX {
    ID      &id
    CRITICALITY &criticality
    EXTENSION &Extension
    PRESENCE &presence
}

-- *****
--
-- Class Definition for Private IES
--
-- *****

NBAP-PRIVATE-IES ::= CLASS {
    &id      PrivateIE-ID,
    &criticality  Criticality,
    &Value,
    &presence      Presence
}
WITH SYNTAX {
    ID      &id
    CRITICALITY &criticality
    TYPE    &Value
    PRESENCE &presence
}

-- *****
--
-- Container for Protocol IES
--
-- *****

ProtocolIE-Container {NBAP-PROTOCOL-IES : IESSetParam} ::=
    SEQUENCE (SIZE (0..maxProtocolIEs)) OF
    ProtocolIE-Field {{IESSetParam}}

ProtocolIE-Single-Container {NBAP-PROTOCOL-IES : IESSetParam} ::=
    ProtocolIE-Field {{IESSetParam}}

ProtocolIE-Field {NBAP-PROTOCOL-IES : IESSetParam} ::= SEQUENCE {
    id      NBAP-PROTOCOL-IES.&id      ({IESSetParam}),
    criticality  NBAP-PROTOCOL-IES.&criticality  ({IESSetParam}{@id}),

```

```

    value      NBAP-PROTOCOL-IES.&Value      ({IEsSetParam}{@id})
  }
-- *****
--
-- Container for Protocol IE Pairs
--
-- *****

ProtocolIE-ContainerPair {NBAP-PROTOCOL-IES-PAIR : IEsSetParam} ::=
  SEQUENCE (SIZE (0..maxProtocolIEs)) OF
  ProtocolIE-FieldPair {{IEsSetParam}}

ProtocolIE-FieldPair {NBAP-PROTOCOL-IES-PAIR : IEsSetParam} ::= SEQUENCE {
  id          NBAP-PROTOCOL-IES-PAIR.&id      ({IEsSetParam}),
  firstCriticality NBAP-PROTOCOL-IES-PAIR.&firstCriticality ({IEsSetParam}{@id}),
  firstValue     NBAP-PROTOCOL-IES-PAIR.&FirstValue ({IEsSetParam}{@id}),
  secondCriticality NBAP-PROTOCOL-IES-PAIR.&secondCriticality ({IEsSetParam}{@id}),
  secondValue    NBAP-PROTOCOL-IES-PAIR.&SecondValue ({IEsSetParam}{@id})
}
-- *****
--
-- Container Lists for Protocol IE Containers
--
-- *****

ProtocolIE-ContainerList {INTEGER : lowerBound, INTEGER : upperBound, NBAP-PROTOCOL-IES : IEsSetParam} ::=
  SEQUENCE (SIZE (lowerBound..upperBound)) OF
  ProtocolIE-Container {{IEsSetParam}}

ProtocolIE-ContainerPairList {INTEGER : lowerBound, INTEGER : upperBound, NBAP-PROTOCOL-IES-PAIR : IEsSetParam} ::=
  SEQUENCE (SIZE (lowerBound..upperBound)) OF
  ProtocolIE-ContainerPair {{IEsSetParam}}
-- *****
--
-- Container for Protocol Extensions
--
-- *****

ProtocolExtensionContainer {NBAP-PROTOCOL-EXTENSION : ExtensionSetParam} ::=
  SEQUENCE (SIZE (1..maxProtocolExtensions)) OF
  ProtocolExtensionField {{ExtensionSetParam}}

ProtocolExtensionField {NBAP-PROTOCOL-EXTENSION : ExtensionSetParam} ::= SEQUENCE {
  id          NBAP-PROTOCOL-EXTENSION.&id ({ExtensionSetParam}),
  criticality NBAP-PROTOCOL-EXTENSION.&criticality ({ExtensionSetParam}{@id}),
  extensionValue NBAP-PROTOCOL-EXTENSION.&Extension ({ExtensionSetParam}{@id})
}
-- *****
--
-- Container for Private IEs

```

```
--  
-- *****  
  
PrivateIE-Container {NBAP-PRIVATE-IES : IESSetParam} ::=  
  SEQUENCE (SIZE (1..maxPrivateIEs)) OF  
  PrivateIE-Field {{IESSetParam}}  
  
PrivateIE-Field {NBAP-PRIVATE-IES : IESSetParam} ::= SEQUENCE {  
  id          NBAP-PRIVATE-IES.&id  
  ({IESSetParam}),  
  criticality  NBAP-PRIVATE-IES.&criticality  
  ({IESSetParam}@id),  
  value       NBAP-PRIVATE-IES.&Value  
  ({IESSetParam}@id)  
}  
  
END
```

## 9.4 Message Transfer Syntax

NBAP shall use the ASN.1 Basic Packed Encoding Rules (BASIC-PER) Aligned Variant as transfer syntax as specified in ref. [11].

The following encoding rules apply in addition to what has been specified in X.691 [11]:

When a bitstring value is placed in a bit-field as specified in 15.6 to 15.11 in [11], the leading bit of the bitstring value shall be placed in the leading bit of the bit-field, and the trailing bit of the bitstring value shall be placed in the trailing bit of the bit-field.

NOTE - When using the "bstring" notation, the leading bit of the bitstring value is on the left, and the trailing bit of the bitstring value is on the right. The term "leading bit" is to be interpreted as equal to the term "first bit" defined in [12].

## 9.5 Timers

$T_{\text{Preempt}}$

- Specifies the maximum time that a Node B may wait for pre-emption of resources for establishment or reconfiguration of Radio Links.

---

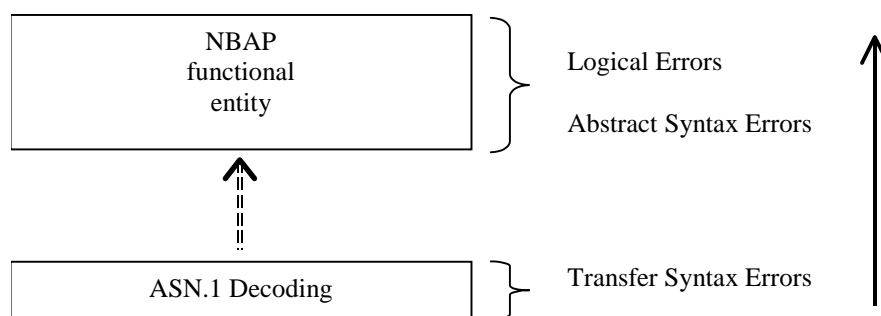
# 10 Handling of Unknown, Unforeseen and Erroneous Protocol Data

## 10.1 General

Protocol Error cases can be divided into three classes:

- Transfer Syntax Error
- Abstract Syntax Error
- Logical Error

Protocol errors can occur in the following functions within a receiving node:



**Figure 38: Protocol Errors in NBAP.**

The information stated in subclauses 10.2, 10.3 and 10.4, to be included in the message used when reporting an error, is what at minimum shall be included. Other optional information elements within the message may also be included, if available. This is also valid for the case when the reporting is done with a response message. The latter is an exception to what is stated in subclause 4.1.



## 10.2 Transfer Syntax Error

A Transfer Syntax Error occurs when the receiver is not able to decode the received physical message. Transfer syntax errors are always detected in the process of ASN.1 decoding. If a Transfer Syntax Error occurs, the receiver should initiate Error Indication procedure with appropriate cause value for the Transfer Syntax protocol error.

Examples for Transfer Syntax Errors are:

- Violation of value ranges in ASN.1 definition of messages. e.g.: If an IE has a defined value range of 0 to 10 (ASN.1: INTEGER (0..10)), and 12 will be received, then this will be treated as a transfer syntax error.
- Violation in list element constraints. e.g.: If a list is defined as containing 1 to 10 elements, and 12 elements will be received, then this case will be handled as a transfer syntax error.
- Missing mandatory elements in ASN.1 SEQUENCE definitions (as sent by the originator of the message).
- Wrong order of elements in ASN.1 SEQUENCE definitions (as sent by the originator of the message).

## 10.3 Abstract Syntax Error

### 10.3.1 General

An Abstract Syntax Error occurs when the receiving functional NBAP entity:

1. receives IEs or IE groups that cannot be understood (unknown id);
2. receives IEs for which the logical range is violated (e.g.: ASN.1 definition: 0 to 15, the logical range is 0 to 10 (values 11 to 15 are undefined), and 12 will be received; this case will be handled as an abstract syntax error using criticality information sent by the originator of the message);
3. does not receive IEs or IE groups but according to the specified presence of the concerned object, the IEs or IE groups should have been present in the received message;
4. receives IEs or IE groups that are defined to be part of that message in wrong order or with too many occurrences of the same IE or IE group;
5. receives IEs or IE groups but according to the conditional presence of the concerned object and the specified condition, the IEs or IE groups should not have been present in the received message.

Cases 1 and 2 (not comprehended IE/IE group) are handled based on received Criticality information. Case 3 (missing IE/IE group) is handled based on Criticality information and Presence information for the missing IE/IE group specified in the version of the specification used by the receiver. Case 4 (IEs or IE groups in wrong order or with too many occurrences) and Case 5 (erroneously present conditional IEs or IE groups) result in rejecting the procedure.

If an Abstract Syntax Error occurs, the receiver shall read the remaining message and shall then for each detected Abstract Syntax Error that belong to cases 1-3 act according to the Criticality Information and Presence Information for the IE/IE group due to which Abstract Syntax Error occurred in accordance with subclauses 10.3.4 and 10.3.5. The handling of cases 4 and 5 is specified in subclause 10.3.6.

### 10.3.2 Criticality Information

In the NBAP messages there is criticality information set for individual IEs and/or IE groups. This criticality information instructs the receiver how to act when receiving an IE or an IE group that is not comprehended, i.e. the entire item (IE or IE group) which is not (fully or partially) comprehended shall be treated in accordance with its own criticality information as specified in subclause 10.3.4.

In addition, the criticality information is used in case of the missing IE/IE group abstract syntax error (see subclause 10.3.5).

The receiving node shall take different actions depending on the value of the Criticality Information. The three possible values of the Criticality Information for an IE/IE group are:

- Reject IE
- Ignore IE and Notify Sender
- Ignore IE

The following rules restrict when a receiving entity may consider an IE, an IE group or an EP not comprehended (not implemented), and when action based on criticality information is applicable:

1. IE or IE group: When one new or modified IE or IE group is implemented for one EP from a standard version, then other new or modified IEs or IE groups specified for that EP in that standard version shall be considered comprehended by the receiving entity (some may still remain unsupported).

Note that this restriction is applicable to a sending entity for constructing messages.

2. EP: The comprehension of different EPs within a standard version or between different standard versions is not mandated. Any EP that is not supported may be considered not comprehended, even if another EP from that standard version is comprehended, and action based on criticality shall be applied.

### 10.3.3 Presence Information

For many IEs/IE groups which are optional according to the ASN.1 transfer syntax, NBAP specifies separately if the presence of these IEs/IE groups is optional or mandatory with respect to RNS application by means of the presence field of the concerned object of class NBAP-PROTOCOL-IES, NBAP-PROTOCOL-IES-PAIR, NBAP-PROTOCOL-EXTENSION or NBAP-PRIVATE-IES.

The presence field of the indicated classes supports three values:

1. Optional;
2. Conditional;
3. Mandatory.

If an IE/IE group is not included in a received message and the presence of the IE/IE group is mandatory or the presence is conditional and the condition is true according to the version of the specification used by the receiver, an abstract syntax error occurs due to a missing IE/IE group.

If an IE/IE group is included in a received message and the presence of the IE/IE group is conditional and the condition is false according to the version of the specification used by the receiver, an abstract syntax error occurs due to this erroneously present conditional IE/IE group.

### 10.3.4 Not comprehended IE/IE group

#### 10.3.4.1 Procedure ID

The receiving node shall treat the different types of received criticality information of the *Procedure ID* according to the following:

##### **Reject IE:**

- If a message is received with a *Procedure ID* marked with "*Reject IE*" which the receiving node does not comprehend, the receiving node shall reject the procedure using the Error Indication procedure.

##### **Ignore IE and Notify Sender:**

- If a message is received with a *Procedure ID* marked with "*Ignore IE and Notify Sender*" which the receiving node does not comprehend, the receiving node shall ignore the procedure and initiate the Error Indication procedure.

##### **Ignore IE:**

- If a message is received with a *Procedure ID* marked with "*Ignore IE*" which the receiving node does not comprehend, the receiving node shall ignore the procedure.

When using the Error Indication procedure to reject a procedure or to report an ignored procedure it shall include the *Procedure ID IE*, the *Triggering Message IE*, and the *Procedure Criticality IE* in the *Criticality Diagnostics IE*.

#### 10.3.4.1A Type of Message

When the receiving node cannot decode the *Type of Message IE*, the Error Indication procedure shall be initiated with an appropriate cause value.

#### 10.3.4.2 IEs Other Than the Procedure ID and Type of Message

The receiving node shall treat the different types of received criticality information of an IE/IE group other than the *Procedure ID* according to the following:

##### **Reject IE:**

- If a message *initiating* a procedure is received containing one or more IEs/IE groups marked with "*Reject IE*" which the receiving node does not comprehend; none of the functional requests of the message shall be executed. The receiving node shall reject the procedure and report the rejection of one or more IEs/IE groups using the message normally used to report unsuccessful outcome of the procedure. In case the information received in the initiating message was insufficient to determine a value for all IEs that are required to be present in the message used to report the unsuccessful outcome of the procedure, the receiving node shall instead terminate the procedure and initiate the Error Indication procedure.
- If a message *initiating* a procedure that does not have a message to report unsuccessful outcome is received containing one or more IEs/IE groups marked with "*Reject IE*" which the receiving node does not comprehend, the receiving node shall terminate the procedure and initiate the Error Indication procedure.
- If a *response* message is received containing one or more IEs/IE groups marked with "*Reject IE*" that the receiving node does not comprehend, the receiving node shall consider the procedure as unsuccessfully terminated and initiate local error handling.

##### **Ignore IE and Notify Sender:**

- If a message *initiating* a procedure is received containing one or more IEs/IE groups marked with "*Ignore IE and Notify Sender*" which the receiving node does not comprehend, the receiving node shall ignore the content of the not comprehended IEs/IE groups, continue with the procedure as if the not comprehended IEs/IE groups were not received (except for the reporting) using the understood IEs/IE groups and report in the response message of the procedure that one or more IEs/IE groups have been ignored. In case the information received in the initiating message was insufficient to determine a value for all IEs that are required to be present in the response message, the receiving node shall instead terminate the procedure and initiate the Error Indication procedure.
- If a message *initiating* a procedure that does not have a message to report the outcome of the procedure is received containing one or more IEs/IE groups marked with "*Ignore IE and Notify Sender*" which the receiving node does not comprehend, the receiving node shall ignore the content of the not comprehended IEs/IE groups, continue with the procedure as if the not comprehended IEs/IE groups were not received (except for the reporting) using the understood IEs/IE groups, and initiate the Error Indication procedure to report that one or more IEs/IE groups have been ignored.
- If a *response* message is received containing one or more IEs/IE groups marked with "*Ignore IE and Notify Sender*" which the receiving node does not comprehend, the receiving node shall ignore the content of the not comprehended IEs/IE groups, continue with the procedure as if the not comprehended IEs/IE groups were not received (except for the reporting) using the understood IEs/IE groups and initiate the Error Indication procedure.

##### **Ignore IE:**

- If a message *initiating* a procedure is received containing one or more IEs/IE groups marked with "*Ignore IE*" which the receiving node does not comprehend, the receiving node shall ignore the content of the not comprehended IEs/IE groups and continue with the procedure as if the not comprehended IEs/IE groups were not received using the understood IEs/IE groups.
- If a *response* message is received containing one or more IEs/IE groups marked with "*Ignore IE*" which the receiving node does not comprehend, the receiving node shall ignore the content of the not comprehended

IEs/IE groups and continue with the procedure as if the not comprehended IEs/IE groups were not received using the understood IEs/IE groups.

When reporting not comprehended IEs/IE groups marked with "*Reject IE*" or "*Ignore IE and Notify Sender*" using a response message defined for the procedure, the *Information Element Criticality Diagnostics IE* shall be included in the *Criticality Diagnostics IE* for each reported IE/IE group. In the *Information Element Criticality Diagnostics IE* the *Repetition Number IE* shall be included and in addition, if the not comprehended IE/IE group is not at message hierarchy level 1 (top level; see annex C) also the *Message Structure IE* shall be included.

When reporting not comprehended IEs/IE groups marked with "*Reject IE*" or "*Ignore IE and Notify Sender*" using the Error Indication procedure, the *Procedure ID IE*, the *Triggering Message IE*, *Procedure Criticality IE*, the *Transaction ID IE*, and the *Information Element Criticality Diagnostics IE* shall be included in the *Criticality Diagnostics IE* for each reported IE/IE group. In the *Information Element Criticality Diagnostics IE* the *Repetition Number IE* shall be included and in addition, if the not comprehended IE/IE group is not at message hierarchy level 1 (top level; see annex C) also the *Message Structure IE* shall be included.

### 10.3.5 Missing IE or IE Group

The receiving node shall treat the missing IE/IE group according to the criticality information for the missing IE/IE group in the received message specified in the version of this specification used by the receiver:

#### Reject IE:

- If a received message *initiating* a procedure is missing one or more IEs/IE groups with specified criticality "*Reject IE*"; none of the functional requests of the message shall be executed. The receiving node shall reject the procedure and report the missing IEs/IE groups using the message normally used to report unsuccessful outcome of the procedure. In case the information received in the initiating message was insufficient to determine a value for all IEs that are required to be present in the message used to report the unsuccessful outcome of the procedure, the receiving node shall instead terminate the procedure and initiate the Error Indication procedure.
- If a received message *initiating* a procedure that does not have a message to report unsuccessful outcome is missing one or more IEs/IE groups with specified criticality "*Reject IE*", the receiving node shall terminate the procedure and initiate the Error Indication procedure.
- If a received *response* message is missing one or more IEs/IE groups with specified criticality "*Reject IE*", the receiving node shall consider the procedure as unsuccessfully terminated and initiate local error handling.

#### Ignore IE and Notify Sender:

- If a received message *initiating* a procedure is missing one or more IEs/IE groups with specified criticality "*Ignore IE and Notify Sender*", the receiving node shall ignore that those IEs are missing and continue with the procedure based on the other IEs/IE groups present in the message and report in the response message of the procedure that one or more IEs/IE groups were missing. In case the information received in the initiating message was insufficient to determine a value for all IEs that are required to be present in the response message, the receiving node shall instead terminate the procedure and initiate the Error Indication procedure.
- If a received message *initiating* a procedure that does not have a message to report the outcome of the procedure is missing one or more IEs/IE groups with specified criticality "*Ignore IE and Notify Sender*", the receiving node shall ignore that those IEs are missing and continue with the procedure based on the other IEs/IE groups present in the message and initiate the Error Indication procedure to report that one or more IEs/IE groups were missing.
- If a received *response* message is missing one or more IEs/IE groups with specified criticality "*Ignore IE and Notify Sender*", the receiving node shall ignore that those IEs are missing and continue with the procedure based on the other IEs/IE groups present in the message and initiate the Error Indication procedure to report that one or more IEs/IE groups were missing.

#### Ignore IE:

- If a received message *initiating* a procedure is missing one or more IEs/IE groups with specified criticality "*Ignore IE*", the receiving node shall ignore that those IEs are missing and continue with the procedure based on the other IEs/IE groups present in the message.

- If a received *response* message is missing one or more IEs/IE groups with specified criticality "*Ignore IE*", the receiving node shall ignore that those IEs/IE groups are missing and continue with the procedure based on the other IEs/IE groups present in the message.

When reporting missing IEs/IE groups with specified criticality "*Reject IE*" or "*Ignore IE and Notify Sender*" using a response message defined for the procedure, the *Information Element Criticality Diagnostics* IE shall be included in the *Criticality Diagnostics* IE for each reported IE/IE group. In the *Information Element Criticality Diagnostics* IE the *Repetition Number* IE shall be included and in addition, if the missing IE/IE group is not at message hierarchy level 1 (top level; see annex C) also the *Message Structure* IE shall be included.

When reporting missing IEs/IE groups with specified criticality "*Reject IE*" or "*Ignore IE and Notify Sender*" using the Error Indication procedure, the *Procedure ID* IE, the *Triggering Message* IE, *Procedure Criticality* IE, the *Transaction ID* IE, and the *Information Element Criticality Diagnostics* IE shall be included in the *Criticality Diagnostics* IE for each reported IE/IE group. In the *Information Element Criticality Diagnostics* IE, the *Repetition Number* IE shall be included and in addition, if the missing IE/IE group is not at message hierarchy level 1 (top level; see annex C) also the *Message Structure* IE shall be included.

### 10.3.6 IEs or IE Groups Received in Wrong Order or With Too Many Occurrences or Erroneously Present

If a message with IEs or IE groups in wrong order or with too many occurrences is received or if IEs or IE groups with a conditional presence are present when the condition is not met (i.e. erroneously present), the receiving node shall behave according to the following:

- If a message *initiating* a procedure is received containing IEs or IE groups in wrong order or with too many occurrences or erroneously present, none of the functional requests of the message shall be executed. The receiving node shall reject the procedure and report the cause value "Abstract Syntax Error (Falsely Constructed Message)" using the message normally used to report unsuccessful outcome of the procedure. In case the information received in the initiating message was insufficient to determine a value for all IEs that are required to be present in the message used to report the unsuccessful outcome of the procedure, the receiving node shall instead terminate the procedure and initiate the Error Indication procedure.
- If a message *initiating* a procedure that does not have a message to report unsuccessful outcome is received containing IEs or IE groups in wrong order or with too many occurrences or erroneously present, the receiving node shall terminate the procedure and initiate the Error Indication procedure, and use cause value "Abstract Syntax Error (Falsely Constructed Message)".
- If a *response* message is received containing IEs or IE groups in wrong order or with too many occurrences or erroneously present, the receiving node shall consider the procedure as unsuccessfully terminated and initiate local error handling.

When determining the correct order only the IEs specified in the specification version used by the receiver shall be considered.

## 10.4 Logical Error

Logical error situations occur when a message is comprehended correctly, but the information contained within the message is not valid (i.e. semantic error), or describes a procedure which is not compatible with the state of the receiver. In these conditions, the following behaviour shall be performed (unless otherwise specified) as defined by the class of the elementary procedure, irrespective of the criticality of the IEs/IE groups containing the erroneous values.

### **Class 1:**

Where the logical error occurs in a request message of a class 1 procedure, and the procedure has a message to report this unsuccessful outcome, this message shall be sent with an appropriate cause value.

Typical cause values are:

- Protocol Causes:
  1. Semantic Error

## 2. Message not compatible with receiver state

Where the logical error is contained in a request message of a class 1 procedure, and the procedure does not have a message to report this unsuccessful outcome, the procedure shall be terminated and the ERROR INDICATION procedure shall be initiated with an appropriate cause value. The *Procedure ID IE*, the *Triggering Message IE* and the *Transaction ID IE* within the *Criticality Diagnostics IE* shall then be included in order to identify the message containing the logical error.

Where the logical error exists in a response message of a class 1 procedure, the procedure shall be considered as unsuccessfully terminated and local error handling shall be initiated.

### **Class 2:**

Where the logical error occurs in a message of a class 2 procedure, the procedure shall be terminated and the ERROR INDICATION procedure shall be initiated with an appropriate cause value. The *Procedure ID IE*, the *Triggering Message IE* and the *Transaction ID IE* within the *Criticality Diagnostics IE* shall then be included in order to identify the message containing the logical error.

## 10.5 Exceptions

The error handling for all the cases described hereafter shall take precedence over any other error handling described in the other subclause of clause 10.

- If any type of error (Transfer Syntax Error, Abstract Syntax Error or Logical Error) is detected in the ERROR INDICATION message, it shall not trigger the Error Indication procedure in the receiving Node but local error handling.
- In case a response message or ERROR INDICATION message needs to be returned, but the information necessary to determine the receiver of that message is missing, the procedure shall be considered as unsuccessfully terminated and local error handling shall be initiated.
- If an error that terminates a procedure occurs, the returned cause value shall reflect the error that caused the termination of the procedure even if one or more abstract syntax errors with criticality 'ignore and notify' have earlier occurred within the same procedure.

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## Annex A (normative): Allocation and Pre-emption of Radio Links in the Node B

### A.1 Deriving Allocation Information for a Radio Link

#### A.1.1 Establishment of a New Radio Link

The Allocation Information for a Radio Link in the case of establishment of a new Radio Link shall be derived as follows:

- The latest received *Allocation/Retention Priority* IE for each transport channel shall be used.

Note: The *Allocation/Retention Priority* IE for a transport channel may have been received in

- a) the procedure that establishes the first Radio Link for the Node B Communication Context in the Node B or
- b) a procedure adding or modifying the transport channel.

- If the *Priority Level* IE in the *Allocation/Retention Priority* IE for all transport channels that are intended to use the Radio Link is set to "no priority", the pre-emption capability of the Radio Link shall be set to "shall not trigger pre-emption".
- If the *Priority Level* IE in the *Allocation/Retention Priority* IE for one or more of the transport channels that are intended to use the Radio Link is not set to "no priority", the allocation priority and the pre-emption capability of the Radio Link shall be set according to the following:
  - The transport channels that have the *Priority Level* IE in the *Allocation/Retention Priority* IE set to "no priority" shall be excluded when setting the allocation priority and pre-emption capability of a Radio Link.
  - The allocation priority for a Radio Link shall be set to highest priority level, given by the *Priority Level* IE in the *Allocation/Retention Priority* IE, for all non excluded transport channels that are intended to use the Radio Link.
  - If all non-excluded transport channels that are intended to use a Radio Link to be established have the pre-emption capability, given by the *Pre-emption Capability* IE in the *Allocation/Retention Priority* IE, set to "shall not trigger pre-emption", the pre-emption capability of the Radio Link shall be set to "shall not trigger pre-emption".  
If one or more non-excluded transport channels that are intended to use the Radio Link to be established have the value of the *Pre-emption Capability* IE in the *Allocation/Retention Priority* IE set to "may trigger pre-emption", the pre-emption capability of the Radio Link shall be set to "may trigger pre-emption".

The derived allocation priority and pre-emption capability are only valid during this allocation/retention process.

#### A.1.2 Modification of an Existing Radio Link

The Allocation Information for a Radio Link in the case of modification of a Radio Link (addition or modification of transport channels using the Radio Link) shall be derived as follows:

- The latest received *Allocation/Retention Priority* IE for each transport channel shall be used.

Note: The *Allocation/Retention Priority* IE for a transport channel may have been received in

- a) the procedure that establishes the first Radio Link for the Node B Communication Context in the Node B,
- b) a previous procedure adding or modifying the transport channel, or
- c) the current procedure adding or modifying the transport channel.

- If the *Priority Level* IE in the *Allocation/Retention Priority* IE for all transport channels to be added or modified in the Radio Link is set to "no priority", the pre-emption capability of the Radio Link to be modified shall be set to "shall not trigger pre-emption".
- If the *Priority Level* IE in the *Allocation/Retention Priority* IE for one or more of the transport channels to be added or modified in the Radio Link is not set to "no priority", the allocation priority of and the pre-emption capability of the Radio Link to be modified shall be set according to the following:
  - The transport channels to be added or modified that have the *Priority Level* IE in the *Allocation/Retention Priority* IE set to "no priority" shall be excluded when setting the allocation priority and pre-emption capability of a Radio Link to be modified.
  - The allocation priority for a Radio Link to be modified shall be set to highest priority level, given by the *Priority Level* IE in the *Allocation/Retention Priority* IE, for all the non-excluded transport channels that are to be added or modified.
  - If all non-excluded transport channels that are to be added or modified in the Radio Link have the pre-emption capability, given by the *Pre-emption Capability* IE in the *Allocation/Retention Priority* IE, set to "shall not trigger pre-emption", the pre-emption capability of the Radio Link to be modified shall be set to "shall not trigger pre-emption".  
If one or more of the non-excluded transport channels to be added or modified in the Radio Link have the value of the *Pre-emption Capability* IE in the *Allocation/Retention Priority* IE set to "may trigger pre-emption", the pre-emption capability of the Radio Link to be modified shall be set to "may trigger pre-emption".

The derived allocation priority and pre-emption capability are only valid during this allocation/retention process.

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## A.2 Deriving Retention Information for a Radio Link

The Retention Information for an existing Radio Link shall be derived as follows:

- The latest received *Allocation/Retention Priority* IE for each transport channel shall be used.

Note: The *Allocation/Retention Priority* IE for a transport channel may have been received in

- a) the procedure that establishes the first Radio Link for the Node B Communication Context in the Node B or
- b) a procedure adding or modifying the transport channel.

- If the *Priority Level* IE in the *Allocation/Retention Priority* IE for one or more transport channels using the Radio Link is set to "no priority", the pre-emption vulnerability of the Radio Link shall be set to "not pre-emptable".
- If the *Priority Level* IE in the *Allocation/Retention Priority* IE for all the transport channels using the Radio Link is not set to "no priority", the retention priority of the Radio Link and the pre-emption vulnerability of the Radio Link shall be set according to the following:
  - The retention priority for a Radio Link shall be set to highest priority level, given by the *Priority Level* IE in the *Allocation/Retention Priority* IE, for all transport channels that uses the Radio Link.
  - If all transport channels that uses the Radio Link have the pre-emption vulnerability, given by the *Pre-emption Vulnerability* IE in the *Allocation/Retention Priority* IE, set to "pre-emptable", the pre-emption vulnerability of the Radio Link shall be set to "pre-emptable".  
If one or more transport channels that uses the Radio Link have the value of the *Pre-emption Vulnerability* IE in the *Allocation/Retention Priority* IE set to "not pre-emptable", the pre-emption vulnerability of the Radio Link shall be set to "not pre-emptable".

The derived retention priority and pre-emption vulnerability are valid until they are changed, or until the Radio Link is deleted. When new transport channels are added to or deleted from the Radio Link or when existing transport channels are modified with regards to the *Allocation/Retention Priority* IE, the retention information shall be derived again according to above.



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## A.3 The Allocation/Retention Process

The Node B shall establish or modify the resources for a Radio Link according to:

- The value of the Allocation Information (allocation priority and pre-emption capability) of the Radio Link to be established or modified. The Allocation Information is derived according to clause A.1.
- The value of the Retention Information (retention priority and pre-emption vulnerability) of existing Radio Links. The Retention Information derived according to clause A.2.
- The resource situation in the cell.

Whilst the process and the extent of the pre-emption functionality is operator dependent, the pre-emption indicators (pre-emption capability and pre-emption vulnerability) shall be treated as follows:

- If the pre-emption capability for a Radio Link to be established or modified is set to "may trigger pre-emption" and the resource situation so requires, the Node B may trigger the pre-emption process in clause A.4 to free resources for this allocation request.
- If the pre-emption capability for a Radio Link to be established or modified is set to "shall not trigger pre-emption", then this allocation request shall not trigger the pre-emption process in clause A.4.
- If the pre-emption vulnerability for an existing Radio Link is set to "pre-emptable", then this Radio Link shall be included in the pre-emption process in clause A.4.
- If the pre-emption vulnerability for an existing Radio Link is set to "not pre-emptable", then this Radio Link shall not be included in the pre-emption process in clause A.4.

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## 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.

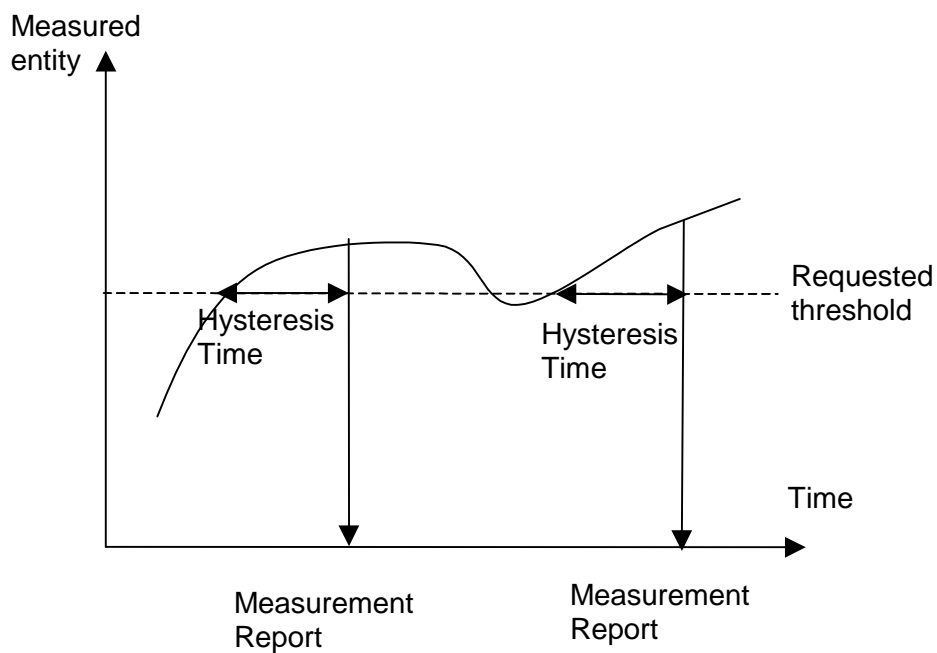
When the pre-emption process detects that one or more Radio Links have to be pre-empted to free resources for a Radio Link(s) to be established or modified, the Node B shall initiate the Radio Link Pre-emption procedure for all the Node B Communication Contexts having Radio Links selected for pre-emption and start the  $T_{\text{Preempt}}$  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  $T_{\text{Preempt}}$  timer expires, the Node B shall regard the procedure that triggered the pre-emption process as failed and complete the procedure in accordance with the "Unsuccessful Operation" subclause of the procedure.

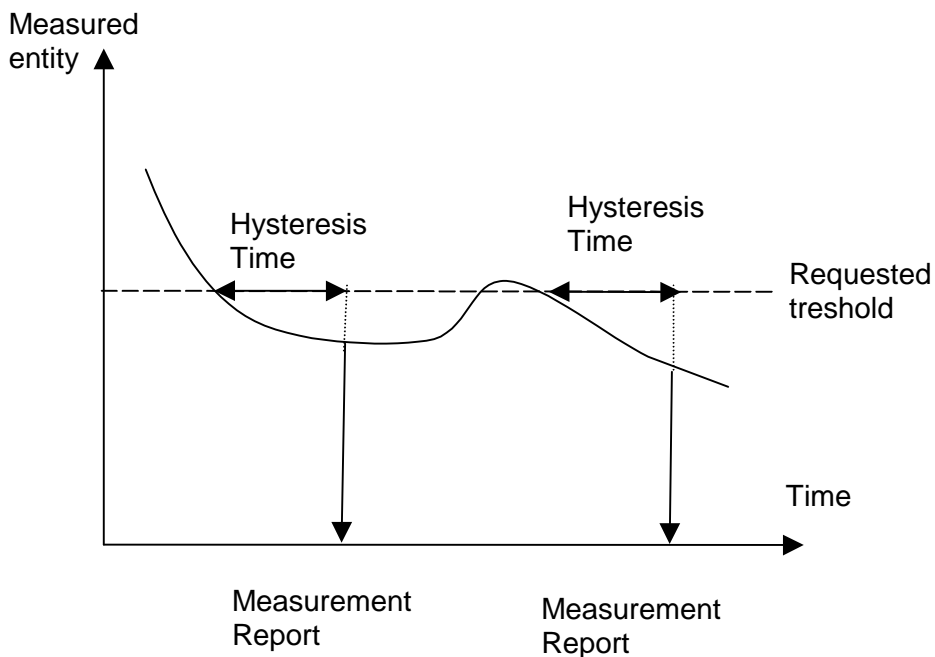
## Annex B (informative): Measurement Reporting

When the *Report Characteristics* IE is set to "Event A" (figure B.1), the Measurement Reporting procedure is initiated when the measured entity rises above the requested threshold and stays there for the requested hysteresis time. If no hysteresis time is given, the value zero shall be used for the hysteresis time.



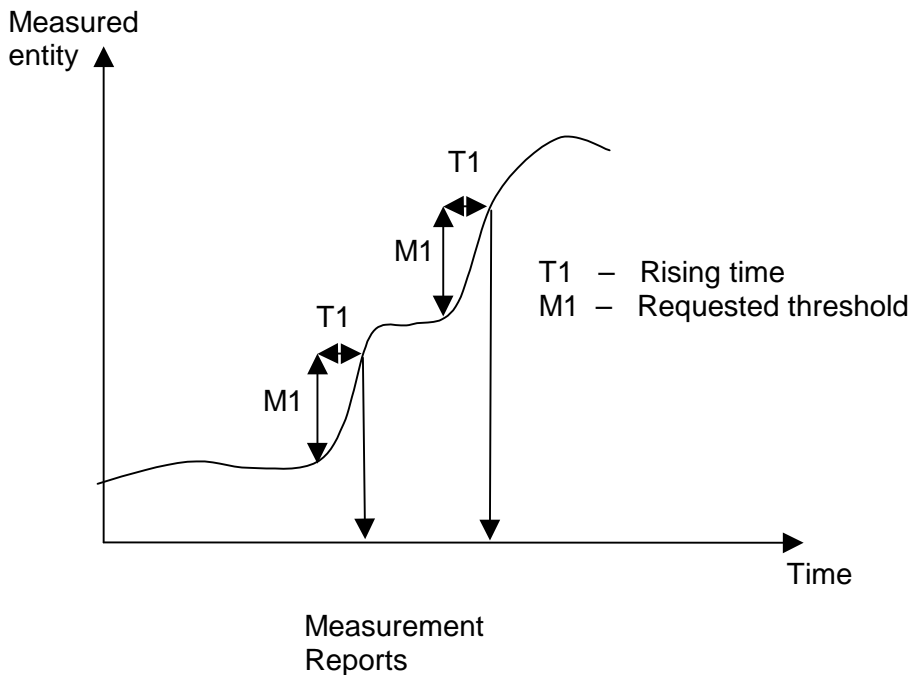
**Figure B.1: Event A reporting with Hysteresis Time specified**

When the *Report Characteristics* IE is set to "Event B" (figure B.2), the Measurement Reporting procedure is initiated when the measured entity falls below the requested threshold and stays there for the requested hysteresis time. If no hysteresis time is given, the value zero shall be used for the hysteresis time.



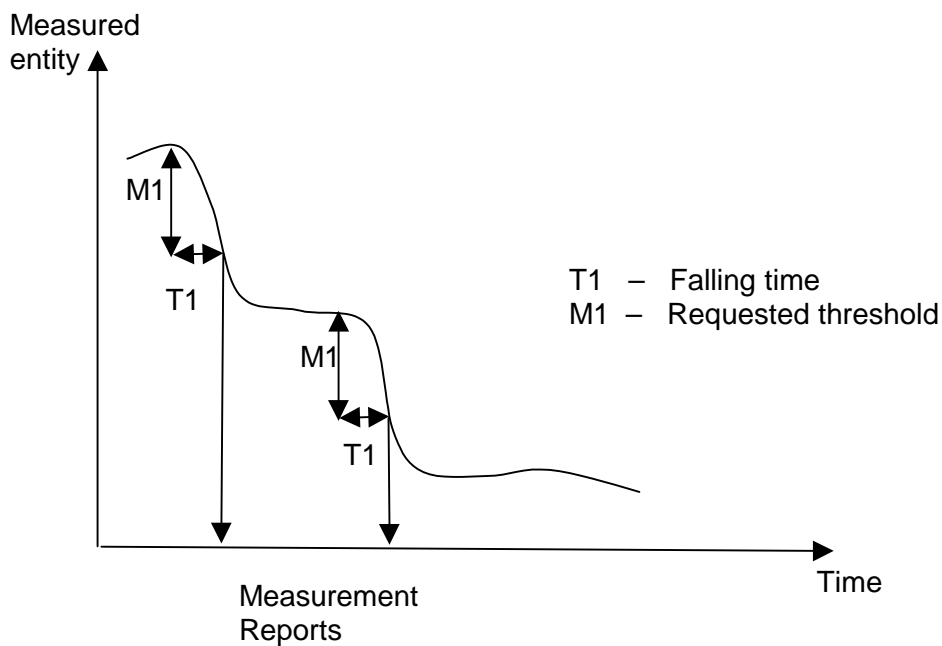
**Figure B.2: Event B reporting with Hysteresis Time specified**

When the *Report Characteristics* IE is set to "Event C" (figure B.3), the Measurement Reporting procedure is initiated always when the measured entity rises by an amount greater than the requested threshold within the requested time. The reporting in figure B.3 is initiated if the Rising Time T1 is less than the requested time.



**Figure B.3: Event C reporting**

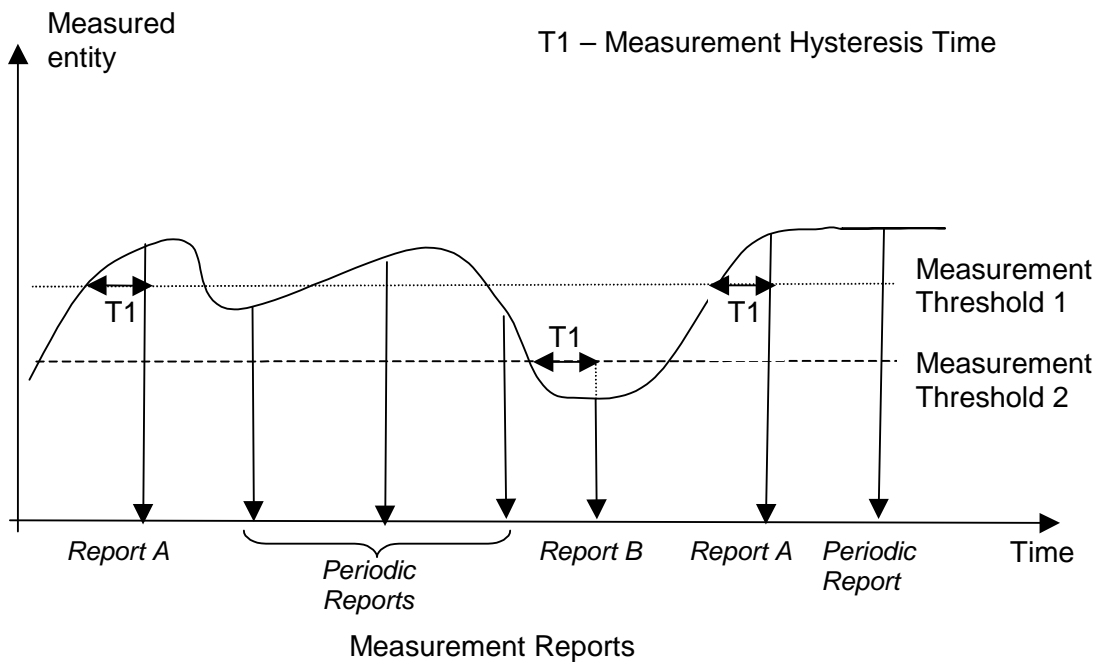
When the *Report Characteristics* IE is set to "Event D" (figure B.4), the Measurement Reporting procedure is initiated always when the measured entity falls by an amount greater than the requested threshold within the requested time. The reporting in figure B.4 is initiated if the Falling Time T1 is less than the requested time.



**Figure B.4: Event D reporting**

When the *Report Characteristics* IE is set to "Event E" (figure B.5), the Measurement Reporting procedure (Report A) is initiated always when the measured entity rises above the "Measurement Threshold 1" and stays there for the "Measurement Hysteresis Time" (T1 in figure B.5). If *Report Periodicity* IE is provided Node B shall also initiate Measurement Reporting procedure periodically. The periodic reporting continues although the measured entity falls below the "Measurement Threshold 1" and is terminated by the Report B.

When the Report A conditions have been met and the measured entity falls below the "Measurement Threshold 2" and stays there for the "Measurement Hysteresis Time" (T1) Measurement Reporting procedure (Report B) is initiated and the periodic reporting is terminated.



**Figure B.5: Event E reporting with Hysteresis Time specified and Periodic Reporting requested**

When the *Report Characteristics* IE is set to "Event F" (figure B.6), the Measurement Reporting procedure (Report A) is initiated always when the measured entity falls below the "Measurement Threshold 1" and stays there for the "Measurement Hysteresis Time" (T1 in figure B.6). If *Report Periodicity* IE is provided Node B shall also initiate Measurement Reporting procedure periodically. The periodic reporting continues although the measured entity rises above the "Measurement Threshold 1" and is terminated by the Report B.

When the Report A conditions have been met and the measured entity rises above the "Measurement Threshold 2" and stays there for the "Measurement Hysteresis Time" (T1) Measurement Reporting procedure (Report B) is initiated and the periodic reporting is terminated.

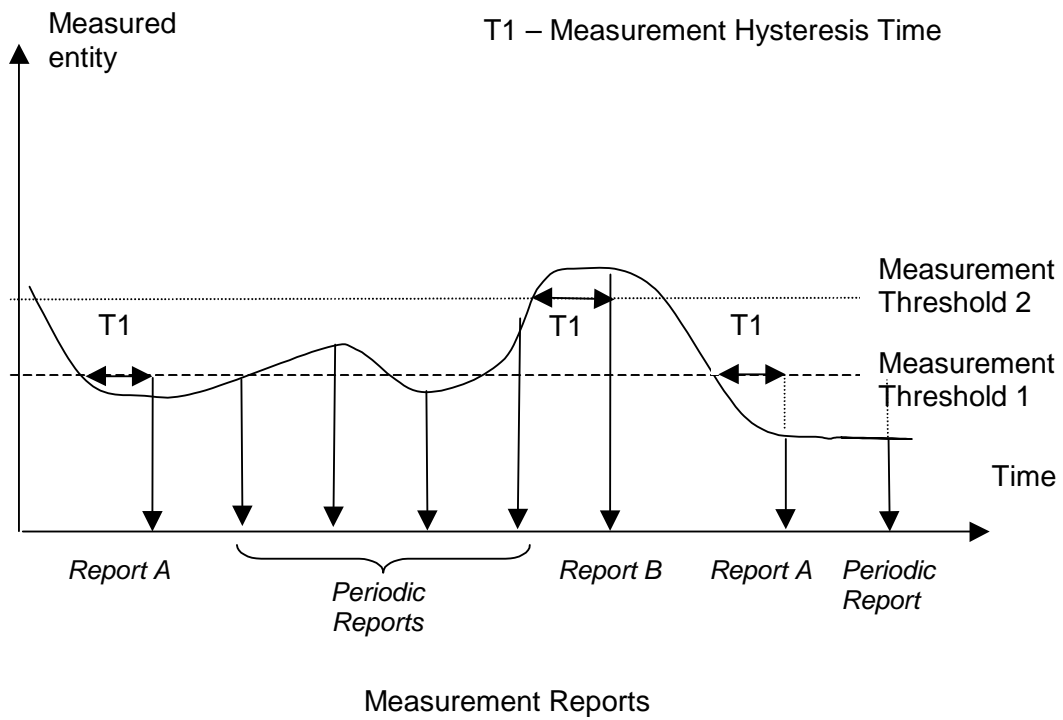


Figure B.6: Event F reporting with Hysteresis Time specified and Periodic Reporting requested

## Annex C (informative): Guidelines for Usage of the Criticality Diagnostics IE

### C.1 EXAMPLE MESSAGE Layout

Assume the following message format:

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Type	M				YES	reject
Transaction ID	M				–	
A	M				YES	reject
B	M				YES	reject
>E		1..<maxE>			EACH	ignore
>>F		1..<maxF>			–	
>>>G		0..3, ...			EACH	ignore
>>H		1..<maxH>			EACH	ignore
>>>G		0..3, ...			EACH	ignore and notify
>>G	M				YES	reject
>>J		1..<maxJ>			–	
>>>G		0..3, ...			EACH	reject
C	M				YES	reject
>K		1..<maxK>			EACH	ignore and notify
>>L		1..<maxL>			–	
>>>M	O				–	
D	M				YES	reject

Note 1. The IEs F, J, and L do not have assigned criticality. The IEs F, J, and L are consequently realised as the ASN.1 type SEQUENCE OF of "ordinary" ASN.1 type, e.g. INTEGER. On the other hand, the repeatable IEs with assigned criticality are realised as the ASN.1 type SEQUENCE OF of an IE object, e.g. ProtocolIE-Single-Container.

For the corresponding ASN.1 layout, see subclause C.4.

## C.2 Example on a Received EXAMPLE MESSAGE

Assume further more that a received message based on the above tabular format is according to the figure below.

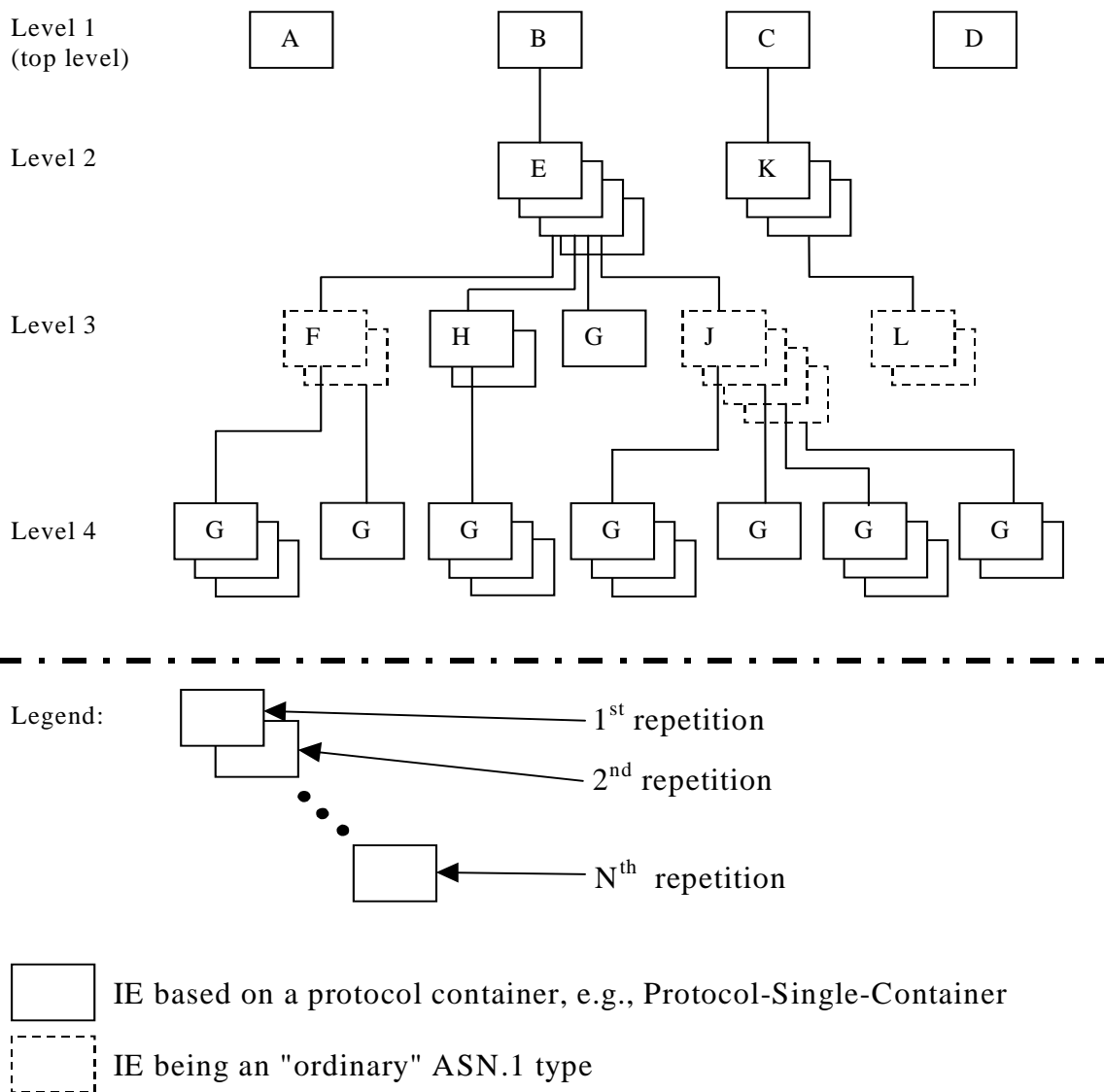
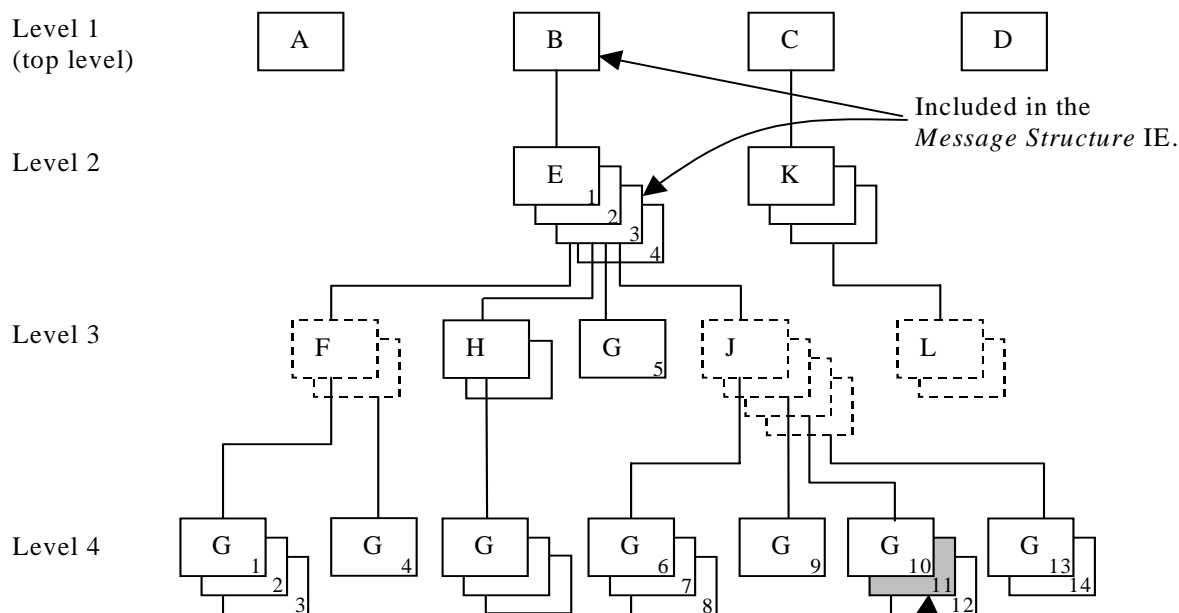


Figure C.1: Example of content of a received NBAP message based on the EXAMPLE MESSAGE



### C.3 Content of Criticality Diagnostics

#### C.3.1 Example 1



Included in the *Information Element Criticality Diagnostics* IE:

- a) *IE ID* IE
- b) *Repetition Number* IE

**Figure C.2: Example of a received NBAP message containing a not comprehended IE**

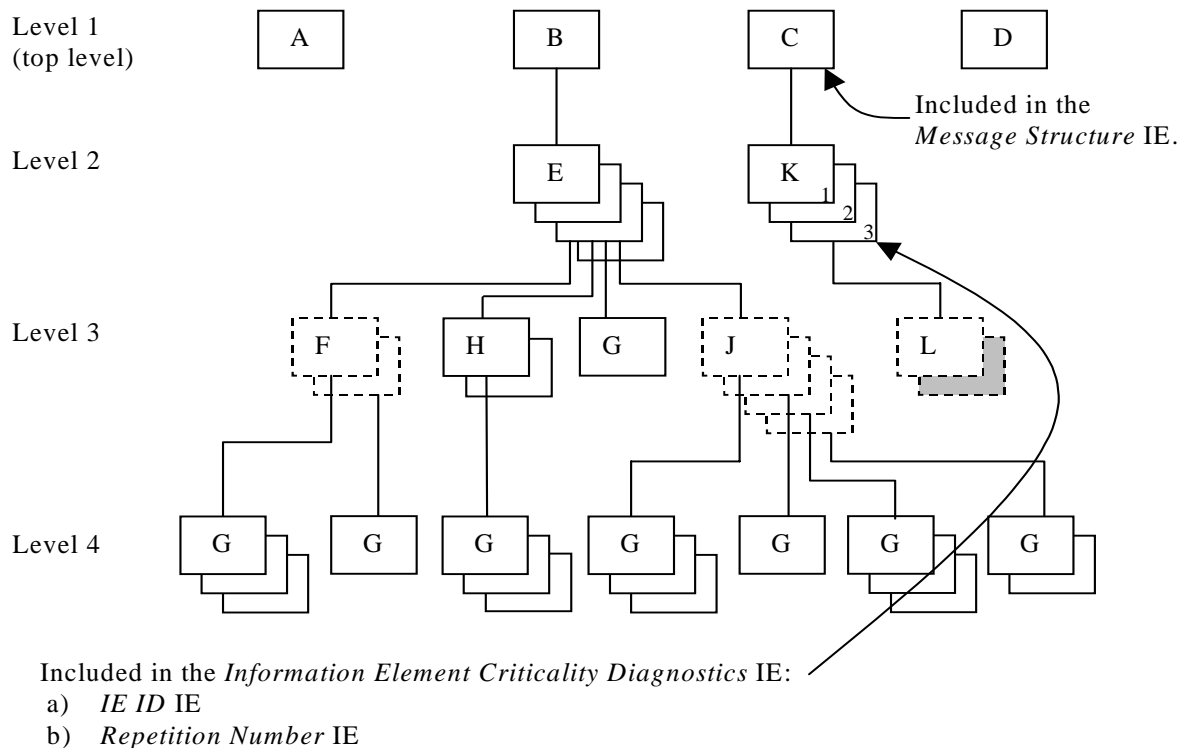
If there is an error within the instance marked as grey in the IE G in the IE J shown in the figure C.2 above, this will be reported within the *Information Element Criticality Diagnostics* IE within the *Criticality Diagnostics* IE as follows:

IE name	Value	Comment
IE Criticality	reject	Criticality for IE on the reported level, i.e. level 4.
IE ID	id-G	IE ID from the reported level, i.e. level 4.
Repetition Number	11	Repetition number on the reported level, i.e. level 4. (Since the IE E (level 2) is the lowest level included in the <i>Message Structure</i> IE this is the eleventh occurrence of IE G within the IE E (level 2).)
Type of Error	not understood	
<i>Message Structure, first repetition</i>		
>IE ID	id-B	IE ID from level 1.
<i>Message Structure, second repetition</i>		
>IE ID	id-E	IE ID from the lowest level above the reported level, i.e. level 2.
>Repetition Number	3	Repetition number from the lowest level above the reported level, i.e. level 2.

Note 2. The IE J on level 3 cannot be included in the *Message Structure* IE since they have no criticality of their own.

Note 3. The repetition number of the reported IE indicates the number of repetitions of IE G received up to the detected erroneous repetition, counting all occurrences of the IE G below the same instance of the previous level with assigned criticality (instance 3 of IE E on level 2).

### C.3.2 Example 2



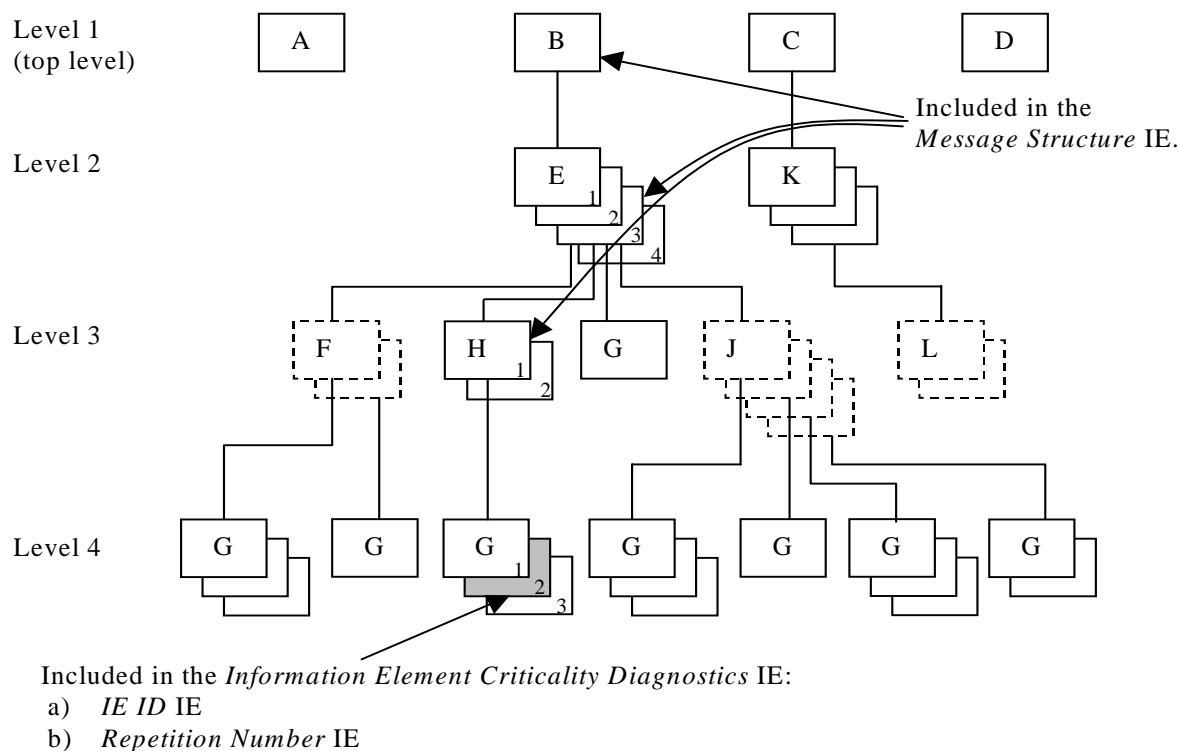
**Figure C.3: Example of a received NBAP message containing a not comprehended IE**

If there is an error within the second instance (marked as grey) in the sequence (IE L in the tabular format) on level 3 below IE K in the structure shown in the figure C.3 above, this will be reported within the *Information Element Criticality Diagnostics* IE within the *Criticality Diagnostics* IE as follows:

IE name	Value	Comment
IE Criticality	ignore and notify	Criticality for IE on the reported level, i.e. level 2.
IE ID	id-K	IE ID from the reported level, i.e. level 2.
Repetition Number	3	Repetition number on the reported level, i.e. level 2.
Type of Error	not understood	
<i>Message Structure, first repetition</i>		
>IE ID	id-C	IE ID from the lowest level above the reported level, i.e. level 1.

Note 4. The IE L on level 3 cannot be reported individually included in the *Message Structure* IE since it has no criticality of its own.

### C.3.3 Example 3



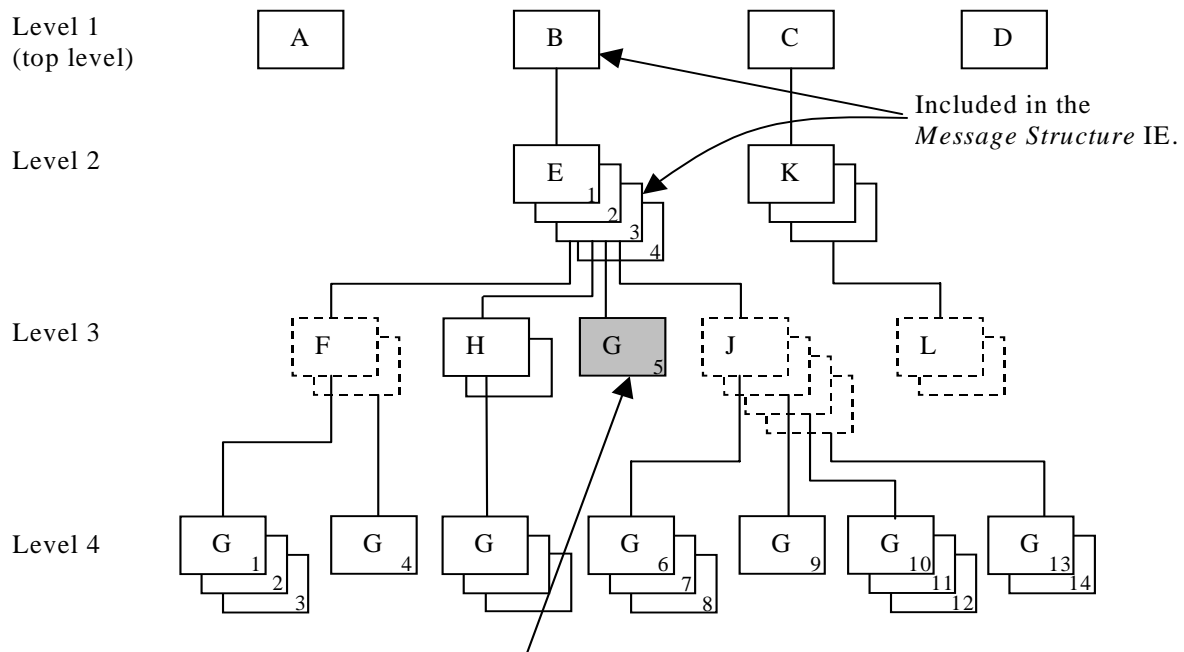
**Figure C.4: Example of a received NBAP message containing a not comprehended IE**

If there is an error within the instance marked as grey in the IE G in the IE H shown in the figure C.4 above, this will be reported within the *Information Element Criticality Diagnostics* IE within the *Criticality Diagnostics* IE as follows:

IE name	Value	Comment
IE Criticality	ignore and notify	Criticality for IE on the reported level, i.e. level 4.
IE ID	id-G	IE ID from the reported level, i.e. level 4.
Repetition Number	2	Repetition number on the reported level, i.e. level 4.
Type of Error	not understood	
<i>Message Structure, first repetition</i>		
>IE ID	id-B	IE ID from level 1.
<i>Message Structure, second repetition</i>		
>IE ID	id-E	IE ID from level 2.
>Repetition Number	3	Repetition number from level 2.
<i>Message Structure, third repetition</i>		
>IE ID	id-H	IE ID from the lowest level above the reported level, i.e. level 3.
>Repetition Number	1	Repetition number from the lowest level above the reported level, i.e. level 3.

Note 5. The repetition number of level 4 indicates the number of repetitions of IE G received up to the detected erroneous repetition, counted below the same instance of the previous level with assigned criticality (instance 1 of IE H on level 3).

C.3.4 Example 4



Included in the *Information Element Criticality Diagnostics IE*:

- a) *IE ID IE*
- b) *Repetition Number IE*

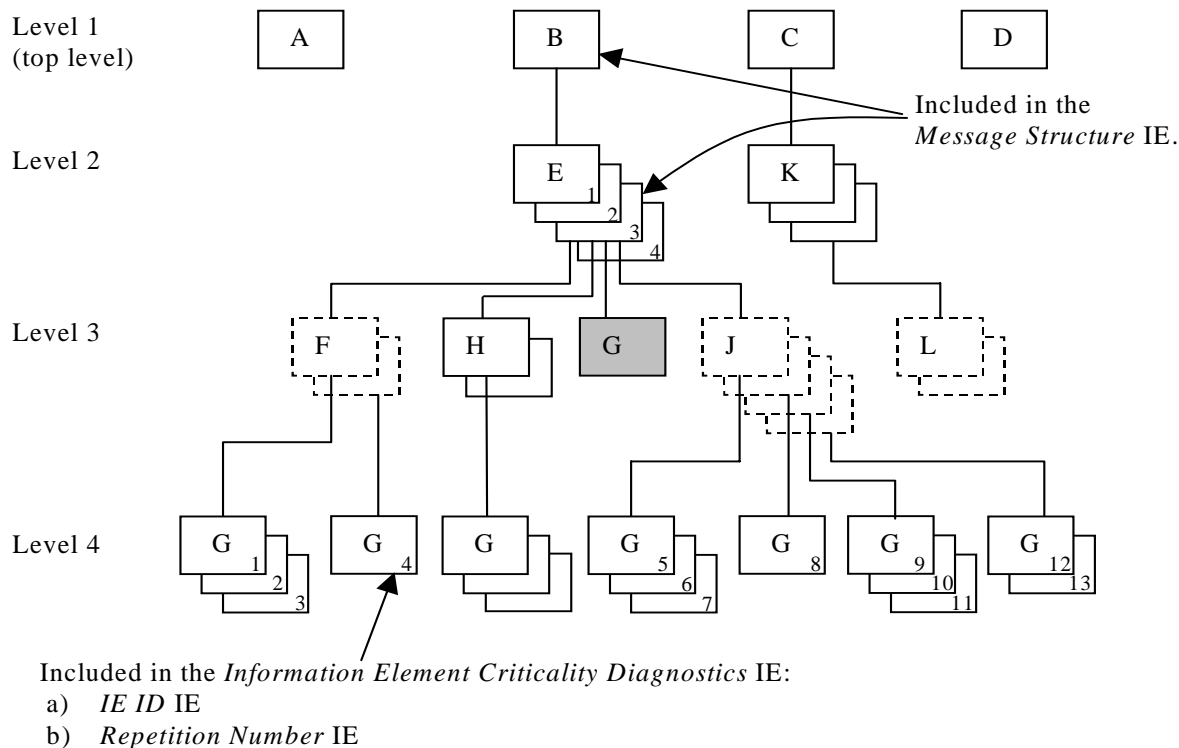
**Figure C.5: Example of a received NBAP message containing a not comprehended IE**

If there is an error within the instance marked as grey in the IE G in the IE E shown in the figure C.5 above, this will be reported within the *Information Element Criticality Diagnostics IE* within the *Criticality Diagnostics IE* as follows:

IE name	Value	Comment
IE Criticality	reject	Criticality for IE on the reported level, i.e. level 3.
IE ID	id-G	IE ID from the reported level, i.e. level 3.
Repetition Number	5	Repetition number on the reported level, i.e. level 3. (Since the IE E (level 2) is the lowest level included in the <i>Message Structure IE</i> this is the fifth occurrence of IE G within the IE E (level 2).
Type of Error	not understood	
<i>Message Structure, first repetition</i>		
>IE ID	id-B	IE ID from level 1.
<i>Message Structure, second repetition</i>		
>IE ID	id-E	IE ID from the lowest level above the reported level, i.e. level 2.
>Repetition Number	3	Repetition number from the lowest level above the reported level, i.e. level 2.

Note 6. The repetition number of the reported IE indicates the number of repetitions of IE G received up to the detected erroneous repetition, counting all occurrences of the IE G below the same instance of the previous level with assigned criticality (instance 3 of IE E on level 2).

C.3.5 Example 5



**Figure C.6: Example of a received 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	
<i>Message Structure, first repetition</i>		
>IE ID	id-B	IE ID from level 1.
<i>Message Structure, second repetition</i>		
>IE ID	id-E	IE ID from the lowest level above the reported level, i.e. level 2.
>Repetition Number	3	Repetition number from the lowest level above the reported level, i.e. level 2.

Note 7. The repetition number of the reported IE indicates the number of repetitions of IE G received up to but not including the missing occurrence, counting all occurrences of the IE G below the same instance of the previous level with assigned criticality (instance 3 of IE E on level 2).

## C.4 ASN.1 of EXAMPLE MESSAGE

```

ExampleMessage ::= SEQUENCE {
    ProtocolIEs          ProtocolIE-Container          {{ExampleMessage-IEs}},
    ProtocolExtensions   ProtocolExtensionContainer   {{ExampleMessage-Extensions}}  OPTIONAL,
    ...
}

ExampleMessage-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-A    CRITICALITY reject  TYPE A  PRESENCE mandatory } |
    { ID id-B    CRITICALITY reject  TYPE B  PRESENCE mandatory } |
    { ID id-C    CRITICALITY reject  TYPE C  PRESENCE mandatory } |
    { ID id-D    CRITICALITY reject  TYPE D  PRESENCE mandatory } ,
    ...
}

B ::= SEQUENCE {
    e                E-List,
    iE-Extensions   ProtocolExtensionContainer { {B-ExtIEs} }  OPTIONAL,
    ...
}

B-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

E-List ::= SEQUENCE (SIZE (1..maxE)) OF ProtocolIE-Single-Container { {E-IEs} }

E-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-E    CRITICALITY ignore  TYPE E  PRESENCE mandatory }
}

E ::= SEQUENCE {
    f                F-List,
    h                H-List,
    g                G-List1,
    j                J-List,
    iE-Extensions   ProtocolExtensionContainer { {E-ExtIEs} }  OPTIONAL,
    ...
}

E-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

F-List ::= SEQUENCE (SIZE (1..maxF)) OF F

F ::= SEQUENCE {
    g                G-List2 OPTIONAL,
    iE-Extensions   ProtocolExtensionContainer { {F-ExtIEs} }  OPTIONAL,
    ...
}

F-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

G-List2 ::= SEQUENCE (SIZE (1..3, ...)) OF ProtocolIE-Single-Container { {G2-IEs} }

G2-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-G    CRITICALITY ignore  TYPE G  PRESENCE mandatory }
}

H-List ::= SEQUENCE (SIZE (1..maxH)) OF ProtocolIE-Single-Container { {H-IEs} }

H-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-H    CRITICALITY ignore  TYPE H  PRESENCE mandatory }
}

H ::= SEQUENCE {
    g                G-List3 OPTIONAL,
    iE-Extensions   ProtocolExtensionContainer { {H-ExtIEs} }  OPTIONAL,
    ...
}

H-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {

```

```

    ...
}
G-List3 ::= SEQUENCE (SIZE (1..3, ...)) OF ProtocolIE-Single-Container { {G3-IEs} }
G3-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-G    CRITICALITY notify  TYPE G  PRESENCE mandatory }
}
G-List1 ::= ProtocolIE-Single-Container { {G1-IEs} }
G1-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-G    CRITICALITY reject  TYPE G  PRESENCE mandatory }
}
J-List ::= SEQUENCE (SIZE (1..maxJ)) OF J
J ::= SEQUENCE {
    g                G-List4 OPTIONAL,
    iE-Extensions    ProtocolExtensionContainer { {J-ExtIEs} } OPTIONAL,
    ...
}
J-ExtIEs    NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
G-List4 ::= SEQUENCE (SIZE (1..3, ...)) OF ProtocolIE-Single-Container { {G4-IEs} }
G4-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-G    CRITICALITY reject  TYPE G  PRESENCE mandatory }
}
C ::= SEQUENCE {
    k                K-List,
    iE-Extensions    ProtocolExtensionContainer { {C-ExtIEs} } OPTIONAL,
    ...
}
C-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
K-List ::= SEQUENCE (SIZE (1..maxK)) OF ProtocolIE-Single-Container { {K-IEs} }
K-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-K    CRITICALITY notify  TYPE K  PRESENCE mandatory }
}
K ::= SEQUENCE {
    l                L-List,
    iE-Extensions    ProtocolExtensionContainer { {K-ExtIEs} } OPTIONAL,
    ...
}
K-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
L-List ::= SEQUENCE (SIZE (1..maxL)) OF L
L ::= SEQUENCE {
    m                M OPTIONAL,
    iE-Extensions    ProtocolExtensionContainer { {L-ExtIEs} } OPTIONAL,
    ...
}
L-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
ExampleMessage-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

## Annex D (informative): Change history

Change history					
TSG RAN#	Version	CR	Tdoc RAN	New Version	Subject/Comment
RAN_06	-	-	RP-99764	3.0.0	Approved at TSG RAN #6 and placed under Change Control
RAN_07	3.0.0	-	-	3.1.0	Approved at TSG RAN #7
RAN_08	3.1.0	-	RP-000250	3.2.0	Approved at TSG RAN #8
RAN_08	3.1.0	-	RP-000251	3.2.0	Approved at TSG RAN #8
RAN_08	3.1.0	-	RP-000252	3.2.0	Approved at TSG RAN #8
RAN_08	3.1.0	-	RP-000253	3.2.0	Approved at TSG RAN #8
RAN_09	3.2.0	165-189	RP-000386	3.3.0	Approved at TSG RAN #9
RAN_09	3.2.0	190-219	RP-000387	3.3.0	Approved at TSG RAN #9
RAN_09	3.2.0	221-246	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	325-388	RP-010125 RP-010126	3.5.0	Approved at TSG RAN #11



Change history							
Date	TSG #	TSG Doc.	CR	Rev	Subject/Comment	Old	New
March 01	11	RP-010160	373, 387		Approved at TSG RAN #11 and placed under Change Control	-	4.0.0
March 01	11	RP-010166	361		Approved at TSG RAN #11 and placed under Change Control	-	4.0.0
March 01	11	RP-010159	372, 374, 381		Approved at TSG RAN #11 and placed under Change Control	-	4.0.0
March 01	11	RP-010164	358, 359		Approved at TSG RAN #11 and placed under Change Control	-	4.0.0
March 01	11	RP-010167	362		Approved at TSG RAN #11 and placed under Change Control	-	4.0.0
06/2001	12	RP-010383	390, 392, 394, 396, 398, 400, 402, 404, 406		Approved at TSG RAN #12	4.0.0	4.1.0
06/2001	12	RP-010384	412, 416, 421, 423, 427, 431, 433, 437, 439, 441		Approved at TSG RAN #12	4.0.0	4.1.0
06/2001	12	RP-010385	449, 456, 462, 464, 467		Approved at TSG RAN #12	4.0.0	4.1.0
06/2001	12	RP-010396	413, 414, 415, 416, 417, 418, 419, 450, 451, 452, 453, 454, 465		Approved at TSG RAN #12	4.0.0	4.1.0
09/2001	13	RP-010587	410	2	Ambiguity in CM handling	4.1.0	4.2.0
09/2001	13	RP-010587	472		Correction to Information Block Deletion	4.1.0	4.2.0
09/2001	13	RP-010587	476		Clarification of the AICH power	4.1.0	4.2.0
09/2001	13	RP-010587	479	1	Transport bearer replacement clarification	4.1.0	4.2.0
09/2001	13	RP-010587	481	1	Corrections to the PDSCH Code Mapping IE	4.1.0	4.2.0
09/2001	13	RP-010587	484	1	Correction to the handling of DL Code Information in RL Reconfiguration procedures	4.1.0	4.2.0
09/2001	13	RP-010587	485	1	Correction to the Error handling of the ERROR INDICATION message	4.1.0	4.2.0
09/2001	13	RP-010587	486		Correct max Codes discrepancy between tabular and ASN.1	4.1.0	4.2.0
09/2001	13	RP-010587	488		S-CCPCH Corrections for TDD	4.1.0	4.2.0
09/2001	13	RP-010587	491	1	Nbap criticality	4.1.0	4.2.0
09/2001	13	RP-010588	500	1	Clarification of Abnormal Conditions/Unsuccessful Operation	4.1.0	4.2.0
09/2001	13	RP-010588	504		Error handling of erroneously present conditional IEs	4.1.0	4.2.0
09/2001	13	RP-010588	507	1	Correction for maxNrOfCPCHs	4.1.0	4.2.0
09/2001	13	RP-010588	509	1	Correction for N_EOT	4.1.0	4.2.0
09/2001	13	RP-010588	513		Bitstrings ordering	4.1.0	4.2.0
09/2001	13	RP-010588	517		Mapping of TFCS to TFCI	4.1.0	4.2.0
09/2001	13	RP-010588	519		Correction of implementation of RAN#12 CRs	4.1.0	4.2.0
09/2001	13	RP-010588	521		TDD Channelisation code range definition	4.1.0	4.2.0
09/2001	13	RP-010588	524	1	Clarification of chapter 10	4.1.0	4.2.0
09/2001	13	RP-010588	526		Clarification of use of Diversity Control Indicator	4.1.0	4.2.0
09/2001	13	RP-010588	528	3	Clarification of coordinated DCHs	4.1.0	4.2.0
09/2001	13	RP-010599	468	2	Allowed Combinations of Dedicated Measurement Type and the Reporting Characteristics Type	4.1.0	4.2.0
09/2001	13	RP-010599	470		Support of 8PSK modulation for LCR TDD	4.1.0	4.2.0

09/2001	13	RP-010599	473		DPC Mode in Radio Link Addition procedure	4.1.0	4.2.0
09/2001	13	RP-010599	475		Correction on NBAP function	4.1.0	4.2.0
09/2001	13	RP-010599	498	1	Adding protocol container in CHOICE type IE	4.1.0	4.2.0
09/2001	13	RP-010599	501	1	Clarification of Abnormal Conditions/Unsuccessful Operation	4.1.0	4.2.0
09/2001	13	RP-010599	515	1	Corrections to position reporting	4.1.0	4.2.0
09/2001	13	RP-010599	518	2	CR to 25.433 v4.1.0: RX timing deviation as dedicated measurement for 1.28Mcps TDD	4.1.0	4.2.0
09/2001	13	RP-010599	522	1	Clarification on the Time Slot LCR	4.1.0	4.2.0
10/2001	-	-	-	-	Editorial correction to correct the header	4.2.0	4.2.1
12/2001	14	RP-010897	530	2	CR on Priority range	4.2.1	4.3.0
12/2001	14	RP-010862	534		Bitstrings ordering	4.2.1	4.3.0
12/2001	14	RP-010862	536		Added UTRAN modes in the IE Type and Reference and Semantics Description in IEs in NBAP messages	4.2.1	4.3.0
12/2001	14	RP-010862	538		Alignment to RAN4 spec for Transmitted Code Power Measurement	4.2.1	4.3.0
12/2001	14	RP-010862	540		Correction the Clause 10 Error Handling	4.2.1	4.3.0
12/2001	14	RP-010862	542		Clarification of TrCh Ordering in TFCS	4.2.1	4.3.0
12/2001	14	RP-010862	544		Addition of SIB15.4 and SIB18 to tabular	4.2.1	4.3.0
12/2001	14	RP-010862	550		Transmit Diversity for TDD	4.2.1	4.3.0
12/2001	14	RP-010862	552		Clarification for the definition of the ASN.1 constants	4.2.1	4.3.0
12/2001	14	RP-010862	559	1	Terminology Corrections	4.2.1	4.3.0
12/2001	14	RP-010863	560	1	Rel-4 specific terminology corrections	4.2.1	4.3.0
12/2001	14	RP-010863	562		Procedure Code Criticality in Error Indication	4.2.1	4.3.0
12/2001	14	RP-010863	565		Clarification for the Power Adjustment Type IE in the DL POWER CONTROL REQUEST message	4.2.1	4.3.0
12/2001	14	RP-010863	567	1	Forward Compatibility for DL Power Balancing	4.2.1	4.3.0
12/2001	14	RP-010863	569		Reconfiguration clarification	4.2.1	4.3.0
12/2001	14	RP-010863	571	2	Addition of amendment to clarify the PER encoding of bitstrings	4.2.1	4.3.0
12/2001	14	RP-010863	575	2	Transport Bearer replacement clarification for the DSCH case	4.2.1	4.3.0
12/2001	14	RP-010863	577		Clarification of the Transaction ID	4.2.1	4.3.0
12/2001	14	RP-010863	579	1	CPCH-related corrections	4.2.1	4.3.0
12/2001	14	RP-010863	582		Correction of S field length	4.2.1	4.3.0
12/2001	14	RP-010874	546	1	Correction of drift rate resolution	4.2.1	4.3.0
12/2001	14	RP-010874	547		Cell Parameter ID IE definition for 1.28Mcps TDD	4.2.1	4.3.0
12/2001	14	RP-010874	548		Amendment of the RADIO LINK ADDITION RESPONSE TDD message for LCR TDD	4.2.1	4.3.0
12/2001	14	RP-010874	580	2	SFN-SFN quality indication	4.2.1	4.3.0
12/2001	14	RP-010912	545	1	Correction to SFN-SFN Observed Time Difference Measurement report mapping	4.2.1	4.3.0
03/2002	15	RP-020174	591	1	Incorrect Physical Shared Channel TDD Procedure definition in ASN.1	4.3.0	4.4.0
03/2002	15	RP-020174	593		Removal of criticality information for Transaction ID in the ERROR INDICATION message	4.3.0	4.4.0
03/2002	15	RP-020174	600		Clarification to measurement unit at Higher Layer Filtering.	4.3.0	4.4.0
03/2002	15	RP-020174	605		Correction of the Limited Power Increase in Synchronised Radio Link Reconfiguration Preparation	4.3.0	4.4.0
03/2002	15	RP-020174	623	1	Correction to physical channels which SCTD can be applied (lub)	4.3.0	4.4.0
03/2002	15	RP-020182	585	1	Corrections to the Information Exchange Initiation procedure	4.3.0	4.4.0
03/2002	15	RP-020182	586	1	Correction to UE position measurements quality and threshold information	4.3.0	4.4.0
03/2002	15	RP-020182	587	1	Correction to UE position measurements change and deviation limit formulas	4.3.0	4.4.0
03/2002	15	RP-020182	601	1	Modification of the T_urban-gps length	4.3.0	4.4.0
03/2002	15	RP-020182	606		Amendment of the COMMON MEASUREMENT INITIATION REQUEST message	4.3.0	4.4.0
03/2002	15	RP-020182	609	1	ASN.1 and tabular amendments for LCR TDD	4.3.0	4.4.0
03/2002	15	RP-020182	610		Midamble shift LCR in the PHYSICAL SAHRED SCHANNEL RECONFIGURATION REQUEST [TDD] message	4.3.0	4.4.0
03/2002	15	RP-020182	617		NBAP Rapporteur corrections	4.3.0	4.4.0
03/2002	15	RP-020231	628	2	Removing of channel coding option "no coding" for FDD	4.3.0	4.4.0
06/2002	16	RP-020412	631	2	Criticality Information Decoding Failure Handling	4.4.0	4.5.0
06/2002	16	RP-020412	635	1	Alignment of tabular and ASN.1 coding for DL power	4.4.0	4.5.0
06/2002	16	RP-020412	638	1	Correction to RL Restore Indication	4.4.0	4.5.0
06/2002	16	RP-020412	647		Use of PDSCH RL ID for TDD DSCH/USCH	4.4.0	4.5.0
06/2002	16	RP-020420	651		Clarification on the Neighboring TDD Cell Measurement information	4.4.0	4.5.0

06/2002	16	RP-020420	653		Introduction of SIB	4.4.0	4.5.0
06/2002	16	RP-020412	661		Correction to the use of the CFN IE / SFN IE in the Measurement Initiation procedures	4.4.0	4.5.0
06/2002	16	RP-020412	664		TFICI 0 definition for TDD	4.4.0	4.5.0
06/2002	16	RP-020412	669	2	NBAP Review Alignment on the ASN.1	4.4.0	4.5.0
06/2002	16	RP-020412	671	1	NBAP Review Alignment of the ASN.1	4.4.0	4.5.0
06/2002	16	RP-020420	674	1	Definition of quality figures for SFN-SFN and Tutan-gps measurement value information	4.4.0	4.5.0
06/2002	16	RP-020412	685	1	Clarification for the usage of the cause value	4.4.0	4.5.0
06/2002	16	RP-020412	697	1	TFICI2 bearer clarification	4.4.0	4.5.0
09/2002	17	RP-020612	705		WG4 Reference Corrections	4.5.0	4.6.0
09/2002	17	RP-020620	687		DSCH Initial Credits	4.5.0	4.6.0
09/2002	17	RP-020614	707		Rx Timing Deviation (TDD) corrections	4.5.0	4.6.0
09/2002	17	RP-020621	717		HS-SCCH Power offset	4.5.0	4.6.0
09/2002	17	RP-020621	742		HS-SCCH Power offset	4.5.0	4.6.0
09/2002	17	RP-020616	709		Clarification on the Common Measurement Reporting procedure	4.5.0	4.6.0
09/2002	17	RP-020589	720	1	Replacing all occurrences of $P_{SIR(k)}$ by $\delta P_{curr}$ in 25.423	4.5.0	4.6.0
09/2002	17	RP-020623	713	2	CQI and ACK/NACK Repetition Factor and Power Offset and k-value	4.5.0	4.6.0
09/2002	17	RP-020623	682	2	CQI and ACK/NACK Repetition factor and Power Offset and k-value	4.5.0	4.6.0
09/2002	17	RP-020630	726	2	IP_offset correction	4.5.0	4.6.0
12/2002	18	RP-020754	746		Alignment of Error Indication procedure text to the latest RNSAP	4.6.0	4.7.0
12/2002	18	RP-020758	748		Add UL SIR_target for Unsynchronized RL Reconfiguration in 1.28Mcps TDD	4.6.0	4.7.0
12/2002	18	RP-020757	750		Correction to RX Timing Deviation LCR value range	4.6.0	4.7.0
12/2002	18	RP-020759	752	2	Slot Format for 1.28Mcps TDD	4.6.0	4.7.0
12/2002	18	RP-020754	754		SYNC_DL_Code ID for 1.28Mcps TDD	4.6.0	4.7.0
12/2002	18	RP-020754	766	1	Clarification on the Minimum Spreading Factor for TDD	4.6.0	4.7.0
12/2002	18	RP-020756	768	1	Node B Synchronisation for 3.84Mcps TDD	4.6.0	4.7.0
12/2002	18	RP-020754	779		Clarification to RACH for 1.28Mcps TDD	4.6.0	4.7.0
12/2002	18	RP-020744	784		Correction for the DL DPDCH transmission	4.6.0	4.7.0
03/2003	19	RP-030068	790		Clarification to DL Power definition for TDD	4.7.0	4.8.0
03/2003	19	RP-030072	793		TPC Step Size for TDD	4.7.0	4.8.0
03/2003	19	RP-030069	795		Clarification to 2nd Interleaving Mode for TDD	4.7.0	4.8.0
03/2003	19	RP-030082	805	1	Corrections to Channelisation Code TFCI Mapping for TDD	4.7.0	4.8.0
03/2003	19	RP-030070	807		Correction for the Information Exchange Initiation procedure	4.7.0	4.8.0
03/2003	19	RP-030071	810		Midamble Configuration for Midamble Shift LCR	4.7.0	4.8.0
03/2003	19	RP-030066	817		Corrections to DCH Combining in RL SETUP and RL ADDITION	4.7.0	4.8.0
03/2003	19	RP-030059	822		Correction of PRACH Midamble for 1.28Mcps TDD	4.7.0	4.8.0
06/2003	20	RP-030325	844		GPS trigger condition	4.8.0	4.9.0
06/2003	20	RP-030324	861		Alignment of the Requested Data Value Information IE description	4.8.0	4.9.0
06/2003	20	RP-030326	866		Correction of Failure message used for logical errors	4.8.0	4.9.0
09/2003	21	RP-030443	880		Corrections to Tx Diversity	4.9.0	4.10.0
09/2003	21	RP-030444	883		'On Modification' and 'Periodic' reporting alignment for Information Exchange procedures	4.9.0	4.10.0
12/2003	22	RP-030674	899	1	Correction of wrong number in GPS Timing calculation	4.10.0	4.11.0
12/2003	22	RP-030674	912		Correction of the repetition name for 1.28Mcps TDD in the RADIO LINK RECONFIGURATION PREPARE TDD message	4.10.0	4.11.0
12/2003	22	RP-030674	914	1	Correction of Node B synchronisation procedures	4.10.0	4.11.0
12/2003	22	RP-030674	916		Correction of the ProtocolIE-Single-Containers in ASN.1 for TDD	4.10.0	4.11.0
12/2003	22	RP-030674	918		ASN.1 corrections for 1.28Mcps TDD	4.10.0	4.11.0
12/2003	22	RP-030674	926		Clarification of Timing advance applied for 1.28Mcps TDD	4.10.0	4.11.0
12/2003	22	RP-030670	948		Information Exchange Initiation behavior correction	4.10.0	4.11.0
12/2003	22	RP-030683	950		Extension of Requested Data Value IE	4.10.0	4.11.0

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## History

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