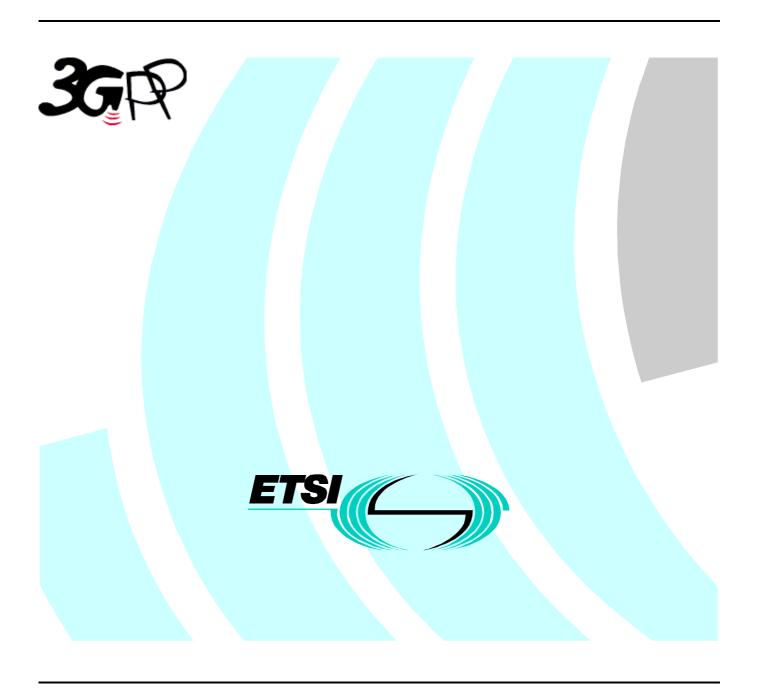# ETSI TS 125 433 V4.0.0 (2001-03)

Technical Specification

**Universal Mobile Telecommunications System (UMTS);
UTRAN Iub Interface NBAP Signalling
(3GPP TS 25.433 version 4.0.0 Release 4)**

Reference
RTS/TSGR-0325433Uv4

Keywords
UMTS

ETSI

650 Route des Lucioles
F-06921 Sophia Antipolis Cedex - FRANCE

Tel.: +33 4 92 94 42 00   Fax: +33 4 93 65 47 16

Siret N° 348 623 562 00017 - NAF 742 C
Association à but non lucratif enregistrée à la
Sous-Préfecture de Grasse (06) N° 7803/88

Important notice

Individual copies of the present document can be downloaded from:
http://www.etsi.org

The present document may be made available in more than one electronic version or in print. In any case of existing or perceived difference in contents between such versions, the reference version is the Portable Document Format (PDF). In case of dispute, the reference shall be the printing on ETSI printers of the PDF version kept on a specific network drive within ETSI Secretariat.

Users of the present document should be aware that the document may be subject to revision or change of status. Information on the current status of this and other ETSI documents is available at http://www.etsi.org/tb/status/

If you find errors in the present document, send your comment to:
editor@etsi.fr

Copyright Notification

ETSI

Intellectual Property Rights

IPRs essential or potentially essential to the present document may have been declared to ETSI. The information pertaining to these essential IPRs, if any, is publicly available for **ETSI members and non-members**, and can be found in ETSI SR 000 314: *"Intellectual Property Rights (IPRs); Essential, or potentially Essential, IPRs notified to ETSI in respect of ETSI standards"*, which is available from the ETSI Secretariat. Latest updates are available on the ETSI Web server (http://www.etsi.org/ipr).

Pursuant to the ETSI IPR Policy, no investigation, including IPR searches, has been carried out by ETSI. No guarantee can be given as to the existence of other IPRs not referenced in ETSI SR 000 314 (or the updates on the ETSI Web server) which are, or may be, or may become, essential to the present document.

Foreword

This Technical Specification (TS) has been produced by the ETSI 3rd Generation Partnership Project (3GPP).

The present document may refer to technical specifications or reports using their 3GPP identities, UMTS identities or GSM identities. These should be interpreted as being references to the corresponding ETSI deliverables.

The cross reference between GSM, UMTS, 3GPP and ETSI identities can be found under www.etsi.org/key .

Contents

Foreword

This Technical Specification has been produced by the 3GPP.

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

Version x.y.z

where:

x   the first digit:

  1   presented to TSG for information;

  2   presented to TSG for approval;

  3   Indicates TSG approved document under change control.

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

z   the third digit is incremented when editorial only changes have been incorporated in the document.

1   Scope

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

2   References

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

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.

- For a specific reference, subsequent revisions do not apply.

- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

3   Definitions, symbols and abbreviations

3.1   Definitions

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

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

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

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

Two kinds of EPs are used:

- **Class 1**: Elementary Procedures with response (success or failure).

- **Class 2**: Elementary Procedures without response.

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

Successful

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

Unsuccessful

- A signalling message explicitly indicates that the EP failed.

Class 2 EPs are considered always successful.

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

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

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

3.2   Symbols

Void.

3.3   Abbreviations

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

AICH	Acquisition Indicator Channel
AP-AICH	Access Preamble Acquisition Indicator Channel
ASN.1	Abstract Syntax Notation One
BCCH	Broadcast Control Channel
CCPCH	Common Control Physical Channel
CFN	Connection Frame Number
CM	Compressed Mode
CPCH	Common Packet Channel
CPICH	Common Pilot Channel
CRNC	Controlling Radio Network Controller
CSICH	CPCH Status Indicator Channel
DCH	Dedicated Channel
DL	Downlink
DPCCH	Dedicated Physical Control Channel
DPCH	Dedicated Physical Channel
DPDCH	Dedicated Physical Data Channel
DSCH	Downlink Shared Channel
FACH	Forward Access Channel
FDD	Frequency Division Duplex
FP	Frame Protocol
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
PUSCH	Physical Uplink Shared Channel
RACH	Random Access Channel
RL	Radio Link
RLS	Radio Link Set
RNC	Radio Network Controller
RRC	Radio Resource Control
SB	Scheduling Block
SCCPCH	Secondary Common Control Physical Channel
SCH	Synchronisation Channel
SIB	System Information Block
SRNC	Serving Radio Network Controller
SSDT	Site Selection Diversity Transmission
STTD	Space Time Transmit Diversity
TDD	Time Division Duplex
TFC	Transport Format Combination
TFCI	Transport Format Combination Indicator
TFCS	Transport Format Combination Set
TFS	Transport Format Set

TPC	Transmit Power Control
TSTD	Time Switched Transmit Diversity
UARFCN	UTRA Absolute Radio Frequency Channel Number
UE	User Equipment
UL	Uplink
UMTS	Universal Mobile Telecommunications System
USCH	Uplink Shared Channel
UTRA	Universal Terrestrial Radio Access
UTRAN	Universal Terrestrial Radio Access Network

4   General

4.1   Procedure Specification Principles

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

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

-    The procedure text discriminates between:

1) Functionality which "shall" be executed

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

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

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

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

4.2   Forwards and Backwards Compatibility

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

4.3   Specification Notations

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

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

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

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

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

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

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

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

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

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

IE When referring to an information element (IE) in the specification the *Information Element Name* is written with the first letters in each word in upper case characters and all letters in Italic font followed by the abbreviation "IE", e.g. *Transport Format Set* IE.

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

5 NBAP Services

5.1 Parallel Transactions

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

6 Services Expected from Signalling Transport

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

7 Functions of NBAP

The NBAP protocol provides the following functions:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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 [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

8 NBAP Procedures

8.1 Elementary Procedures

NBAP procedures are divided into common procedures and dedicated procedures.

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

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

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

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

Table 2: Class 1

Elementary Procedure	Message	Successful Outcome Response message	Unsuccessful Outcome Response message
Cell Setup	CELL SETUP REQUEST	CELL SETUP RESPONSE	CELL SETUP FAILURE
Cell Reconfiguration	CELL RECONFIGURATION REQUEST	CELL RECONFIGURATION RESPONSE	CELL RECONFIGURATION FAILURE
Cell Deletion	CELL DELETION REQUEST	CELL DELETION RESPONSE	
Common Transport Channel Setup	COMMON TRANSPORT CHANNEL SETUP REQUEST	COMMON TRANSPORT CHANNEL SETUP RESPONSE	COMMON TRANSPORT CHANNEL SETUP FAILURE
Common Transport Channel Reconfiguration	COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST	COMMON TRANSPORT CHANNEL RECONFIGURATION RESPONSE	COMMON TRANSPORT CHANNEL RECONFIGURATION FAILURE
Common Transport Channel Deletion	COMMON TRANSPORT CHANNEL DELETION REQUEST	COMMON TRANSPORT CHANNEL DELETION RESPONSE	
Physical Shared Channel Reconfigure [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 [TDD]	CELL SYNCHRONISATION INITIATION REQUEST	CELL SYNCHRONISATION INITIATION RESPONSE	CELL SYNCHRONISATION INITIATION FAILURE
Cell Synchronisation Reconfiguration [TDD]	CELL SYNCHRONISATION RECONFIGURATION REQUEST	CELL SYNCHRONISATION RECONFIGURATION RESPONSE	CELL SYNCHRONISATION RECONFIGURATION FAILURE
Cell Synchronisation Adjustment [TDD]	CELL SYNCHRONISATION ADJUSTMENT REQUEST	CELL SYNCHRONISATION ADJUSTMENT RESPONSE	CELL SYNCHRONISATION ADJUSTMENT FAILURE
Information Exchange Initiation	INFORMATION EXCHANGE INITIATION REQUEST	INFORMATION EXCHANGE INITIATION RESPONSE	INFORMATION EXCHANGE INITIATION FAILURE

Table 3: Class 2

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

8.2 NBAP Common Procedures

8.2.1 Common Transport Channel Setup

8.2.1.1 General

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

8.2.1.2 Successful Operation

CRNC   Node B

COMMON TRANSPORT CHANNEL SETUP
REQUEST

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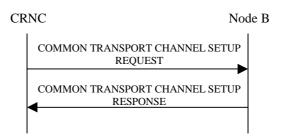
Figure 1: Common Transport Channel Setup procedure, Successful Operation

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

One message can configure only one of the following combinations:

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

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

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

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

Secondary CCPCH:	[FDD - When the COMMON TRANSPORT CHANNEL SETUP REQUEST message contains a Secondary CCPCH, the Node B shall configure and activate it according to the COMMON TRANSPORT CHANNEL SETUP REQUEST message.]
	[TDD - When the COMMON TRANSPORT CHANNEL SETUP REQUEST message contains one or more Secondary CCPCHs, the Node B shall configure and activate them according to the COMMON TRANSPORT CHANNEL SETUP REQUEST message.]
	[TDD- FACHs and PCH may be mapped onto a CCTrCH which may consist of several Secondary CCPCHs]
	If the COMMON TRANSPORT CHANNEL SETUP REQUEST message contains one or several FACHs, the Node B shall configure and activate them according to the COMMON TRANSPORT CHANNEL SETUP REQUEST message.
	If the COMMON TRANSPORT CHANNEL SETUP REQUEST message contains a PCH and a PICH, the Node B shall configure and activate them according to the COMMON TRANSPORT CHANNEL SETUP REQUEST message.
PRACH:	When the COMMON TRANSPORT CHANNEL SETUP REQUEST message contains a PRACH, the Node B shall configure and activate it according to the COMMON TRANSPORT CHANNEL SETUP REQUEST message.
[1.28Mcps TDD – FPACH]:	If the COMMON TRANSPORT CHANNEL SETUP REQUEST message contains a FPACH, the Node B shall configure and activate it according to the COMMON TRANSPORT CHANNEL SETUP REQUEST message.
[FDD-PCPCHs]:	When the COMMON TRANSPORT CHANNEL SETUP REQUEST message contains PCPCHs, the Node B shall configure and activate it according to the COMMON TRANSPORT CHANNEL SETUP REQUEST message.

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

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

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

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

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

8.2.1.3   Unsuccessful Operation

CRNC   Node B

COMMON TRANSPORT CHANNEL SETUP
REQUEST

COMMON TRANSPORT CHANNEL SETUP
FAILURE
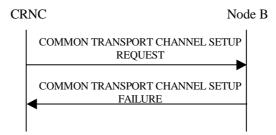
Figure 2: Common Transport Channel Setup procedure, Unsuccessful Operation

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

If the 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

- Unknown C-ID

- 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

Protocol Cause

- Semantic error

- Message not compatible with receiver state

Miscellaneous Cause

- O&M Intervention

- Control processing overload

- HW failure

8.2.1.4 Abnormal Conditions

-

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

CRNC   Node B

COMMON TRANSPORT CHANNEL
RECONFIGURATION REQUEST

COMMON TRANSPORT CHANNEL
RECONFIGURATION RESPONSE

Figure 3: Common Transport Channel Reconfiguration, Successful Operation

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

One message can configure only one of the following combinations:

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

- [TDD – 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].

   [3.84Mcps TDD SCCPCH: If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST
                     message includes the *SCCPCH Power* IE, the Node B shall reconfigure the power that the
                     indicated S-CCPCH shall use.]

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

8.2.2.3   Unsuccessful Operation

CRNC   Node B

COMMON TRANSPORT CHANNEL
RECONFIGURATION REQUEST

COMMON TRANSPORT CHANNEL
RECONFIGURATION FAILURE

Figure 4: Common Transport Channel Reconfiguration procedure, Unsuccessful Operation

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

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

Typical cause values are as follows:

Radio Network Layer Cause

- Cell not available

- Unknown C-ID

- Power level not supported

- Node B Resources unavailable

Transport Layer Cause

- Transport Resources Unavailable

Protocol Cause

- Semantic error

Miscellaneous Cause

- O&M Intervention

- Control processing overload

- HW failure

8.2.2.4 Abnormal Conditions

-

8.2.3 Common Transport Channel Deletion

8.2.3.1 General

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

8.2.3.2 Successful Operation

CRNC   Node B

COMMON TRANSPORT CHANNEL
DELETION REQUEST

COMMON TRANSPORT CHANNEL
DELETION RESPONSE
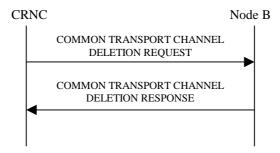
Figure 5: Common Transport Channel Deletion procedure, Successful Operation

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

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

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

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

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

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

8.2.3.3 Unsuccessful Operation

-

8.2.3.4 Abnormal Conditions

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

8.2.4 Block Resource

8.2.4.1 General

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

The logical resource that can be blocked is a cell.

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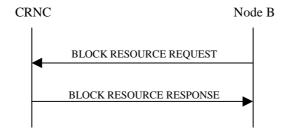
Figure 6: Block Resource procedure, Successful Operation

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

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

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

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

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

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

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

Interactions with the Unblock Resource procedure:

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

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

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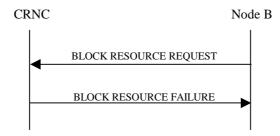
Figure 7: Block Resource procedure, Unsuccessful Operation

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:

Protocol Cause

- Semantic error

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

CRNC Node B

UNBLOCK RESOURCE INDICATION

Figure 8: Unblock Resource procedure, Successful Operation

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

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

8.2.5.3 Abnormal Conditions

-

8.2.6 Audit Required

8.2.6.1 General

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

8.2.6.2 Successful Operation

CRNC Node B

AUDIT REQUIRED INDICATION

Figure 9: Audit Required procedure, Successful Operation

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

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

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

8.2.6.3   Abnormal Conditions

-

8.2.7   Audit

8.2.7.1   General

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

8.2.7.2   Successful Operation

CRNC   Node B

AUDIT REQUEST

AUDIT RESPONSE
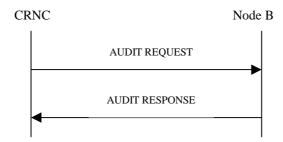
Figure 10: Audit procedure, Successful Operation

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

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

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

Information Provided In One Audit Sequence.

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

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

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

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

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

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

8.2.7.3   Unsuccessful Operation

Figure 10A: Audit procedure, Unsuccessful Operation

If   the Node B 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.

Typical cause values for the AUDIT FAILURE message are:

Protocol Causes:

- Message not Compatible with Receiver State

8.2.7.4   Abnormal Conditions

-

8.2.8   Common Measurement Initiation

8.2.8.1   General

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

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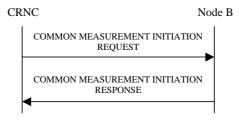
Figure 11: Common Measurement Initiation procedure, Successful Operation

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

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

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

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

If the *Common Measurement Type* IE is not set to 'SFN-SFN Observed Time Difference' and the *SFN Reporting Indicator* IE is set to "FN Reporting Required", the *SFN* IE shall be included in the measurement report or in the measurement response, the latter only in the case the *Report Characteristics* IE is set to 'On-Demand'. The reported SFN shall be the SFN at the time when the measurement value was reported by the layer 3 filter, referred to as point C in the measurement model [25]. If the *Common Measurement Type* IE is set to 'SFN-SFN Observed Time Difference' and the *SFN Reporting Indicator* IE is ignored.

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

Common measurement type

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

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

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

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

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

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

If the *Report Characteristics* IE is set to 'Event C', the Node B shall initiate the Common Measurement Reporting procedure when the measured entity rises by an amount greater than the requested threshold within the requested time.

If the *Report Characteristics* IE is set to 'Event D', the Node B shall initiate the Common Measurement Reporting procedure when the measured entity falls more than the requested threshold within the requested time.

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

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

If the *Report Characteristics* IE is set to 'On Modification', the Node B shall report the result of the requested measurement immediately. Then the Node B shall initiate the Common Measurement Reporting procedure in accordance to the following conditions: 1. If the *Common Measurement Type* IE is set to 'UTRAN GPS Timing of Cell Frame for LCS':

If the $T_{UTRAN\text{-}GPS}$ *Change Limit* IE is included in the $T_{UTRAN\text{-}GPS}$ *Measurement Threshold Information* IE, the Node B shall each time a new measurement result is received from the physical layer measurement, calculate the change of $T_{UTRAN\text{-}GPS}$ 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 $T_{UTRAN\text{-}GPS}$ *Change Limit* IE. The change of $T_{UTRAN\text{-}GPS}$ value (F_n) is calculated according to the following:

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

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

$\qquad for\ n>0$

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

M_n is the latest measurement result received from the physical layer measurements, measured at SFN_n.

M_{n-1} is the previous measurement result received from the physical layer measurements, measured at

SFN_{n-1}.

M_1 is the first measurement result received from the physical layer measurements after first Common Measurement Reporting at initiation or after the last event was triggered.

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

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

$P_n=b \quad for\ n=0$

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

$F_n = min(abs(M_n - P_n),\ abs(M_n - P_n - 37158912000000),\ abs(M_n - P_n + 37158912000000)) \quad for\ n>0$

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

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

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

abs denotes the absolute value.

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

M_n is the latest measurement result received from the physical layer measurements, measured at SFN_n.

M_1 is the first measurement result received from the physical layer measurements after first Common Measurement Reporting at initiation or after the last event was triggered.

The $T_{UTRAN-GPS}$ 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 from the physical layer measurement, 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 measurment which has triggred the event and set n equal to zero when $\_F_n$ rises above the threshold indicated by the *SFN-SFN Change Limit* IE. The change of the SFN-SFN value is calculated according to the following:

$F_n=0$ *for n=0*

$F_n = (M_n - a) \bmod 40960$ *for n>0*

F_n is the change of the SFN-SFN

value expressed in unit [1/16 chip] when n measurement results has been received after first Common Measurement Reporting at initiation or after the last event was triggered.

a is the last reported SFN-SFN .

M_n is the latest measurement result received from the physical layer measurements, measured at SFN_n.

M_1 is the first measurement result received from the physical layer measurements after first Common Measurement Reporting at initiation or after the last event was triggered.

If the *Predicted SFN-SFN Deviation Limit* IE is included in the *SFN-SFN Measurement Threshold Information* IE, the Node B shall each time a new measurement result is received from the physical layer measurement, 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 measurment which has triggred the event and set n equal to zero when the F_n rises above the threshold indicated by the *Predicted SFN-SFN Deviation Limit* IE. The P_n and F_n are calculated according to the following:

$P_n=b$ *for n=0*

$P_n = ((a * (15*((SFN_n - SFN_{n-1}) \bmod 4096) + (TS_n - TS_{n-1}))*2560*16+ P_{n-1}) \bmod 40960) - 20480$ *for n>0*

$F_n = min(abs(M_n - P_n), abs(M_n - P_n - 40960), abs(M_n - P_n + 40960))$ *for n>0*

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

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

b is the last reported SFN-SFN value.

abs denotes the absolute value.

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

M_n is the latest measurement result received from the physical layer measurements, measured at the Time Slot TS_n of the Frame SFN_n.

M_1 is the first measurement result received from the physical layer measurements after first Common Measurement Reporting at initiation or after the last event was triggered.

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

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

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

Higher layer filtering

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

The averaging shall be performed according to the following formula.

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

The variables in the formula are defined as follows:

F_n is the updated filtered measurement result

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

M_n is the latest received measurement result from physical layer measurements

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

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

Common measurement accuracy

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

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

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

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

Response message

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

If the *Common Measurement Type* IE is set to 'SFN-SFN Observed Time Difference' and the *Report Characteristics* IE is set to 'On Demand' or "On Modification", all the available measurement results shall be reported in the *Successful*

Neighbouring cell SFN-SFN Observed Time Difference Measurement Information IE in the *SFN-SFN Measurement Value Information* IE and the Node B shall indicate in the *Unsuccessful Neighbouring cell SFN-SFN Observed Time Difference Measurement Information* IE all the remaining neighbouring cells with no measurement result available in the COMMON MEASUREMENT INITIATION RESPONSE message.

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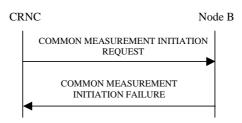
Figure 12: Common Measurement Initiation procedure, Unsuccessful Operation

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

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

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

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

If the *Report characteristics type* IE is received with value set to 'On Modification' in the COMMON MEASUREMENT INITIATION REQUEST message where the *Common Measurement Type* IE is set to other values than the 'UTRAN GPS Timing of Cell Frame for LCS' or 'SFN-SFN Observed Time Difference', the Node B shall regard the Common Measurement Initiation procedure as failed.

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

-

8.2.9 Common Measurement Reporting

8.2.9.1 General

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

8.2.9.2 Successful Operation

```
      CRNC                              Node B
        |                                 |
        |                                 |
        |   COMMON MEASUREMENT REPORT     |
        |<--------------------------------|
        |                                 |
        |                                 |
        |                                 |
```

Figure 13: Common Measurement Reporting procedure, Successful Operation

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

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

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

8.2.9.3 Abnormal Conditions

-

8.2.10 Common Measurement Termination

8.2.10.1 General

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

8.2.10.2 Successful Operation

```
      CRNC                              Node B
        |                                 |
        | COMMON MEASUREMENT TERMINATION  |
        |           REQUEST               |
        |-------------------------------->|
        |                                 |
```

Figure 14: Common Measurement Termination procedure, Successful Operation

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

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

8.2.10.3 Abnormal Conditions

-

8.2.11 Common Measurement Failure

8.2.11.1 General

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

8.2.11.2 Successful Operation

CRNC   Node B

COMMON MEASUREMENT FAILURE
INDICATION

Figure 15: Common Measurement Failure procedure, Successful Operation

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

8.2.11.3 Abnormal Conditions

-

8.2.12 Cell Setup

8.2.12.1 General

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

8.2.12.2 Successful Operation

CRNC   Node B

CELL SETUP REQUEST

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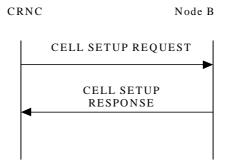
Figure 16: Cell Setup procedure, Successful Operation

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

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

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

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

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

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.

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

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

8.2.12.3   Unsuccessful Operation

CRNC   Node B

CELL SETUP REQUEST

CELL SETUP FAILURE
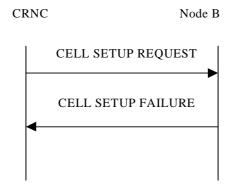
Figure 17: Cell Setup procedure: Unsuccessful Operation

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

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

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

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

Typical cause values are as follows:

Radio Network Layer Cause

- S-CPICH not supported

- Requested Tx Diversity Mode not supported

- Unknown Local Cell ID

- Power level not supported

- Node B Resources unavailable

- IPDL not supported

Protocol Cause

- Semantic error

Miscellaneous Cause

- O&M Intervention

- Control processing overload

- HW failure

8.2.12.4   Abnormal Conditions

-

8.2.13   Cell Reconfiguration

8.2.13.1   General

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

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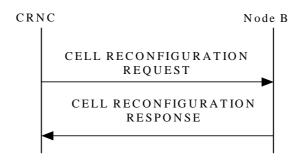
Figure 18: Cell Reconfiguration procedure, Successful Operation

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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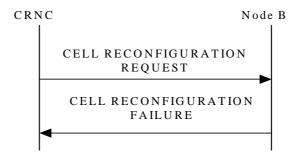
Figure 19: Cell Reconfiguration procedure: Unsuccessful Operation

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

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

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

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

The Cause IE shall be set to an appropriate value.

Typical cause values are as follows:

Radio Network Layer Cause

- Unknown C-ID

- Power level not supported

- Node B Resources unavailable

- IPDL not supported

- IPDL already activated

- IPDL parameters not available

Protocol Cause

- Semantic error

Miscellaneous Cause

- O&M Intervention

- Control processing overload

- HW failure

8.2.13.4 Abnormal Conditions

-

8.2.14 Cell Deletion

8.2.14.1 General

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

8.2.14.2 Successful Operation

CRNC   Node B

CELL DELETION REQUEST

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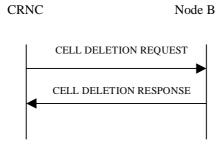
Figure 10: Cell Deletion procedure, Successful Operation

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

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

8.2.14.3 Unsuccessful Operation

-

8.2.14.4 Abnormal Conditions

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

8.2.15 Resource Status Indication

8.2.15.1 General

This procedure is used in the following cases:

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

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

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

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

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

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

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

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

8.2.15.2 Successful Operation

```
CRNC                                              Node B
  |                                                 |
  |            RESOURCE STATUS INDICATION           |
  |<------------------------------------------------|
  |                                                 |
```

Figure 21: Resource Status Indication procedure, Successful Operation

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

Local Cell Becomes Existing:

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

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

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

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

Local Cell Deletion:

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

Capability Change of a Local Cell:

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

Capability Change of a Cell:

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

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

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

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

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

Capability Change of a Communication Control Port:

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

Capability Change of a Local Cell Group:

When the resource capabilities of a Local Cell Group change at the Node B, the Node B shall report the new capability by sending a RESOURCE STATUS INDICATION message with the *Indication Type* IE set equal to "Service Impacting" and the *Local Cell Group Information* IE reporting the change. The *Cause* IE in the RESOURCE STATUS INDICATION message shall be set to an appropriate value. If the RESOURCE STATUS INDICATION message contains both the *DL or Global Capacity Credit* IEand the *UL Capacity Credit* IEthen the internal resource capabilities

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

General:

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

8.2.15.3   Abnormal Conditions

-

8.2.16   System Information Update

8.2.16.1   General

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

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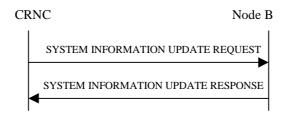
Figure 22: System Information Update procedure, Successful Operation

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

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

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

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

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

-    SFN mod IB_SG_REP = IB_SG_POS

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

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

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

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

Information Block deletion
If the *IB Deletion Indicator* IE value is set to 'Deletion' the Node B shall delete the IB indicated by the *IB Type* IE and *IB OC ID* IE from the transmission schedule on BCCH.

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

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

8.2.16.3   Unsuccessful Operation

CRNC   Node B

SYSTEM INFORMATION UPDATE REQUEST

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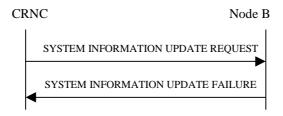
Figure 23: System Information Update procedure: Unsuccessful Operation

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

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

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

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

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

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

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

Possible cause values are:

Radio Network Layer Cause

- Unknown C-ID

- SIB Origination in Node B not Supported

- BCCH scheduling error

Miscellaneous Cause

- Hardware failure

- Control Processing overload

- O&M Intervention

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

8.2.16.4 Abnormal Conditions

-

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.

8.2.17.2 Successful Operation

Figure 24: Radio Link Setup procedure, Successful Operation

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

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

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

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

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

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

[FDD – If the received *Limited Power Increase* IE is set to 'Used', the DRNS 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 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]]

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

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

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

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.

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

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

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

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

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

[FDD – The Node B shall start the DL transmission using the initial DL power specified in the message on each DL channelisation code of the RL until either UL synchronisation on the Uu is achieved for the RLS or a DL POWER CONTROL REQUEST message is received. No inner loop power control or balancing shall be performed during this period. The DL power shall then vary according to the inner loop power control (see ref.[10], subclause 5.2.1.2) 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.].

[TDD – The Node B shall start the DL transmission using the initial DL power specified in the message on each DL channelisation code and on each Time Slot of the RL until the UL synchronisation on the Uu is achieved for the RL. No

inner loop power control shall be performed during this period. The DL power shall then vary according to the inner loop power control (see ref.[22], subclause 4.2.3.3), but shall always be kept within the maximum and minimum limit specified in the RL SETUP REQUEST message.]

[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]).]]

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

[FDD - 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. If the RADIO LINK SETUP REQUEST message includes both *SSDT Cell Identity* IE and *SSDT Cell Identity for EDSCHPC* IE, then Node B shall ignore the value in *SSDT Cell Identity for EDSCHPC* IE]

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

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

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

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

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

[FDD – If the RADIO LINK SETUP REQUEST message includes the *Transmission Gap Pattern Sequence Information* IE and the *Active Pattern Sequence Information* IE, the Node B shall immediately activate the indicated Transmission Gap Pattern Sequences. For each sequence the *TGCFN* refers to the latest passed CFN with that value.]

[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.]

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

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

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

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

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

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

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

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

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

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

8.2.17.3   Unsuccessful Operation

CRNC   Node B

RADIO LINK SETUP REQUEST

RADIO LINK SETUP FAILURE

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.]

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.

Typical cause values are as follows:

Radio Network Layer Cause

- RL Already Activated/allocated

- Combining not supported

- Combining Resources not available

- Requested Tx Diversity Mode not supported

- Invalid CM Settings

- 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

Protocol Cause

- Semantic error

Miscellaneous Cause

- O&M Intervention

- Control processing overload

- HW failure

8.2.17.4   Abnormal Conditions

-

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

CRNC   Node B

PHYSICAL SHARED CHANNEL
RECONFIGURATION REQUEST

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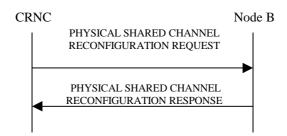
Figure 26: Physical Shared Channel Reconfiguration: Successful Operation

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

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

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 - *TDD Channelisation Code* IE, *Midamble shift and burst type* IE, *Time Slot* IE], [1.28Mcps TDD - *TDD Channelisation Code LCR* IE, *Midamble shift LCR* IE, *Time Slot LCR* IE], *TDD Physical Channel Offset* IE, *Repetition Period* IE, *Repetition Length* IE, or *TFCI presence* IE the Node B shall apply these as the new values, otherwise the old values specified for this set are still applicable.

PDSCH/PUSCH Deletion

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

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

8.2.18.3 Unsuccessful Operation

CRNC   Node B

PHYSICAL SHARED CHANNEL
RECONFIGURATION REQUEST

PHYSICAL SHARED CHANNEL
RECONFIGURATION FAILURE
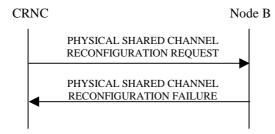
Figure 27: Physical Shared Channel Reconfiguration procedure: Unsuccessful Opreration

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

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

Typical cause values are as follows:

Radio Network Layer Cause

- Cell not available

- Node B Resources unavailable

Transport Layer Cause

- Transport Resources Unavailable

Protocol Cause

- Semantic error

Miscellaneous Cause

- O&M Intervention

- Control processing overload

- HW failure

8.2.18.4 Abnormal Conditions

-

8.2.19 Reset

8.2.19.1 General

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

8.2.19.2 Successful Operation

8.2.19.2.1 Reset Initiated by the CRNC
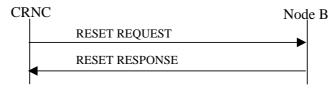
Figure 27A Reset procedure (CRNC to Node B), Successful Operation

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

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

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

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

8.2.19.2.2 Reset Initiated by the Node B

CRNC   Node B

RESET REQUEST

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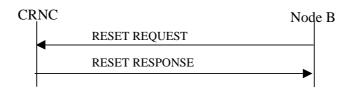
Figure 27B Reset procedure (Node B to CRNC), Successful Operation

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

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

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

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

8.2.19.3 Unsuccessful Operation

-

8.2.19.4 Abnormal Conditions

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

8.2.20 Cell Synchronisation Initiation [TDD]

8.2.20.1 General

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

8.220.2 Successful Operation

CRNC   Node B
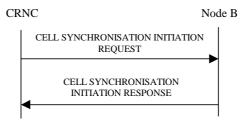
Figure 27C Cell Synchronisation Initiation procedure, Successful Operation

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 sync bursts if requested.

Cell Sync Burst Transmission Initiation

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

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 sync burst.

In case the *SFN* IE is present, the Node B shall after measurement of the indicated cell sync 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 sync burst measurement shall be performed. Whenever the Cell Synchronisation Initialtion procedure is initiated, only the 'Frame related' report characteristic type shall apply.

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

Response message
If the Node B was able to initiate the cell sync 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.

8.220.3   Unsuccessful Operation

CRNC   Node B

Figure 27D Cell Synchronisation Initiation procedure, Unsuccessful Operation

If the requested transmission or measurement on cell sync 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

- Unknown C-ID.

- Cell Synchronisation not supported

- Power level not supported

- Measurement Temporarily not Available

Miscellaneous Cause

- O&M Intervention

- HW failure

8.2.20.4   Abnormal Conditions

-

8.2.21   Cell Synchronisation Reconfiguration [TDD]

8.2.21.1   General

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

8.2.21.2   Successful Operation

CRNC   Node B

CELL SYNCHRONISATION
RECONFIGURATION REQUEST

CELL SYNCHRONISATION
RECONFIGURATION RESPONSE
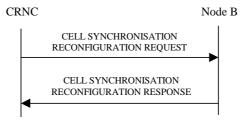
Figure 27E Cell Synchronisation Reconfiguration procedure, Successful Operation

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

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

Cell Sync Burst Schedule

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

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

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

Cell Sync Frame number is calculated by:

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

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

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

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 sync 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 sync 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 sync 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 sync 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 sync 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 sync 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 sync 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 sync burst measurement when the cell sync 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.

Response message

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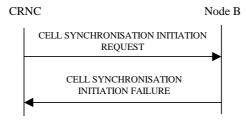
8.2.21.3 Unsuccessful Operation

CRNC   Node B

CELL SYNCHRONISATION
RECONFIGURATION REQUEST

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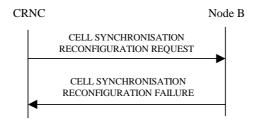
Figure 27F Cell Synchronisation Reconfiguration procedure, Unsuccessful Operation

If the Node B cannot reconfigure the requested transmission or measurement on cell sync 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

- Unknown C-ID.

- Cell Synchronisation not supported

- Power level not supported

- Measurement Temporarily not Available

Miscellaneous Cause

- O&M Intervention

- HW failure

8.2.21.4 Abnormal Conditions

-

8.2.22 Cell Synchronisation Reporting [TDD]

8.2.22.1 General

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

8.2.22.2 Successful Operation

CRNC   Node B

CELL SYNCHRONISATION REPORT

Figure 27G Cell Synchronisation Reporting procedure, Successful Operation

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

In the steady state phase when several cell sync 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 [TDD]

8.2.23.1   General

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

8.2.23.2   Successful Operation

```
CRNC                                          Node B

       |   CELL SYNCHRONISATION TERMINATION   |
       |              REQUEST                  |
       |------------------------------------->|
       |                                      |
```

Figure 27H Cell Synchronisation Termination procedure, Successful Operation

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

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

8.2.23.3   Abnormal Conditions

-

8.2.24   Cell Synchronisation Failure [TDD]

8.2.24.1   General

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

8.2.24.2   Successful Operation

CRNC   Node B

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 sync bursts can no longer be supported.

8.2.24.3 Abnormal Conditions

-

8.2.25 Cell Synchronisation Adjustment [TDD]

8.2.25.1 General

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

8.2.25.2 Successful Operation

CRNC   Node B
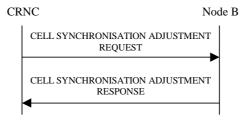
Figure 27J Cell Synchronisation Adjustment, Successful Operation

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 sync 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

CRNC   Node B

CELL SYNCHRONISATION
ADJUSTMENT REQUEST

CELL SYNCHRONISATION ADJUSTMENT
FAILURE
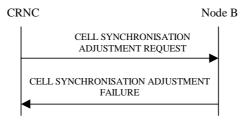
Figure 27K Cell Synchronisation Adjustment, Unsuccessful Operation

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

- Unknown C-ID.

- Cell Synchronisation Adjustment not supported

- Power level not supported

Miscellaneous Cause

- O&M Intervention

- HW failure

8.2.25.4 Abnormal Conditions

-

8.2.26 Information Exchange Initiation

8.2.26.1 General

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

8.2.26.2 Successful Operation

CRNC   Node B

INFORMATION EXCHANGE INITIATION
REQUEST

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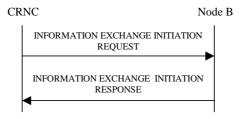
Figure 27L: Information Exchange Initiation procedure, Successful Operation

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

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

Information Report Characteristics

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

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

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

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

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

2) If the *Information Type Item* IE is set to 'GPS Information' and the *GPS Information Item* IE includes 'GPS Navigation Model & Time Recovery', the Node B shall initiate the Information Reporting procedure for this specific GPS Information Item when a change has occurred regarding either the IODC or the list of visible satellites, identified by the *SatID* IEs.

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

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

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

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

Response message

If the Node B was able to initiate the information provision requested by the CRNC it shall respond with the INFORMATION EXCHANGE INITIATION RESPONSE message sent over the Node B control port. The message shall include the same Information Exchange ID that was included in the INFORMATION EXCHANGE REQUEST message.

8.2.26.3   Unsuccessful Operation

CRNC   Node B

INFORMATION EXCHANGE INITIATION
REQUEST

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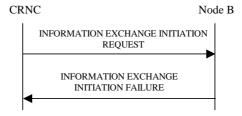
Figure 27M: Information Exchange Initiation procedure, Unsuccessful Operation

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

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

Exchange ID that was used in the INFORMATION EXCHANGE INITIATION REQUEST message and the *Cause* IE set to an appropriate value.

Typical cause values are as follows:

Radio Network Layer Cause

Information temporarily not available.

Information Provision not supported for the object.

8.2.27.4   Abnormal Conditions

-

8.2.27   Information Reporting

8.2.27.1   General

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

8.2.27.2   Successful Operation

CRNC   Node B

INFORMATION REPORT

Figure 27N: Information Reporting procedure, Successful Operation

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

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

8.2.27.3   Abnormal Conditions

-

8.2.28   Information Exchange Termination

8.2.28.1   General

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

8.2.28.2 Successful Operation

```
         CRNC                                    Node B
          |                                        |
          | INFORMATION EXCHANGE  TERMINATION       |
          |            REQUEST                       |
          |--------------------------------------->|
          |                                        |
```

Figure 27O: Information Exchange Termination procedure, Successful Operation

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

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

8.2.28.3 Abnormal Conditions

-

8.2.29 Information Exchange Failure

8.2.29.1 General

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

8.2.29.2 Successful Operation

```
         CRNC                                    Node B
          |                                        |
          |  INFORMATION EXCHANGE FAILURE           |
          |          INDICATION                      |
          |<---------------------------------------|
          |                                        |
```

Figure 27P: Information Exchange Failure procedure, Successful Operation

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

8.3 NBAP Dedicated Procedures

8.3.1 Radio Link Addition

8.3.1.1 General

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

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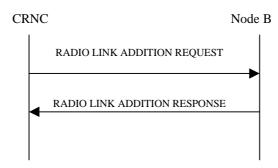
8.3.1.2 Successful Operation

Figure: 28 Radio Link Addition procedure, Successful Operation

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

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

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

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

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

[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.]

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

[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 Channelisation Code of the RL when starting transmission until either UL synchronisation on the Uu is achieved for the RLS or a DL POWER REQUEST message is received. If no *Initial DL Transmission power* IE is included, the Node B shall use any transmission power level currently used on already existing RL's for this UE. No inner loop power control or balancing shall be performed during this period. The DL power shall then vary according to the inner loop power control (see ref.[10], subclause 5.2.1.2) with DPC MODE=0 and the downlink power control procedure (see 8.3.7).]

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

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

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 Channelisation Code of the RL. If no *Minimum DL power* IE is included, any Minimum DL power stored for already existing RLs for this UE shall be applied.

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

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

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

[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].

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

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

[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.]

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

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

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

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

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

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

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

[FDD – After addition of the new RL(s), the UL out-of-sync algorithm defined in [10] shall for each of the previously existing and newly established RL Set(s) use the maximum value of the parameters N_OUTSYNC_IND and T_RLFAILURE, and the minimum value of the parameters N_INSYNC_IND, that are configured in the cells supporting the radio links of the RL Set.]
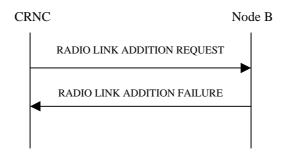
8.3.1.3 Unsuccessful Operation

Figure 29: Radio Link Addition procedure: Unsuccessful Operation

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

[FDD – If the RADIO LINK ADDITION REQUEST contains 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".]

Typical cause values are as follows:

Radio Network Layer Cause

- RL Already Activated/allocated

- Combining not supported

- Combining Resources not available

- Requested Tx Diversity Mode not supported

- UL SF not supported

- DL SF not supported

- Invalid CM Settings

- Reconfiguration CFN not elapsed

- CM not supported

Transport Layer Cause

- Transport Resources Unavailable

Protocol Cause

- Semantic error

Miscellaneous Cause

- O&M Intervention

- Control processing overload

- HW failure

8.3.1.4 Abnormal conditions

-

8.3.2 Synchronised Radio Link Reconfiguration Preparation

8.3.2.1 General

The Synchronised Radio Link Reconfiguration Preparation procedure is used to prepare a new configuration of all Radio Links related to one UE-UTRAN connection within a Node B.

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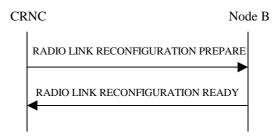
8.3.2.2 Successful Operation

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

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

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

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

DCH Modification:

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

- If the *DCHs to Modify* IE includes the *Frame Handling Priority* IE, the Node B should store this information for this DCH in the new configuration. The received Frame Handling Priority should be used when prioritising between different frames in the downlink on the radio interface in congestion situations within the Node B once the new configuration has been activated.

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

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

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

- If the *DCHs to Modify* IE includes the *UL FP Mode* IE for a DCH or a DCH which belongs to a set of co-ordinated DCHs, the Node B shall apply the new FP Mode in the Uplink of the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.

- If the *DCHs to Modify* IE includes the *ToAWS* IE for a DCH or a DCH which belongs to a set of co-ordinated DCHs, the Node B shall apply the new ToAWS in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.

- If the *DCHs to Modify* IE includes the *ToAWE* IE for a DCH or a DCH which belongs to a set of co-ordinated DCHs, the Node B shall apply the new ToAWE in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.

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

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

DCH Addition:

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

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

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

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

- The Node B should store the *Frame Handling Priority* IE received for a DCH to be added in the new configuration The received Frame Handling Priority should be used when prioritising between different frames in the downlink on the radio interface in congestion situations within the Node B once the new configuration has been activated.

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

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

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

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

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

DCH Deletion:

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

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

Physical Channel Modification:

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

- [FDD – If the *UL DPCH Information* IE includes the *Uplink Scrambling Code* IE, the Node B shall apply this Uplink Scrambling Code to the new configuration.]

- [FDD – If the *UL DPCH Information* IE includes the *Min UL Channelisation Code Length* IE, the Node B shall apply the value in the new configuration. The Node B shall apply the contents of the *Max Number of UL DPDCHs* IE (if it is included) in the new configuration.]

- [FDD – If the *UL DPCH Information* IE includes the *UL SIR Target* IE, the Node B shall use the value for the UL inner loop power control when the new configuration is being used.]

- [FDD – If the *UL DPCH Information* IE includes the *Puncture Limit* IE, the Node B shall apply the value in the uplink of the new configuration.]

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

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

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

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

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

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

- [FDD – If the *DL DPCH Information* IE includes the *TFCI Signalling Mode* IE or the *TFCI Presence* IE, the Node B shall use the information when building TFCIs in the new configuration.]

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

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

- [FDD – If the *DL DPCH Information* IE includes the *Limited Power Increase* IE and the IE is set to 'Used', the Node B shall use Limited Power Increase ref. [10] subclause 5.2.1 for the inner loop DL power control in the new configuration.]

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

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

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

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

[TDD – UL/DL CCTrCH Modification]

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

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

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

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

  - [TDD – If the IE includes any UL *DPCH to modify* or *DL DPCH to modify* IEs, and includes any of *Repetition Period* IE, *Repetition Length* IE, or *TDD DPCH Offset* IE or the message includes UL/DL Timeslot Information and includes any of *[3.84Mcps TDD - Midamble shift and Burst Type* IE, *Time Slot* IE], [1.28Mcps TDD - *Midamble shift LCR* IE, *Time Slot LCR* IE], or *TFCI presence* IE or the message includes UL/DL Code information and includes [3.84Mcps TDD - *TDD Channelisation Code* IE], [1.28Mcps TDD - *TDD Channelisation Code LCR* IE], the Node B shall apply these specified information elements as the new values, otherwise the old values specified for this DPCH configuration are still applicable.]

[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 – UL/DL CCTrCH Deletion]

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

DSCH Addition/Modification/Deletion:

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

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

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

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

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

[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, 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 both *SSDT Cell Identity* IE and *SSDT Cell Identity for EDSCHPC* IE, then Node B shall ignore the *SSDT Cell Identity for EDSCHPC* IE.]

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

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

- [FDD – If the *RL Information* IE 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 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.

General

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

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

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

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

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

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

8.3.2.3 Unsuccessful Operation

CRNC   Node B

RADIO LINK RECONFIGURATION PREPARE

RADIO LINK RECONFIGURATION FAILURE
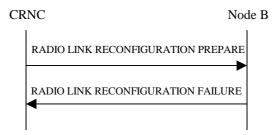
Figure 31: Synchronised Radio Link Reconfiguration Preparation procedure, Unsuccessful Operation

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.

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.]

Typical cause values are as follows:

Radio Network Layer Cause

- UL SF not supported

- DL SF not supported

- Invalid CM Settings

- 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

Protocol Cause

- Semantic error

Miscellaneous Cause

- O&M Intervention

- Control processing overload

- HW failure

8.3.2.4   Abnormal Conditions

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

8.3.3   Synchronised Radio Link Reconfiguration Commit

8.3.3.1   General

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

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

8.3.3.2   Successful Operation

CRNC   Node B

RADIO LINK RECONFIGURATION COMMIT

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

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

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

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

In the case of a transport channel modification for which a new transport bearer was requested and established, the switch to the new transport bearer shall also take place at the indicated CFN.

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

8.3.3.3   Abnormal Conditions

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

8.3.4 Synchronised Radio Link Reconfiguration Cancellation

8.3.4.1 General

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

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

8.3.4.2 Successful Operation

```
        CRNC                                    Node B

          |   RADIO LINK RECONFIGURATION CANCEL   |
          |-------------------------------------->|
          |                                       |
```

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

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

8.3.4.3 Abnormal Conditions

-

8.3.5 Unsynchronised Radio Link Reconfiguration

8.3.5.1 General

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

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

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

8.3.5.2 Successful Operation

```
        CRNC                                    Node B

          |  RADIO LINK RECONFIGURATION REQUEST   |
          |-------------------------------------->|
          |                                       |
          |  RADIO LINK RECONFIGURATION RESPONSE  |
          |<--------------------------------------|
          |                                       |
```
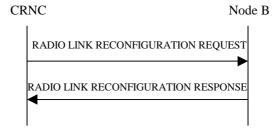
Figure 34: Unsynchronised Radio Link Reconfiguration Procedure, Successful Operation

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

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

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

DCH Modification:

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

- If the *DCHs to Modify* IE includes on the *Frame Handling Priority* IE, the Node B should store this information for this DCH in the new configuration. The received Frame Handling Priority should be used when prioritising between different frames in the downlink on the radio interface in congestion situations within the Node B once the new configuration has been activated.

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

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

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

- If the *DCHs to Modify* IE includes the *UL FP Mode* IE for a DCH or a set of co-ordinated DCHs, the Node B shall apply the new FP Mode in the Uplink of the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.

- If the *DCHs to Modify* IE includes the *ToAWS* IE for a DCH or a set of co-ordinated DCHs, the Node B shall apply the new ToAWS in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.

- If the *DCHs to Modify* IE includes the *ToAWE* IE for a DCH or a set of co-ordinated DCHs, the Node B shall apply the new ToAWE in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.

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

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

DCH Addition:

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

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

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

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

- The Node B should store the *Frame Handling Priority* IE received for a DCH to be added in the new configuration. The received Frame Handling Priority should be used when prioritising between different frames

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

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

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

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

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

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

DCH Deletion:

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

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

[FDD - Physical Channel Modification:]

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

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

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

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

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

- [FDD – If the *DL DPCH Information* IE includes the *Limited Power Increase* IE and the IE is set to 'Used', the Node B shall, if supported, use Limited Power Increase according to ref. [10] subclause 5.2.1 for the inner loop DL power control in the new configuration.]

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

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

[TDD – UL/DL CCTrCH Modification]

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

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

[TDD – UL/DL CCTrCH Deletion]

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

RL Information:

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

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

- If the *RL Information* IE includes the *Minimum DL Power* IE, the Node B shall apply this value to the new configuration and 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 *DL Code Information* IE for any of the allocated DL Channelisation code, the Node B shall apply the new setting when new compressed mode measurement are activated.]

- [FDD – If the *RL Information* IE 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 whenever the downlink compressed mode method SF/2 is active in the new configuration.]

General

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

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

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

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

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

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

8.3.5.3 Unsuccessful Operation

CRNC   Node B

RADIO LINK RECONFIGURATION REQUEST

RADIO LINK RECONFIGURATION FAILURE
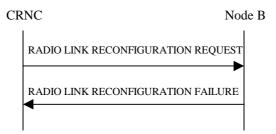
Figure 35: Unsynchronised Radio Link Reconfiguration procedure, Unsuccessful Operation

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

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

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.

Typical cause values are as follows:

Radio Network Layer Cause

- Invalid CM Settings

- CM not supported

Transport Layer Cause

- Transport Resources Unavailable

Protocol Cause

- Semantic error

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.

8.3.6 Radio Link Deletion

8.3.6.1 General

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

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

8.3.6.2 Successful Operation

CRNC   Node B

RADIO LINK DELETION REQUEST

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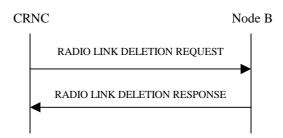
Figure 36: Radio Link Deletion procedure, Successful Operation

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

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

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

8.3.6.3 Unsuccessful Operation

-

8.3.6.4 Abnormal Conditions

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

8.3.7 Downlink Power Control [FDD]

8.3.7.1 General

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

8.3.7.2 Successful Operation

CRNC   Node B

DL POWER CONTROL REQUEST

Figure 37: Downlink Power Control procedure, Successful Operation

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

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

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

If the value of the *Power Adjustment Type* IE is *Individual*, the Node B shall perform the power adjustment (see below) for all radio links addressed in the message using the given DL Reference Powers per RL.

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

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

Power Adjustment

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

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

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

-

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
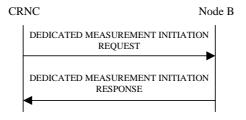
Figure 38: Dedicated Measurement Initiation procedure, Successful Operation

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

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

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

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

[TDD – If DPCH ID is provided within the RL Information the measurement request shall apply for the requested physical channel individually.]

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

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

Report characteristics
The *Report Characteristics* IE is set to how the reporting of the measurement shall be performed.

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

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

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

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

If the *Report Characteristics* IE is set to 'Event C', the Node B shall initiate the Dedicated Measurement Reporting procedure when the measured entity rises by an amount greater than the requested threshold within the requested time.

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.

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

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

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

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

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

Higher layer filtering

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

The averaging shall be performed according to the following formula.

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

The variables in the formula are defined as follows

F_n is the updated filtered measurement result

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

M_n is the latest received measurement result from physical layer measurements

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

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

Response message

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

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

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

Interaction with Reset Procedure

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

8.3.8.3 Unsuccessful Operation
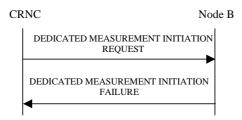
Figure 39: Dedicated Measurement Request procedure: Unsuccessful Operation

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

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

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

Typical cause values are as follows:

Radio Network Layer cause

- Measurement not supported for the object

- Measurement Temporarily not Available

Miscellaneous Cause

- O&M Intervention

- Control processing overload

- HW failure

8.3.8.4 Abnormal Conditions

-

8.3.9 Dedicated Measurement Reporting

8.3.9.1 General

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

8.3.9.2 Successful Operation

CRNC Node B

DEDICATED MEASUREMENT REPORT

Figure 40: Dedicated Measurement Reporting procedure, Successful Operation

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

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

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

8.3.9.3 Abnormal Conditions

-

8.3.10 Dedicated Measurement Termination

8.3.10.1 General

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

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

8.3.10.2 Successful Operation

CRNC Node B

DEDICATED MEASUREMENT
TERMINATION REQUEST

Figure 41: Dedicated Measurement Termination procedure, Successful Operation

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

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

8.3.10.3 Abnormal Conditions

-

8.3.11 Dedicated Measurement Failure

8.3.11.1 General

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

8.3.11.2 Successful Operation

CRNC   Node B

DEDICATED MEASUREMENT FAILURE
INDICATION

Figure 42: Dedicated Measurement Failure procedure, Successful Operation

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

If the failed measurement was initiated with the *Node B Communication Context ID* IE set to the reserved value "All NBCC" and the Node B has terminated the measurement reporting of the measurement corresponding to the Measurement ID indicated in the DEDICATED MEASUREMENT FAILURE INDICATION message, the *CRNC Communication Context ID* IE shall be set to the value 'All CRNCCC'.

8.3.11.3 Abnormal Conditions

-

8.3.12 Radio Link Failure

8.3.12.1 General

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

8.3.12.2 Successful Operation

CRNC   Node B

RADIO LINK FAILURE INDICATION
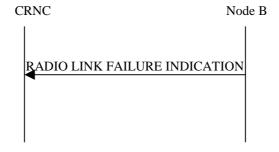
Figure 43: Radio Link Failure procedure, Successful Operation

When Node B detects that one or more Radio Link [FDD - or Radio Link Sets] [TDD – or CCTrCHs within a Radio Link] is no longer available, it sends the RADIO LINK FAILURE INDICATION message to CRNC indicating the failed Radio Links or Radio Link Sets or CCTrCHs with the most appropriate cause values in the *Cause* IE.   If the failure concerns one or more individual Radio Links the Node B shall indicate the affected Radio Link(s) using the *RL*

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

When the Radio Link Failure procedure is used to notify the loss of UL synchronisation of a [FDD – Radio Link Set] [TDD – Radio Link or CCTrCHs within a Radio Link] on the Uu, the message shall be sent, with the cause value 'Synchronisation Failure', when indicated by the UL out-of-sync algorithm defined in [10] and [21]. [FDD – The algorithm in [10] shall use the maximum value of the parameters N_OUTSYNC_IND and T_RLFAILURE, and the minimum value of the parameters N_INSYNC_IND, that are configured in the cells supporting the radio links of the RL Set.]

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

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

Typical cause values are:

Radio Network Layer Causes:

- Synchronisation Failure

- Invalid CM settings

Transport Layer Causes:

- Transport Resources Unavailable

Miscellaneous Causes:

- Control Processing Overload

- HW Failure

- O&M Intervention

8.3.12.3   Abnormal Conditions

-

8.3.13   Radio Link Restoration

8.3.13.1   General

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

8.3.13.2　Successful Operation

Figure 44: Radio Link Restoration procedure, Successful Operation

The Node B shall send the RADIO LINK RESTORE INDICATION message to the CRNC when indicated by the UL sync detection algorithm defined in ref. [10] and [21]. [FDD – The algorithm in ref. [10] shall use the minimum value of the parameters N_INSYNC_IND that are configured in the cells supporting the radio links of the RL Set.]

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

8.3.13.3　Abnormal Condition

-

8.3.14　Compressed Mode Command [FDD]

8.3.14.1　General

The Compressed Mode Command procedure is used to activate or deactivate the compressed mode in the Node B for one UE-UTRAN connection.

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

8.3.14.2　Successful Operation

Figure 47: Compressed Mode Command procedure, Successful Operation

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

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

8.3.14.3 Abnormal Conditions

-

8.3.15 Downlink Power Timeslot Control [TDD]

8.3.15.1 General

The purpose of this procedure is to enable the Node B to use the indicated DL Timeslot ISCP values when deciding the DL TX Power for each timeslot

The Downlink Power Timeslot Control procedure can be initiated by the CRNC at any time when the Node B communication context exists, irrespective of other ongoing CRNC initiated dedicated NBAP procedures towards this Node B communication context. The only exception occurs when the CRNC has requested the deletion of the last RL via this Node B, in which case the Downlink Power Timeslot Control procedure shall no longer be initiated.

8.3.15.2 Successful Operation

```
CRNC                                    Node B
  |                                       |
  |      DL POWER TIMESLOT CONTROL        |
  |             REQUEST                   |
  |-------------------------------------->|
  |                                       |
```

Figure 47A: Downlink Power Timeslot Control procedure, Successful Operation

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

Upon reception, the Node B shall use the indicated DL Timeslot ISCP value when deciding the DL TX Power for each timeslot as specified in ref. [21], i.e. it shall reduce the DL TX power in those downlink timeslots of the radio link where the interference is low, and increase the DL TX power in those timeslots where the interference is high, while keeping the total downlink power in the radio link unchanged.

8.3.15.3 Abnormal Conditions

-

8.3.16 Radio Link Pre-emption

8.3.16.1 General

This procedure is started by the Node B when resources need to be freed.

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

8.3.16.2 Successful Operation

```
CRNC                                    Node B
  |                                       |
  |                                  +----------+
  |                                  | RL to be pre-
  |                                  |  empted  |
  |                                  +----------+
  |   RADIO LINK PREEMPTION REQUIRED      |
  |          INDICATION                   |
  |<--------------------------------------|
  |                                       |
```
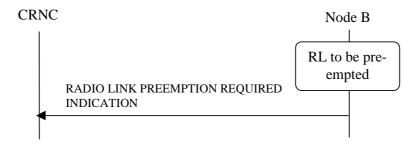
Figure 47B: RL Pre-emption procedure, Successful Operation

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

8.3.16.3 Abnormal Conditions

-

8.4 Error Handling Procedures

8.4.1 Error Indication

8.4.1.1 General

The Error Indication procedure is initiated by a node in orderto report detected errors in one incoming message, provided they cannot be reported by an appropriate response message.

8.4.1.2 Successful Operation

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

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

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

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

CRNC   Node B

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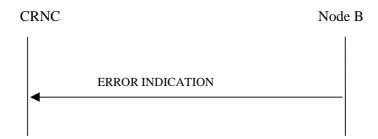
Figure 49: Error Indication procedure (Node B to CRNC): Successful Operation

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

8.4.1.3 Abnormal Conditions

-

9 Elements for NBAP communication

9.1 Message Functional Definition and Content

9.1.1 General

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

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

9.1.2 Message Contents

9.1.2.1 Presence

An information element can be of the following types:

M	The information element is mandatory, i.e. always present in the message
O	The information element is optional, i.e. may or may not be present in the message independently on the presence or value of other information elements in the same message
C	The presence of the information element is conditional to the presence or to the value of another information element, as reported in the table below the message containing the explanation of the condition

In case of an information element group, the group is preceded by a name for the info group (in bold). It is also indicated how many times a group may be repeated in the message and whether the group is conditional. The presence field of the information elements inside one group defines if the information element is mandatory, optional or conditional if the group is present.

9.1.2.2 Criticality

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

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

9.1.2.3 Range

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

9.1.2.4 Assigned Criticality

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

9.1.3 COMMON TRANSPORT CHANNEL SETUP REQUEST

9.1.3.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
C-ID	M		9.2.1.9		YES	reject
Configuration Generation ID	M		9.2.1.16		YES	reject
CHOICE common physical channel to be configured	M				YES	ignore
>*Secondary CCPCH*					–	
>>Secondary CCPCH		*1*				
>>>Common Physical Channel ID	M		9.2.1.13		–	
>>>FDD SCCPCH Offset	M		9.2.2.15	Corresponds to [7]: $_{S\text{-}CCPCH,k}$	–	
>>>DL Scrambling Code	C-PCH		9.2.2.13		–	
>>>FDD DL Channelisation Code Number	M		9.2.2.14		–	
>>>TFCS	M		9.2.1.58	For the DL.	–	
>>>Secondary CCPCH Slot Format	M		9.2.2.43		–	
>>>TFCI Presence	C – SlotFormat		9.2.1.57	Refer to TS [7]	–	
>>>Multiplexing Position	M		9.2.2.23		–	
>>>Power Offset Information		1			–	
>>>>PO1	M		Power Offset 9.2.2.29	Power offset for the TFCI bits	–	
>>>>PO3	M		Power Offset 9.2.2.29	Power offset for the pilot bits	–	
>>>STTD Indicator	M		9.2.2.48		–	
>>>FACH Parameters	C-choiceCh	*0..<ma xnoofF ACHs>*			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	C-choiceCh	*0..1*			YES	reject
>>>>Common Transport Channel ID	M		9.2.1.14		–	
>>>>Transport Format	M		9.2.1.59	For the DL.	–	

Set						
>>>>ToAWS	M		9.2.1.61		–	
>>>>ToAWE	M		9.2.1.60		–	
>>>>PCH Power	M		DL Power 9.2.1.21		–	
>>>>PICH Parameters		1			–	
>>>>>Common Physical Channel ID	M		9.2.1.13		–	
>>>>>FDD DL Channelisation Code Number	M		9.2.2.14		–	
>>>>>PICH Power	M		9.2.1.49A		–	
>>>>>PICH Mode	M		9.2.2.26	Number of PI per frame	–	
>>>>>STTD Indicator	M		9.2.2.48		–	
>PRACH					–	
>>PRACH		1				
>>>Common Physical Channel ID	M		9.2.1.13		–	
>>>Scrambling Code Number	M		9.2.2.42		–	
>>>TFCS	M		9.2.1.58	For the UL.	–	
>>>Preamble Signatures	M		9.2.2.31		–	
>>>Allowed Slot Format Information		1..*<MaxnoofSlotFormatsPRACH>*			–	
>>>>RACH Slot Format	M		9.2.2.37		–	
>>>RACH Sub Channel Numbers	M		9.2.2.38		–	
>>>Puncture Limit	M		9.2.1.50	For the UL	–	
>>>Preamble Threshold	M		9.2.2.32		–	
>>>RACH Parameters		1			YES	Reject
>>>>Common Transport Channel ID	M		9.2.1.14		–	
>>>>Transport Format Set	M		9.2.1.59	For the UL.	–	
>>AICH Parameters		1			–	
>>>Common Physical Channel ID	M		9.2.1.13		–	
>>>AICH Transmission Timing	M		9.2.2.1		–	
>>>FDD DL Channelisation Code Number	M		9.2.2.14		–	
>>>AICH Power	M		9.2.2.D		–	
>>>STTD Indicator	M		9.2.2.48		–	
>PCPCHes					–	
>>CPCH Parameters		1			–	
>>>Common Transport Channel ID	M		9.2.1.14		–	
>>>Transport Format Set	M		9.2.1.59	For the UL.	–	
>>>AP Preamble	M		CPCH		–	

Scrambling Code			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	C-CDSig		9.2.2.1C		–	
>>>Puncture Limit	M		9.2.1.50	For the UL	–	
>>>CPCH UL DPCCH Slot Format	M		9.2.2.4C	For UL CPCH message control part	–	
>>>UL SIR	M		UL SIR 9.2.2.58		–	
>>>Initial DL transmission Power	M		DL Power 9.2.1.21		–	
>>>Maximum DL Power	M		DL Power 9.2.1.21		–	
>>>Minimum DL Power	M		DL Power 9.2.1.21		–	
>>>PO2	M		Power Offset 9.2.2.29	Power offset for the TPC bits	–	
>>>PO3	M		Power Offset 9.2.2.29	Power offset for the pilot bits	–	
>>>FDD TPC DL Step Size	M		9.2.2.16		–	
>>>N_Start_Message	M		9.2.2.23C		–	
>>>N_EOT	M		9.2.2.23A		–	
>>>Channel Assignment Indication	M		9.2.2.1D		–	
>>>CPCH Allowed Total Rate	M		9.2.2.4A		–	
>>>PCPCH Channel Information		*1..<maxnoofPCPCHs>*			–	
>>>>Common Physical Channel ID	M		9.2.1.13		–	
>>>>CPCH Scrambling Code Number	M		9.2.2.4B	For UL PCPCH	–	
>>>>DL Scrambling Code	M		9.2.2.13	For DL CPCH message part	–	
>>>>FDD DL Channelisation Code	M		9.2.2.14	For DL CPCH	–	

				message part		
>>>>PCP Length	M		9.2.2.24A		–	
>>>>UCSM Information	C-NCA	*1*			–	
>>>>>Min UL Channelisation Code Length	M		9.2.2.22		–	
>>>>>NF_max	M		9.2.2.23B		–	
>>>>>Channel Request Parameters		*0..<maxAPSigNum>*			–	
>>>>>>AP Preamble Signature	M		9.2.2.1A		–	
>>>>>AP Sub Channel Number	O		9.2.2.1B		–	
>>>VCAM Mapping Information	C-CA	*1..<maxnoofLen>*		Refer to TS [18]	–	
>>>>Min UL Channelisation Code Length	M		9.2.2.22		–	
>>>>NF_max	M		9.2.2.23B		–	
>>>>Max Number of PCPCHes	M		9.2.2.20A		–	
>>>>SF Request Parameters		*1..<maxAPSigNum>*			–	
>>>>>AP Preamble Signature	M		9.2.2.1A		–	
>>>>>AP Sub Channel Number	O		9.2.2.1B		–	
>>>AP-AICH Parameters		*1*			–	
>>>>Common Physical Channel ID	M		9.2.1.13		–	
>>>>FDD DL Channelisation Code Number	M		9.2.2.14		–	
>>>>AP-AICH Power	M		AICH Power 9.2.2.D		–	
>>>>CSICH Power	M		AICH Power 9.2.2.D	For CSICH bits at end of AP-AICH slot	–	
>>>>STTD Indicator	M		9.2.2.48		–	
>>>CD/CA-ICH Parameters		*1*			–	
>>>>Common Physical Channel ID	M		9.2.1.13		–	
>>>>FDD DL Channelisation Code Number	M		9.2.2.14		–	
>>>>CD/CA-ICH Power	M		AICH Power 9.2.2.D		–	
>>>>STTD Indicator	M		9.2.2.48		–	

Condition	Explanation
SlotFormat	This IE is present only if the Secondary CCPCH Slot Format is equal to any of the value 8 to 17
ChoiceCh	One of the channels FACH or PCH or both must be present.
CDSig	The IE may be present if the Available CD Signatures is present.
CA	The IE must be present if the Channel Assignment Indication is set to 'CA Active'.
NCA	The IE must be present if the Channel Assignment Indication is set to 'CA Inactive'.
PCH	This IE is present only if the PCH parameters IE is not present.

Range bound	Explanation
MaxnoofFACHs	Maximum number of FACHs that can be defined on a Secondary CCPCH.
MaxnoofPCPCHs	Maximum number of PCPCHs for a CPCH
MaxnoofLen	Maximum number of Min UL Channelisation Code Length
MaxnoofSlotFormatsPRACH	Maximum number of SF for a PRACH
MaxAPSigNum	Maximum number of AP Signatures.

9.1.3.2 TDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
C-ID	M		9.2.1.9		YES	reject
Configuration Generation ID	M		9.2.1.16		YES	reject
CHOICE *common physical channels to be configured*	M				YES	ignore
>*Secondary CCPCHs*					–	
>>CCTrCH ID	M		9.2.3.3	For DL CCTrCH supporting one or several Secondary CCPCHs	–	
>>TFCS	M		9.2.1.58	For DL CCTrCH supporting one or several Secondary CCPCHs	–	
>>TFCI Coding	M		9.2.3.22		–	
>>Puncture Limit	M		9.2.1.50		–	
>>Secondary CCPCH		*0..<maxnoofSCCPCHs>*		Mandatory For 3.84Mcps TDD only	GLOBAL	reject
>>>Common Physical Channel ID	M		9.2.1.13		–	
>>>TDD Channelisation Code	M		9.2.3.19		–	
>>>Time Slot	M		9.2.3.23		–	
>>>Midamble shift and Burst Type	M		9.2.3.7		–	
>>>TDD Physical Channel Offset	M		9.2.3.20		–	
>>>Repetition Period	M		9.2.3.16		–	
>>>Repetition Length	M		9.2.3.15		–	
>>>SCCPCH Power	M		DL Power 9.2.1.21		–	
>>FACH	C ChoiceCh	*0..<maxnoofFACHs>*			GLOBAL	reject
>>>Common Transport Channel ID	M		9.2.1.14		–	
>>>CCTrCH ID	M		9.2.3.3		–	
>>>Transport Format Set	M		9.2.1.59	For the DL.	–	
>>>ToAWS	M		9.2.1.61		–	
>>>ToAWE	M		9.2.1.60		–	

>>>Max FACH Power	O		DL Power 9.2.1.21	For 1.28Mcps TDD only	YES	reject
>>PCH	C ChoiceCh	*0..1*			YES	reject
>>>Common Transport Channel ID	M		9.2.1.14		–	
>>>CCTrCH ID	M		9.2.3.3		–	
>>>Transport Format Set	M		9.2.1.59	For the DL.	–	
>>>ToAWS	M		9.2.1.61		–	
>>>ToAWE	M		9.2.1.60		–	
>>>PICH Parameters		*0..1*		Mandatory For 3.84Mcps TDD only	YES	reject
>>>>Common Physical Channel ID	M		9.2.1.13		–	
>>>>TDD Channelisation Code	M		9.2.3.19		–	
>>>>Time Slot	M		9.2.3.23		–	
>>>>Midamble shift and Burst Type	M		9.2.3.7		–	
>>>>TDD Physical Channel Offset	M		9.2.3.20		–	
>>>>Repetition period	M		9.2.3.16		–	
>>>>Repetition length	M		9.2.3.15		–	
>>>>Paging Indicator Length	M		9.2.3.8		–	
>>>>PICH Power	M		9.2.1.49A		–	
>>>PCH Power	O		DL Power 9.2.1.21	For 1.28Mcps TDD only	–	
>>>PICH Parameters LCR		*0..1*		Mandatory For 1.28Mcps TDD only	YES	reject
>>>>Common Physical Channel ID	M		9.2.1.13		–	
>>>>TDD Channelisation Code LCR	M		9.2.3.19a		–	
>>>>Time Slot LCR	M		9.2.3.24A		–	
>>>>Midamble shift LCR	M		9.2.3.7A		–	
>>>>TDD Physical Channel Offset	M		9.2.3.20		–	
>>>>Repetition period	M		9.2.3.16		–	
>>>>Repetition length	M		9.2.3.15		–	
>>>>Paging Indicator Length	M		9.2.3.8		–	
>>>>PICH Power	M		9.2.1.49A		–	

>>Secondary CCPCH LCR		0..<maxnoofS-CCPCHLCRs>		Mandatory For 1.28Mcps TDD only	GLOBAL	reject
>>>Common Physical Channel ID	M		9.2.1.13		–	
>>>TDD Channelisation Code LCR	M		9.2.3.19a		–	
>>>Time Slot LCR	M		9.2.3.24A		–	
>>>Midamble shift LCR	M		9.2.3.7A		–	
>>>TDD Physical Channel Offset	M		9.2.3.20		–	
>>>Repetition Period	M		9.2.3.16		–	
>>>Repetition Length	M		9.2.3.15		–	
>PRACH					–	
>>PRACH	M	0..1		Mandatory for 3.84Mcps TDD only	YES	reject
>>>Common Physical Channel ID	M		9.2.1.13		–	
>>>TFCS	M		9.2.1.58		–	
>>>Time Slot	M		9.2.3.23		–	
>>>TDD Channelisation Code	M		9.2.3.19		–	
>>>Max PRACH Midamble Shifts	M		9.2.3.6		–	
>>>PRACH Midamble	M		9.2.3.14		–	
>>>RACH		1			YES	reject
>>>>Common Transport Channel ID	M		9.2.1.14		–	
>>>>Transport Format Set	M		9.2.1.59	For the UL	–	
>>PRACH LCR		0 ..<maxnoofPRACHLCRs>		Mandatory For 1.28Mcps TDD only	YES	reject
>>>Common Physical Channel ID	M		9.2.1.13		–	
>>>TFCS	M		9.2.1.58		–	
>>>Time Slot LCR	M		9.2.3.24A		–	
>>>TDD Channelisation Code LCR	M		9.2.3.19a		–	
>>>Max PRACH Midamble Shifts	M		9.2.3.6		–	
>>>PRACH Midamble	M		9.2.3.14		–	
>>>RACH		1			YES	reject
>>>>Common Transport Channel ID	M		9.2.1.14		–	
>>>>Transport Format Set	M		9.2.1.59	For the UL	–	
>>FPACH		0..1		Mandatory for 1.28Mcps TDD only	GLOBAL	reject
>>>Common Physical Channel ID	M		9.2.1.13		–	

>>>TDD Channelisation Code LCR	M		9.2.3.19a		–	
>>>Time Slot LCR	M		9.2.3.24A		–	
>>>Midamble shift LCR	M		9.2.3.7A		–	
>>>Max FPACH Power	M		9.2.3.5E		–	

Condition	Explanation
ChoiceCh	One of the channels FACH or PCH or both must be present.

Range bound	Explanation
MaxnoofSCCPCHs	Maximum number of Secondary CCPCHs per CCTrCH for 3.84Mcps TDD.
MaxnoofS-CCPCHLCRs	Maximum number of Secondary CCPCHs per CCTrCH for 1.28Mcps TDD.
MaxnoofCCTrCHs	Maximum number of CCTrCHs that can be defined in a cell.
MaxnoofFACHs	Maximum number of FACHs that can be defined on a Secondary CCPCH.
MaxnoofPRACHLCRs	Maximum number of PRACH LCR that can be defined on a RACH for 1.28Mcps TDD.

9.1.4 COMMON TRANSPORT CHANNEL SETUP RESPONSE

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
FACH Parameters info		*0..<ma xnoofF ACHs>*		The FACH Parameters may be combined with PCH Parameters	GLOBAL	ignore
>FACH Parameters	M		Common Transport Channel Information Response 9.2.1.14A		–	
PCH Parameters	O		Common Transport Channel Information Response 9.2.1.14A	The PCH Parameters may be combined with FACH Parameters	YES	ignore
RACH parameters	O		Common Transport Channel Information Response 9.2.1.14A	The RACH Parameters shall not be combined with FACH Parameters or PCH Parameters	YES	ignore
CPCH parameters	O		Common Transport Channel Information Response 9.2.1.14A	The CPCH Parameters shall not be combined with FACH Parameters or PCH Parameters or RACH Parameters	YES	ignore
Criticality Diagnostics	O		9.2.1.17		YES	ignore

Range bound	Explanation
MaxnoofFACHs	Maximum number of FACHs that can be defined on a Secondary CCPCH[FDD] / a group of Secondary CCPCHs [TDD].

9.1.5   COMMON TRANSPORT CHANNEL SETUP FAILURE

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	–
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	–
Cause	M		9.2.1.6		YES	ignore
Criticality Diagnostics	O		9.2.1.17		YES	ignore

9.1.6 COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST

9.1.6.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
C-ID	M		9.2.1.9		YES	reject
Configuration Generation ID	M		9.2.1.16		YES	reject
CHOICE *common physical channel to be reconfigured*	M				YES	reject
>*Secondary CCPCH*					–	
>>FACH parameters		*0..<maxFACHCell>*			GLOBAL	reject
>>>Common Transport Channel ID	M		9.2.1.14		–	
>>>Max FACH Power	O		DL Power 9.2.1.21	Maximum allowed power on the FACH.	–	
>>>ToAWS	O		9.2.1.61		–	
>>>ToAWE	O		9.2.1.60		–	
>>PCH Parameters		*0..1*			YES	reject
>>>Common Transport Channel ID	M		9.2.1.14		–	
>>>PCH Power	O		DL Power 9.2.1.21	Power to be used on the PCH.	–	
>>>ToAWS	O		9.2.1.61		–	
>>>ToAWE	O		9.2.1.60		–	
>>PICH Parameters		*0..1*			YES	reject
>>>Common Physical Channel ID	M		9.2.1.13		–	
>>>PICH Power	O		9.2.1.49A		–	
>*PRACH*					–	
>>PRACH Parameters		*0..<MexPRACHCell>*			GLOBAL	reject
>>>Common Physical Channel ID	M		9.2.1.13		–	
>>>Preamble Signatures	O		9.2.2.31		–	
>>>**Allowed Slot Format Information**		*0..<MaxnoofSlotFormatsPRACH>*			–	
>>>>RACH Slot Format	M		9.2.2.37		–	
>>>RACH Sub Channel Numbers	O		9.2.2.38		–	
>>AICH Parameters		*0..<MaxPRACHCell>*			GLOBAL	reject
>>>Common Physical Channel ID	M		9.2.1.13		–	

>>>AICH Power	O		9.2.2.D		–	
>CPCH					–	
>>CPCH Parameters		*0..<maxnoofCPCHs>*			GLOBAL	reject
>>>Common Transport Channel ID	M		9.2.1.14		–	
>>>UL SIR	O		9.2.2.58		–	
>>>Initial DL transmission Power	O		DL Power 9.2.1.21		–	
>>>Maximum DL Power	O		DL Power 9.2.1.21		–	
>>>Minimum DL Power	O		DL Power 9.2.1.21		–	
>>AP-AICH Parameters		*0..<maxnoofCPCHs>*			GLOBAL	reject
>>>Common Physical Channel ID	M		9.2.1.13		–	
>>>AP-AICH Power	O		AICH Power 9.2.2.D		–	
>>>CSICH Power	O		AICH Power 9.2.2.D	For CSICH bits at end of AP-AICH slot	–	
>>CD/CA-ICH Parameters		*0..<maxnoofCPCHs>*			GLOBAL	reject
>>>Common Physical Channel ID	M		9.2.1.13		–	
>>>CD/CA-ICH Power	O		AICH Power 9.2.2.D		–	

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

9.1.6.2 TDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
C-ID	M		9.2.1.9		YES	reject
Configuration Generation ID	M		9.2.1.16		YES	reject
Secondary CCPCH parameters		0 .. 1			YES	reject

>CCTrCH ID	M		9.2.3.3	For DL CCTrCH supporting one or several Secondary CCPCHs	–	
>Secondary CCPCHs to be configured		0.. <MaxnoofSCCPCHs>			GLOBAL	reject
>>Common Physical Channel ID	M		9.2.1.13		–	
>>SCCPCH Power	O		DL power 9.2.1.21	For 3.84Mcps TDD only	–	
PICH Parameters		0 .. 1			YES	reject
>Common Physical Channel ID	M		9.2.1.13		–	
>PICH Power	O		9.2.1.49A		–	
FACH parameters		*0..<Maxno ofFACHs>*			GLOBAL	reject
>Common Transport Channel ID	M		9.2.1.14		–	
>ToAWS	O		9.2.1.61		–	
>ToAWE	O		9.2.1.60			
>Max FACH Power	O		DL Power 9.2.1.21	For 1.28Mcps TDD only		
PCH parameters		0 .. 1			YES	reject
>Common Transport Channel ID	M		9.2.1.14		–	
>ToAWS	O		9.2.1.61		–	
>ToAWE	O		9.2.1.60		–	
>PCH Power	O		DL Power 9.2.1.21	For 1.28Mcps TDD only		
FPACH parameters		0..1		Mandatory for 1.28Mcps TDD only	YES	reject
>Common Physical Channel ID	M		9.2.1.13		–	
>Max FPACH Power	O		9.2.3.5E		–	

Range bound	Explanation
MaxnoofSCCPCHs	Maximum number of SCCPCH that can be repeated in a Cell
MaxnoofFACHs	Maximum number of FACHs that can be repeated in a Cell

9.1.7 COMMON TRANSPORT CHANNEL RECONFIGURATION RESPONSE

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Criticality Diagnostics	O		9.2.1.17		YES	ignore

9.1.8 COMMON TRANSPORT CHANNEL RECONFIGURATION FAILURE

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Cause	M		9.2.1.6		YES	ignore
Criticality Diagnostics	O		9.2.1.17		YES	ignore

9.1.9 COMMON TRANSPORT CHANNEL DELETION REQUEST

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
C-ID	M		9.2.1.9		YES	reject
Common Physical Channel ID	M		9.2.1.13	Indicates the Common Physical Channel for which the Common Transport Channels (together with the Common Physical Channel) shall be deleted.	YES	reject
Configuration Generation ID	M		9.2.1.16		YES	reject

9.1.10 COMMON TRANSPORT CHANNEL DELETION RESPONSE

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Criticality Diagnostics	O		9.2.1.17		YES	ignore

9.1.11 BLOCK RESOURCE REQUEST

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
C-ID	M		9.2.1.9		YES	reject
Blocking Priority Indicator	M		9.2.1.5		YES	reject
Shutdown Timer	C-*BlockNormal*		9.2.1.56		YES	reject

Condition	Explanation
BlockNormal	The information element is present when the Blocking Priority Indicator IE indicates 'Normal Priority'.

9.1.12 BLOCK RESOURCE RESPONSE

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Criticality Diagnostics	O		9.2.1.17		YES	ignore

9.1.13 BLOCK RESOURCE FAILURE

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Cause	M		9.2.1.6		YES	ignore
Criticality Diagnostics	O		9.2.1.17		YES	ignore

9.1.14 UNBLOCK RESOURCE INDICATION

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	ignore
Transaction ID	M		9.2.1.62		–	
C-ID	M		9.2.1.9		YES	ignore

9.1.15 AUDIT REQUIRED INDICATION

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	ignore
Transaction ID	M		9.2.1.62		–	

9.1.16 AUDIT REQUEST

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Start Of Audit Sequence Indicator	M		9.2.1.56B		YES	reject

9.1.17 AUDIT RESPONSE

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
End Of Audit Sequence Indicator	M		9.2.1.29A		YES	ignore
Cell Information		*0.. <maxCellin NodeB >*			EACH	ignore
>C-ID	M		9.2.1.9		–	
>Configuration Generation ID	M		9.2.1.16		–	
>Resource Operational State	M		9.2.1.52		–	
>Availability Status	M		9.2.1.2		–	
>Local Cell ID	M		9.2.1.38	The local cell that the cell is configured on	–	
>Primary SCH Information	O		Common Physical Channel Status Information 9.2.1.13A		YES	ignore
>Secondary SCH Information	O		Common Physical Channel Status Information 9.2.1.13A		YES	ignore
>Primary CPICH Information	O		Common Physical Channel Status Information 9.2.1.13A		YES	ignore
>Secondary CPICH Information		*0..<maxSC PICHCell>*			EACH	ignore
>>Secondary CPICH Individual Information	M		Common Physical Channel Status Information 9.2.1.13A		–	
>Primary CCPCH Information	O		Common Physical Channel Status Information 9.2.1.13A		YES	ignore
>BCH Information	O		Common Transport Channel Status Information 9.2.1.13A		YES	ignore

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

			9.2.1.13A			
>CPCH Information		0..<maxCPCHCell>			EACH	ignore
>>CPCH Individual Information	M		Common Transport Channel Status Information 9.2.1.14B		–	
>AP-AICH Information		0..<maxCPCHCell>			EACH	ignore
>>AP-AICH Individual Information	M		Common Physical Channel Status Information 9.2.1.13A		–	
>CD/CA-ICH Information		0..<maxCPCHCell>			EACH	ignore
>>CD/CA-ICH Individual Information	M		Common Physical Channel Status Information 9.2.1.13A		–	
>SCH Information	O		Common Physical Channel Status Information 9.2.1.13A	TDD Sync Channel	YES	ignore
>FPACH Information		0..<maxFPACHCell>		For 1.28Mcps TDD only	EACH	ignore
>>FPACH Individual Information	M		Common Physical Channel Status Information 9.2.1.13A		-	
>DwPCH Information	O		Common Physical Channel Status Information 9.2.1.13A	For 1.28Mcps TDD only	YES	ignore
Communication Control Port Information		0.. <maxCCPinNodeB>			EACH	ignore
>Communication Control Port ID	M		9.2.1.15		–	
>Resource Operational State	M		9.2.1.52		–	
>Availability Status	M		9.2.1.2		–	
Local Cell Information		0.. <maxLocalCellinNodeB>			EACH	ignore
>Local Cell ID	M		9.2.1.38		–	

ETSI

>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
Local Cell Group Information		*0.. <maxLocal CellinNode B>*			EACH	ignore
>Local Cell Group ID	M		9.2.1.37A		–	
>DL or Global Capacity Credit	M		9.2.1.20B		–	
>UL Capacity Credit	O		9.2.1.65A		–	
>Common Channels Capacity Consumption Law	M		9.2.1.9A		–	
>Dedicated Channels Capacity Consumption Law	M		9.2.1.20A		–	
Criticality Diagnostics	O		9.2.1.17		YES	ignore

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

9.1.17A AUDIT FAILURE

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Cause	M		9.2.1.6		YES	ignore
Criticality diagnostics	O		9.2.1.17		YES	ignore

9.1.18 COMMON MEASUREMENT INITIATION REQUEST

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Measurement ID	M		9.2.1.42		YES	reject
Common Measurement Object Type	M		9.2.1.10		YES	reject
CHOICE Common *Measurement Object Type*	M				YES	reject
>*Cell*					–	
>>C-ID	M		9.2.1.9		–	
>>Time Slot	O		9.2.3.23	For 3.84Mcps TDD only	–	
>>Time Slot LCR	O		9.2.3.24A	For 1.28Mcps TDD only	YES	reject
>>Neighbouring Cell Measurement Information		0..<maxnoMeasNCells>			GLOBAL	ignore
>>>Neighbouring FDD Cell Measurement Information	O		9.2.1.47C		–	–
>>>Neighbouring TDD Cell Measurement Information	O		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 Accuracy	O		9.2.1.9B		YES	reject

Range bound	Explanation
maxnoMeasNCells	Maximum number of neighbouring cells that can be measured on.

9.1.19   COMMON MEASUREMENT INITIATION RESPONSE

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Measurement ID	M		9.2.1.42		YES	ignore
CHOICE Common *Measurement Object Type*	O			Common Measurement Object Type that the measurement was initiated with.	YES	ignore
>*Cell*					YES	
>>Common Measurement value	M		9.2.1.12		–	
>*RACH*				FDD only	–	
>>Common Measurement Value	M		9.2.1.12		–	
>*CPCH*				FDD only	–	
>>Common Measurement Value	M		9.2.1.12		–	
SFN	O		9.2.1.53A	Common Measurement Time Reference	YES	ignore
Criticality Diagnostics	O		9.2.1.17		YES	ignore
Common Measurement Achieved Accuracy	O		Common Measurement Accuracy 9.2.1.9B		YES	ignore

9.1.20   COMMON MEASUREMENT INITIATION FAILURE

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Measurement ID	M		9.2.1.42		YES	Ignore
Cause	M		9.2.1.6		YES	Ignore
Criticality Diagnostics	O		9.2.1.17		YES	Ignore

9.1.21 COMMON MEASUREMENT REPORT

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	ignore
Transaction ID	M		9.2.1.62		–	
Measurement ID	M		9.2.1.42		YES	ignore
CHOICE Common *Measurement Object Type*	M			Common Measurement Object Type that the measurement was initiated with.	YES	ignore
>*Cell*					–	
>>Common Measurement Value Information	M		9.2.1.12A		–	
>*RACH*				FDD only	–	
>>Common Measurement Value Information	M		9.2.1.12A		–	
>*CPCH*				FDD only	–	
>>Common Measurement Value Information	M		9.2.1.12A			
SFN	O		9.2.1.53A	Common Measurement Time Reference	YES	ignore

9.1.22 COMMON MEASUREMENT TERMINATION REQUEST

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	ignore
Transaction ID	M		9.2.1.62		–	
Measurement ID	M		9.2.1.42		YES	ignore

9.1.23 COMMON MEASUREMENT FAILURE INDICATION

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	ignore
Transaction ID	M		9.2.1.62		–	
Measurement ID	M		9.2.1.42		YES	ignore
Cause	M		9.2.1.6		YES	ignore

9.1.24   CELL SETUP REQUEST

9.1.24.1   FDD Message

IE/Group Name	Presence	Range	IE type and Reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Local Cell ID	M		9.2.1.38		YES	reject
C-ID	M		9.2.1.9		YES	reject
Configuration Generation ID	M		9.2.1.16		YES	reject
T Cell	M		9.2.2.49		YES	reject
UARFCN	M		9.2.1.65	Corresponds to Nu [14]	YES	reject
UARFCN	M		9.2.1.65	Corresponds to Nd [14]	YES	reject

Maximum Transmission Power	M		9.2.1.40	YES	reject
Closed Loop Timing Adjustment Mode	O		9.2.2.2A	YES	reject
Primary Scrambling Code	M		9.2.2.34	YES	reject
Synchronisation Configuration		1		YES	reject
>N_INSYNC_IND	M		9.2.1.47A	–	
>N_OUTSYNC_IND	M		9.2.1.47B	–	
>T_RLFAILURE	M		9.2.1.56A	–	
DL TPC pattern 01 count	M		9.2.2.13A	YES	reject
Primary SCH Information		1		YES	reject
>Common Physical Channel ID	M		9.2.1.13	–	
>Primary SCH Power	M		DL Power 9.2.1.21	–	
>TSTD Indicator	M		9.2.1.64	–	
Secondary SCH Information		1		YES	reject
>Common Physical Channel ID	M		9.2.1.13	–	
>Secondary SCH power	M		DL Power 9.2.1.21	–	
>TSTD Indicator	M		9.2.1.64	–	
Primary CPICH Information		1		YES	reject
>Common Physical Channel ID	M		9.2.1.13	–	
>Primary CPICH power	M		9.2.2.33	–	
>Transmit Diversity Indicator	M		9.2.2.53	–	
Secondary CPICH Information		0..*maxSCPICHCell*		EACH	reject
>Common Physical Channel ID	M		9.2.1.13	–	
>DL Scrambling code	M		9.2.2.13	–	
>FDD DL Channelisation Code Number	M		9.2.2.14	–	
>Secondary CPICH Power	M		DL Power 9.2.1.21	–	
>Transmit Diversity Indicator	M		9.2.2.53	–	
Primary CCPCH Information		1		YES	reject
>Common Physical Channel ID	M		9.2.1.13	–	
>**BCH Information**		1		–	
>>Common Transport Channel ID	M		9.2.1.14	–	
>>BCH Power	M		DL Power 9.2.1.21	–	
>STTD Indicator	M		9.2.2.48	–	
Limited power increase information		1		YES	reject
>Power_Raise_Limit	M		9.2.2.29A	–	
>DL_power_averaging_window_size	M		9.2.2.12A	–	
IPDL Parameter Information		0..1		YES	reject
>IPDL FDD Parameters	M		9.2.2.18C	–	
>IPDL Indicator	M		9.2.1.36F	–	

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

9.1.24.2 TDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Local Cell ID	M		9.2.1.38		YES	reject
C-ID	M		9.2.1.9		YES	reject
Configuration Generation Id	M		9.2.1.16		YES	reject
UARFCN	M		9.2.1.65	Corresponds to Nt [15]	YES	reject
Cell Parameter ID	M		9.2.3.4		YES	reject
Maximum Transmission Power	M		9.2.1.40		YES	reject
Transmission Diversity Applied	M		9.2.3.26	On DCHs	YES	reject
Sync Case	M		9.2.3.18		YES	reject
Synchronisation Configuration		1			YES	reject
>N_INSYNC_IND	M		9.2.1.47A		–	
>N_OUTSYNC_IND	M		9.2.1.47B		–	
>T_RLFAILURE	M		9.2.1.56A		–	
DPCH Constant Value	M		Constant Value		YES	reject
PUSCH Constant Value	M		Constant Value		YES	reject
PRACH Constant Value	M		Constant Value		YES	reject
Timing Advance Applied	M		9.2.3.22A		YES	reject
SCH Information		0..1		Mandatory For 3.84Mcps TDD only	YES	reject
>Common Physical Channel ID	M		9.2.1.13		–	
>CHOICE *Sync Case*	M				YES	reject
>>*Case 1*					–	
>>>Time Slot	M		9.2.3.23		–	
>>*Case 2*					–	
>>>SCH Time Slot	M		9.2.3.17		–	
>SCH Power	M		DL Power 9.2.1.21		–	
>TSTD Indicator	M		9.2.1.64		–	
PCCPCH Information		0..1		Mandatory For 3.84Mcps TDD only	YES	reject
>Common Physical Channel ID	M		9.2.1.13		–	
>TDD Physical Channel Offset	M		9.2.3.20		–	
>Repetition Period	M		9.2.3.16		–	
>Repetition Length	M		9.2.3.15		–	
>PCCPCH Power	M		9.2.3.9		–	
>Block STTD Indicator	M		9.2.3.1		–	
Time Slot Configuration		0 .. 15		Mandatory For 3.84Mcps TDD only	GLOBAL	reject
>Time Slot	M		9.2.3.23		–	
>Time Slot Status	M		9.2.3.25		–	
>Time Slot Direction	M		9.2.3.24		–	

Time Slot Configuration LCR		0 .. 7		Mandatory For 1.28Mcps TDD only	GLOBAL	reject
>Time Slot LCR	M		9.2.3.24A		–	
>Time Slot Status	M		9.2.3.25		–	
>Time Slot Direction	M		9.2.3.24		–	
PCCPCH Information LCR		0..1		Mandatory For 1.28Mcps TDD only	YES	reject
>Common physical channel ID	M		9.2.1.13		–	
>Time Slot LCR	M		9.2.3.24A		–	
>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		–	
>Block STTD Indicator	M		9.2.3.1		–	
>TSTD Indicator	M		9.2.1.64		–	
DwPCH Information		0..1		Mandatory For 1.28Mcps TDD only	YES	reject
>Common Physical Channel ID	M		9.2.1.13		–	
>TSTD Indicator	M		9.2.1.64		–	
>SYNC_DL Code ID	M		9.2.3.18B		–	
>DwPCH Power	M		9.2.3.5B		–	
Reference SFN offset	O		9.2.3.14B		YES	ignore
IPDL Parameter Information		0..1			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
Synchronisation Configuration		0,1			YES	reject
>N_INSYNC_IND	M		9.2.1.47A		–	
>N_OUTSYNC_IND	M		9.2.1.47B		–	
>T_RLFAILURE	M		9.2.1.56A		–	
Primary SCH Information		0,1			YES	reject
>Common Physical Channel ID	M		9.2.1.13		–	
>Primary SCH power	M		DL Power 9.2.1.21		–	
Secondary SCH Information		0,1			YES	reject
>Common Physical Channel ID	M		9.2.1.13		–	
>Secondary SCH power	M		DL Power 9.2.1.21		–	
Primary CPICH Information		0,1			YES	reject
>Common Physical Channel ID	M		9.2.1.13		–	
>Primary CPICH power	M		9.2.2.33		–	
Secondary CPICH Information		0..<*maxSCPICHCell*>			YES	reject
>Common Physical Channel ID	M		9.2.1.13		–	
>Secondary CPICH Power	M		DL Power 9.2.1.21		–	
Primary CCPCH Information		0,1			YES	reject
>**BCH Information**		1			–	
>>Common Transport Channel ID	M		9.2.1.14		–	
>>BCH Power	M		DL Power 9.2.1.21		–	
IPDL Parameter Information		0..1			YES	reject
>IPDL FDD Parameters	O		9.2.2.18C		–	
>IPDL Indicator	M		9.2.1.36F		–	

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

9.1.27.2 TDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
C-ID	M		9.2.1.9		YES	reject
Configuration Generation ID	M		9.2.1.16		YES	reject
Synchronisation Configuration		0,1			YES	reject
>N_INSYNC_IND	M		9.2.1.47A		–	
>N_OUTSYNC_IND	M		9.2.1.47B		–	
>T_RLFAILURE	M		9.2.1.56A		–	
Timing Advance Applied	O		9.2.3.22A	For 3.84Mcps TDD only	YES	reject
SCH Information		0,1		For 3.84Mcps TDD only	YES	reject
>Common Physical Channel ID	M		9.2.1.13		–	
>SCH Power	M		DL Power 9.2.1.21		–	
PCCPCH Information		0,1			YES	reject
>Common Physical Channel ID	M		9.2.1.13		–	
>PCCPCH Power	M		9.2.3.9		–	
Maximum Transmission Power	O		9.2.1.40		YES	reject
DPCH Constant Value	O		Constant Value		YES	reject
PUSCH Constant Value	O		Constant Value		YES	reject
PRACH Constant Value	O		Constant Value		YES	reject
Time Slot Configuration		0..15		Mandatory For 3.84Mcps TDD only	GLOBAL	reject
>Time Slot	M		9.2.3.23		–	
>Time Slot Status	M		9.2.3.25		–	
>Time Slot Direction	M		9.2.3.24		–	
Time Slot Configuration LCR		0 .. 7		Mandatory For 1.28Mcps TDD only	GLOBAL	reject
>Time Slot LCR	M		9.2.3.24A		–	
>Time Slot Status	M		9.2.3.25		–	
>Time Slot Direction	M		9.2.3.24		–	
DwPCH Information		0 .. 1		Mandatory For 1.28Mcps TDD only	YES	reject
>Common Physical Channel ID	M		9.2.1.13		–	
>DwPCH Power	M		9.2.3.5B		–	
IPDL Parameter Information		0..1			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		–	
Indication Type	M		9.2.1.36		YES	ignore
CHOICE *Indication Type*	M				YES	ignore
>*No Failure*					–	
>>**Local Cell Information**		*1.. <max LocalCellin NodeB >*			EACH	ignore
>>>Local Cell ID	M		9.2.1.38		–	
>>>Add/Delete Indicator	M		9.2.1.1		–	
>>>DL or Global Capacity Credit	C-add		9.2.1.20B		–	
>>>UL Capacity Credit	O		9.2.1.65A		–	
>>>Common Channels Capacity Consumption Law	C-add		9.2.1.9A		–	
>>>Dedicated Channels Capacity Consumption Law	C-add		9.2.1.20A		–	
>>>Maximum DL Power Capability	C-add		9.2.1.39		–	
>>>Minimum Spreading Factor	C-add		9.2.1.47		–	
>>>Minimum DL Power Capability	C-add		9.2.1.46A		–	
>>>Reference Clock availability	C-add		9.2.3.14A	TDD only	YES	ignore
>>>Local Cell Group ID	O		9.2.1.37A		–	
>>**Local Cell Group Information**		*0.. <maxLocal CellinNode B>*			EACH	ignore
>>>Local Cell Group ID	M		9.2.1.37A		–	
>>>DL or Global Capacity Credit	M		9.2.1.20B		–	
>>>UL Capacity Credit	O		9.2.1.65A		–	
>>>Common Channels Capacity Consumption Law	M		9.2.1.9A		–	
>>>Dedicated Channels Capacity Consumption Law	M		9.2.1.20A		–	
>*Service Impacting*					–	
>>**Local Cell Information**		*0.. <maxLocal CellinNode B>*			EACH	ignore
>>>Local Cell ID	M		9.2.1.38		–	
>>>DL or Global Capacity Credit	O		9.2.1.20B		–	
>>>UL Capacity Credit	O		9.2.1.65A		–	

>>>Common Channels Capacity Consumption Law	O		9.2.2.3		–	
>>>Dedicated Channels Capacity Consumption Law	O		9.2.2.6		–	
>>>Maximum DL Power Capability	O		9.2.1.39		–	
>>>Minimum Spreading Factor	O		9.2.1.47		–	
>>>Minimum DL Power Capability	O		9.2.1.46A		–	
>>>Reference Clock availability	O		9.2.3.14A	TDD only	YES	ignore
>>**Local Cell Group Information**		*0.. <maxLocalCellinNodeB>*			EACH	ignore
>>>Local Cell Group ID	M		9.2.1.37A		–	
>>>DL or Global Capacity Credit	O		9.2.2.12		–	
>>>UL Capacity Credit	O		9.2.2.60		–	
>>>Common Channels Capacity Consumption Law	O		9.2.2.3		–	
>>>Dedicated Channels Capacity Consumption Law	O		9.2.2.6		–	
>>**Communication Control Port Information**		*0.. <maxCCPinNodeB>*			EACH	ignore
>>>Communication Control Port ID	M		9.2.1.15		–	
>>>Resource Operational State	M		9.2.1.52		–	
>>>Availability Status	M		9.2.1.2		–	
>>**Cell Information**		*0.. <maxCellinNodeB>*			EACH	ignore
>>>C-ID	M		9.2.1.9		–	
>>>Resource Operational State	O		9.2.1.52		–	
>>>Availability Status	O		9.2.1.2		–	
>>>Primary SCH Information	O		Common Physical Channel Status Information 9.2.1.13A		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		YES	ignore

			9.2.1.13A			
>>>Secondary CPICH Information		0..<maxSCPICHCell>			EACH	ignore
>>>>Secondary CPICH Individual Information	M		Common Physical Channel Status Information 9.2.1.13A		–	
>>>Primary CCPCH Information	O		Common Physical Channel Status Information 9.2.1.13A		YES	ignore
>>>BCH Information	O		Common Transport Channel Status Information 9.2.1.14B		YES	ignore
>>>Secondary CCPCH Information		0..<maxSCCPCHCell>			EACH	ignore
>>>>Secondary CCPCH Individual Information	M		Common Physical Channel Status Information 9.2.1.13A		–	
>>>PCH Information	O		Common Transport Channel Status Information 9.2.1.14B		YES	ignore
>>>PICH Information	O		Common Physical Channel Status Information 9.2.1.13A		YES	ignore
>>>FACH Information		0.. <maxFACHCell>			EACH	ignore
>>>>FACH Individual Information	M		Common Transport Channel Status Information 9.2.1.14B		–	
>>>PRACH Information		0..<maxPRACHCell>			EACH	ignore
>>>>PRACH Individual Information	M		Common Physical Channel Status Information 9.2.1.13A		–	
>>>RACH Information		0.. <maxPRACHCell>			EACH	ignore
>>>>RACH Individual Information	M		Common Transport Channel Status Information		–	

			9.2.1.14B			
>>>AICH Information		0.. <maxPRA CHCell>			EACH	ignore
>>>>AICH Individual Information	M		Common Physical Channel Status Information 9.2.1.13A		–	
>>>PCPCH Information		0..<maxPC PCHCell>			EACH	ignore
>>>>PCPCH Individual Information	M		Common Physical Channel Status Information 9.2.1.13A		–	
>>>CPCH Information		0.. <maxCPC HCell>			EACH	ignore
>>>>CPCH Individual Information	M		Common Transport Channel Status Information 9.2.1.14B		–	
>>>AP-AICH Information		0.. <maxCPC HCell>			EACH	ignore
>>>>AP-AICH Individual Information	M		Common Physical Channel Status Information 9.2.1.13A		–	
>>>CD/CA-ICH Information		0.. <maxCPC HCell>			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		YES	ignore
>>>FPACH Information		0 .. <maxFPA CHCell>		For 1.28Mcps TDD only	EACH	ignore
>>>>FPACH Individual Information	M		Common Physical Channel Status Information 9.2.1.13A		–	
>>>DwPCH Information	O		Common Physical Channel Status Information 9.2.1.13A	For 1.28Mcps TDD only	YES	ignore
Cause	O		9.2.1.6		YES	ignore

Condition	Explanation
C-add	This IE is present only if "Add/Delete Indicator" equals to add

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

9.1.33   SYSTEM INFORMATION UPDATE REQUEST

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	

C-ID	M		9.2.1.9		YES	reject
BCCH Modification Time	O		9.2.1.3		YES	reject
MIB/SB/SIBInformation		1.. maxIB			GLOBAL	reject
>IB Type	M		9.2.1.35		–	
>IB OC ID	M		9.2.1.31A	In one message, every occurrence of IB Type can only be deleted once and/or added once.	–	
>CHOICE *IB DeletionIndicator*	M				–	
>>*NoDeletion*					–	
>>>SIB Originator	C-SIB		9.2.1.55		–	
>>>IB SG REP	O		9.2.1.34		–	
>>>Segment Information		1.. maxIBSEG			GLOBAL	reject
>>>>IB SG POS	O		9.2.1.33		–	
>>>>Segment type	C – CRNCOrigination		9.2.1.53B		–	
>>>>IB SG DATA	C – CRNCOrigination		9.2.1.32		–	
>>*Deletion*			NULL		–	

Range bound	Explanation
1..maxIB	Maximum number of information Blocks supported in one message.
1..maxIBSEG	Maximum number of segments for one Information Block

Condition	Explanation
CRNCOrigination	The IE shall be present if *the SIB Originator* IE is set to 'CRNC' or if the IB Type equals "MIB", "SB1" or "SB2".
SIB	This IE shall be present if the IB Type is equal to "SIB"

9.1.34   SYSTEM INFORMATION UPDATE RESPONSE

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Criticality Diagnostics	O		9.2.1.17		YES	ignore

9.1.35   SYSTEM INFORMATION UPDATE FAILURE

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Cause	M		9.2.1.6		YES	ignore
Criticality Diagnostics	O		9.2.1.17		YES	ignore

9.1.36   RADIO LINK SETUP REQUEST

9.1.36.1   FDD message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
CRNC Communication Context ID	M		9.2.1.18	The reserved value "All CRNCC C" shall not be used.	YES	reject
Transaction ID	M		9.2.1.62		–	
UL DPCH Information		1			YES	reject
>UL Scrambling Code	M		9.2.2.59		–	
>Min UL Channelisation Code length	M		9.2.2.22		–	
>Max Number of UL DPDCHs	C – CodeLen		9.2.2.21		–	
>puncture Limit	M		9.2.1.50	For UL	–	
>TFCS	M		9.2.1.58	for UL	–	
>UL DPCCH Slot Format	M		9.2.2.57		–	
> UL SIR Target	M		UL SIR 9.2.2.58		–	
>Diversity mode	M		9.2.2.9		–	
>SSDT cell ID Length	O		9.2.2.45		–	
>S Field Length	C-FBI		9.2.2.40		–	
>DPC mode	O		9.2.2.13C		YES	reject
DL DPCH Information		1			YES	reject
>TFCS	M		9.2.1.58	For DL	–	
>DL DPCH Slot Format	M		9.2.2.10		–	
>TFCI signalling mode	M		9.2.2.50		–	
>TFCI presence	C-SlotFormat		9.2.1.57		–	
>Multiplexing Position	M		9.2.2.23		–	
>PDSCH RL ID	C-DSCH		RL ID 9.2.1.53		–	
>PDSCH code mapping	C-DSCH		9.2.2.25		–	
>Power Offset Information		1			–	
>>PO1	M		Power Offset 9.2.2.29	Power offset for the TFCI bits	–	
>>PO2	M		Power Offset 9.2.2.29	Power offset for the TPC bits	–	
>>PO3	M		Power Offset 9.2.2.29	Power offset for the pilot bits	–	
>FDD TPC DL Step Size	M		9.2.2.16		–	
>Limited Power Increase	M		9.2.2.18A		–	
>Inner Loop DL PC Status	M		9.2.2.18B		–	
DCH Information	M		DCH FDD Information 9.2.2.4D		YES	reject
DSCH Information	O		DSCH FDD Information 9.2.2.13B		YES	reject

TFCI2 bearer information		0..1			YES	ignore
>ToAWS	M		9.2.1.61		-	
>ToAWE	M		9.2.1.60		-	
RL Information		1 to \<maxnoof RLs>			EACH	notify
>RL ID	M		9.2.1.53		–	
>C-ID	M		9.2.1.9		–	
>First RLS Indicator	M		9.2.2.16A		–	
>Frame Offset	M		9.2.1.31		–	
>Chip Offset	M		9.2.2.2		–	
>Propagation Delay	O		9.2.2.35		–	
>Diversity Control Field	C – NotFirstRL		9.2.1.25		–	
>DL Code Information	M		FDD DL Code Information 9.2.2.14A		–	
>Initial DL transmission Power	M		DL Power 9.2.1.21	Initial power on DPCH	–	
>Maximum DL power	M		DL Power 9.2.1.21	Maximum allowed power on DPCH	–	
>Minimum DL power	M		DL Power 9.2.1.21	Minimum allowed power on DPCH	–	
>SSDT Cell Identity	O		9.2.2.44		–	
>Transmit Diversity Indicator	C – Diversity mode		9.2.2.53		–	
>SSDT Cell Identity for EDSCHPC	C-EDSCHPC		9.2.2.44A		YES	ignore
Transmission Gap Pattern Sequence Information	C - CM_Active		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	This IE is present only if "Min UL Channelisation Code length" equals to 4
FBI	This IE shall be present if the *UL DPCCH Slot Format* IE indicates a slot format with 1 or 2 FBI bits (see ref.[7])
NotFirstRL	This IE is present only if the RL is not the first one in the RL Information.
DSCH	This IE is present only if the *DSCH Information* IE is present
SlotFormat	This IE is only present if the DL DPCH slot format is equal to any of the value 12 to 16.
Diversity mode	This IE is present unless *Diversity Mode* IE in *UL DPCH Information* IE is "none"
CM_Active	This IE shall be present when the *Active Pattern Sequence Information* IE is present, otherwise this IE is optional.
EDSCHPC	This IE shall be present if *Enhanced DSCH PC* IE is present in the *DSCH Common Information* IE.

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

9.1.36.2 TDD message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
CRNC Communication Context ID	M		9.2.1.18	The reserved value "All CRNCC C" shall not be used.	YES	reject
Transaction ID	M		9.2.1.62		–	
UL CCTrCH Information		0 to <maxno CCTrCH>			EACH	notify
>CCTrCH ID	M		9.2.3.3		–	
>TFCS	M		9.2.1.58		–	
>TFCI Coding	M		9.2.3.22		–	
>Puncture Limit	M		9.2.1.50		–	
>UL DPCH Information		0..1		For 3.84Mcps TDD only	YES	notify
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>UL Timeslot Information	M		9.2.3.26C		–	
>UL DPCH Information LCR		0..1		For 1.28Mcps TDD only	YES	notify
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>UL Timeslot Information LCR	M		9.2.3.26E		–	
DL CCTrCH Information		0 to <maxno CCTrCH>			EACH	notify
>CCTrCH ID	M		9.2.3.3		–	
>TFCS	M		9.2.1.58		–	
>TFCI Coding	M		9.2.3.22		–	
>Puncture Limit	M		9.2.1.50		–	
>TDD TPC DL Step Size	M		9.2.3.21			
>TPC CCTrCH List		0 to <maxnoC CTrCH>		List of uplink CCTrCH which provide TPC	**–**	
>>TPC CCTrCH ID	M		CCTrCH ID 9.2.3.3		–	
>DL DPCH information		0..1		For 3.84Mcps TDD only	YES	notify
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>DL Timeslot Information	M		9.2.3.4E		–	
>DL DPCH information LCR		0..1		For 1.28Mcps	YES	notify

				TDD only		
>>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
RL Information		1			YES	reject
>RL ID	M		9.2.1.53		–	
>C-ID	M		9.2.1.9		–	
>Frame Offset	M		9.2.1.31		–	
>Special Burst Scheduling	M		9.2.3.18A		–	
>Initial DL transmission Power	M		DL Power 9.2.1.21	Initial power on DPCH	–	
>Maximum DL power	M		DL Power 9.2.1.21	Maximum allowed power on DPCH	–	
>Minimum DL power	M		DL Power 9.2.1.21	Minimum allowed power on DPCH	–	
>DL Time Slot ISCP Info	O		9.2.3.4F	For 3.84Mcps TDD only	–	
>DL Timeslot ISCP Information LCR		*0 .. <Maxnoof DLtsLCR>*		For 1.28Mcps TDD only	GLOBAL	reject
>>Time slot LCR	M		9.2.3.24A		–	
>>DL Timeslot ISCP	M		9.2.3.4B		–	

Range bound	Explanation
MaxnoCCTrCH	Number of CCTrCH for one UE for 3.84Mcps TDD.
MaxnoofDLtsLCR	Maximum number of Downlink time slots per Radio Link for 1.28Mcps TDD.

9.1.37 RADIO LINK SETUP RESPONSE

9.1.37.1 FDD message

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

Condition	Explanation
NotFirstRL	This IE is present only if the RL is not the first one in the RL Information.

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

9.1.37.2 TDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
CRNC Communication Context ID	M		9.2.1.18	The reserved value "All CRNCCC" shall not be used.	YES	ignore
Transaction ID	M		9.2.1.62		–	
Node B Communication Context ID	M		9.2.1.48	The reserved value "All NBCC" shall not be used.	YES	ignore
Communication Control Port ID	M		9.2.1.15		YES	ignore
RL Information Response		0..1		Mandatory For 3.84Mcps TDD only	YES	ignore
>RL ID	M		9.2.1.53		–	
>UL Time Slot ISCP Info	M		9.2.3.26D		–	
>UL PhysCH SF Variation	M		9.2.3.26B		–	
>DCH Information Response	O		9.2.1.20C		YES	ignore
>DSCH Information Response	O		9.2.1.27A		YES	ignore
>USCH Information Response	O		9.2.3.28		YES	ignore
RL Information Response LCR		0 .. 1		Mandatory For 1.28Mcps TDD only	YES	ignore
>RL ID	M		9.2.1.53		–	
>UL Time Slot ISCP Info LCR	M		9.2.3.26F		–	
>UL PhysCH SF Variation	M		9.2.3.26B		–	
>DCH Information Response	O		9.2.1.20C		YES	ignore
>DSCH Information Response	O		9.2.1.27A		YES	ignore
>USCH Information Response	O		9.2.3.28		YES	ignore
Criticality Diagnostics	O		9.2.1.17		YES	ignore

9.1.38 RADIO LINK SETUP FAILURE

9.1.38.1 FDD Message

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

Condition	Explanation
Success	This IE is present if at least one of the radio links has been successfully set up.
NotFirstRL	This IE is present only if the RL is not the first one in the RL Information.

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

9.1.38.2   TDD Message

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

9.1.39   RADIO LINK ADDITION REQUEST

9.1.39.1   FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Node B Communication Context ID	M		9.2.1.48	The reserved value "All NBCC" shall not be used.	YES	reject
Transaction ID	M		9.2.1.62		–	
Compressed Mode Deactivation Flag	O		9.2.2.3A		YES	reject
RL Information		*1..<ma xnoofR L-1>*			EACH	notify
>RL ID	M		9.2.1.53		–	
>C-ID	M		9.2.1.9		–	
>Frame Offset	M		9.2.1.31		–	
>Chip Offset	M		9.2.2.2		–	
>Diversity Control Field	M		9.2.1.25		–	
>DL Code Information	M		FDD DL Code Information 9.2.2.14A		–	
>Initial DL transmission power	O		DL Power 9.2.1.21	Initial power on DPCH	–	
>Maximum DL power	O		DL Power 9.2.1.21	Maximum allowed power on DPCH	–	
>Minimum DL power	O		DL Power 9.2.1.21	Minimum allowed power on DPCH	–	
>SSDT Cell Identity	O		9.2.2.44		–	
>Transmit Diversity Indicator	O		9.2.2.53		–	

Range bound	Explanation
MaxnoofRL	Maximum number of RLs for one UE
MaxnoofDLCodes	Maximum number of DL code information

9.1.39.2 TDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Node B Communication Context ID	M		9.2.1.48	The reserved value "All NBCC" shall not be used.	YES	reject
Transaction ID	M		9.2.1.62		–	
UL CCTrCH Information		0 to <maxno CCTrCH>			GLOBAL	reject
>CCTrCH ID	M		9.2.3.3		–	
>UL DPCH Information		0..1		For 3.84Mcps TDD only	YES	notify
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>UL Timeslot Information	M		9.2.3.26C		–	
>UL DPCH Information LCR		0..1		For 1.28Mcps TDD only	YES	notify
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>UL Timeslot Information LCR	M		9.2.3.26E		–	
DL CCTrCH Information		0 to <maxno CCTrCH>			GLOBAL	reject
>CCTrCH ID	M		9.2.3.3		–	
>DL DPCH information		0..1		For 3.84Mcps TDD only	YES	notify
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>DL Timeslot Information	M		9.2.3.4E		–	
>DL DPCH information LCR		0..1		For 1.28Mcps TDD only	YES	notify
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>DL Timeslot Information LCR	M		9.2.3.4O		–	
RL Information		1			YES	reject
>RL ID	M		9.2.1.53		–	
>C-ID	M		9.2.1.9		–	
>Frame Offset	M		9.2.1.31		–	
>Diversity Control Field	M		9.2.1.25		–	
>Initial DL transmission Power	O		DL Power 9.2.1.21	Initial power on DPCH	–	
>Maximum DL power	O		DL Power	Maximum	–	

			9.2.1.21	allowed power on DPCH		
>Minimum DL power	O		DL Power 9.2.1.21	Minimum allowed power on DPCH	–	
>DL Time Slot ISCP Info	O		9.2.3.4F	For 3.84Mcps TDD only	–	
>DL Timeslot ISCP Information LCR		*0..<MaxnoofDLtsLCR>*		For 1.28Mcps TDD only	GLOBAL	reject
>>Time slot LCR	M		9.2.3.24A		–	
>>DL Timeslot ISCP	M		9.2.3.4B		–	

Range bound	Explanation
MaxnoCCTrCH	Number of CCTrCH for one UE for 3.84Mcps TDD.
MaxnoofDLtsLCR	Maximum number of Downlink time slots per Radio Link for 1.28Mcps TDD

9.1.40 RADIO LINK ADDITION RESPONSE

9.1.40.1 FDD message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
CRNC Communication Context ID	M		9.2.1.18	The reserved value "All CRNCCC" shall not be used.	YES	ignore
Transaction ID	M		9.2.1.62		–	
RL Information Response		*1..<maxnoofRL-1>*			EACH	ignore
>RL ID	M		9.2.1.53		–	
>RL Set ID	M		9.2.2.9		–	
> Received total wide band power	M		9.2.2.39A		–	
>Diversity Indication	M		9.2.1.26		–	
>CHOICE *diversity indication*	M				–	
>>*Combining*					–	
>>>RL ID	M		9.2.1.53	Reference RL	–	
>>*Non combining*					–	
>>>DCH Information Response	M		9.2.1.20C		–	
>SSDT support indicator	M		9.2.2.46		–	
Criticality Diagnostics	O		9.2.1.17		YES	ignore

Range bound	Explanation
MaxnoofRL	Maximum number of RLs for one UE

9.1.40.2 TDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
CRNC Communication Context ID	M		9.2.1.18	The reserved value "All CRNCC C" shall not be used.	YES	ignore
Transaction ID	M		9.2.1.62		–	
RL Information response		1			YES	ignore
>RL ID	M		9.2.1.53		–	
> UL Time Slot ISCP Info	M		9.2.3.26D		–	
>UL PhysCH SF Variation	M		9.2.3.26B		–	
>DCH Information		0..1			–	
>>Diversity Indication	M		9.2.1.26		–	
>>CHOICE *diversity indication*	M				–	
>>>*Combining*				In TDD it indicates whether the old Transport Bearer shall be reused or not	–	
>>>>RL ID	M		9.2.1.53	Reference RL	–	
>>>*Non combining*					–	
>>>>DCH Information Response	M		9.2.1.20C		–	
>DSCH Information Response	O		9.2.1.27A		YES	ignore
>USCH Information Response	O		9.2.3.29		YES	ignore
Criticality Diagnostics	O		9.2.1.17		YES	ignore

9.1.41 RADIO LINK ADDITION FAILURE

9.1.41.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
CRNC Communication Context ID	M		9.2.1.18	The reserved value "All CRNCC C" shall not be used.	YES	ignore
Transaction ID	M		9.2.1.62		–	
CHOICE *cause level*	M				YES	Ignore
>*General*					–	
>>Cause	M		9.2.1.6		–	
>*RL specific*					–	
>>Unsuccessful RL Information Response		1..<*ma xnoofR L-1*>			EACH	ignore
>>>RL ID	M		9.2.1.53		–	
>>>Cause	M		9.2.1.6		–	
>>Succcessful RL Information Response		1..<*ma xnoofR L-2*>			EACH	ignore
>>>RL ID	M		9.2.1.53		–	
>>>RL Set ID	M		9.2.2.39			
>>> Received total wide band power	M		9.2.2.39A		–	
>>>Diversity Indication	M		9.2.1.26		–	
>>>CHOICE *diversity indication*	M				–	
>>>>*Combining*					–	
>>>>>RL ID	M		9.2.1.53	Reference RL	–	
>>>>*Non combining*					–	
>>>>>DCH Information Response	M		9.2.1.20C		–	
>>>SSDT support indicator	M		9.2.2.46		–	
Criticality Diagnostics	O		9.2.1.17		YES	ignore

Range bound	Explanation
MaxnoofRL	Maximum number of RLs for one UE

9.1.41.2   TDD Message

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

9.1.42 RADIO LINK RECONFIGURATION PREPARE

9.1.42.1 FDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantic Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Node B Communication Context ID	M		9.2.1.48	The reserved value "All NBCC" shall not be used.	YES	reject
Transaction ID	M		9.2.1.62		–	
UL DPCH Information		*0..1*			YES	reject
>UL Scrambling code	O		9.2.2.59		–	
>UL SIR Target	O		UL SIR 9.2.2.58		–	
>Min UL Channelistion Code Length	O		9.2.2.22		–	
>Max Number of UL DPDCHs	C – CodeLen		9.2.2.20		–	
>Puncture Limit	O		9.2.1.50	For UL	–	
>TFCS	O		9.2.1.58		–	
>UL DPCCH Slot Format	O		9.2.2.57		–	
>Diversity mode	O		9.2.2.9		–	
>SSDT Cell Identity Length	O		9.2.2.45		–	
>S-Field Length	O		9.2.2.40		–	
DL DPCH Information		*0..1*			YES	reject
>TFCS	O		9.2.1.58		–	
>DL DPCH Slot Format	O		9.2.2.10		–	
>TFCI Signalling Mode	O		9.2.2.50		–	
>TFCI presence	C-Slot Format		9.2.1.57		–	
>Multiplexing Position	O		9.2.2.23		–	
>PDSCH code mapping	O		9.2.2.25		–	
>PDSCH RL ID	O		RL ID 9.2.1.53		–	
>Limited Power Increase	O		9.2.2.18A		–	
DCHs to Modify	O		DCHs FDD to Modify 9.2.2.4E		YES	reject
DCHs to Add	O		DCH FDD Information 9.2.2.4D		YES	reject
DCHs to Delete		*0..<max noofDCHs>*			GLOBAL	reject
>DCH ID	M		9.2.1.20		–	
DSCH to modify		*0..<max noofDSCHs>*			YES	reject
>DSCH ID	M		9.2.1.27		–	
>Transport Format Set	O		9.2.1.59	For the DL.	–	
>Allocation/Retention Priority	O		9.2.1.1A		–	
>Frame Handling Priority	O		9.2.1.30		–	
>ToAWS	O		9.2.1.61		–	
>ToAWE	O		9.2.1.60		–	

>Transport Bearer Request Indicator	M		9.2.1.62A		–	
DSCH to add	O		DSCH FDD Information 9.2.2.13B		YES	reject
DSCH to Delete		0..<max noofDS CHs>			YES	reject
>DSCH ID	M		9.2.1.27		–	
TFCI2 bearer specific information		0..1			YES	reject
>CHOICE *TFCI2 bearer action*	M				–	
>>Add or modify					–	
>>>ToAWS	M		9.2.1.61		–	
>>>ToAWE	M		9.2.1.60		–	
>>Delete			NULL		–	
RL Information		0..<max noofRLs >			EACH	reject
>RL ID	M		9.2.1.53		–	
>DL Code Information	O		FDD DL Code Information 9.2.2.14A		–	
>Maximum DL Power	O		DL Power 9.2.1.21	Maximum allowed power on DPCH	–	
>Minimum DL Power	O		DL Power 9.2.1.21	Minimum allowed power on DPCH	–	
>SSDT Indication	O		9.2.2.47		–	
>SSDT Cell Identity	C– SSDTIndON		9.2.2.44		–	
>Transmit Diversity Indicator	C – Diversity mode		9.2.2.53		–	
>SSDT Cell Identity for EDSCHPC	C- EDSCHPC		9.2.2.44A		YES	ignore
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 may be present if the SSDT Indication is set to 'SSDT Active in the UE'.
CodeLen	This IE is present only if "Min UL Channelisation Code length" equals to 4.
SlotFormat	This IE is only present if the DL DPCH slot format is equal to any of the value 12 to 16.
SF/2	This IE is present only 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'".
Diversity mode	This IE is present unless *Diversity Mode* IE in *UL DPCH Information* group, unless it is equal to "none"
EDSCHPC	This IE shall be present if *Enhanced DSCH PC* IE is present in the *DSCH Common Information* IE.

Range Bound	Explanation
MaxnoofDCHs	Maximum number of DCHs for a UE.
MaxnoofDSCHs	Maximum number of DSCHs for a UE.
MaxnoofRLs	Maximum number of RLs for a UE.

9.1.42.2 TDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantic Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Node B Communication Context ID	M		9.2.1.48	The reserved value "All NBCC" shall not be used.	YES	reject
Transaction ID	M		9.2.1.62		–	
UL CCTrCH to Add		0.. <maxno of CCTrCHs>			GLOBAL	reject
>CCTrCH ID	M		9.2.3.3		–	
>TFCS	M		9.2.1.58		–	
>TFCI Coding	M		9.2.3.22		–	
>Puncture Limit	M		9.2.1.50		–	
>UL DPCH Information		0..1		For 3.84Mcps TDD only	YES	reject
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>UL Timeslot Information	M		9.2.3.26C		–	
>UL DPCH Information LCR		0..1		For 1.28Mcps TDD only	YES	reject
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>UL Timeslot Information LCR	M		9.2.3.26E		–	
UL CCTrCH to Modify		0.. <maxno of CCTrCHs>			GLOBAL	reject
>CCTrCH ID	M		9.2.3.3		–	
>TFCS	O		9.2.1.58		–	
>TFCI Coding	O		9.2.3.22		–	
>Puncture Limit	O		9.2.1.50		–	
>UL DPCH to add		0..1		For 3.84Mcps TDD only	YES	reject
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>UL Timeslot Information	M		9.2.3.26C		–	
>UL DPCH to modify		0..1			YES	reject
>>Repetition Period	O		9.2.3.16		–	
>>Repetition Length	O		9.2.3.15		–	
>>TDD DPCH Offset	O		9.2.3.19A		–	
>>UL Timeslot Information		0 to <maxno ofULts>		For 3.84Mcps TDD only	–	
>>>Time Slot	M		9.2.3.23		–	

>>>Midamble Shift and Burst Type	O		9.2.3.7		–	
>>>TFCI Presence	O		9.2.1.57		–	
>>>UL Code Information		0 to \<maxnoOfDPCH>			–	
>>>>DPCH ID	M		9.2.3.5		–	
>>>>TDD Channelisation Code	O		9.2.3.19		–	
>>UL Timeslot Information LCR		0 to \<MaxnoofULtsLCR>		For 1.28Mcps TDD only	GLOBAL	reject
>>>Time Slot LCR	M		9.2.3.24A		–	
>>>Midamble shift LCR	O		9.2.3.7A		–	
>>>TFCI Presence	O		9.2.1.57		–	
>>>UL Code Information LCR		0 to \<maxnoOfDPCHLCR>			–	
>>>>DPCH ID	M		9.2.3.5		–	
>>>>TDD Channelisation Code LCR	O		9.2.3.19a		–	
>UL DPCH to delete		0.. \<maxno of DPCHs>			GLOBAL	reject
>>DPCH ID	M		9.2.3.5		–	
>UL DPCH to add LCR		0..1		For 1.28Mcps TDD only	YES	reject
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>UL Timeslot Information LCR	M		9.2.3.26E		–	
UL CCTrCH to Delete		0.. \<maxno of CCTrCHs>			GLOBAL	reject
>CCTrCH ID	M		9.2.3.3		–	
DL CCTrCH to Add		0.. \<maxno of CCTrCHs>			GLOBAL	reject
>CCTrCH ID	M		9.2.3.3		–	
>TFCS	M		9.2.1.58		–	
>TFCI Coding	M		9.2.3.22		–	
>PunctureLimit	M		9.2.1.50		–	
>TPC CCTrCH List		0 to \<maxno CCTrCHs>		List of uplink CCTrCH which provide TPC	–	
>>TPC CCTrCH ID	M		CCTrCH ID 9.2.3.3		–	
>DL DPCH Information		0..1		For 3.84Mcps	YES	reject

				TDD only		
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>DL Timeslot Information	M		9.2.3.4E		–	
>DL DPCH Information LCR		*0..1*		For 1.28Mcps TDD only	YES	reject
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>DL Timeslot Information LCR	M		9.2.3.4O		–	
DL CCTrCH to Modify		*0.. <maxno of CCTrCHs>*			GLOBAL	reject
>CCTrCH ID	M		9.2.3.3.		–	
>TFCS	O		9.2.1.58		–	
>TFCI Coding	O		9.2.3.22		–	
>PunctureLimit	O		9.2.1.50		–	
>TPC CCTrCH List		0 to <maxno CCTrCHs>		List of uplink CCTrCH which provide TPC	**–**	
>>TPC CCTrCH ID	M		CCTrCH ID 9.2.3.3		–	
>DL DPCH to add		*0..1*		For 3.84Mcps TDD only	YES	reject
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>DL Timeslot Information	M		9.2.3.4E		–	
>DL DPCH to modify		*0..1*			YES	reject
>>Repetition Period	O		9.2.3.16		–	
>>Repetition Length	O		9.2.3.15		–	
>>TDD DPCH Offset	O		9.2.3.19A		–	
>>DL Timeslot Information		0 .. <maxno ofDLts>		For 3.84Mcps TDD only	–	
>>>Time Slot	M		9.2.3.23		–	
>>>Midamble Shift and Burst Type	O		9.2.3.7		–	
>>>TFCI Presence	O		9.2.1.57		–	
>>>DL Code Information		0 .. <maxno OfDPCH>			–	
>>>>DPCH ID	M		9.2.3.5		–	
>>>>TDD Channelisation Code	O		9.2.3.19		–	
>>DL Timeslot Information LCR		0 .. <Maxno ofDLtsLCR>		For 1.28Mcps TDD only	GLOBAL	reject
>>>Time Slot LCR	M		9.2.3.24A		–	
>>>Midamble shift LCR	O		9.2.3.7A		–	
>>>TFCI Presence	O		9.2.1.57		–	

ETSI

>>>DL Code Information LCR		0 .. <maxnoOfDPCHLCRs>			–	
>>>>DPCH ID	M		9.2.3.5		–	
>>>>TDD Channelisation Code LCR	O		9.2.3.19a		–	
>DL DPCH to delete		*0.. <maxno of DPCHs>*			GLOBAL	reject
>>DPCH ID	M		9.2.3.5		–	
>DL DPCH to add LCR		*0..1*		For 1.28Mcps TDD only	YES	reject
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>DL Timeslot Information LCR	M		9.2.3.4O		–	
DL CCTrCH to Delete		*0.. <maxno of CCTrCHs>*			GLOBAL	reject
>CCTrCH ID	M		9.2.3.3		–	
DCHs to Modify	O		DCHs TDD to Modify 9.2.3.4D		YES	reject
DCHs to Add	O		DCH TDD Information 9.2.3.4C		YES	reject
DCHs to Delete		*0..<max noofDCHs>*			GLOBAL	reject
>DCH ID	M		9.2.1.20		–	
DSCH Information to modify		0 .. <Maxno of DSCHs>			GLOBAL	reject
>DSCH ID	M		9.2.1.27		–	
>CCTrCH ID	O		9.2.3.3	DL CCTrCH in which the DSCH is mapped	–	
>Transport Format Set	O		9.2.1.59		–	
>Allocation/Retention Priority	O		9.2.1.1A		–	
>Frame Handling Priority	O		9.2.1.30		–	
>ToAWS	O		9.2.1.61		–	
>ToAWE	O		9.2.1.60		–	
>Transport Bearer Request Indicator	M		9.2.1.62A		–	
DSCH Information to add	O		DSCH TDD Information 9.2.3.5A		YES	reject
DSCH Information to delete		0 .. <Maxno of			GLOBAL	reject

		DSCHs >				
>DSCH ID	M		9.2.1.27		–	
USCH Information to modify		0 .. <Maxno of USCHs >			GLOBAL	reject
>USCH ID	M		9.2.3.27		–	
>Transport Format Set	O		9.2.1.59		–	
> Allocation/Retention Priority	O		9.2.1.1A		–	
>CCTrCH ID	O		9.2.3.2	UL CCTrCH in which the USCH is mapped	–	
>Transport Bearer Request Indicator	M		9.2.1.62A		–	
USCH Information to add	O		USCH Information 9.2.3.28		YES	reject
USCH Information to delete		0 .. <Maxno of USCHs >			GLOBAL	reject
>USCH ID	M		9.2.3.27		–	
RL Information		*0..1*			YES	reject
>RL ID	M		9.2.1.53		–	
>Maximum Downlink Power	O		DL Power 9.2.1.21	Maximum allowed power on DPCH	–	
>Minimum Downlink Power	O		DL Power 9.2.1.21	Minimum allowed power on DPCH	–	

Condition	Explanation
CoorDCH	This IE is present only this DCH is part of a set of coordinated DCHs (number of instances of DCH Specific Info is greater than 1)

Range Bound	Explanation
MaxnoofDCHs	Maximum number of DCHs for a UE.
MaxnoofCCTrCHs	Maximum number of CCTrCHs for a UE.
Maxnoof DPCHs	Maximum number of DPCHs in one CCTrCH for 3.84Mcps TDD.
MaxnoOfDPCHLCRs	Maximum number of DPCHs in one CCTrCH for 1.28Mcps TDD.
MaxnoofDSCHs	Maximum number of DSCHs for one UE
MaxnoofUSCHs	Maximum number of USCHs for one UE
MaxnoofDLts	Maximum number of Downlink time slots per Radio Link for 3.84Mcps TDD.
MaxnoofDLtsLCR	Maximum number of Downlink time slots per Radio Link for 1.28Mcps TDD.
MaxnoofULts	Maximum number of Uplink time slots per Radio Link for 3.84Mcps TDD.
MaxnoofULtsLCR	Maximum number of Uplink time slots per Radio Link for 1.28Mcps TDD.

9.1.43 RADIO LINK RECONFIGURATION READY

IE/Group name	Presence	Range	IE Type and Reference	Semantic Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
CRNC Communication Context ID	M		9.2.1.18	The reserved value "All CRNCCC" shall not be used.	YES	ignore
Transaction ID	M		9.2.1.62		–	
RL Information Response		0..<max noofRLs>		Only one RL information response group for one group of combined RLs shall be present	EACH	ignore
>RL ID	M		9.2.1.53		–	
>DCH Information Response	O		9.2.1.20C		YES	ignore
>DSCH Information Response	O		9.2.1.27A		YES	ignore
>USCH Information Response	O		9.2.3.29	TDD only	YES	ignore
>TFCI2 Bearer Information Response	O		9.2.2.49A		–	
Criticality Diagnostics	O		9.2.1.17		YES	ignore

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

9.1.44 RADIO LINK RECONFIGURATION FAILURE

IE/Group Name	Presence	Range	IE Type and Reference	Semantic Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
CRNC Communication Context ID	M		9.2.1.18	The reserved value "All CRNCCC" shall not be used.	YES	ignore
Transaction ID	M		9.2.1.62		–	
CHOICE *cause level*	M				YES	ignore
>*General*					–	
>>Cause	M		9.2.1.6		YES	ignore
>*RL specific*					–	
>>RLs Causing Reconfiguration Failure		0..<max noofRLs>			EACH	ignore
>>>RL ID	M		9.2.1.53		–	
>>>Cause	M		9.2.1.6		–	
Criticality Diagnostics	O		9.2.1.17		YES	ignore

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

9.1.45 RADIO LINK RECONFIGURATION COMMIT

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

9.1.46 RADIO LINK RECONFIGURATION CANCEL

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

9.1.47 RADIO LINK RECONFIGURATION REQUEST

9.1.47.1 FDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantic Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Node B Communication Context ID	M		9.2.1.48	The reserved value "All NBCC" shall not be used.	YES	reject
Transaction ID	M		9.2.1.62		–	
UL DPCH Information		*0..1*			YES	reject
>TFCS	O		9.2.1.58	For the UL.	–	
DL DPCH Information		*0..1*			YES	reject
>TFCS	O		9.2.1.58	For the DL.	–	
>TFCI Signalling Mode	O		9.2.2.50		–	
>Limited Power Increase	O		9.2.2.18A		–	
DCHs to Modify	O		DCHs FDD to Modify 9.2.2.4E		YES	reject
DCHs to Add	O		DCH FDD Information 9.2.2.4D		YES	reject
DCHs to Delete		*0..<maxnoofDCHs>*			GLOBAL	reject
>DCH ID	M		9.2.1.20		–	
Radio Link Information		*0..<maxnoofRLs>*			EACH	reject
>RL ID	M		9.2.1.53		–	
>Maximum DL Power	O		DL Power 9.2.1.21	Maximum allowed power on DPCH	–	
>Minimum DL Power	O		DL Power 9.2.1.21	Minimum allowed power on DPCH	–	
>DL Code Information	C-SF/2		FDD DL Code Information 9.2.2.14A		–	
Transmission Gap Pattern Sequence Information	O		9.2.2.53A		YES	reject

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

Condition	Explanation
SF/2	This IE is present only if the *Transmission Gap Pattern Sequence Information* IE is included and the indicated Downlink Compressed Mode method for at least one of the included Transmission Gap Pattern Sequence is set to "SF/2".

9.1.47.2 TDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantic Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Node B Communication Context ID	M		9.2.1.48	The reserved value "All NBCC" shall not be used.	YES	reject
Transaction ID	M		9.2.1.62		–	
UL CCTrCH to modify		*0..<maxnoofCCTrCHs>*			EACH	notify
>CCTrCH ID	M		9.2.3.3		–	
>TFCS	O		9.2.1.58		–	
>Puncture Limit	O		9.2.1.50		–	
UL CCTrCH to delete		*0..<maxnoofCCTrCHs>*			EACH	notify
>CCTrCH ID	M		9.2.3.3		–	
DL CCTrCH to modify		*0..<maxnoofCCTrCHs>*			EACH	notify
>CCTrCH ID	M		9.2.3.3		–	
>TFCS	O		9.2.1.58		–	
>Puncture Limit	O		9.2.1.50		–	
DL CCTrCH to delete		*0..<maxnoofCCTrCHs>*			EACH	notify
>CCTrCH ID	M		9.2.3.3		–	
DCHs to Modify	O		DCHs TDD to Modify 9.2.3.4D		YES	reject
DCHs to Add	O		DCH TDD Information 9.2.3.4C		YES	reject
DCHs to Delete		*0..<maxnoofDSCHs>*			GLOBAL	reject
>DCH ID	M		9.2.1.20		–	
RL Information		*0..1*			YES	reject
>RL ID	M		9.2.1.53		–	
>Maximum Downlink Power	O		DL Power 9.2.1.21	Maximum allowed power on DPCH	–	
>Minimum Downlink Power	O		DL Power 9.2.1.21	Minimum allowed power on DPCH	–	

Range bound	Explanation
MaxnoofCCTrCHs	Maximum number of CCTrCHs for a UE.

9.1.48 RADIO LINK RECONFIGURATION RESPONSE

IE/Group Name	Presence	Range	IE Type and Reference	Semantic Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
CRNC Communication Context ID	M		9.2.1.18	The reserved value "All CRNCCC" shall not be used.	YES	ignore
Transaction ID	M		9.2.1.62		–	
RL Information Response		*0..<maxnoofRLs>*		Only one RL information response group for one group of combined RLs shall be present	EACH	ignore
>RL ID	M		9.2.1.53		–	
>DCH Information Response	O		9.2.1.20C		YES	ignore
Criticality Diagnostics	O		9.2.1.17		YES	ignore

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

9.1.49 RADIO LINK DELETION REQUEST

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Node B Communication Context ID	M		9.2.1.48	The reserved value "All NBCC" shall not be used.	YES	reject
CRNC Communication Context ID	M		9.2.1.18		YES	reject
Transaction ID	M		9.2.1.62		–	
RL Information		*1..<maxnoofRLs>*			EACH	notify
>RL ID	M		9.2.1.53		–	

Range bound	Explanation
MaxnoofRLs	Maximum number of radio links for one UE

9.1.50   RADIO LINK DELETION RESPONSE

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
CRNC Communication Context ID	M		9.2.1.18	The reserved value "All CRNCC C" shall not be used.	YES	ignore
Transaction ID	M		9.2.1.62		–	
Criticality Diagnostics	O		9.2.1.17		YES	ignore

9.1.51   DL POWER CONTROL REQUEST [FDD]

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	ignore
Node B Communication Context ID	M		9.2.1.48	The reserved value "All NBCC" shall not be used.	YES	ignore
Transaction ID	M		9.2.1.62		–	
Power Adjustment Type	M		9.2.2.27		YES	ignore
DL Reference Power	C-Common		DL power 9.2.1.21	Power on DPCH	YES	Ignore
Inner Loop DL PC Status	O		9.2.2.18B		YES	ignore
DL Reference Power Information	C-Individual	1..<maxnoof RLs>			GLOBAL	ignore
>RL ID	M		9.2.1.53		–	
>DL Reference Power	M		DL power 9.2.1.21	Power on DPCH	–	
Max Adjustment Step	C-CommonO rIndividual		9.2.2.20		YES	ignore
Adjustment Period	C-CommonO rIndividual		9.2.2.A		YES	ignore
Adjustment Ratio	C-CommonO rIndividual		9.2.2.B		YES	ignore

Condition	Explanation
Common	This IE is present only "Adjustment Type " equals to 'Common'
Individual	This IE is present only "Adjustment Type " equals to 'Individual'
CommonOrIndividual	This IE is present only "Adjustment Type " equals to 'Common' or 'Individual'

Range Bound	Explanation
MaxnoofRLs	Maximum number of Radio Links for a UE

9.1.52 DEDICATED MEASUREMENT INITIATION REQUEST

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Node B Communication Context ID	M		9.2.1.48	The reserved value "All NBCC" shall not be used when the Report characteristics type is set to "On-Demand".	YES	reject
Transaction ID	M		9.2.1.62		–	
Measurement ID	M		9.2.1.42		YES	reject
Dedicated Measurement Object Type	M		9.2.1.22		YES	reject
CHOICE *Dedicated Measurement Object Type*	M				YES	reject
>*RL*					–	
>>**RL Information**		1..<maxnoofRLs>			EACH	reject
>>>RL ID	M		9.2.1.53		–	
>>>DPCH ID	O		9.2.3.5	TDD only	–	
>*ALL RL*			NULL		–	
>*RLS*				FDD only	–	
>>**RL Set Information**		1..<maxnoofRLSets>			–	
>>>RL Set ID	M		9.2.2.39		–	
>*ALL RLS*			NULL	FDD only	–	
Dedicated Measurement Type	M		9.2.1.23		YES	reject
Measurement Filter Coefficient	O		9.2.1.41		YES	reject
Report Characteristics	M		9.2.1.51		YES	reject
CFN reporting indicator	M		FN reporting indicator 9.2.1.29B		YES	reject
CFN	O		9.2.1.7		YES	reject

Range	Explanation
MaxnoofRLs	Maximum number of individual RL's a measurement can be started on.
MaxnoofRLSets	Maximum number of individual RL Sets a measurement can be started on.

9.1.53 DEDICATED MEASUREMENT INITIATION RESPONSE

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
CRNC Communication Context ID	M		9.2.1.18		YES	ignore
Transaction ID	M		9.2.1.62		–	
Measurement ID	M		9.2.1.42		YES	ignore
CHOICE *Dedicated Measurement Object Type*	O			Dedicated Measurement Object Type the measurement was initiated with	YES	ignore
>*RL* or *ALL RL*					–	
>>RL Information		1..<maxnoofRLs>			EACH	ignore
>>>RL ID	M		9.2.1.53		–	
>>>DPCH ID	O		9.2.3.5	TDD only	–	
>>>Dedicated Measurement Value	M		9.2.1.24		–	
>>>CFN	O		9.2.1.7	Dedicated Measurement Time Reference	_	
>*RLS* or *ALL RLS*				FDD only	–	
>>RL Set Information		1..<maxnoofRLSets>			–	
>>>RL Set ID	M		9.2.2.39		–	
>>>Dedicated Measurement Value	M		9.2.1.24		–	
>>>CFN	O		9.2.1.7	Dedicated Measurement Time Reference	_	
Criticality Diagnostics	O		9.2.1.17		YES	ignore

Range	Explanation
MaxnoofRLs	Maximum number of individual RL's the measurement can be started on.
MaxnoofRLSets	Maximum number of individual RL Sets a measurement can be started on.

9.1.54   DEDICATED MEASUREMENT INITIATION FAILURE

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
CRNC Communication Context ID	M		9.2.1.18		YES	ignore
Transaction ID	M		9.2.1.62		–	
Measurement ID	M		9.2.1.42		YES	ignore
Cause	M		9.2.1.6		YES	ignore
Criticality Diagnostics	O		9.2.1.17		YES	ignore

9.1.55   DEDICATED MEASUREMENT REPORT

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	ignore
CRNC Communication Context ID	M		9.2.1.18	The reserved value "All CRNCC C" shall not be used.	YES	ignore
Transaction ID	M		9.2.1.62		–	
Measurement ID	M		9.2.1.42		YES	ignore
CHOICE *Dedicated Measurement Object Type*	M			Dedicated Measurement Object Type the measurement was initiated with	YES	ignore
>*RL* or *ALL RL*					–	
>>RL Information		1..<maxnoofRLs>			EACH	ignore
>>>RL ID	M		9.2.1.53		–	
>>>DPCH ID	O		9.2.3.5	TDD only	–	
>>>Dedicated Measurement Value Information	M		9.2.1.24A		–	
>*RLS* or *ALL RLS*				FDD only	–	
>>RL Set Information		1..<maxnoofRLSets>			EACH	ignore
>>>RL Set ID	M		9.2.1.39		–	
>>>Dedicated Measurement Value Information	M		9.2.1.24A		–	

Range	Explanation
MaxnoofRLs	Maximum number of individual RL's the measurement can be started on.
MaxnoofRLSets	Maximum number of individual RL Sets a measurement can be started on.

9.1.56 DEDICATED MEASUREMENT TERMINATION REQUEST

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	ignore
Node B Communication Context ID	M		9.2.1.48	The reserved value 'All NB CC' shall be used if this value was used when initiating the measurement. Otherwise, the reserved value 'All NBCC' shall not be used.	YES	ignore
Transaction ID	M		9.2.1.62		–	
Measurement ID	M		9.2.1.42		YES	ignore

9.1.57 DEDICATED MEASUREMENT FAILURE INDICATION

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

9.1.58 RADIO LINK FAILURE INDICATION

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	ignore
CRNC Communication Context ID	M		9.2.1.18	The reserved value "All CRNCC C" shall not be used.	YES	ignore
Transaction ID	M		9.2.1.62		–	
CHOICE *Reporting Object*	M			Object for which the Failure shall be reported.	YES	ignore
>*RL*					–	
>>RL Information		1 to *<MaxnoofRLs>*			EACH	ignore
>>>RL ID	M		9.2.1.53		–	
>>>Cause	M		9.2.1.6		–	
>*RL Set*					–	
>>RL Set Information		1 to *<MaxnoofRLSets>*			EACH	ignore
>>>RL Set ID	M		9.2.2.39		–	
>>>Cause	M		9.2.1.6		–	
>*CCTrCH*						
>>RL ID	M		9.2.1.53		–	
>>CCTrCH List		1 to *<MaxnoCCTrCH>*			EACH	ignore
>>>CCTrCH ID	M		CCTrCH ID 9.2.3.3		–	
>>>Cause	M		9.2.1.6		–	

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

9.1.59 RADIO LINK RESTORE INDICATION

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	ignore
CRNC Communication Context ID	M		9.2.1.18	The reserved value "All CRNCCC" shall not be used.	YES	ignore
Transaction ID	M		9.2.1.62		–	
CHOICE *Reporting Object*	M			Object for which the Restoration shall be reported.	YES	ignore
>*RL*					–	
>>**Radio Link Information**		*1 to <MaxnoofRLs>*			EACH	ignore
>>>RL ID	M		9.2.1.53		–	
>*RL Set*					–	
>>**RL Set Information**		1 to *<MaxnoofRLSets>*			EACH	ignore
>>>RL Set ID	M		9.2.2.39		–	
>*CCTrCH*						
>>RL ID	M		9.2.1.53			
>>**CCTrCH List**		1 to *<MaxnoCCTrCH>*			EACH	ignore
>>>CCTrCH ID	M		CCTrCH ID 9.2.3.3		–	

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

9.1.60 COMPRESSED MODE COMMAND [FDD]

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

9.1.61 ERROR INDICATION

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

Condition	Explanation
Ifalone	At least either of Cause IE or Criticality Diagnostics IE shall be present.

9.1.62 PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST [TDD]

IE/Group Name	Presence	Range	IE Type and Reference	Semantic Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		-	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		-	
C-ID	M		9.2.1.9		YES	reject
SFN	O		9.2.1.53A		YES	reject
PDSCH Sets to add		0..<maxnoof PDSCHSets >			GLOBAL	reject

>PDSCH Set ID	M		9.2.3.11		-	
>PDSCH to add Information		*0..1*		Mandatory for 3.84Mcps TDD	YES	reject
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD Physical Channel Offset	M		9.2.3.20		–	
>>DL Timeslot Information		1 .. <maxnoofDLts>			–	
>>>Time Slot	M		9.2.3.23		–	
>>>Midamble Shift and Burst Type	M		9.2.3.7		–	
>>>TFCI Presence	M		9.2.1.57		–	
>>>DL Code Information		1 .. <maxnoOfPDSCH>			–	
>>>>PDSCH ID	M		9.2.3.10		–	
>>>>TDD Channelisation Code	M		9.2.3.19		–	
>PDSCH to add Information LCR		*0..1*		Mandatory for 1.28Mcps TDD	YES	reject
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD Physical Channel Offset	M		9.2.3.20		–	
>>DL Timeslot Information LCR		1 .. <MaxnoofDLtsLCR>			GLOBAL	reject
>>>Time Slot LCR	M		9.2.3.24A		–	
>>>TFCI Presence	M		9.2.1.57		–	
>>>DL Code Information LCR		1 .. <maxnoOfPDSCH>			GLOBAL	reject
>>>>PDSCH ID	M		9.2.3.10		–	
>>>>TDD Channelisation Code LCR	M		9.2.3.19a		–	
PDSCH Sets to Modify		*0..<maxnoofPDSCHSets>*			GLOBAL	reject
>PDSCH Set ID	M		9.2.3.11		-	
>PDSCH to modify Information		*0..1*		Mandatory for 3.84Mcps TDD	YES	reject
>>Repetition Period	O		9.2.3.16		–	
>>Repetition Length	O		9.2.3.15		–	
>>TDD Physical Channel Offset	O		9.2.3.20		–	
>>DL Timeslot Information		0 .. <maxnoofDLts>			–	
>>>Time Slot	M		9.2.3.23		–	
>>>Midamble Shift and Burst Type	O		9.2.3.7		–	
>>>TFCI Presence	O		9.2.1.57		–	
>>>DL Code Information		0 .. <maxnoOfPDSCH>			–	

>>>>PDSCH ID	M		9.2.3.10		–	
>>>>TDD Channelisation Code	M		9.2.3.19		–	
>PDSCH to modify Information LCR		0..1		Mandatory for 1.28 Mcps TDD	YES	reject
>>Repetition Period	O		9.2.3.16		–	
>>Repetition Length	O		9.2.3.15		–	
>>TDD Physical Channel Offset	O		9.2.3.20		–	
>>DL Timeslot Information LCR		0 .. \<MaxnoofDLtsLCR\>			GLOBAL	reject
>>>Time Slot LCR	M		9.2.3.24A		–	
>>>Midamble shift LCR	O		9.2.3.7A		–	
>>>TFCI Presence	O		9.2.1.57		–	
>>>DL Code Information LCR		0 .. \<maxnoOfPDSCHLCR\>			GLOBAL	reject
>>>>PDSCH ID	M		9.2.3.10		–	
>>>>TDD Channelisation Code LCR	M		9.2.3.19a		–	
PDSCH Sets to Delete		*0..\<maxnoof PDSCHSets\>*			GLOBAL	reject
>PDSCH Set ID	M		9.2.3.11		-	
PUSCH Sets to add		*0..\<maxnoof PUSCHSets\>*			GLOBAL	reject
>PUSCH Set ID	M		9.2.3.13		-	
>PUSCH to add Information		*0..1*		Mandatory for 3.84Mcps TDD	YES	reject
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD Physical Channel Offset	M		9.2.3.20		–	
>>UL Timeslot Information		1 .. \<maxnoofULts\>			–	
>>>Time Slot	M		9.2.3.23		–	
>>>Midamble Shift and Burst Type	M		9.2.3.7		–	
>>>TFCI Presence	M		9.2.1.57		–	
>>>UL Code Information		1 .. \<maxnoOfPUSCH\>			–	
>>>>PUSCH ID	M		9.2.3.12		–	
>>>>TDD Channelisation Code	M		9.2.3.19		–	
>PUSCH to add Information LCR	O	1		For 1.28Mcps TDD only	YES	reject
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD Physical Channel Offset	M		9.2.3.20		–	
>>UL Timeslot Information LCR		1 .. \<MaxnoofULtsLCR\>			GLOBAL	reject
>>>Time Slot LCR	M		9.2.3.24A		–	
>>>Midamble shift LCR	M		9.2.3.7A			
>>>TFCI Presence	M		9.2.1.57		–	

>>>UL Code Information LCR		1 .. <maxnoOfPUSCHLCR>			GLOBAL	reject
>>>>PUSCH ID	M		9.2.3.12		–	
>>>>TDD Channelisation Code LCR	M		9.2.3.19a		–	
PUSCH Sets to Modify		*0..<maxnoof PUSCHSets >*			GLOBAL	reject
>PUSCH Set ID	M		9.2.3.13		-	
>PUSCH to modify Information		*0..1*		For 3.84Mcps TDD only	YES	reject
>>Repetition Period	O		9.2.3.16		–	
>>Repetition Length	O		9.2.3.15		–	
>>TDD Physical Channel Offset	O		9.2.3.20		–	
>>UL Timeslot Information		0 .. <maxnoofULts>			–	
>>>Time Slot	M		9.2.3.23		–	
>>>Midamble Shift and Burst Type	O		9.2.3.7		–	
>>>TFCI Presence	O		9.2.1.57		–	
>>>UL Code Information		0 .. <maxnoOfPDSCH>			–	
>>>>PUSCH ID	M		9.2.3.12		–	
>>>>TDD Channelisation Code	M		9.2.3.19		–	
>PUSCH to modify Information LCR		0..1		For 1.28Mcps TDD only	YES	reject
>>Repetition Period	O		9.2.3.16		–	
>>Repetition Length	O		9.2.3.15		–	
>>TDD Physical Channel Offset	O		9.2.3.20		–	
>>UL Timeslot Information LCR		0 .. <MaxnoofULtsLCR>		For 1.28Mcps TDD only	GLOBAL	reject
>>>Time Slot LCR	M		9.2.3.24A		–	
>>>Midamble shift LCR	M		9.2.3.7A			
>>>TFCI Presence	O		9.2.1.57		–	
>>>UL Code Information LCR		0 .. <maxnoOfPDSCHLCR>			GLOBAL	reject
>>>>PUSCH ID	M		9.2.3.12		–	
>>>>TDD Channelisation Code LCR	M		9.2.3.19a		–	
PUSCH Sets to Delete		*0..<maxnoof PUSCHSets >*			GLOBAL	reject
>PUSCH Set ID	M		9.2.3.13		-	

Range bound	Explanation
Maxnoof PDSCH Sets	Maximum number of PDSCH Sets in a cell.
Maxnoof PDSCH	Maximum number of PDSCH in a cell for 3.84Mcps TDD only.
MaxnoOfPDSCHLCR	Maximum number of PDSCH in a cell for 1.28Mcps TDD only.

Maxnoof PUSCH Sets	Maximum number of PUSCH Sets in a cell.
Maxnoof PUSCH	Maximum number of PUSCH in a cell for 3.84Mcps TDD.
Maxnoof PUSCHLCR	Maximum number of PUSCH in a cell for 1.28Mcps TDD.
MaxnoofDLts	Maximum number of Downlink time slots in a cell for 3.84Mcps TDD.
MaxnoofULts	Maximum number of Uplink time slots in a cell for 3.84Mcps TDD.
MaxnoofULtsLCR	Maximum number of Uplink time slots in a cell for 1.28Mcps TDD

9.1.63 PHYSICAL SHARED CHANNEL RECONFIGURATION RESPONSE [TDD]

IE/Group Name	Presence	Range	IE Type and Reference	Semantic Description	Criticality	Assigned Criticality
Message Discriminator	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	Semantic Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		-	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		-	
CHOICE *cause level*	M				YES	ignore
>*General*					–	
>>Cause	M		9.2.1.6		–	
> *Set specific*					–	
>>Unsuccessful DL Shared channel set		0..<maxnoof PDSCHSets>			EACH	ignore
>>>PDSCH Set ID	M		9.2.3.13		-	
>>>Cause	M		9.2.1.6		YES	ignore
>>Unsuccessful UL Shared channel set		0..<maxnoof PUSCHSets>			EACH	ignore
>>>PUSCH Set ID	M		9.2.3.13		-	
>>>Cause	M		9.2.1.6		-	
Criticality Diagnostics	O		9.2.1.17		YES	ignore

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

9.1.65 RESET REQUEST

IE/Group Name	Presence	Range	IE type and reference	Semantic Description on	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
CHOICE *Reset Indicator*	M				YES	ignore
>*CommunicationContext*					–	
>>**Communication Context Information**		*1..<maxCommunicationContext>*			EACH	reject
>>>CHOICE *Communication Context Type*	M				–	
>>>>*CRNC Communication Context*					–	
>>>>>CRNC Communication Context ID	M		9.2.1.18		–	
>>>>*Node B Communication Context*					–	
>>>>>Node B Communication Context ID	M		9.2.1.48		–	
>*CommunicationControl Port*					–	
>>**Communication Control Port Information**		*1.. <maxCCPinNodeB>*			EACH	reject
>>>Communication Control Port ID	M		9.2.1.15		–	
>*Node B*			NULL		–	

Range bound	Explanation
maxCommunicationContext	Maximum number of communication contexts that can exist in the Node-B
maxCCPinNodeB	Maximum number of communication control ports that can exist in the Node B

9.1.66 RESET RESPONSE

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Criticality Diagnostics	O		9.2.1.17		YES	ignore

9.1.67   DL POWER TIMESLOT CONTROL REQUEST [TDD]

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	ignore
Node B Communication Context ID	M		9.2.1.48	The reserved value "All NBCC" shall not be used.	YES	ignore
Transaction ID	M		9.2.1.62		–	
DL Time Slot ISCP Info	O		9.2.3.4F	Mandatory For 3.84Mcps TDD only	YES	ignore
DL Timeslot ISCP Information LCR		0..<Maxnoof DLtsLCR>		Mandatory For 1.28Mcps TDD only	GLOBAL	ignore
>RL ID	M		9.2.1.53		–	
>Time slot LCR	M		9.2.3.24A		–	
>DL Timeslot ISCP	M		9.2.3.4B		–	

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

9.1.68   RADIO LINK PREEMPTION REQUIRED INDICATION

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Type	M		9.2.1.46		YES	ignore
Transaction ID	M		9.2.1.62		–	
CRNC Communication Context ID	M		9.2.1.18		YES	ignore
RL Information		*0..<maxno ofRLs>*			EACH	ignore
>RL ID	M		9.2.1.53		–	

Range bound	Explanation
MaxnoofRLs	Maximum number of radio links for one UE

9.1.69 INFORMATION EXCHANGE INITIATION REQUEST

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Information Exchange ID	M		9.2.1.36C		YES	reject
Information Exchange Object Type	M		9.2.1.36A		YES	reject
CHOICE *Information Exchange Object Type*	M		9.2.1.36A		YES	reject
>*Cell*					-	
>>C-ID	M		9.2.1.9		-	
Information Type	M		9.2.1.36D		YES	reject
Information Report Characteristics	M		9.2.1.36B		YES	reject

9.1.70 INFORMATION EXCHANGE INITIATION RESPONSE

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Information Exchange ID	M		9.2.1.36C		YES	ignore
CHOICE *Information Exchange Object Type*	M		9.2.1.36A		YES	ignore
>*Cell*					-	
>>Requested Data Value	M		9.2.1.51A		-	
Criticality Diagnostics	O		9.2.1.17		YES	ignore

9.1.71 INFORMATION EXCHANGE INITIATION FAILURE

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Information Exchange ID	M		9.2.1.36C		YES	ignore
Cause	M		9.2.1.6		YES	ignore
Criticality Diagnostics	O		9.2.1.17		YES	ignore

9.1.72 INFORMATION REPORT

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	ignore
Transaction ID	M		9.2.1.62		–	
Information Exchange ID	M		9.2.1.36C		YES	ignore
CHOICE *Information Exchange Object Type*	M		9.2.1.36A		YES	ignore
>*Cell*					-	
>>Requested Data Value Information	M		9.2.1.51B		-	

9.1.73 INFORMATION EXCHANGE TERMINATION REQUEST

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	ignore
Transaction ID	M		9.2.1.62		–	
Information Exchange ID	M		9.2.1.36C		YES	ignore

9.1.74 INFORMATION EXCHANGE FAILURE INDICATION

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	ignore
Transaction ID	M		9.2.1.62		–	
Information Exchange ID	M		9.2.1.36C		YES	ignore
Cause	M		9.2.1.6		YES	ignore

9.1.75 CELL SYNCHRONISATION INITIATION REQUEST [TDD]

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
C-ID	M		9.2.1.9		YES	reject
Time Slot	M		9.2.3.23		YES	reject
Cell Sync Burst Transmission Initiation Information		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			
>Cell Sync Burst Repetition Period	M		9.2.3.4J		–	
>Initial DL transmission Power	M		DL Power 9.2.1.21		–	

Cell Sync Burst Measurement Initiation Information		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		9.2.3.18E		–	
>SFN	O		9.2.1.53A		–	
>Synchronisation Report Characteristics	M		9.2.3.18D		–	

9.1.76   CELL SYNCHRONISATION INITIATION RESPONSE [TDD]

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Criticality Diagnostics	O		9.2.1.17		YES	ignore

9.1.77   CELL SYNCHRONISATION INITIATION FAILURE [TDD]

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Cause	M		9.2.1.6		YES	Ignore
Criticality Diagnostics	O		9.2.1.17		YES	Ignore

9.1.78 CELL SYNCHRONISATION RECONFIGURATION REQUEST [TDD]

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
C-ID	M		9.2.1.9		YES	reject
Time Slot	M		9.2.3.23		YES	reject
Number of cycles per SFN period	M		9.2.3.7B		YES	reject
Number of repetitions per cycle period	M		9.2.3.7C		YES	reject
Cell Sync Burst Transmission Reconfiguration Information		0 .. < maxnoofCellSyncBursts >			Global	reject
>CSB Transmission ID	M		9.2.3.4N		–	
>Sync Frame number to transmit	M		Sync Frame number 9.2.3.18C		–	
>Cell Sync Burst Code	O		9.2.3.4G		–	
>Cell Sync Burst Code shift	O		9.2.3.4H		–	
>DL transmission Power	O		DL Power 9.2.1.21		–	
Cell Sync Burst Measurement Reconfiguration Information		0..1			GLOBAL	reject
>Cell Sync Burst Measurement Information		1 .. <maxnoofCellSyncBursts>			–	
>>Sync Frame number to receive	M		Sync Frame number 9.2.3.18C		–	
>>Cell Sync Burst Information		1..< maxnoofreceptionsperSyncFrame>			–	
>>>CSB Measurement ID	M		9.2.3.4I		–	
>>>Cell Sync Burst Code	M		9.2.3.4G		–	
>>>Cell Sync Burst Code shift	M		9.2.3.4H		–	
>Synchronisation Report Type	O		9.2.3.18E		–	
>Synchronisation Report Characteristics	O		9.2.3.18D		–	

Range bound	Explanation
maxnoofCellSyncBursts	Maximum number of cell sync bursts per cycle
maxnoofreceptionsperSyncFrame	Maximum number of cell sync burst receptions per Sync Frame

9.1.79 CELL SYNCHRONISATION RECONFIGURATION RESPONSE [TDD]

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Criticality Diagnostics	O		9.2.1.17		YES	ignore

9.1.80 CELL SYNCHRONISATION RECONFIGURATION FAILURE [TDD]

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Cause	M		9.2.1.6		YES	Ignore
Criticality Diagnostics	O		9.2.1.17		YES	Ignore

9.1.81 CELL SYNCHRONISATION REPORT [TDD]

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	ignore
Transaction ID	M		9.2.1.62		–	
Cell Synchronisation Information		*1.. <maxCellin NodeB >*			EACH	ignore
>C-ID	M		9.2.1.9		–	
>CHOICE *Synchronisation Report Type*					–	
>>*Initial Phase* or *Steady-State Phase*					–	
>>>Cell Sync Burst Measured Information		1 .. <maxnoof CellSyncB ursts>			–	
>>>>SFN	M		9.2.1.53A		–	
>>>>Cell Sync Burst Information		1..<maxno ofreception sperSyncF rame>			–	
>>>>>CHOICE *Cell Sync Burst Availability Indicator*	M				–	
>>>>>>*Cell Sync Burst Available*					–	
>>>>>>>Cell Sync Burst	M		9.2.3.4L		–	

Timing						
>>>>>>>Cell Sync Burst SIR	M		9.2.3.4K		–	
>>>>>>*Cell Sync Burst not Available*			NULL		–	
>>*Late-Entrant Cell*			NULL		–	

Range bound	Explanation
maxCellinNodeB	Maximum number of Cells in a Node B
maxnoofCellSyncBursts	Maximum number of cell sync bursts per cylce
maxnoofreceptionsperSyncFrame	Maximum number of cell sync burst receptions per Sync Frame

9.1.82 CELL SYNCHRONISATION TERMINATION REQUEST [TDD]

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	ignore
Transaction ID	M		9.2.1.62		–	
C-ID	M		9.2.1.9		YES	ignore
CSB Transmission ID	O		9.2.3.4N		YES	ignore
CSB Measurement ID	O		9.2.3.4I		YES	ignore

9.1.83 CELL SYNCHRONISATION FAILURE INDICATION [TDD]

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	ignore
Transaction ID	M		9.2.1.62		–	
C-ID	M		9.2.1.9		YES	ignore
CSB Transmission ID	O		9.2.3.4N		YES	ignore
CSB Measurement ID	O		9.2.3.4I		YES	ignore
Cause	M		9.2.1.6		YES	ignore

9.1.84 CELL SYNCHRONISATION ADJUSTMENT REQUEST [TDD]

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	ignore
Transaction ID	M		9.2.1.62		–	
Cell Adjustment Information		1.. <maxCellinNodeB>			EACH	ignore
>C-ID	M		9.2.1.9		–	
>Frame Adjustment value	O		9.2.3.5C		–	
>Timing Adjustment value	O		9.2.3.22a		–	
>DL Transmission Power	O		9.2.1.21		–	
>SFN	O		9.2.1.53A		–	

Range bound	Explanation
MaxCellinNodeB	Maximum number of Cells in a Node B

9.1.85 CELL SYNCHRONISATION ADJUSTMENT RESPONSE [TDD]

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	ignore
Transaction ID	M		9.2.1.62		–	
Criticality Diagnostics	O		9.2.1.17		YES	Ignore

9.1.86 CELL SYNCHRONISATION ADJUSTMENT FAILURE [TDD]

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	ignore
Transaction ID	M		9.2.1.62		–	
CHOICE *cause level*	M				YES	ignore
>*General*					–	
>>Cause	M		9.2.1.6		–	
>*Cell specific*					–	
>>Unsuccessful Cell Information Response		1.. \<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 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.

9.2.1 Common parameters

9.2.1.1 Add/Delete Indicator

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Add/Delete Indicator			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. 0 = spare. 1 = highest priority. . . . 14 = Lowest priority. 15= not used.
Pre-emption Capability	M		ENUMERATED(shall not trigger pre-emption, may trigger pre-emption)	
Pre-emption Vulnerability	M		ENUMERATED (not pre-emtable, pre-emtable)	

9.2.1.2   Availability Status

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Availability Status			ENUMERATED (empty, in test, failed, power off, off line, off duty, dependency, degraded, not installed, log full, …)	

9.2.1.3   BCCH Modification Time

Indicates the time after which the new system information shall be applied on BCCH.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
BCCH Modification Time			Integer (0..511))	All SFN values in which MIB may be mapped are allowed. The tabular description is presented in [18].

9.2.1.4 Binding ID

The Binding ID is the identifier of a user data stream. It is allocated at Node B and it is unique for each transport bearer under establishment to/from the Node B.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Binding ID			Octetstring (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 descriptions	Criticality	Assigned Criticality
Burst Start	M		INTEGER (0..15)	See [10] and [21]	–	
Burst Length	M		INTEGER (10..25)	See [10] and [21]	–	
Burst freq	M		INTEGER (1..16)	See [10] and [21]	–	

9.2.1.6 Cause

IE/Group Name	Presence	Range	IE type and reference	Semantics description
CHOICE *Cause group*				
>*Radio Network Layer*				
>Radio Network Layer Cause	M		Enumerated (unknown C-ID, Cell not available, Power level not supported, DL radio resources not available, UL radio resources not available, RL Already Activated/allocated, Node B Resources Unavailable, Measurement not supported for the object, Combining Resources not available, Requested configuration not supported, Synchronization failure, Priority transport channel established, SIB Origination in Node B not Supported, Requested Tx Diversity Mode not supported, Unspecified, BCCH scheduling error, Measurement Temporarily not Available, Invalid CM Setting, Reconfiguration CFN not elapsed, Number of DL codes not supported, S-CPICH not supported, Combining not supported, UL SF not supported, DL SF not supported, Common Transport Channel Type not supported, Dedicated Transport Channel Type not supported, Downlink Shared Channel Type not supported, Uplink Shared Channel Type not supported, CM not supported, Tx diversity no longer supported, Unknown Local Cell ID, …, Number of UL codes not supported, Information temporarily not available, Information Provision not supported for the object, Cell Synchronisation not supported, Cell Synchronisation Adjustment not supported, DPC Mode Change not Supported,	

			IPDL already activated, IPDL not supported, IPDL parameters not available)	
>*Transport Layer*				
>Transport Layer Cause	M		Enumerated (Transport resource unavailable, Unspecified, …)	
>*Protocol*				
>Protocol Cause			Enumerated (Transfer syntax error, Abstract syntax error (reject), Abstract syntax error (ignore and notify), Message not compatible with receiver state, Semantic error, Unspecified, Abstract syntax error (falsely constructed message), …)	
>*Misc*				
>Miscellaneous Cause	M		Enumerated (Control processing overload Hardware failure, O&M intervention, Not enough user plane processing resources, Unspecified, …)	

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

Radio Network Layer cause	Meaning
BCCH scheduling error	The Node B has detected an illegal BCCH schedule update (see subclause 8.2.16.3)
Cell not Available,	The concerning cell or local cell is not available
Cell Synchronisation not supported	The concerning cell(s) do not support Cell Synchronisation
Combining not supported	The Node B does not support RL combining for the concerning cells
Combining Resources Not Available	The value of the received *Diversity Control Field* IE was set to 'Must', but the Node B cannot perform the requested combining
CM not supported	The concerning cell(s) do not support Compressed Mode
Common Transport Channel Type not supported	The concerning cell(s) do not support the RACH and/or FACH and/or CPCH Common Transport Channel Type
Dedicated Transport Channel Type not supported	The concerning cell(s) do not support the Dedicated Transport Channel Type
DL Radio Resources not Available	The Node B does not have sufficient DL radio resources available
DL SF not supported	The concerning cell(s) do not support the requested DL SF
DL Shared Channel Type not supported	The concerning cell(s) do not support the Downlink Shared Channel Type
DPC Mode Change not Supported	The concerning cells do not support DPC mode changes
Information Provision not supported for the object	The requested information provision is not supported for the concerned object types
Information temporarily not available	The requested information can temporarily not be provided
Invalid CM Settings	The concerning cell(s) consider the requested Compressed Mode settings invalid
IPDL already activated	The concerning cell(s) have already active IPDL ongoing

IPDL not supported	The concerning cell(s) do not support the IPDL
IPDL parameters not available	The concerning cell(s) do not have IPDL parameters defining IPDL to be applied
Measurement not Supported For The Object	At least one of the concerning cell(s) does not support the requested measurement on the concerning object type
Measurement Temporarily not Available	The Node B can temporarily not provide the requested measurement value
Node B resources unavailable	The Node B does not have sufficient resources available
Number of DL codes not supported	The concerning cell(s) do not support the requested number of DL codes
Number of UL codes not supported	The concerning cell(s) do not support the requested number of UL codes
Power Level not Supported	A DL power level was requested which the concerning cell(s) do not support
Priority transport channel established	The CRNC cannot perform the requested blocking since a transport channel with a high priority is present
Reconfiguration CFN not elapsed	The requested action cannot be performed due to that a COMMIT message was received previously, but the concerning CFN has not yet elapsed
Requested Configuration not Supported	The concerning cell(s) do not support the requested configuration i.e. power levels, Transport Formats, physical channel parameters
Requested Tx Diversity mode not supported	The concerning cell(s) do not support the requested transmit diversity mode
RL already Activated/ allocated	The Node B has already allocated an RL with the requested RL-id for this UE context
S-CPICH not supported	The concerning cell(s) do not support S-CPICH
SIB Orgination in Node B not Supported	The Node B does not support the origination of the requested SIB for the concerning cell
Synchronisation Failure	Loss of UL Uu synchronisation
Cell Synchronisation Adjustment not supported	The concerning cell(s) do not support Cell Synchronisation Adjustment
Tx diversity no longer supported	Tx diversity can no longer be supported in the concerning cell.
UL Radio Resources not Available	The Node B does not have sufficient UL radio resources available
UL SF not supported	The concerning cell(s) do not support the requested minimum UL SF
UL Shared Channel Type not supported	The concerning cell(s) do not support the Uplink Shared Channel Type
Unknown C-ID	The Node B is not aware of a cell with the provided C-ID
Unknown Local Cell ID	The Node B is not aware of a local cell with the provided Local Cell ID
Unspecified	Sent when none of the above cause values applies but still the cause is Radio Network layer related

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

Protocol cause	Meaning
Abstract Syntax Error (Reject)	The received message included an abstract syntax error and the concerning criticality indicated "reject" (see subclause 10.3)
Abstract Syntax Error (Ignore and Notify)	The received message included an abstract syntax error and the concerning criticality indicated "ignore and notify" (see subclause 10.3)
Abstract syntax error (falsely constructed message)	The received message contained IEs in wrong order or with too many occurrences (see subclause 10.3)
Message not Compatible with Receiver State	The received message was not compatible with the receiver state (see subclause 10.4)
Semantic Error	The received message included a semantic error (see subclause 10.4)
Transfer Syntax Error	The received message included a transfer syntax error (see subclause 10.2)

Unspecified	Sent when none of the above cause values applies but still the cause is protocol related

Miscellaneous cause	Meaning
Control Processing Overload	Node B control processing overload
Hardware Failure	Node B hardware failure
Not enough User Plane Processing Resources	Node B has insufficient user plane processing resources available
O&M Intervention	Operation and Maintenance intervention related to Node B equipment
Unspecified	Sent when none of the above cause values applies and the cause is not related to any of the categories Radio Network Layer, Transport Network Layer or Protocol

9.2.1.7 CFN

Connection Frame Number for the radio connection, see ref. [17].

IE/Group Name	Presence	Range	IE type and reference	Semantics description
CFN			Integer (0..255)	

9.2.1.8 CFN Offset

Void

9.2.1.9 C-ID

The C-ID (Cell identifier) is the identifier of a cell in one RNC.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
C-ID			INTEGER (0…65535)	

9.2.1.9A Common Channels Capacity Consumption Law

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

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

- Common Transport Channel Setup

- Common Transport Channel Deletion

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.

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

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

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
SF allocation law		<MaxNumberOfSF>		[FDD - For each SF, cost of its allocation: the first instance corresponds to SF = 4, the second to SF = 8, the third to SF = 16 and so on.] [TDD – For each SF, cost of its allocation: the first instance corresponds to SF = 1, the second to SF = 2, the third to SF = 4 and so on.]
>DL cost	M		INTEGER (0..65535)	
>UL cost	M		INTEGER (0..65535)	

Range bound	Explanation
MaxNumberOfSF	Maximum number of Spreading Factors

9.2.1.9B   Common Measurement Accuracy

The Common Measurement Accuracy IE indicates the accuracy of the common measurement.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
$T_{UTRAN\text{-}GPS}$ Measurement Accuracy Class	C-MeasurementAccuracy		$T_{UTRAN\text{-}GPS}$ Accuracy Class 9.2.1.64C	

Condition	Explanation
C-MeasurementAccuracy	Only one IE shall be present.

9.2.1.10   Common Measurement Object Type

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

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

9.2.1.11 Common Measurement Type

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Common Measurement Type			ENUMERATED (Received total wide band power, Transmitted Carrier Power, Acknowledged PRACH preambles, UL Timeslot ISCP, Acknowledged PCPCH Access Preambles, Detected PCPCH Access Preambles, …, UTRAN GPS Timing of Cell Frames for LCS, SFN-SFN Observed Time Difference)	UL Timeslot ISCP is used by TDD only, Acknowledged PRACH preambles, Acknowledged PCPCH Access Preambles, Detected PCPCH Access Preambles are used by FDD only

9.2.1.12 Common Measurement Value

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Transmitted Carrier Power Value	C *MeasValue*		INTEGER(0..100)	According to mapping in [22] and [23]
Received total wide band power Value	C *MeasValue*		INTEGER(0..621)	According to mapping in [22] and [23]
Acknowledged PRACH Preamble Value [FDD only]	C *MeasValue*		INTEGER(0..240, …)	According to mapping in [22]
UL Timeslot ISCP [TDD only]	C *MeasValue*		INTEGER(0..127)	According to mapping in [23]
Acknowledged PCPCH Access Preambles [FDD only]	C *MeasValue*		INTEGER(0..15,…)	According to mapping in [22]
Detected PCPCH Access Preambles [FDD only]	C *MeasValue*		INTEGER(0..240,…)	According to mapping in [22]
>T$_{UTRAN-GPS}$ Measurement Value Information	C *MeasValue*		9.2.1.64A	
> SFN-SFN Measurement Value Information	C *MeasValue*		9.2.1.53E	

Condition	Explanation
MeasValue	Only one measurement value can be present at the same time.

9.2.1.12A   Common Measurement Value Information

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
CHOICE *Measurement Availability Indicator*	M				–	
>*Measurement Available*					–	
>>Common Measurement value	M		9.2.1.12		–	
>*Measurement not Available*			NULL		–	

9.2.1.13   Common Physical Channel ID

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

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

9.2.1.13A   Common Physical Channel Status Information

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Common Physical Channel ID	M		9.2.1.13		–	
Resource Operational State	M		9.2.1.52		–	
Availability Status	M		9.2.1.2		–	

9.2.1.14   Common Transport Channel ID

Common Transport Channel ID is the unique identifier for one common transport channel within a cell.

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

9.2.1.14A   Common Transport Channel Information Response

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Common Transport Channel ID	M		9.2.1.14		–	
Binding ID	O		9.2.1.4		–	
Transport Layer Address	O		9.2.1.63		–	

9.2.1.14B   Common Transport Channel Status Information

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

9.2.1.15   Communication Control Port ID

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Communication Control Port ID			INTEGER (0..65535)	

9.2.1.16 Configuration Generation ID

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

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

9.2.1.17 Criticality Diagnostics

The *Criticality Diagnostics* IE is sent by a Node B or the CRNC when parts of a received message have not been comprehended or are missing. It contains information about which IE was not comprehended or is missing.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Procedure ID		0..1		Procedure ID is to be used if Criticality Diagnostics is part of Error Indication procedure, and not within the response message of the same procedure that caused the error
>Procedure Code	M		INTEGER (0..255)	
>Ddmode	M		ENUMERATED (FDD, TDD, 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). The value 'ignore' shall never be used.
Transaction ID	O		Transaction ID 9.2.1.62	
Information Element Criticality Diagnostics		0 to <maxnoof errors>		
>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 (1..256)	The repetition number of the not understood IE within the bottom most repetition level identified by the message structure IE, if applicable
>Message Structure	O		9.2.1.45A	

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

9.2.1.18 CRNC Communication Context ID

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
CRNC Communication Context ID			INTEGER (0..2^20 –1)	2^20-1 is reserved value to indicate all the CRNC communication contexts that can be reached by the communication control port (All CRNCCC).

9.2.1.19 DCH Combination Indicator

Void

9.2.1.20 DCH ID

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
DCH ID			INTEGER (0..255)	

9.2.1.20A Dedicated Channels Capacity Consumption Law

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

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

- Radio Link Setup

- Radio Link Addition

- Radio Link Reconfiguration

- Radio Link Deletion

- [TDD - Physical Shared Channel Reconfiguration]

For the Radio Link Setup and Radio Link Addition procedures, the cost given in the consumption law shall be debited from the Capacity Credit, whereas it shall credited to the Capacity Credit for the Radio Link Deletion procedure. For the Radio Link Reconfiguration procedure, the difference of the consumption cost for the new spreading factor and the consumption cost for the old spreading factor shall be debited from the Capacity Credit (or credited when this difference is negative).

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

[FDD - For a Radio Link creating a Radio Link Set (first RL of a RLS), the cost for the RL (cost 2) and RLS (cost 1) shall be taken into account. When adding a Radio Link to a Radio Link Set, only the RL cost (cost 2) shall be taken into account.
In the case of multiple Radio Links are established in one procedure, for every created Radio Link Set the first Radio Link is always the Radio Link with the lowest repetition number.]

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

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

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

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

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
SF allocation law		1..<MaxNumberOf SF>		[FDD - For each SF, cost of its allocation: the first instance corresponds to SF = 4, the second to SF = 8, the third to SF = 16 and so on.] [TDD – For each SF, cost of its allocation: the first instance corresponds to SF = 1, the second to SF = 2, the third to SF = 4 and so on.]
>DL cost 1	M		INTEGER (0..65535)	[FDD – This is the cost of a RLS,] [TDD – This is the additional cost of the first DPCH/PDSCH/PUSCH assigned to any user in a cell within a timeslot.]
>DL cost 2	M		INTEGER (0..65535)	[FDD – This is the cost of a RL,] [TDD – This is the cost of a DPCH/PDSCH/PUSCH]
>UL cost 1	M		INTEGER (0..65535)	FDD – This is the cost of a RLS,] [TDD – This is the additional cost of the first DPCH/PDSCH/PUSCH assigned to any user in a cell within a timeslot.]
>UL cost 2	M		INTEGER (0..65535)	[FDD – This is the cost of a RL,] [TDD – This is the cost of a DPCH/PDSCH/PUSCH.]

Range bound	Explanation
MaxNumberOfSF	Maximum number of Spreading Factors

9.2.1.20B DL or Global Capacity Credit

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
DL or Global Capacity Credit			INTEGER (0..65535)	

9.2.1.20C DCH Information Response

The *DCH Information Response* IE provides information for DCHs that have been established or modified.

IE/Group Name	Presence	Range	IE type and reference	Semantics descriptions	Criticality	Assigned Criticality
DCH Information Response		*1 to <maxnoofDCHs>*		Only one DCH per set of coordinated DCH shall be included	–	
>DCH ID	M		9.2.1.20		–	
>Binding ID	O		9.2.1.4		–	
>Transport Layer Address	O		9.2.1.63		–	

Range bound	Explanation
MaxnoofDCHs	Maximum number of DCH per UE.

9.2.1.21 DL Power

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

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

9.2.1.22 Dedicated Measurement Object Type

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

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

9.2.1.23 Dedicated Measurement Type

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Dedicated Measurement Type			ENUMERATED (SIR, SIR Error, Transmitted Code Power, RSCP, Rx Timing Deviation, Round Trip Time,…)	RSCP, Rx Timing Deviation are used by TDD only, Round Trip Time, SIR Error are used by FDD only.

Note: For definitions of the measurement types refer to [4] and [5].

9.2.1.24 Dedicated Measurement Value

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
SIR value	C *MeasValue*		INTEGER(0..63)	According to mapping in [22] and [23]
SIR error Value	C *MeasValue*		INTEGER(0..125)	According to mapping in [22], [FDD only]
Transmitted Code Power Value	C *MeasValue*		INTEGER(0..127)	According to mapping in [22] and [23]
RSCP	C *MeasValue*		INTEGER(0..127)	According to mapping in [23], [TDD only]
Rx Timing Deviation	C MeasValue		INTEGER(0..8191)	According to mapping in [23], [3.84Mcps TDD only]
Round Trip Time	C *MeasValue*		INTEGER(0..32767)	According to mapping in [22], [FDD only]

Condition	Explanation
MeasValue	Only one measurement value can be present at the same time.

9.2.1.24A Dedicated Measurement Value Information

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
CHOICE *Measurement Availability Indicator*	M				–	
>*Measurement Available*					–	
>>Dedicated Measurement Value	M		9.2.1.24		–	
>>CFN	O		9.2.1.7	Dedicated Measurement Time Reference	–	
>*Measurement not Available*			NULL		–	

9.2.1.24B   DGPS Corrections

The DGPS Corrections IE contains DGPS information used by the UE Positioning A-GPS method. For further details on the meaning of parameters, see [28].

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
GPS TOW	M		INTEGER (0..604799)	Time in seconds. This field indicates the baseline time for which the corrections are valid
Status/Health	M		ENUMERATED (UDRE scale 1.0, UDRE scale 0.75, UDRE scale 0.5, UDRE scale 0.3, UDRE scale 0.1, no data, invalid data)	This field indicates the status of the differential corrections
Satellite Information		1..<MaxNoSat>		
>SatID	M		INTEGER (0..63)	Satellite ID
>IODE	M		Bit string(8)	This IE is the sequence number for the ephemeris for the particular satellite. It can be used to determine if new ephemeris is used for calculating the corrections that are provided. This eight-bit IE is incremented for each new set of ephemeris for the satellite and may occupy the numerical range of [0, 239] during normal operations.
>UDRE	M		ENUMERATED (UDRE ≤1.0m, 1.0m < UDRE ≤ 4.0m, 4.0m < UDRE ≤ 8.0m, 8.0m < UDRE)	User Differential Range Error. This field provides an estimate of the uncertainty (1-σ) in the corrections for the particular satellite. The value in this field shall be multiplied by the UDRE Scale Factor in the common Corrections Status/Health field to determine the final UDRE estimate for the particular satellite
>PRC	M		INTEGER (-2047..2047)	Pseudo Range Correction Scaling factor 0.32 meters
>Range Correction Rate	M		INTEGER (-127.. 127)	Scaling factor 0.032 m/s

Range Bound	Explanation
MaxNoSat	Maximum number of satellites for which information can be provided

9.2.1.25 Diversity Control Field

The Diversity Control Field indicates if the current RL may, must or must not be combined with the already existing RLs.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Diversity Control Field			ENUMERATED(May, Must, Must not)	

9.2.1.26 Diversity Indication

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

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

9.2.1.27 DSCH ID

The DSCH ID uniquely identifies a DSCH within a Node B Communication Context.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
DSCH ID			INTEGER (0..255)	

9.2.1.27A DSCH Information Response

The *DSCH Information Response* IE provides information for DSCHs that have been established or modified.

IE/Group Name	Presence	Range	IE type and reference	Semantics descriptions	Criticality	Assigned Criticality
DSCH Information Response		1 to <Numof DSCH>			–	
>DSCH ID	M		9.2.1.27		–	
>Binding ID	O		9.2.1.4		–	
>Transport Layer Address	O		9.2.1.63		–	

Range bound	Explanation
MaxnoofDSCHs	Maximum number of DSCHs for one UE.

9.2.1.28 DSCH Transport Format Set

Void

9.2.1.29 DSCH Transport Format Combination Set

Void

9.2.1.29A End Of Audit Sequence Indicator

Indicates if the AUDIT RESPONSE message ends an audit sequence or not.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
End Of Audit Sequence Indicator			ENUMERAT ED(end of audit sequence, not end of audit sequence)	End of audit sequence = all audit information has been provided by the Node B; Not end of audit sequence = more audit information is available;

9.2.1.29B FN reporting indicator

Frame Number reporting indicator.

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
FN reporting indicator			ENUMERATED(FN Reporting Required, FN Reporting Not Required)	

9.2.1.30 Frame Handling Priority

This parameter indicates the priority level to be used during the lifetime of the DCH/DSCH for temporary restriction of the allocated resources due overload reason.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Frame Handling Priority			INTEGER (0..15)	0=lower priority, 15=higher priority

9.2.1.31 Frame Offset

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Frame Offset			INTEGER (0..255)	Frames

9.2.1.31A IB_OC_ID

The IB OC ID identifies the occurrence of a specific Information Block.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
IB OC ID			INTEGER (1..16)	

9.2.1.31B GPS Navigation Model & Time Recovery

This IE contains subframes 1 to 3 of the GPS navigation message. For further details on the meaning of parameters, see [27].

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Navigation Message 1to3		*1..<MaxNoSat>*		
>Transmission TOW	M		INTEGER (0..1048575)	Time of the Week when the message is broadcast.
>SatID	M		INTEGER (0..63)	Satellite ID of the satellite from which the information is obtained
>TLM Message	M		Bit string(14)	
>Tlm Revd (C)	M		Bit string(2)	
>HO-Word	M		Bit string(22)	
>WN	M		Bit string(10)	
>C/A or P on L2	M		Bit string(2)	
>User Range Accuracy Index	M		Bit string(4)	
>SV Health	M		Bit string(6)	
>IODC	M		Bit string(10)	
>L2 P Data Flag	M		Bit string(1)	
>SF 1 Reserved	M		Bit string(87)	
>T_{GD}	M		Bit string(8)	
>t_{oc}	M		Bit string(16)	
>af_2	M		Bit string(8)	
>af_1	M		Bit string(16)	
>af_0	M		Bit string(22)	
>C_{rs}	M		Bit string(16)	
>Δn	M		Bit string(16)	
>M_0	M		Bit string(32)	
>C_{uc}	M		Bit string(16)	
>e	M		Bit string(32)	
>C_{us}	M		Bit string(16)	
>$(A)^{1/2}$	M		Bit string(32)	
>t_{oe}	M		Bit string(16)	
>Fit Interval Flag	M		Bit string(1)	
>AODO	M		Bit string(5)	
>C_{ic}	M		Bit string(16)	
>$OMEGA_0$	M		Bit string(32)	
>C_{is}	M		Bit string(16)	
>i_0	M		Bit string(32)	
>C_{rc}	M		Bit string(16)	
>ω	M		Bit string(32)	
>OMEGAdot	M		Bit string(24)	
>Idot	M		Bit string(14)	
>Spare/zero fill	M		Bit string(20)	

Range Bound	Explanation
MaxNoSat	Maximum number of satellites for which information can be provided

9.2.1.31C   GPS Ionospheric Model

This IE provides the information regarding the GPS Ionospheric Model. For further details on the meaning of parameters, see [27].

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
α_0	M		Bit string(8)	
α_1	M		Bit string(8)	
α_2	M		Bit string(8)	
α_3	M		Bit string(8)	
β_0	M		Bit string(8)	
β_1	M		Bit string(8)	
β_2	M		Bit string(8)	
β_3	M		Bit string(8)	

9.2.1.31D   GPS UTC Model

This IE provides the information regarding the GPS UTC Model. For further details on the meaning of parameters, see [27].

IE/Group name	Presence	Range	IE Type and Reference	Semantics description
A_1	M		Bit string(24)	
A_0	M		Bit string(32)	
t_{ot}	M		Bit string(8)	
Δt_{LS}	M		Bit string(8)	
WN_t	M		Bit string(8)	
WN_{LSF}	M		Bit string(8)	
DN	M		Bit string(8)	
Δt_{LSF}	M		Bit string(8)	

9.2.1.31E   GPS Real-Time Integrity

This IE provides the information regarding the status of the GPS constellation. For further details on the meaning of parameters, see [27].

IE/Group name	Presence	Range	IE Type and Reference	Semantics description
CHOICE *Bad Satellites Presence*	M			
>*Bad Satellites*				
>>Satellite information		*1..<MaxNoSat>*		
>>>BadSatID	M		INTEGER (0..63)	Satellite ID
>*No Bad Satellites*			NULL	

Range Bound	Explanation
MaxNoSat	Maximum number of satellites for which information can be provided

9.2.1.31F   GPS Almanac

This IE provides the information regarding the GPS Almanac. For further details on the meaning of parameters, see [27].

IE/Group name	Presence	Range	IE Type and Reference	Semantics description
WN_a	M		Bit string(8)	
Satellite information	M	*1,,<MaxNoSat>*		
>SatID	M		INTEGER (0..63)	Satellite ID
>e	M		Bit string(16)	
>t_{oa}	M		Bit string(8)	
>δi	M		Bit string(16)	
>OMEGADOT	M		Bit string(16)	
>SV Health	M		Bit string(8)	
>$A^{1/2}$	M		Bit string(24)	
>$OMEGA_0$	M		Bit string(24)	
>M_0	M		Bit string(24)	
>ω	M		Bit string(24)	
>af_0	M		Bit string(11)	
>af_1	M		Bit string(11)	

Range Bound	Explanation
MaxNoSat	Maximum number of satellites for which information can be provided

9.2.1.31G   GPS Receiver Geographical Position (GPS RX Pos)

The GPS Receiver Geographical Position is used to identify the geographical coordinates of a GPS receiver relevant for a certain Information Exchange Object.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Latitude Sign	M		ENUMERATED (North, South)	
Degrees of Latitude	M		INTEGER ($0...2^{23}$-1)	The IE value (N) is derived by this formula: $N \leq 2^{23}$ X /90 < N+1 X being the latitude in degree (0°.. 90°)
Degrees of Longitude	M		INTEGER ($-2^{23}...2^{23}$-1)	The IE value (N) is derived by this formula: $N \leq 2^{24}$ X /360 < N+1 X being the longitude in degree (-180°..+180°)

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

First position of an Information Block segment in the SFN cycle (IB_SG_POS < IB_SG_REP).

IE/Group Name	Presence	Range	IE type and reference	Semantics description
IB_SG_POS			INTEGER (0.. 4094)	Only even positions allowed. See ref. [18]

9.2.1.34   IB_SG_REP

Repetition distance for an Information Block segment. The segment shall be transmitted when SFN mod IB_SG_REP = IB_SG_POS.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
IB_SG_REP			ENUMERATED (4, 8, 16, 32, 64, 128, 256, 512, 1024, 2048, 4096)	Repetition period for the IB segment in frames

9.2.1.35   IB Type

The IB Type identifies a specific system information block.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
IB Type			Enumerated (MIB, SB1, SB2, SIB1, SIB2 SIB3, SIB4, SIB5, SIB6, SIB7, SIB8, SIB9, SIB10, SIB11, SIB12, SIB13, SIB13.1 SIB13.2, SIB13.3, SIB13.4, SIB14, SIB15, SIB15.1, SIB15.2, SIB15.3, SIB16, …, SIB17)	

9.2.1.36   Indication Type

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

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

9.2.1.36A   Information Exchange Object Type

The Information Exchange Object type indicates the type of object that the requested information shall be valid for.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Information Exchange Object Type			ENUMERATED (Cell, …)	

9.2.1.36B   Information Report Characteristics

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Information Report Characteristics Type	M		ENUMERATED(On Demand, Periodic, On Modification, ...)	
Periodic	C-Periodic			
>Information Report Periodicity	M		ENUMERATED (1min…1hr, …) step 1min, (1hr…24hr, …) step 1hr, …	The frequency with which the Node B shall send information reports.
On Modification	C-OnModification			
>Information Threshold	M		9.2.1.36E	

Condition	Explanation
Periodic	This IE shall be present if the *Information Report Characteristics Type* IE indicates 'periodic'
OnModification	This IE shall be present if the *Information Report Characteristics Type* IE indicates 'On Modification' and the concerning information type requires threshold information

9.2.1.36C   Information Exchange ID

The Information Exchange ID uniquely identifies any requested information per Node B.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Information Exchange ID	M		INTEGER (0 .. 2^20-1)	

9.2.1.36D   Information Type

The Information Type indicates which kind of information the Node B shall provide.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Information Type Item	M		ENUMERATED (GPS Information, DGPS Corrections, GPS RX Pos, …)	
GPS Information	C-GPS	*0..<MaxNoGPSItems>*		
> GPS Information Item			ENUMERATED (GPS Navigation Model & Time Recovery, GPS Ionospheric Model, GPS UTC Model, GPS Almanac, GPS Real-Time Integrity, …)	

Condition	Explanation
GPS	This IE shall be present if the *Information Type Item* IE indicates 'GPS Information'

Range Bound	Explanation
MaxNoGPSItems	Maximum number of GPS Information Items supported in one Information Exchange

9.2.1.36E   Information Threshold

The Information Threshold indicates which kind of information shall trigger the Information Reporting procedure.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
CHOICE *Information Type Item*	M			
>*DGPS*				
>>PRC Deviation	M		ENUMERATED (1, 2, 5, 10, …)	PRC deviation in meters from the previously reported value, which shall trigger a report

9.2.1.36F   IPDL Indicator

Indicates if IPDL periods shall be active or not.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
IPDL Indicator			ENUMERATED(active, inactive)	

9.2.1.37   Limited Power Increase

Void.

9.2.1.37A   Local Cell Group ID

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

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

9.2.1.38   Local Cell ID

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Local Cell ID			INTEGER(0…268435455)	

9.2.1.39   Maximum DL Power Capability

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

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

9.2.1.40   Maximum Transmission Power

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Maximum transmission Power			ENUMERATED(0,..500)	Unit dBm Granularity 0.1 dB 0: 0 dBm 1: 0.1 dBm … 499: 49.9 dBm 500: 50.0 dBm

9.2.1.40A Measurement Availability Indicator

Indicates if measurement is available or not.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Measurement Availability Indicator			ENUMERATED(measurement available, measurement not available)	

9.2.1.41 Measurement Filter Coefficient

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

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

9.2.1.42 Measurement ID

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

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

9.2.1.43 Measurement Increase/Decrease Threshold

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

Information Element / Group Name	Presence	Range	IE Type and Reference	Semantics Description
Received total wide band power	C – Threshold		INTEGER(0 ..620)	0: 0 dB 1: 0.1 dB 2: 0.2 dB … 620: 62dB
Transmitted Carrier Power	C – Threshold		INTEGER(0 ..100)	According to mapping in [22] and [23]
Acknowledged PRACH Preambles	C – Threshold		INTEGER(0 ..240,…)	According to mapping in [22], [FDD only]
UL Timeslot ISCP	C – Threshold		INTEGER(0 ..126)	0: 0 dB 1: 0.5 dB 2: 1 dB … 126: 63 dB, [TDD only]
SIR	C – Threshold		INTEGER(0 ..62)	0: 0 dB 1: 0.5 dB 2: 1 dB … 62: 31dB
SIR Error	C – Threshold		INTEGER(0 ..124)	0: 0 dB 1: 0.5 dB 2: 1 dB … 124: 62 dB, [FDD only]
Transmitted Code Power	C – Threshold		INTEGER(0 ..112,…)	0: 0 dB 1: 0.5 dB 2: 1 dB … 112: 56 dB
RSCP	C – Threshold		INTEGER(0 ..126)	0: 0 dB 1: 0.5 dB 2: 1 dB … 126: 63 dB, [TDD only]
Round Trip Time	C – Threshold		INTEGER(0 ..32766)	0: 0 chips 1: 0.0625 chips 2: 0.1250 chips … 32766: 2047.875 chips, [FDD only]
Acknowledged PCPCH Access Preambles	C – Threshold		INTEGER(0 ..15,…)	According to mapping in [22] [FDD only]
Detected PCPCH Access Preambles	C – Threshold		INTEGER(0 ..240,…)	According to mapping in [22] [FDD only]

Condition	Explanation
Threshold	Only one measurement threshold can be present at the same time.

9.2.1.44   Measurement Threshold

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

Information Element / Group Name	Presence	Range	IE Type and Reference	Semantics Description
Received total wide band power	*C – Threshold*		INTEGER(0..621)	According to mapping in [22] and [23]
Transmitted Carrier Power	*C – Threshold*		INTEGER(0..100)	According to mapping in [22] and [23]
Acknowledged PRACH Preambles	*C – Threshold*		INTEGER(0..240,…)	According to mapping in [22], [FDD only]
UL Timeslot ISCP	*C – Threshold*		INTEGER(0..127)	According to mapping in [23] [TDD only]
SIR	*C – Threshold*		INTEGER(0..63)	According to mapping in [22] and [23]
SIR Error	*C – Threshold*		INTEGER(0..125)	According to mapping in [22], [FDD only]
Transmitted Code Power	*C – Threshold*		INTEGER(0..127)	According to mapping in [22] and [23]
RSCP	*C – Threshold*		INTEGER(0..127)	According to mapping in [23] [TDD only]
Rx Timing Deviation	*C - Threshold*		INTEGER(0..8191)	According to mapping in [23] [3.84Mcps TDD only]
Round Trip Time	*C – Threshold*		INTEGER(0..32767)	According to mapping in [22] [FDD only]
Acknowledged PCPCH Access Preambles	*C – Threshold*		INTEGER(0..15,…)	According to mapping in [22] [FDD only]
Detected PCPCH Access Preambles	*C – Threshold*		INTEGER(0..240,…)	According to mapping in [22] [FDD only]
$T_{UTRAN-GPS}$ Measurement Threshold Information	*C – Threshold*		9.2.1.64B	
SFN-SFN Measurement Threshold Information	*C – Threshold*		9.2.1.53C	

Condition	Explanation
Threshold	Only one measurement threshold can be present at the same time.

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message structure		1 to <maxnooflevels>		Information given per level with assigned criticality in an hierachical message structure. Given from top level down to the level above the reported level for the occured error (reported in the *Information Element Criticality Diagnostics* IE).	GLOBAL	ignore
>IE ID	M		INTEGER (0..65535)	The IE ID of this level's IE containing the not understood or missing IE.	-	
>Repetition Number	O		INTEGER (1..256)	The repetition number of this level's reported IE, if applicable	-	

Range bound	Explanation
maxnooflevels	Maximum no. of message levels to report. The value for maxnooflevels is 256.

9.2.1.46 Message Type

The Message Type uniquely identifies the message being sent.

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

9.2.1.46A Minimum DL Power Capability

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

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

9.2.1.47 Minimum Spreading Factor

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

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

9.2.1.47A N_INSYNC_IND

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

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

9.2.1.47B N_OUTSYNC_IND

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

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

9.2.1.47C 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 TDD neighbouring cells used for the purpose of measurements.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
>UC-Id	M		9.2.1.65B	
>UARFCN	M		9.2.1.65	Corresponds to Nt [15]
>Cell Parameter ID	M		9.2.3.4	

9.2.1.48 Node B Communication Context ID

The Node B Communication Context ID is the identifier of the Communication Context in the Node B, it corresponds to the dedicated resources which are necessary for an UE using one or more dedicated channels in a given Node B.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Node B Communication Context ID			INTEGER (0..2^20-1)	2^20-1 is reserved value to indicate all the existing and future Node B communication contexts that can be reached by the communication control port (All NBCC).

9.2.1.49 Payload CRC Presence Indicator

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

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

9.2.1.49A PICH Power

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

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

9.2.1.50 Puncture Limit

The Puncture limit limits the amount of puncturing that can be applied in order to minimise the number of dedicated physical channels.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Puncture limit			INTEGER (0..15)	0: 40% 1: 44 % … 14: 96% 15: 100% (no puncturing)

9.2.1.50A QE-Selector

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

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

9.2.1.51 Report Characteristics

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Report characteristics type			ENUMERATED(On Demand, Periodic, Event A, Event B, Event C, Event D, Event E, Event F,... ,On Modification)	
Periodic	C – Periodic			
>Report Periodicity	M		ENUMERATED (10ms…1min,…) step 10ms, (1min…1hr,…) step 1min,…	The frequency with which the Node B shall send measurement reports.
Event A	C – Event A			
>Measurement Threshold	M		Measurement Threshold 9.2.1.44	The threshold for which the Node B shall trigger a measurement report.
>Measurement Hysteresis Time	O		ENUMERATED (10ms…1min,…) step 10ms,…	
Event B	C – Event B			
>Measurement Threshold	M		Measurement Threshold 9.2.1.44	The threshold for which the Node B shall trigger a measurement report.
>Measurement Hysteresis Time	O		ENUMERATED (10ms…1min,…) step 10ms,…	
Event C	C – Event C			
>Measurement Increase/Decrease Threshold	M		Measurement Increase/Decrease Threshold 9.2.1.43	
>Measurement Change Time	M		ENUMERATED (10ms…1min,…) step 10ms,…	The time the measurement entity shall rise on (in ms), in order to trigger a measurement report.
Event D	C – Event D			
>Measurement Increase/Decrease Threshold	M		Measurement Increase/Decrease Threshold 9.2.1.43	
>Measurement Change Time	M		ENUMERATED (10ms…1mi	The time the measurement entity shall fall (in ms), in order to trigger a

			n,…) step 10ms,…	measurement report.
Event E	C – Event E			
>Measurement Threshold 1	M		Measurement Threshold 9.2.1.44	
>Measurement Threshold 2	O		Measurement Threshold 9.2.1.44	
>Measurement Hysteresis Time	O		ENUMERATED (10ms…1min,…) step 10ms,…	The hysteresis time in ms
>Report Periodicity	O		ENUMERATED (10ms…1min,…) step 10ms, (1min…1hr, …) step 1min,…	The frequency with which the Node B shall send measurement reports.
Event F	C – Event F			
>Measurement Threshold 1	M		Measurement Threshold 9.2.1.44	
>Measurement Threshold 2	O		Measurement Threshold 9.2.1.44	
>Measurement Hysteresis Time	O		ENUMERATED (10ms…1min,…) step 10ms,…	The hysteresis time in ms
>Report Periodicity	O		ENUMERATED (10ms…1min,…) step 10ms, (1min…1hr, …) step 1min,…	The frequency with which the Node B shall send measurement reports.
>On Modification	C -On Modification			
>>Measurement Threshold	M		Measurement Threshold 9.2.1.44	

Condition	Explanation
C-Periodic	Valid if *Report Characteristics Type* IE indicates "periodic"
C-Event A	Valid if *Report Characteristics Type* IE indicates "Event A"
C-Event B	Valid if *Report Characteristics Type* IE indicates "Event B"
C-Event C	Valid if *Report Characteristics Type* IE indicates "Event C"
C-Event D	Valid if *Report Characteristics Type* IE indicates "Event D"
C-Event E	Valid if *Report Characteristics Type* IE indicates "Event E"
C-Event F	Valid if *Report Characteristics Type* IE indicates "Event F"
C-On Modification	Valid if *Report Characteristics Type* IE indicates 'On Modification'

9.2.1.51A   Requested Data Value

The *Requested Data Value* IE contains the relevant data concerning the ongoing information exchange.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
DGPS Corrections	C-DataVal		9.2.1.24B	
GPS Navigation Model & Time Recovery	C-DataVal		9.2.1.31B	
GPS Ionospheric Model	C-DataVal		9.2.1.31C	
GPS UTC Model	C-DataVal		9.2.1.31D	
GPS Almanac	C-DataVal		9.2.1.31F	
GPS Real-Time Integrity	C-DataVal		9.2.1.31E	
GPS RX Pos	C-DataVal		9.2.1.31G	

Condition	Explanation
C-DataVal	At least one of these IEs shall be present

9.2.1.51B   Requested Data Value Information

The *Requested Data Value Information* IE provides information both on whether or not the Requested Data Value is provided in the message or not and if provided also the Requested Data Value itself. In case of periodic reporting, 'Information Not Available' shall be used when at least one part of the requested information was not available at the moment of initiating the Information Reporting procedure.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
CHOICE *Information Availability Indicator*	M				–	
>*Information Available*					–	
>>Requested Data Value	M		9.2.1.51A		–	
>*Information not Available*			NULL		–	

9.2.1.52   Resource Operational State

The resource operational state is used to indicate the current operational state of the associated resource following a Node B failure.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Resource Operational State			ENUMERATED(Enabled, Disabled)	When a resource is marked as disabled, then its child resources are implicitly disabled. Cell Resource hierarchy can be referred to [6].

9.2.1.52A   Retention Priority

Void.

9.2.1.53   RL ID

The RL ID is the unique identifier for one RL associated with a UE.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
RL ID			INTEGER (0..31)	

9.2.1.53a   RNC-Id

This is the identifier of one RNC in UTRAN.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
RNC-Id			INTEGER (0..4095)	

9.2.1.53A   SFN

System Frame Number of the cell, see ref. [17].

IE/Group Name	Presence	Range	IE type and reference	Semantics description
SFN			Integer (0..4095)	

9.2.1.53B   Segment type

Segment type as defined in [18].

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Segment type			Enumerated(First segment, First segment short, Subsequent segment, Last segment, Last segment short, Complete SIB, Complete SIB short,…)	

9.2.1.53C   SFN-SFN Measurement Threshold Information

The SFN-SFN Measurement Threshold Information defines the related thresholds SFN-SFN Observed Time Difference measurments which shall trigger the Event On Modification.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
SFN-SFN Change Limit	C - SFNSFNLimit		INTEGER(1..16384)	Change of SFN-SFN value compared to previously reported value, which shall trigger a new report. Unit in 1/16 chip.
Predicted SFN-SFN Deviation Limit	C-SFNSFNLimit		INTEGER(1..16384)	Deviation of the predicated SFN-SFN from the latest measurement result, which shall trigger a new report. Unit in 1/16 chip.

Condition	Explanation
C- SFNSFNLimit	At least one thresold shall be present.

9.2.1.53D   SFN-SFN Measurement Time Stamp

IE/Group Name	Presence	Range	IE type and reference	Semantics description
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 Primary CPICH Time Slot of the reference cell at which this measurement has been performed (FDD Only). Indicates the Time Slot of the reference cell at which this measurement has been performed (TDD Only).

9.2.1.53E   SFN-SFN Measurement Value Information

The SFN-SFN Measurement Value Information IE indicates the measurement result related to SFN-SFN Observed Time Difference measurements.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Successful Neighbouring cell SFN-SFN Observed Time Difference Measurement Information		1..<maxnoMeasNCell>		
>UC-Id	M		9.2.1.65B	
>SFN-SFN	M		INTEGER(0. . 40961)	According to mapping in [22]. TBD by RAN4.
>SFN-SFN Quality	M		INTEGER(0. .16383)	Indicates the standard deviation of the SFN-SFN measurements.
>SFN-SFN Drift Rate	M		INTEGER(-16383..+16383)	Indicates the SFN-SFN drift rate in 1/16 chip per second. A positive value indicates that the Referece cell clock is running at a greater frequency than the measured neighbouring cell.
>SFN-SFN Drift Rate Quality	M		INTEGER(0. . 16383)	Indicates the standard deviation of the SFN-SFN drift rate measurements.
>SFN-SFN Measurement Time Stamp	M		9.2.1.53D	
Unsuccessful Neighbouring cell SFN-SFN Observed Time Difference Measurement Information		0..<maxnoMeasNCell-1>		
>UC-Id	M		9.2.1.65B	

Range bound	Explanation
maxnoMeasNCell	Maximum number of neighbouring cells that can be measured on.

9.2.1.54 SIB Deletion Indicator

Void.

9.2.1.55 SIB Originator

Indicates if the Node B shall fill in the SIB information or not.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
SIB Originator			Enumerated(Node B, CRNC,…)	

9.2.1.56 Shutdown Timer

The shutdown timer shall indicate the length of time available to the CRNC to perform the block of a resource when a Normal priority block is requested.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Shutdown Timer			*INTEGER(1..3600)*	Value in seconds

9.2.1.56A   T_RLFAILURE

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

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

9.2.1.56B   Start Of Audit Sequence Indicator

Indicates if the AUDIT REQUEST message initiates a new audit sequence or not.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Start Of Audit Sequence Indicator			ENUMERATED(start of audit sequence, not start of audit sequence)	

9.2.1.57   TFCI Presence

The TFCI Presence parameter indicates whether the TFCI shall be included. In TDD if it is present in the timeslot, it will be included within the first Channelization code listed.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
TFCI presence			ENUMERATED (Present, not present)	

9.2.1.58   TFCS (Transport Format Combination Set)

The Transport Format Combination Set is defined as a set of Transport Format Combinations on a Coded Composite Transport Channel. It is the allowed Transport Format Combinations of the corresponding Transport Channels. The DL Transport Format Combination Set is applicable for DL Transport Channels.

[FDD - Where the UE is assigned access to one or more DSCH transport channels then the UTRAN has the choice of two methods for signalling the mapping between TFCI(field 2) values and the corresponding TFC:

Method #1 - TFCI range

The mapping is described in terms of a number of groups, each group corresponding to a given transport format combination (value of CTFC(field2)). The CTFC(field2) value specified in the first group applies for all values of TFCI(field 2) between 0 and the specified 'Max TFCI(field2) value'. The CTFC(field2) value specified in the second group applies for all values of TFCI(field 2) between the 'Max TFCI(field2) value' specified in the last group plus one and the specified 'Max TFCI(field2) value' in the second group.   The process continues in the same way for the

following groups with the TFCI(field 2) value used by the UE in constructing its mapping table starting at the largest value reached in the previous group plus one.

Method #2 - Explicit

The mapping between TFCI(field 2) value and CTFC(field2) is spelt out explicitly for each value of TFCI (field2)]

IE/Group Name	Presence	Range	IE type and reference	Semantics description
CHOICE *DSCH*				
>*No split in TFCI*				This choice is made if : a) The TFCS refers to the uplink OR b) The mode is FDD and none of the Node B communication contexts are assigned any DSCH transport channels OR c) The mode is TDD
>>TFCS		1 to <maxnoofTFCs>		The first instance of the parameter corresponds to TFC zero, the second to 1 and so on.
>>>CTFC	M		INTEGER(0..MaxCTFC)	Integer number calculated according to [18]
>>>CHOICE Gain Factors	C-PhysChan			
>>>>Signalled Gain Factors				
>>>>>CHOICE mode				
>>>>>>FDD				
>>>>>>>Gain Factor β_C	M		Integer (0..15)	For UL DPCCH or control part of PRACH or control part of PCPCH in FDD; mapping in accordance to [9]
>>>>>>>Gain Factor β_D	M		Integer (0..15)	For UL DPDCH or data part of PRACH or data part of PCPCH in FDD: mapping in accordance to [9]
>>>>>>TDD				
>>>>>>>Gain Factor β	M		Integer (0..15)	For UL DPCH in TDD; mapping in accordance to [20]
>>>>>Reference TFC nr	O		Integer (0..3)	If this TFC is a reference TFC, this IE indicates the reference number
>>>>Computed Gain Factors				
>>>>>Reference TFC nr	M		Integer (0..3)	Indicates the reference TFC to be used to calculate the gain factors for this TFC
>*There is a split in the TFCI*				This choice is made if : a) The TFCS refers to the downlink AND b) The mode is FDD and one of the Node B communication contexts is assigned one or more DSCH transport channels
>>Transport format combination_DCH		1 to <MaxTFCI_1_Combs>		The first instance of the parameter *Transport format combination_DCH* corresponds to TFCI (field 1) = 0, the second to TFCI (field 1) = 1 and so on.
>>>CTFC(field1)	M		Integer(0..MaxCTFC)	Integer number calculated according to [18]. The calculation of CTFC ignores any DSCH transport channels which may be assigned
>>Choice *Signalling method*				
>>>*TFCI range*				
>>>>TFC mapping on DSCH		1 to <MaxNoTFCIGroups>		

>>>>>Max TFCI(field2) value	M		Integer(1..1023)	This is the Maximum value in the range of TFCI(field2) values for which the specified CTFC(field2) applies
>>>>>>CTFC(field 2)	M		Integer(0..MaxCTFC)	Integer number calculated according to [18]. The calculation of CTFC ignores any DCH transport channels which may be assigned
>>>*Explicit*				
>>>>**Transport format combination_DSCH**		1 to <MaxTFCI_2_Combs>		The first instance of the parameter *Transport format combination_DSCH* corresponds to TFCI (field2) = 0, the second to TFCI (field 2) = 1 and so on.
>>>>>CTFC(field2)	M		Integer(0..MaxCTFC)	Integer number calculated according to [18]. The calculation of CTFC ignores any DCH transport channels which may be assigned

Condition	Explanation
PhysChan	The choice shall be present if the TFCS concerns a UL DPCH or PRACH channel or PCPCH channel in FDD, not when the TFCS is used for other physical channels.

Range bound	Explanation
MaxnoofTFCs	The maximum number of Transport Format Combinations.
MaxTFCI_1_Combs	Maximum number of TFCI (field 1) combinations (given by 2 raised to the power of the length of the TFCI (field 1))
MaxTFCI_2_Combs	Maximum number of TFCI (field 2) combinations (given by 2 raised to the power of the length of the TFCI (field 2))
MaxNoTFCIGroups	Maximum number of groups, each group described in terms of a range of TFCI(field 2) values for which a single value of CTFC(field2) applies
MaxCTFC	Maximum number of the CTFC value is calculated according to the following: $$\sum_{i=1}^{I}(L_i - 1)P_i$$ with the notation according to ref. [18]

9.2.1.59   Transport Format Set

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Dynamic Transport Format Information		1 to <maxTFcount>		The first instance of the parameter corresponds to TFI zero, the second to 1 and so on.
>Number of Transport blocks	M		INTEGER (0..512)	
>Transport Block Size	C – Blocks		INTEGER (0..5000)	Bits
>CHOICE *mode*	M			
>>*TDD*				
>>>**Transmission Time interval Information**	C-TTIdynamic	1 to <maxTTIcount>		
>>>>Transmission time interval	M		Enumerated(10, 20, 40, 80,…)	ms
Semi-static Transport Format Information		1		
>Transmission time interval	M		ENUMERATED (10, 20, 40, 80, dynamic,…)	ms Value "dynamic" for TDD only
>Type of channel coding	M		ENUMERATED (No coding, Convolutional, Turbo,…)	
>Coding Rate	C – Coding		ENUMERATED (1/2, 1/3,…)	
>Rate matching attribute	M		INTEGER (1..maxRM)	
>CRC size	M		ENUMERATED (0, 8, 12, 16, 24,…)	
>CHOICE *mode*	M			
>>*TDD*				
>>>2nd interleaving mode	M		Enumerated(Frame related, Timeslot related,…)	

Condition	Explanation
Blocks	This IE is only present if "Number of Transport Blocks" is greater than 0.
Coding	This IE is only present if IE "Type of channel coding" is "Convolutional" or "Turbo"
TTIdynamic	This IE is mandatory if the "Transmission Time Interval" of the "Semi-static Transport Format Information" is "dynamic". Otherwise it is absent.

Range bound	Explanation
MaxTFcount	Maximum number of different transport formats that can be included in the Transport format set for one transport channel.
MaxRM	Maximum number that could be set as rate matching attribute for a transport channel.
MaxTTIcount	The amount of different TTI that are possible for that transport format.

9.2.1.60   ToAWE

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
ToAWE			INTEGER (0..2559)	ms.

9.2.1.61 ToAWS

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
ToAWS			INTEGER (0..1279)	ms.

9.2.1.62 Transaction ID

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

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Transaction ID			CHOICE INTEGER (0..127) or INTEGER (0..32767)	

9.2.1.62A Transport Bearer Request Indicator

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

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

9.2.1.63 Transport Layer Address

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$_{UTRAN-GPS}$ Measurement Value Information

The T$_{UTRAN-GPS}$ *Measurement Value Information* IE indicates the measurement results related to the UTRAN GPS Timing of Cell Frame for LCS measurements.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
T$_{UTRAN-GPS}$	M		INTEGER(0..37158911999999)	Indicates the UTRAN GPS Timing of Cell Frame for LCS. According to mapping in [22].
T$_{UTRAN-GPS}$ Quality	M		INTEGER(0..2^20-1)	Indicates the standard deviation of the T$_{UTRAN-GPS}$ measurements.
T$_{UTRAN-GPS}$ Drift Rate	M		INTEGER(-2^14+1..+2^14-1)	Indicates the T$_{UTRAN-GPS}$ drift rate in 1/16 chip per second. A positive value indicates that the UTRAN clock is running at a lower frequency than GPS clock.
T$_{UTRAN-GPS}$ Drift Rate Quality	M		INTEGER(0..2^14-1)	Indicates the standard deviation of the T$_{UTRAN-GPS}$ drift rate measurements.

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

The T$_{UTRAN-GPS}$ Measurement Threshold Information defines the related thresholds for   UTRAN GPS Timing of Cell Frame for LCS measurments shall shall trigger the event On Modification.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
T$_{UTRAN-GPS}$ Change Limit	C - UTRANGPSLimit		INTEGER(1..2^20)	Change of T$_{UTRAN-GPS}$ value compared to previously reported value, which shall trigger a new report. Unit in 1/16 chip.
Predicted T$_{UTRAN-GPS}$ Deviation Limit	C- UTRANGPSLimit		INTEGER(1..2^20)	Deviation of the predicated T$_{UTRAN-GPS}$ from the latest measurement result, which shall trigger a new report. Unit in 1/16 chip.

Condition	Explanation
C- UTRANGPSLimit	At least one thresold shall be present.

9.2.1.64C T$_{UTRAN-GPS}$ Accuracy Class

The T$_{UTRAN-GPS}$ Accuracy Class IE indicates the accuracy class of the UTRAN GPS Timing of Cell Frame for LCS measurement.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
T_{UTRAN-GPS} Accuracy Class			ENUMERATED(Accuracy Class A, Accuracy Class B, Accuracy Class C,…)	More information about T_{UTRAN-GPS} Measurement Accuracy Class is included in [22].

9.2.1.65   UARFCN

Designate the central frequency of the channel number.

Information Element / Group Name	Presence	Range	IE Type and Reference	Semantics Description
UARFCN			INTEGER (0..16383, …)	corresponds to 0.0Hz.. 3276.6MHz (subclause 5.4.3 in [14] and [15])

9.2.1.65A   UL Capacity Credit

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
UL Capacity Credit			INTEGER (0..65535)	

9.2.1.65B   UTRAN Cell Identifier (UC-Id)

The UC-Id (UTRAN Cell identifier) is the identifier of a cell in one UTRAN.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
>RNC-Id	M		9.2.1.53a	
>C-Id	M		9.2.1.9	

9.2.1.66   UL FP Mode

This parameter defines if normal or silent mode of the Frame Protocol shall be used for the UL.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
UL FP Mode			ENUMERATED (Normal, Silent,…)	

9.2.1.67   UL interference level

Void.

9.2.2 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	Defines when the old Active pattern sequences, if active, shall be terminated. From this moment on, the new sequences are activated at the given TGCFN .
Transmission Gap Pattern Sequence Status		0 to <MaxTGPS>		
>TGPSI Identifier	M		Integer(1..< MaxTGPS>)	If the group is not present, none of the pattern sequences are activated. References an already defined sequence.
>TGPRC	M		Integer (0..63)	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 within the Transmission Gap Pattern Sequence.

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

9.2.2.B Adjustment Period

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

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

9.2.2.C Adjustment Ratio

Adjustment Ratio IE *(Radj)* defines the convergence rate used for the associated Adjustment Period.

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

9.2.2.D AICH Power

The AICH Power IE indicates a power level relative to the primary CPICH power configured in a cell.

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

9.2.2.1 AICH Transmission Timing

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

9.2.2.1A AP Preamble Signature

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
AP Preamble Signature			INTEGER (0..15)	Described in ref. [9]

9.2.2.1B AP Sub Channel Number

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
AP Sub Channel Number			INTEGER (0..11)	Described in ref. [10]

9.2.2.1C CD Sub Channel Numbers

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
CD Sub Channel Numbers			BIT STRING (12)	Bit 0=Sub Channel Number 0 Bit 1=Sub Channel Number 1 … Bit 11=Sub Channel Number 11 [10]

9.2.2.1D Channel Assignment Indication

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Channel Assignment Indication			ENUMERATED (CA Active, CA Inactive)	

9.2.2.2 Chip Offset

The Chip Offset is defined as the radio timing offset inside a radio frame. The Chip offset is used as offset for the DL DPCH relative to the Primary CPICH timing.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Chip Offset			INTEGER (0..38399)	Chips

9.2.2.2A Closed Loop Timing Adjustment Mode

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

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
Closed Loop Timing Adjustment Mode			ENUMERATED (Offset1, Offset2,…)	According to ref. [10] subclause 7.1: Offset1 = slot(j+1)mod15 Offset2 = slot(j+2)mod15

9.2.2.3 Common Channels Capacity Consumption Law

Void

9.2.2.3A Compressed Mode Deactivation Flag

Compressed Mode Deactivation Flag indicates whether Compressed Mode shall be deactivated or not in the new RL.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Compressed Mode Deactivation flag			ENUMERATED(Deactivate, Maintain Active)	

9.2.2.4 Compressed Mode Method

Void.

9.2.2.4A CPCH Allowed Total Rate

IE/Group Name	Presence	Range	IE type and reference	Semantics description
CPCH Allowed Total Rate			ENUMERATED (15, 30, 60, 120, 240, 480, 960, 1920, 2880, 3840, 4800, 5760,…)	Channel Symbol Rate (ksps)

9.2.2.4B   CPCH Scrambling Code Number

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
CPCH Scrambling Code Number			INTEGER (0..79)	Described in ref. [9]

9.2.2.4C   CPCH UL DPCCH Slot Format

Indicates the slot format used in UL CPCH message control part, accordingly to ref. [7]

IE/Group Name	Presence	Range	IE type and reference	Semantics description
CPCH UL DPCCH slot format			INTEGER (0..2,…)	

9.2.2.4D   DCH FDD Information

The *DCH FDD Information* IE provides information for DCHs to be established.

IE/Group Name	Presence	Range	IE type and reference	Semantics descriptions	Criticality	Assigned Criticality
DCH FDD Information		1 to <*maxnoof DCHs*>			–	
>Payload CRC Presence Indicator	M		9.2.1.49		–	
>UL FP mode	M		9.2.1.66		–	
>ToAWS	M		9.2.1.61		–	
>ToAWE	M		9.2.1.60		–	
>DCH Specific Info		1..<*maxno ofDCHs*>			–	
>>DCH ID	M		9.2.1.20		–	
>>Transport Format Set	M		9.2.1.59	For UL	–	
>>Transport Format Set	M		9.2.1.59	For DL	–	
>>Allocation/Retention Priority	M		9.2.1.1A		–	
>>Frame Handling Priority	M		9.2.1.30		–	
>>QE-Selector	M		9.2.1.50A		–	

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

9.2.2.4E   DCHs FDD to Modify

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

en

IE/Group Name	Presence	Range	IE type and reference	Semantics descriptions	Criticality	Assigned Criticality
DCHs FDD to Modify		1..<max noofDCHs>			–	
>UL FP Mode	O		9.2.1.66		–	
>ToAWS	O		9.2.1.61		–	
>ToAWE	O		9.2.1.60		–	
>Transport Bearer Request Indicator	M		9.2.1.62A		–	
>DCH Specific Info		1..<max noofDCHs>			–	
>>DCH ID	M		9.2.1.20		–	
>>Transport Format Set	O		9.2.1.59	For the UL.	–	
>>Transport Format Set	O		9.2.1.59	For the DL.	–	
>>Allocation/Retention Priority	O		9.2.1.1A		–	
>>Frame Handling Priority	O		9.2.1.20		–	

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

9.2.2.5 D-Field Length

Void.

9.2.2.6 Dedicated Channels Capacity Consumption Law

Void

9.2.2.7 Diversity Control Field

Void.

9.2.2.8 Diversity Indication

Void.

9.2.2.9 Diversity mode

Define the diversity mode to be applied.

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

9.2.2.10 DL DPCH Slot Format

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
DL DPCH slot format			INTEGER (0..16,…)	

9.2.2.11 DL frame type

Void.

9.2.2.12 DL or Global Capacity Credit

Void

9.2.2.12A DL_power_averaging_window_size

DL_power_averaging_window_size IE defines the window size when Limited Power Increase is used [10].

IE/Group Name	Presence	Range	IE type and reference	Semantics description
DL_power_averaging_window_size			INTEGER (1..60)	1-60 inner loop power adjustments, step size 1 adjustment

9.2.2.13 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 descriptions	Criticality	Assigned Criticality
DSCH FDD Information		*1 to <maxnoof DSCHs>*			–	
>DSCH ID	M		9.2.1.27		–	
>Transport Format Set	M		9.2.1.59	For DSCH	–	
>Allocation/Retention Priority	M		9.2.1.1A		–	
>Frame Handling Priority	M		9.2.1.30		–	
>ToAWS	M		9.2.1.61		–	
>ToAWE	M		9.2.1.60		–	

Range bound	Explanation
MaxnoofDSCHs	Maximum number of DSCHs for one UE.

9.2.2.13C   DPC Mode

The *DPC Mode* IE indicates the DPC mode to be applied [10].

IE/Group Name	Presence	Range	IE type and reference	Semantics description
DPC Mode			ENUMERAT TED (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	Criticality	Assigned Criticality
Enhanced DSCH PC Indicator	O		9.2.2.13G		–	
Enhanced DSCH PC	C-EDSCHPC On		9.2.2.13E		–	

Condition	Explanation
EDSCHPCOn	The IE shall be present only if the *Enhanced DSCH PC Indicator* IE is set to ' Enhanced DSCH PC Active in the UE'.

9.2.2.13E   Enhanced DSCH PC

The Enhanced DSCH PC includes all the parameters which are needed for DSCH power control improvement during soft handover.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Enhanced DSCH PC Wnd	M		9.2.2.13H	
Enhanced DSCH PC Counter	M		9.2.2.13F	
Enhanced DSCH Power Offset	M		9.2.2.13I	

9.2.2.13F   Enhanced DSCH PC Counter

The Enhanced DSCH PC Counter parameter gives the number of correct cell ID command to receive in the averaging window, *Enhance DSCH PC Wnd* IE.

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.

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)	step 1dB

9.2.2.14   FDD DL Channelisation Code Number

The DL Channelisation Code Number indicates the DL Channelisation Code number for a specific DL physical channel.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
FDD DL ChannelisationCode Number			INTEGER(0.. 511)	According to the mapping in [9]. The maximum value is equal to the DL spreading factor –1

9.2.2.14A FDD DL Code Information

The *FDD DL Code Information* IE provides DL Code information for the RL.

IE/Group Name	Presence	Range	IE type and reference	Semantics descriptions	Criticality	Assigned Criticality
FDD DL Code Information		1 to <maxnoof-DLCodes			–	
>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
MaxnoofDLCodes	Maximum number of DL code information.

9.2.2.15 FDD SCCPCH Offset

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

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

9.2.2.16A First RLS Indicator

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

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

9.2.2.17 Gap Period

Void.

9.2.2.18 Gap Position Mode

Void.

9.2.2.18A Limited Power Increase

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

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Limited Power Increase			ENUMERATED(Used, Not used)	

9.2.2.18B Inner Loop DL PC Status

The *Inner Loop DL PC Status* IE indicates whether inner loop DL control shall be active or inactive for all radio links associated with the context identified by the *Node B Communication Context Id* IE.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Inner Loop DL PC Status			ENUMERATED(Active, Inactive)	

9.2.2.18C IPDL FDD Parameters

The *IPDL FDD Parameters* IE provides information about IPDL to be applied for FDD when activated.

IE/Group Name	Presence	Range	IE type and reference	Semantics descriptions	Criticality	Assigned Criticality
IP spacingFDD	M		ENUMERATED (5,7,10,15, 20,30,40,50)	See [10]	–	
IP length	M		ENUMERATED (5,10)	See [10]	–	
Seed	M		INTEGER (0..63)	See [10]	–	
Burst mode parameters	O		9.2.1.5A			

9.2.2.19 Max Adjustment Period

Void.

9.2.2.20 Max Adjustment Step

Defines the maximum allowed value for the change of DL power level during a certain number of slots that can be utilised by the downlink power balancing algorithm. *Max Adjustment Step* IE defines a time period, in terms of number of slots, in which the accumulated power adjustment shall be maximum 1dB. This value does not include the DL inner loop PC adjustment.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Max Adjustment Step			INTEGER (1 .. 10)	Slots

9.2.2.20A Max Number of PCPCHes

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Max Number of PCPCHes			INTEGER(1..64, …)	

9.2.2.21 Maximum Number of UL DPDCHs

Maximum number of uplink DPDCHs to be used during the connection. Needed by the rate matching algorithm.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Max Number of UL DPDCHs			INTEGER (1..6)	

9.2.2.22 Minimum UL Channelisation Code Length

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Min UL Channelisation Code length			ENUMERATED(4,8,16, 32,64,128, 256)	

9.2.2.23 Multiplexing Position

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Multiplexing Position			ENUMERATED(Fixed, Flexible)	

9.2.2.23A   N_EOT

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
N_EOT			INTEGER (0..8)	TTI

9.2.2.23B   NF_max

The NF_max is defined as maximum number of Frame in a PCPCH message data part.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
NF_max			INTEGER (1..64,…)	

9.2.2.23C   N_Start_Message

The N_Start_Message is defined as number of Frames for start message of   DL DPDCHes for a CPCH.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
N_Start_Message			INTEGER (1..8)	

9.2.2.24   Pattern Duration (PD)

IE/Group Name	Presence	Range	IE type and reference	Semantics description
PD			INTEGER(0..2047, …)	Frames If the value is set to '0', the Pattern Duration shall be interpreted as 'infinite'

9.2.2.24A   PCP Length

Indicates CPCH power control preamble length.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
PCP Length			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.   The UE maps TFCI(field2) values to PDSCH codes in the following way.   The PDSCH code used for TFCI(field 2) = 0 , is

given by the SF and code number = 'PDSCH code start' of Group = 1.   The PDSCH code used for TFCI(field 2) = 1, is given by the SF and code number = 'PDSCH code start' + 1.   This continues, with unit increments in the value of TFC mapping to unit increments in code number up until the point that code number = 'PDSCH code stop'.   The process continues in the same way for the next group with the TFCI(field 2) value used by the UE when constructing its mapping table starting at the largest value reached in the previous group plus one. In the event that 'PDSCH code start' = 'PDSCH code stop' (as may occur when mapping the PDSCH root code to a TFCI (field 2) value) then this is to be interpreted as defining the mapping between the channelisation code and a single TFCI (ie. TFCI(field 2) should not be incremented twice).

Note that each value of TFCI (field 2) maps to a given code number and when the 'multi-code info' parameter is greater than 1, then each value of TFCI (field 2) actually maps to a set of PDSCH codes.   In this case contiguous codes are assigned,   starting at the channelisation code denoted by the 'code number' parameter and including all codes with code numbers up to and including 'code number' - 1 + the value given in the parameter 'multi-code info'.

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 PDSCH code specified in the first group applies for all values of TFCI(field 2) between 0 and the specified 'Max TFCI(field2)'. The PDSCH code 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)' in the second group.   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 group plus one.

Method #3 - Explicit

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

Information Element/Group name	Presence	Range	IE type and reference	Semantics description
DL Scrambling Code	M		INTEGER (0..15)	Scrambling code on which PDSCH is transmitted. 0= Primary scrambling code of the cell 1…15 = Secondary scrambling code

Choice *signalling method*				
>*code range*				
>>**PDSCH code mapping**		1 to \<MaxNoCodeGroups>		
>>Spreading factor	M		Enumerated(4, 8, 16, 32, 64, 128, 256)	
>>multi-code info	M		Integer(1..16)	This parameter indicates the number of PDSCH transmitted to the UE. The PDSCH codes all have the same SF as denoted by the Spreading factor parameter. Contiguous codes are assigned, starting at the channelisation code denoted by the spreading factor and code number parameter and including all codes, with code numbers up to and including 'code number' - 1 + 'multi-code info'. Note that 'code number'-1+'multi-code info' will not be allowed to exceed 'maxCodeNumComp'-1
>>Code number	M		Integer(0..maxCodeNumComp-1)	PDSCH code start, Numbering as described in [18]
>>Code number	M		Integer(0..maxCodeNumComp-1)	PDSCH code stop, Numbering as described in [18]
>*TFCI range*				
>>**DSCH mapping**		1 to \<MaxNoTFCIGroups>		
>>>Max TFCI(field2) value	M		Integer(1..1023)	This is the maximum value in the range of TFCI(field 2) values for which the specified PDSCH code applies
>>>Spreading factor	M		Enumerated(4, 8, 16, 32, 64, 128, 256)	SF of PDSCH code
>>>multi-code info	M		Integer(1..16)	Semantics as described for this parameter above
>>>Code number	M		Integer(0..maxCodeNumComp-1)	Code number of PDSCH code. Numbering as described in [18]
>*Explicit*				
>>**PDSCH code**		1 to MaxTFCI_2_Combs		The first instance of the parameter PDSCH code corresponds to TFCI (field2) = 0, the second to TFCI(field 2) = 1 and so on.
>>>Spreading factor	M		Enumerated(4, 8, 16, 32, 64, 128, 256)	SF of PDSCH code
>>>multi-code info	M		Integer(1..16)	Semantics as described for this parameter above
>>>Code number	M		Integer(0..maxCodeNumComp-1)	Code number of PDSCH code. Numbering as described in [18]

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

9.2.2.26   PICH Mode

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

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

9.2.2.27   Power Adjustment Type

Defines the characteristic of the power adjustment.

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

9.2.2.28   Power Control Mode

Void.

9.2.2.29   Power Offset

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Power Offset			INTEGER (0…24)	Step 0.25 dB, range 0-6 dB

9.2.2.29A   Power_Raise_Limit

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

9.2.2.30 Power Resume Mode

Void.

9.2.2.31 Preamble Signature

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Preamble Signatures			BIT STRING (16)	Bit 0=P0 Bit 1=P1 .. Bit 15=P15 [9]

9.2.2.32 Preamble Threshold

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

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

9.2.2.33 Primary CPICH Power

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

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

9.2.2.34 Primary Scrambling code

The Primary scrambling code to be used in the cell.

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

9.2.2.35 Propagation Delay

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Propagation Delay			INTEGER (0..255)	Chips. Step size is 3 chips. 0=0 chips, 1=3 chips, …

9.2.2.36 QE-Selector

Void.

9.2.2.37 RACH Slot Format

IE/Group Name	Presence	Range	IE type and reference	Semantics description
RACH Slot Format			ENUMERATED(0..3, ...)	See ref. [7].

9.2.2.38 RACH sub Channel numbers

IE/Group Name	Presence	Range	IE type and reference	Semantics description
RACH Sub Channel Numbers			BIT STRING (12)	Bit 0=Sub Channel Number 0 Bit 1=Sub Channel Number 1 … Bit 11=Sub Channel Number 11

9.2.2.39 RL Set ID

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
RL Set ID			INTEGER (0..31)	

9.2.2.39A Received total wide band power

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Received total wide band power			INTEGER(0..621)	According to mapping in [22].

9.2.2.40 S-Field Length

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
S Field Length			ENUMERATED (1, 2,…)	

9.2.2.41 Scrambling Code Change

Void.

9.2.2.42   Scrambling Code Number

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Scrambling Code Word Number			INTEGER (0..15)	Identification of scrambling code see ref. [9].

9.2.2.43   Secondary CCPCH Slot Format

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Secondary CCPCH Slot Format			INTEGER(0..17,…)	

9.2.2.44   SSDT Cell Identity

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
SSDT Cell Identity			ENUMERATED (a, b.., h)	

9.2.2.44A   SSDT Cell Identity for EDSCHPC

The SSDT Cell Identity for EDSCHPC is a temporary ID for enhanced DSCH power control.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
SSDT Cell Identity for EDSCHPC			SSDT Cell Identity 9.2.2.44	

9.2.2.45   SSDT Cell ID Length

The SSDT Cell ID Length parameter shows the length of the SSDT Cell ID.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Cell ID Length			ENUMERATED(Short, Medium, Long)	

9.2.2.46   SSDT Support Indicator

The SSDT Support Indicator indicates whether a RL supports SSDT or not.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
SSDT Support Indicator			ENUMERATED (SSDT Supported, SSDT not supported).	

9.2.2.47 SSDT Indication

The SSDT Indication indicates whether SSDT is in use by the UE or not.

IE/Group name	Presence	Range	IE type and reference	Semantics description
SSDT Indication			ENUMERATED(SSDT Active in the UE, SSDT not Active in the UE)	

9.2.2.48 STTD Indicator

Indicates if STTD shall be active or not.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
STTD Indicator			ENUMERATED(active, inactive)	

9.2.2.49 T Cell

Timing delay used for defining start of SCH, CPICH and the DL scrambling code(s) in a cell relative BFN. Resolution 256 chips.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
T Cell			Enumerated (0 , 1, ..,9)	0: 0 chip 1: 256 chip .. 9: 2304 chip [17]

9.2.2.49A TFCI2 Bearer Information Response

The *TFCI2 Bearer Information Response* IE provides information for TFCI2 bearer that have been established or modified.

IE/Group Name	Presence	Range	IE type and reference	Semantics descriptions	Criticality	Assigned Criticality
Binding ID	M		9.2.1.4		-	
Transport Layer Address	M		9.2.1.63		-	

9.2.2.50 TFCI signalling mode

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
TFCI signalling option	M		ENUMERATED (Normal, Split)	'Normal' : meaning no split in the TFCI field (either 'Logical' or 'Hard') '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	This IE is only present if 'TFCI signalling option' = 'split'
SplitType	This IE is only present if 'Split type' = 'Logical'

9.2.2.51 TGD

Void.

9.2.2.52 TGL

Void.

9.2.2.53 Transmit Diversity Indicator

The Transmit Diversity Indicator indicates whether transmit diversity shall be active or not.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Transmit Diversity Indicator			ENUMERATED(active, inactive)	

9.2.2.53A Transmission Gap Pattern Sequence Information

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Transmission gap pattern Sequence Information		1 to <MaxTGPS>		
>TGPSI Identifier	M		Integer(1..<MaxTGPS>)	Transmission Gap Pattern Sequence Identifier Establish a reference to the compressed mode pattern sequence. Up to <MaxTGPS> simultaneous compressed mode pattern sequences can be used.
>TGSN	M		Integer (0..14)	Transmission Gap Starting Slot Number The slot number of the first transmission gap slot within the TGCFN.
>TGL1	M		Integer(1..14)	The length of the first Transmission Gap within the transmission gap pattern expressed in number of slots.
>TGL2	O		Integer (1..14)	The length of the second Transmission Gap within the transmission gap pattern. If omitted, then TGL2=TGL1.
>TGD	M		Integer (0, 15.. 269)	Transmission gap distance indicates the number of slots between the starting slots of two consecutive transmission gaps within a transmission gap pattern. If there is only one transmission gap in the transmission gap pattern, this parameter shall be set to 0 (0 =undefined).
>TGPL1	M		Integer (1..144,…)	The duration of transmission gap pattern 1 in frames.
>TGPL2	O		Integer (1..144,…)	The duration of transmission gap pattern 2 in frames. If omitted, then TGPL2=TGPL1.
>UL/DL mode	M		Enumerated (UL only, DL only, UL/DL)	Defines whether only DL, only UL, or combined UL/DL compressed mode is used.
>Downlink compressed mode method	C-DL		Enumerated (puncturing, SF/2, higher layer scheduling, …)	Method for generating downlink compressed mode gap None means that compressed mode pattern is stopped.
>Uplink compressed mode method	C-UL		Enumerated (SF/2, higher layer scheduling, …)	Method for generating uplink compressed mode gap.
>Downlink frame type	M		Enumerated (A, B,…)	Defines if frame structure type 'A' or 'B' shall be used in downlink compressed mode.
>DeltaSIR1	M		Integer (0..30)	Delta in UL 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) Step 0.1 dB, Range 0-3dB
>DeltaSIRafter1	M		Integer	Delta in UL SIR target value to

			(0..30)	be set in the Node B one frame after the frame containing the start of the first transmission gap in the transmission gap pattern,. Step 0.1 dB, Range 0-3dB
>DeltaSIR2	O		Integer (0..30)	Delta in UL SIR target value to be set in the Node B during the frame containing the start of the second transmission gap in the transmission gap pattern (without including the effect of the bit-rate increase) When omitted, DeltaSIR2 = DeltaSIR1. Step 0.1 dB, Range 0-3dB
>DeltaSIRafter2	O		Integer (0..30)	Delta in UL SIR target value to be set in the Node B one frame after the frame containing the start of the second transmission gap in the transmission gap pattern. When omitted, DeltaSIRafter2 = DeltaSIRafter1. Step 0.1 dB, Range 0-3dB

Condition	Explanation
C-UL	This information element is only sent when the value of the "UL/DL mode" IE is "UL only" or "UL/DL".
C-DL	This information element is only sent when the value of the "UL/DL mode" IE is "DL only" or "UL/DL".

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

9.2.2.53B Transmission Gap Pattern Sequence Code Information

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

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

9.2.2.54 UL/DL compressed mode selection:

Void.

9.2.2.55 UL delta SIR

Void.

9.2.2.56 UL delta SIR after

Void.

9.2.2.57 UL DPCCH Slot Format

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
UL DPCCH slot format			INTEGER (0..5,…)	

9.2.2.58 UL SIR

The UL SIR indicates a received UL SIR.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
UL SIR			ENUMERATED (-8.2 .. 17.3)	Step 0.1 dB

9.2.2.59 UL Scrambling Code

The UL Scrambling Code is the scrambling code used by UE. Every UE has its specific UL Scrambling Code.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
UL scrambling code number	M		INTEGER (0.. 2^{24}-1)	
UL scrambling code length	M		ENUMERATED(Short, Long)	

9.2.2.60 UL Capacity Credit

Void

9.2.3 TDD specific Parameters

9.2.3.1 Block STTD Indicator

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

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

9.2.3.2 Burst Type

Void.

9.2.3.3 CCTrCH ID

The CCTrCH ID identifies unambiguously a CCTrCH inside a Radio Link.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
CCTrCH ID			INTEGER (0..15)	

9.2.3.4 Cell Parameter ID

The Cell Parameter ID identifies unambiguously the Code Groups, Scrambling Codes, Midambles and Toffset (see ref. [20]).

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Cell Parameter ID			INTEGER (0..127,…)	

9.2.3.4A Constant Value

The Constant Value is the power margin used by a UE to set the proper uplink power for a DCH, USCH, or a RACH.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Constant Value			INTEGER (-10...10,…)	Unit dB Granularity 1 dB.

9.2.3.4B DL Timeslot ISCP

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
DL Timeslot ISCP			INTEGER (0..91)	According to mapping in ref. [5].

9.2.3.4C DCH TDD Information

The *DCH TDD Information* IE provides information for DCHs to be established.

IE/Group Name	Presence	Range	IE type and reference	Semantics descriptions	Criticality	Assigned Criticality
DCH TDD Information		*1 to <maxnoof DCHs>*			–	
>Payload CRC Presence Indicator	M		9.2.1.49		–	
>UL FP mode	M		9.2.1.66		–	
>ToAWS	M		9.2.1.61		–	
>ToAWE	M		9.2.1.60		–	
>DCH Specific Info		*1..<maxno ofDCHs>*			–	
>>DCH ID	M		9.2.1.20		–	
>>CCTrCH ID	M		9.2.3.3	UL CCTrCH in which the DCH is mapped	–	
>>CCTrCH ID	M		9.2.3.3	DL CCTrCH in which the DCH is mapped	–	
>>Transport Format Set	M		9.2.1.59	For UL	–	
>>Transport Format Set	M		9.2.1.59	For DL	–	
>>Allocation/Retention Priority	M		9.2.1.1A		–	
>>Frame Handling Priority	M		9.2.1.30		–	
>>QE-Selector	C-CoorDCH		9.2.1.50A		–	

Condition	Explanation
CoorDCH	This IE is present only this DCH is part of a set of coordinated DCHs (number of instances of DCH Specific Info is greater than 1)

Range bound	Explanation
MaxnoofDCHs	Maximum number of DCHs for one UE

9.2.3.4D   DCHs TDD to Modify

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

IE/Group Name	Presence	Range	IE type and reference	Semantics descriptions	Criticality	Assigned Criticality
DCHs TDD to Modify		1..<maxnoofDCHs>			GLOBAL	reject
>UL FP Mode	O		9.2.1.66		–	
>ToAWS	O		9.2.1.61		–	
>ToAWE	O		9.2.1.60		–	
>Transport Bearer Request Indicator	M		9.2.1.62A		–	
>DCH Specific Info		1..<maxnoofDCHs>			–	
>>DCH ID	M		9.2.1.20		–	
>>CCTrCH ID	O		9.2.3.3	UL CCTrCH in which the DCH is mapped.	–	
>>CCTrCH ID	O		9.2.3.3	DL CCTrCH in which the DCH is mapped	–	
>>Transport Format Set	O		9.2.1.59	For the UL.	–	
>>Transport Format Set	O		9.2.1.59	For the DL.	–	
>>Allocation/Retention Priority	O		9.2.1.1A		–	
>>Frame Handling Priority	O		9.2.1.30		–	

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

9.2.3.4E   DL Timeslot Information

The *DL Timeslot Information* IE provides information for DL Time slot to be established.

IE/Group Name	Presence	Range	IE type and reference	Semantics descriptions	Criticality	Assigned Criticality
DL Timeslot Information		1 ..<maxnoofDLts>			–	
>Time Slot	M		9.2.3.23		–	
>Midamble Shift and Burst Type	M		9.2.3.7		–	
>TFCI Presence	M		9.2.1.57		–	
>DL Code Information	M		TDD DL Code Information 9.2.3.19B		–	

Range bound	Explanation
MaxnoofDLts	Maximum number of Downlink time slots per Radio Link

9.2.3.4F   DL Time Slot ISCP Info

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

IE/Group Name	Presence	Range	IE type and reference	Semantics descriptions	Criticality	Assigned Criticality
DL Time Slot ISCP Info		*1 .. <maxnoofDLts>*			–	
>Time Slot	M		9.2.3.23		–	
>DL Timeslot ISCP	M		9.2.3.4B		–	

Range bound	Explanation
MaxnoofDLts	Maximum number of Downlink time slots per Radio Link for 3.84Mcps TDD.

9.2.3.4G   Cell Sync Burst Code

The *Cell Sync Burst Code* IE indicates which Code is used for a given Cell Sync Burst.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Cell Sync Burst Code			INTEGER (0..7,..)	

9.2.3.4H   Cell Sync Burst Code Shift

The *Cell Sync Burst Code Shift* IE indicates the number of code shifts used for a given Cell Sync Burst.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Cell Sync Burst Code Shift			INTEGER (0..7)	

9.2.3.4I   CSB Measurement ID

The *Cell Sync Burst Measurement ID* IE uniquely identifies any cell sync burst measurement per Node B - control port.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
CSB Measurement ID			Integer(0 .. 65535)	

9.2.3.4J   Cell Sync Burst Repetition Period

The *Cell Sync Burst Repetition Period* IE represents the number of consecutive Radio Frames after which the cell sync burst transmission/measurement is repeated. This means that if the Time Slot K is assigned to the cell sync burst transmission/measurements in the Radio Frame J, the cell sync burst transmission/measurement is also in all the Radio Frames $J+n*Repetition\ Period$.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Cell Sync Burst Repetition Period			INTEGER (0..4095)	

9.2.3.4K   Cell Sync Burst SIR

Indicates the Signal to Interference Ratio of the cell sync burst measurement according definition in [5].

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Cell Sync Burst SIR			INTEGER (0..31)	According to mapping in [23]

9.2.3.4L   Cell Sync Burst Timing

The *Cell sync burst timing* IE defines the time of start (defined by the first detected path in time) of the cell sync burst of a neighbouring cell see [5].

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Cell Sync Burst Timing			CHOICE INTEGER (0..255) or INTEGER (0..1048575)	According to mapping in [23]

9.2.3.4M   Cell Sync Burst Timing Threshold

The *Cell Sync Burst Timing Threshold* IE defines the threshold that shall trigger a Cell Synchronisation Report message.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Cell Sync Burst Timing Threshold			INTEGER (0..254)	0: 0 chips 1: 0.125 chips 2: 0.250 chips … 254: 31.75 chips

9.2.3.4N   CSB Transmission ID

The *Cell Sync Burst Transmisson ID* IE uniquely identifies any cell sync burst transmission per Node B-control port.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
CSB Transmission ID			Integer(0 .. 65535)	

9.2.3.4O   DL Timeslot Information LCR

The *DL Timeslot Information LCR* IE provides information for DL Time slot to be established.

IE/Group Name	Presence	Range	IE type and reference	Semantics descriptions	Criticality	Assigned Criticality
DL Timeslot Information LCR		1 .. <Maxnoof DLtsLCR>			–	
>Time Slot LCR	M		9.2.3.24A		–	
>Midamble Shift LCR	M		9.2.3.7A		–	
>TFCI Presence	M		9.2.1.57		–	
>DL Code Information	M		TDD DL Code Information LCR 9.2.3.19C		–	

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

9.2.3.5 DPCH ID

The DPCH ID identifies unambiguously a DPCH inside a Radio Link.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
DPCH ID			INTEGER (0..239)	

9.2.3.5A DSCH TDD Information

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

IE/Group Name	Presence	Range	IE type and reference	Semantics descriptions	Criticality	Assigned Criticality
DSCH TDD Information		1 to <Maxnoof DSCHs>			–	
>DSCH ID	M		9.2.1.27		–	
>CCTrCH ID	M		9.2.3.2	DL CCTrCH in which the DSCH is mapped	–	
>Transport Format Set	M		9.2.1.59	For DSCH	–	
>Allocation/Retention Priority	M		9.2.1.1A		–	
>Frame handling Priority	M		9.2.1.30		–	
>ToAWS	M		9.2.1.61		–	
>ToAWE	M		9.2.1.60		–	

Range bound	Explanation
MaxnoofDSCHs	Maximum number of DSCH for one UE

9.2.3.5B DwPCH Power

DwPCH Power is the power that shall be used for transmitting the DwPCH in a cell.

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

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 descriptions	Criticality	Assigned Criticality
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.

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

9.2.3.6   Max PRACH Midamble shift

Indicates the maximum number of Midamble shifts to be used in a cell.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Max PRACH Midamble Shifts			ENUMERATED (4, 8,…)	

9.2.3.7   Midamble shift and burst type

This information element indicates burst type and midamble allocation.

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

Three different midamble allocation schemes exist:

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

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

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
CHOICE Burst Type				
>"Type 1"				
>>Midamble Allocation Mode	M		Enumerated (Default midamble, Common midamble, UE specific midamble)	
>> Midamble Configuration Burst Type 1 And 3	M		Integer(4, 8, 16)	As defined in [19]
>>Midamble Shift	C-UE		Integer(0..15)	
>"Type 2"				
>>Midamble Allocation Mode	M		Enumerated (Default midamble, Common midamble, UE specific midamble)	
>> Midamble Configuration Burst Type 2	M		Integer(3,6)	As defined in [19]
>>Midamble Shift	C-UE		INTEGER (0..5)	
>"Type 3"				UL only
>>Midamble Allocation Mode	M		Enumerated (Default midamble, UE specific midamble)	
>> Midamble Configuration Burst Type 1 And 3	M		Integer(4, 8, 16)	As defined in [19]
>>Midamble Shift	C-UE		Integer(0..15)	
> "..."				

Condition	Explanation
C-UE	This information element is only sent when the value of the "Midamble Allocation Mode" IE is "UE-specific midamble".

9.2.3.7A   Midamble shift LCR

This information element indicates midamble allocation in 1.28Mcps TDD.

IE/Group name	Presence	Range	IE type and reference	Semantics description
Midamble Allocation Mode	M		Enumerated (Default midamble, Common midamble, UE specific midamble)	
Midamble Shift LCR	C-UE		Integer(0..15)	

Condition	Explanation
UE	This information element is only sent when the value of the "Midamble Allocation Mode" IE is "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 sync bursts shall be transmitted or the cell sync bursts from the neighbouring cells shall be measured.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
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

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

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

9.2.3.10 PDSCH ID

The PDSCH ID identifies unambiguously a PDSCH inside a cell.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
PDSCH ID			INTEGER (0..255)	

9.2.3.11 PDSCH Set ID

The PDSCH Set Id identifies unambiguously a PDSCH Set inside a cell.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
PDSCH Set ID			INTEGER (0..255)	See ref. [6]

9.2.3.12 PUSCH ID

The PUSCH ID identifies unambiguously a PUSCH inside a cell.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
PUSCH ID			INTEGER (0..255)	

9.2.3.13 PUSCH Set ID

The PUSCH Set ID identifies unambiguously a PUSCH Set inside a cell.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
PUSCH Set ID			INTEGER (0..255)	See ref. [6]

9.2.3.14 PRACH Midamble

The PRACH Midamble indicates if only the Basic Midamble Sequence or also the time-inverted Midamble Sequence is used.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
PRACH Midamble			ENUMERATED (Inverted, Direct)	

9.2.3.14A Reference Clock availability

The *Reference Clock availability* IE is used to indicate the presence and operating of a Reference Clock connected to a TDD cell for cell synchronisation purpose.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Reference Clock availability			ENUMERATED(Available, Not Available)	

9.2.3.14B   Reference SFN offset

The *Reference SFN offset* IE indicates the number of frames the reference SFN shall be shifted compared to the SFN derived from the synchronisation port.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Reference SFN offset			INTEGER(0 .. 255)	

9.2.3.15   Repetition Length

The Repetition Length represents the number of consecutive Radio Frames inside a Repetition Period in which the same Time Slot is assigned to the same Physical Channel see ref. [18].

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Repetition Length			INTEGER(1..63)	

9.2.3.16   Repetition Period

The Repetition Period represents the number of consecutive Radio Frames after which the same assignment scheme of Time Slots to a Physical Channel is repeated. This means that if the Time Slot *K* is assigned to a physical channel in the Radio Frame *J*, it is assigned to the same physical channel also in all the Radio Frames *J+n*Repetition Period* (where *n* is an integer) see ref. [18].

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Repetition Period			ENUMERATED(1, 2, 4, 8, 16, 32, 64)	

9.2.3.17   SCH Time Slot

The *SCH Time Slot* IE represents the first time slot (k) of a pair of time slots inside a Radio Frame that shall be assigned to the Physical Channel SCH. The *SCH Time Slot* IE is only applicable if the value of *Sync Case* IE is Case 2 since in this case the SCH is allocated in TS#k and TS#k+8.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
SCH Time Slot			INTEGER(0..6)	

9.2.3.18   Sync case

The SCH and PCCPCH are mapped on one or two downlink slots per frame. There are two cases of SCH and PCCPCH allocation as follows:

Case 1)   SCH and PCCPCH allocated in a single TS#k

Case 2)   SCH allocated in two TS: TS#k and TS#k+8
           PCCPCH allocated in TS#k

[1.28Mcps TDD - There is no Sync Case indication needed for 1.28Mcps TDD. If the *Sync Case* IE must be included in a message from CRNC to Node B used for 1.28Mcps TDD, the CRNC should indicate Sync Case 1 and the Node B shall ignore it.]

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Sync Case			Integer (1..2,…)	

9.2.3.18A   Special Burst Scheduling

The number of frames between special burst transmissions during DTX.

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

9.2.3.18B   SYNC_DL Code ID

The SYNC_DL Code ID identifies the SYNC_DL Code which used by DwPCH.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
SYNC_DL Code ID			INTEGER (1..32,...)	

9.2.3.18C   Sync Frame number

The *Sync Frame Number* IE indicates the number of the Sync frame per Cycle Length where the cell sync bursts shall be transmitted or the cell sync bursts from the neighbouring cells shall be measured.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Sync Frame number			INTEGER (1..10)	

9.2.3.18D   Synchronisation Report Characteristics

The *Synchronisation Report Characteristics* IE defines how the reporting on measured cell sync bursts shall be performed

Different methods shall apply for the measured cell sync burst reports. 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				
>Synchronisation Report characteristics type	M		ENUMERATED (Frame related, SFN	

			period related, Cycle length related, Threshold exceeding, ...)	
>Threshold exceeding	C-Threshold exceeding			Applies only to the Steady State Phase
>>Cell Sync Burst Threshold Information		1 .. <maxnoofCellSyncBursts>		
>>>Sync Frame number to receive	M		Sync Frame number 9.2.3.18C	
>>>Cell Sync Burst Information		1..<maxnoofreceptionsperSyncFrame>		
>>>>Cell Sync Burst Code	M		9.2.3.4G	
>>>>Cell Sync Burst Code shift	M		9.2.3.4H	
>>>>Cell Sync Burst Arrival Time	O		Cell Sync Burst Timing 9.2.3.4L	
>>>>Cell Sync Burst Timing Threshold	O		9.2.3.4M	

Range bound	Explanation
maxnoofCellSyncBursts	Maximum number of cell sync burst per cycle
maxnoofreceptionsperSyncFrame	Maximum number of cell sync burst receptions per Sync Frame

9.2.3.18E   Synchronisation Report Type

The *Synchronisationt Report Type* IE represents the individual types of synchronisation reports that shall apply within the individual synchronisation phases. (see [17]).

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Synchronisation Report Type			ENUMERATED (Initial Phase, Steady-State Phase, Late-Entrant Cell, ...)	

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 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
CHOICE *SF*				
>SF=1			Enumerated(QPSK, 8PSK,...)	Modulation options in contrast to 3.84Mcps TDD mode
>Otherwise				
>>TDD Channelisation Code			ENUMERATED ((1/1), (2/1), (2/2), (4/1),…(4/4), (8/1), (8/8), (16/1)… (16/16) ,…)	

CHOICE SF	Condition under which the given SF is chosen
SF =1	"spreading factor" is set to 1
otherwise	"spreading factor" is set to a value distinct from 1

9.2.3.19A   TDD DPCH Offset

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
TDD DPCH Offset			CHOICE INTEGER (0..63) or INTEGER (0..255)	

9.2.3.19B   TDD DL Code Information

The *TDD DL Code Information* IE provides DL Code information for the RL.

IE/Group Name	Presence	Range	IE type and reference	Semantics descriptions	Criticality	Assigned Criticality
TDD DL Code Information		1 .. <maxnoOf DPCH>			–	
>DPCH ID	M		9.2.3.5		–	
>TDD Channelisation Code	M		9.2.3.19		–	

Range bound	Explanation
maxnoOfDPCH	Maximum number of DPCH in one CCTrCH

9.2.3.19C   TDD DL Code Information LCR

The *TDD DL Code Information LCR* IE provides DL Code information for the RL.

IE/Group Name	Presence	Range	IE type and reference	Semantics descriptions	Criticality	Assigned Criticality
TDD DL Code Information LCR		1 .. <maxnoOf DPCHLCR >			–	
>DPCH ID	M		9.2.3.5		–	
>TDD Channelisation Code LCR	M		9.2.3.19a		–	

Range bound	Explanation
maxnoOfDPCHLCR	Maximum number of DPCH in one CCTrCH for 1.28Mcps TDD

9.2.3.20   TDD Physical Channel Offset

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
TDD Physical Channel Offset			INTEGER (0..63)	

9.2.3.21   TDD TPC DL step size

This parameter indicates step size for the DL power adjustment.

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

9.2.3.21A   TDD UL Code Information

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

IE/Group Name	Presence	Range	IE type and reference	Semantics descriptions	Criticality	Assigned Criticality
TDD UL Code Information		1 .. <maxnoOfDPCH>			–	
>DPCH ID	M		9.2.3.5		–	
>TDD Channelisation Code	M		9.2.3.19		–	

Range bound	Explanation
MaxnoOfDPCH	Maximum number of DPCH in one CCTrCH

9.2.3.21B   TDD UL Code Information LCR

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

IE/Group Name	Presence	Range	IE type and reference	Semantics descriptions	Criticality	Assigned Criticality
TDD UL Code Information LCR		1 .. <maxnoOfDPCHLCR>			–	
>DPCH ID	M		9.2.3.5		–	
>TDD Channelisation Code LCR	M		9.2.3.19a		–	

Range bound	Explanation
MaxnoOfDPCHLCR	Maximum number of DPCH in one CCTrCH for 1.28Mcps TDD.

9.2.3.22   TFCI Coding

The TFCI Coding describes the way how the TFCI bits are coded. By default 1 TFCI bit is coded with 4 bits, 2 TFCI bits are coded with 8 bits, 3-5 TFCI bits are coded with 16 bits and 6-10 TFCI bits are coded with 32 bits.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
TFCI Coding			Enumerated (4, 8, 16, 32,…)	

9.2.3.22a   Timing Adjustment value

The *Timing Adjustment value* IE indicates the timing correction within a Frame. Type 1 is used for the initial phase of Node B synchronisation. Type 2 is used for the steady-state phase of Node B synchronisation.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Timing Adjustment value			CHOICE INTEGER (0..255) or INTEGER (0..1048575)	According to mapping in [23]

9.2.3.22A   Timing Advance Applied

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

For 1.28Mcps TDD this IE must be set "No"

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Timing Advance Applied			ENUMERAT ED (Yes, No)	

9.2.3.23   Time Slot

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Time Slot			INTEGER (0..14)	

9.2.3.24   Time Slot Direction

This parameter indicates whether the TS in the cell is used in Uplink or Downlink direction.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Time Slot Direction			Enumerated (UL, DL,…)	

9.2.3.24A   Time Slot LCR

The Time Slot LCR represents the minimum time interval inside a Radio Frame that can be assigned to a Physical Channel in 1.28Mcps TDD.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Time Slot LCR			INTEGER (0..6)	

9.2.3.25   Time Slot Status

This parameter indicates whether the TS in the cell is active or not.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Time Slot Status			Enumerated (active, notActive,…)	

9.2.3.26   Transmission Diversity Applied

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

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

9.2.3.26A UL Timeslot ISCP

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
UL Timeslot ISCP			INTEGER (0..127)	According to mapping in [23].

9.2.3.26B UL PhysCH SF Variation

Indicates whether variation of SF in UL is supported by Radio Link or not.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
UL PhysCH SF Variation			ENUMERAT ED (SF_Variatio n_supported, SF_Variation _NOT_supp orted)	

9.2.3.26C UL Timeslot Information

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

IE/Group Name	Presence	Range	IE type and reference	Semantics descriptions	Criticality	Assigned Criticality
UL Timeslot Information		*1 .. <maxn oofULts >*			–	
>Time Slot	M		9.2.3.23		–	
>Midamble Shift and Burst Type	M		9.2.3.7		–	
>TFCI Presence	M		9.2.1.57		–	
> UL Code Information	M		TDD UL Code Information 9.2.3.21A			

Range bound	Explanation
MaxnoofULts	Maximum number of Uplink time slots per Radio Link

9.2.3.26D UL Time Slot ISCP Info

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description s	Criticality	Assigned Criticality
UL Time Slot ISCP Info		*1 .. <maxnoofUL ts>*				
>Time Slot	M		9.2.3.23			
>UL Timeslot ISCP	M		9.2.3.26A			

Range bound	Explanation
MaxnoofULts	Maximum number of Uplink time slots per Radio Link

9.2.3.26E   UL Timeslot Information LCR

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

IE/Group Name	Presence	Range	IE type and reference	Semantics descriptions	Criticality	Assigned Criticality
UL Timeslot Information LCR		1 .. <Maxn oofULts LCR>			–	
>Time Slot LCR	M		9.2.3.24A		–	
>Midamble Shift LCR	M		9.2.3.7A		–	
>TFCI Presence	M		9.2.1.57		–	
> UL Code Information	M		TDD UL Code Information LCR 9.2.3.21B			

Range bound	Explanation
MaxnoofULtsLCR	Maximum number of Uplink time slots per Radio Link for 1.28Mcps TDD.

9.2.3.26F   UL Time Slot ISCP Info LCR

The *UL Time Slot ISCP Info LCR* IE provides information for UL Interfernce level for each time slot within the Radio Link.

IE/Group Name	Presence	Range	IE type and reference	Semantics descriptions	Criticality	Assigned Criticality
UL Time Slot ISCP Info LCR		1 .. <MaxnoofUL tsLCR>			–	
>Time Slot LCR	M		9.2.3.24A		–	
>UL Timeslot ISCP	M		9.2.3.26A		–	

Range bound	Explanation
MaxnoofULtsLCR	Maximum number of Uplink time slots per Radio Link for 1.28Mcps TDD

9.2.3.27   USCH ID

The USCH ID uniquely identifies a USCH within a Node B Communication Context.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
USCH ID			INTEGER (0..255)	

9.2.3.28   USCH Information

The *USCH Information* IE provides information for USCHs to be established.

IE/Group Name	Presence	Range	IE type and reference	Semantics descriptions	Criticality	Assigned Criticality
USCH Information		*1 to <Maxnoof USCHs>*			–	
>USCH ID	M		9.2.3.27		–	
>CCTrCH ID	M		9.2.3.3	UL CCTrCH in which the USCH is mapped	–	
>Transport Format Set	M		9.2.1.59	For USCH	–	
>Allocation/Retention Priority	M		9.2.1.1A		–	

Range bound	Explanation
MaxnoofUSCHs	Maximum number of USCH for one UE

9.2.3.29   USCH Information Response

The *USCH Information Response* IE provides information for USCHs that have been established or modified.

IE/Group Name	Presence	Range	IE type and reference	Semantics descriptions	Criticality	Assigned Criticality
USCH Information Response		*1 .. <Maxnoof USCHs>*			–	
>USCH ID	M		9.2.3.27		–	
>Binding ID	O		9.2.1.4		–	
>Transport Layer Address	O		9.2.1.63		–	

Range bound	Explanation
MaxnoofUSCHs	Maximum number of USCHs for one UE

9.3 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.
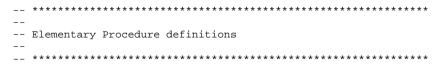
9.3.1 Usage of Private Message mechanism for non-standard use

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,
```

ETSI

```
        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,
```

ETSI

```
        id-radioLinkPreemption,
        id-radioLinkRestoration,
        id-radioLinkSetup,
        id-reset,
        id-resourceStatusIndication,
        id-synchronisationAdjustment,
        id-synchronisedRadioLinkReconfigurationCancellation,
        id-synchronisedRadioLinkReconfigurationCommit,
        id-synchronisedRadioLinkReconfigurationPreparation,
        id-systemInformationUpdate,
        id-unblockResource,
        id-unSynchronisedRadioLinkReconfiguration
FROM NBAP-Constants;

-- **************************************************************
--
-- Interface Elementary Procedure Class
--
-- **************************************************************

NBAP-ELEMENTARY-PROCEDURE ::= CLASS {
    &InitiatingMessage                      ,
    &SuccessfulOutcome                      OPTIONAL,
    &UnsuccessfulOutcome                    OPTIONAL,
    &Outcome                                OPTIONAL,
    &messageDiscriminator                   MessageDiscriminator,
    &procedureID                            ProcedureID UNIQUE,
    &criticality                            Criticality DEFAULT ignore
}

WITH SYNTAX {
    INITIATING MESSAGE                      &InitiatingMessage
    [SUCCESSFUL OUTCOME                     &SuccessfulOutcome]
    [UNSUCCESSFUL OUTCOME                   &UnsuccessfulOutcome]
    [OUTCOME                                &Outcome]
    MESSAGE DISCRIMINATOR                   &messageDiscriminator
    PROCEDURE ID                            &procedureID
    [CRITICALITY                            &criticality]
}

-- **************************************************************
--
-- Interface PDU Definition
--
-- **************************************************************

NBAP-PDU ::= CHOICE {
    initiatingMessage       InitiatingMessage,
    succesfulOutcome        SuccessfulOutcome,
    unsuccesfulOutcome      UnsuccessfulOutcome,
    outcome                 Outcome,
    ...
}
```

```
InitiatingMessage ::= SEQUENCE {
    procedureID             NBAP-ELEMENTARY-PROCEDURE.&procedureID  ({NBAP-ELEMENTARY-PROCEDURES}),
    criticality             NBAP-ELEMENTARY-PROCEDURE.&criticality  ({NBAP-ELEMENTARY-PROCEDURES}{@procedureID}),
    messageDiscriminator    NBAP-ELEMENTARY-PROCEDURE.&messageDiscriminator({NBAP-ELEMENTARY-PROCEDURES}{@procedureID}),
    transactionID           TransactionID,
    value                   NBAP-ELEMENTARY-PROCEDURE.&InitiatingMessage({NBAP-ELEMENTARY-PROCEDURES}{@procedureID})
}

SuccessfulOutcome ::= SEQUENCE {
    procedureID             NBAP-ELEMENTARY-PROCEDURE.&procedureID  ({NBAP-ELEMENTARY-PROCEDURES}),
    criticality             NBAP-ELEMENTARY-PROCEDURE.&criticality  ({NBAP-ELEMENTARY-PROCEDURES}{@procedureID}),
    messageDiscriminator    NBAP-ELEMENTARY-PROCEDURE.&messageDiscriminator({NBAP-ELEMENTARY-PROCEDURES}{@procedureID}),
    transactionID           TransactionID,
    value                   NBAP-ELEMENTARY-PROCEDURE.&SuccessfulOutcome({NBAP-ELEMENTARY-PROCEDURES}{@procedureID})
}

UnsuccessfulOutcome ::= SEQUENCE {
    procedureID             NBAP-ELEMENTARY-PROCEDURE.&procedureID  ({NBAP-ELEMENTARY-PROCEDURES}),
    criticality             NBAP-ELEMENTARY-PROCEDURE.&criticality  ({NBAP-ELEMENTARY-PROCEDURES}{@procedureID}),
    messageDiscriminator    NBAP-ELEMENTARY-PROCEDURE.&messageDiscriminator({NBAP-ELEMENTARY-PROCEDURES}{@procedureID}),
    transactionID           TransactionID,
    value                   NBAP-ELEMENTARY-PROCEDURE.&UnsuccessfulOutcome({NBAP-ELEMENTARY-PROCEDURES}{@procedureID})
}

Outcome ::= SEQUENCE {
    procedureID             NBAP-ELEMENTARY-PROCEDURE.&procedureID  ({NBAP-ELEMENTARY-PROCEDURES}),
    criticality             NBAP-ELEMENTARY-PROCEDURE.&criticality  ({NBAP-ELEMENTARY-PROCEDURES}{@procedureID}),
    messageDiscriminator    NBAP-ELEMENTARY-PROCEDURE.&messageDiscriminator({NBAP-ELEMENTARY-PROCEDURES}{@procedureID}),
    transactionID           TransactionID,
    value                   NBAP-ELEMENTARY-PROCEDURE.&Outcome  ({NBAP-ELEMENTARY-PROCEDURES}{@procedureID})
}

-- **************************************************************
--
-- Interface Elementary Procedure List
--
-- **************************************************************

NBAP-ELEMENTARY-PROCEDURES NBAP-ELEMENTARY-PROCEDURE ::= {
    NBAP-ELEMENTARY-PROCEDURES-CLASS-1          |
    NBAP-ELEMENTARY-PROCEDURES-CLASS-2          ,
    ...
}

NBAP-ELEMENTARY-PROCEDURES-CLASS-1 NBAP-ELEMENTARY-PROCEDURE ::= {
    cellSetupFDD                                |
    cellSetupTDD                                |
    cellReconfigurationFDD                      |
    cellReconfigurationTDD                      |
    cellDeletion                                |
    commonTransportChannelSetupFDD              |
    commonTransportChannelSetupTDD              |
```

```
    commonTransportChannelReconfigureFDD              |
    commonTransportChannelReconfigureTDD              |
    commonTransportChannelDelete                      |
    audit                                             |
    blockResource                                     |
    radioLinkSetupFDD                                 |
    radioLinkSetupTDD                                 |
    systemInformationUpdate                           |
    commonMeasurementInitiation                       |
    radioLinkAdditionFDD                              |
    radioLinkAdditionTDD                              |
    radioLinkDeletion                                 |
    reset                                             |
    synchronisedRadioLinkReconfigurationPreparationFDD |
    synchronisedRadioLinkReconfigurationPreparationTDD |
    unSynchronisedRadioLinkReconfigurationFDD         |
    unSynchronisedRadioLinkReconfigurationTDD         |
    dedicatedMeasurementInitiation                    |
    physicalSharedChannelReconfiguration             ,
    ...,
    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   dedicated
    PROCEDURE ID        { procedureCode id-physicalSharedChannelReconfiguration, ddMode tdd }
    CRITICALITY     reject
}


--*** InformationExchangeInitiation ***
informationExchangeInitiation NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      InformationExchangeInitiationRequest
    SUCCESSFUL OUTCOME      InformationExchangeInitiationResponse
    UNSUCCESSFUL OUTCOME    InformationExchangeInitiationFailure
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID            { procedureCode id-informationExchangeInitiation,   ddMode common }
    CRITICALITY        reject
}

-- *** CellSynchronisationInitiation (TDD only) ***
cellSynchronisationInitiationTDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE  CellSynchronisationInitiationRequestTDD
    SUCCESSFUL OUTCOME  CellSynchronisationInitiationResponseTDD
    UNSUCCESSFUL OUTCOME    CellSynchronisationInitiationFailureTDD
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID        { procedureCode id-cellSynchronisationInitiation, ddMode tdd }
    CRITICALITY     reject
}

-- *** CellSynchronisationReconfiguration (TDD only) ***
cellSynchronisationReconfigurationTDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE  CellSynchronisationReconfigurationRequestTDD
    SUCCESSFUL OUTCOME  CellSynchronisationReconfigurationResponseTDD
    UNSUCCESSFUL OUTCOME    CellSynchronisationReconfigurationFailureTDD
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID        { procedureCode id-cellSynchronisationReconfiguration, ddMode tdd }
    CRITICALITY     reject
}

-- *** CellSynchronisationAdjustment (TDD only) ***
cellSynchronisationAdjustmentTDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE  CellSynchronisationAdjustmentRequestTDD
    SUCCESSFUL OUTCOME  CellSynchronisationAdjustmentResponseTDD
    UNSUCCESSFUL OUTCOME    CellSynchronisationAdjustmentFailureTDD
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID        { procedureCode id-cellSynchronisationAdjustment, ddMode tdd }
    CRITICALITY     reject
}

-- Class 2

-- *** ResourceStatusIndication ***
resourceStatusIndication NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      ResourceStatusIndication
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID            { procedureCode id-resourceStatusIndication, ddMode common }
    CRITICALITY        ignore
```

```
}

-- *** AuditRequired ***
auditRequired NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      AuditRequiredIndication
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID            { procedureCode id-auditRequired, ddMode common }
    CRITICALITY         ignore
}

-- *** CommonMeasurementReport ***
commonMeasurementReport NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      CommonMeasurementReport
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID            { procedureCode id-commonMeasurementReport, ddMode common }
    CRITICALITY         ignore
}

-- *** CommonMeasurementTermination ***
commonMeasurementTermination NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      CommonMeasurementTerminationRequest
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID            { procedureCode id-commonMeasurementTermination, ddMode common }
    CRITICALITY         ignore
}

-- *** CommonMeasurementFailure ***
commonMeasurementFailure NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      CommonMeasurementFailureIndication
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID            { procedureCode id-commonMeasurementFailure, ddMode common }
    CRITICALITY         ignore
}

-- *** SynchronisedRadioLinkReconfirurationCommit ***
synchronisedRadioLinkReconfigurationCommit NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      RadioLinkReconfigurationCommit
    MESSAGE DISCRIMINATOR   dedicated
    PROCEDURE ID            { procedureCode id-synchronisedRadioLinkReconfigurationCommit, ddMode common }
    CRITICALITY         ignore
}

-- *** SynchronisedRadioReconfigurationCancellation ***
synchronisedRadioLinkReconfigurationCancellation NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      RadioLinkReconfigurationCancel
    MESSAGE DISCRIMINATOR   dedicated
    PROCEDURE ID            { procedureCode id-synchronisedRadioLinkReconfigurationCancellation, ddMode common }
    CRITICALITY         ignore
}

-- *** RadioLinkFailure ***
radioLinkFailure NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      RadioLinkFailureIndication
```

```
    MESSAGE DISCRIMINATOR   dedicated
    PROCEDURE ID            { procedureCode id-radioLinkFailure, ddMode common }
    CRITICALITY         ignore
}

-- *** RadioLinkPreemption ***
radioLinkPreemption NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE  RadioLinkPreemptionRequiredIndication
    MESSAGE DISCRIMINATOR   dedicated
    PROCEDURE ID        { procedureCode id-radioLinkPreemption, ddMode common }
    CRITICALITY     ignore
}

-- *** RadioLinkRestoration ***
radioLinkRestoration NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      RadioLinkRestoreIndication
    MESSAGE DISCRIMINATOR   dedicated
    PROCEDURE ID            { procedureCode id-radioLinkRestoration, ddMode common }
    CRITICALITY         ignore
}

-- *** DedicatedMeasurementReport ***
dedicatedMeasurementReport NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      DedicatedMeasurementReport
    MESSAGE DISCRIMINATOR   dedicated
    PROCEDURE ID            { procedureCode id-dedicatedMeasurementReport, ddMode common }
    CRITICALITY         ignore
}

-- *** DedicatedMeasurementTermination  ***
dedicatedMeasurementTermination NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      DedicatedMeasurementTerminationRequest
    MESSAGE DISCRIMINATOR   dedicated
    PROCEDURE ID            { procedureCode id-dedicatedMeasurementTermination, ddMode common }
    CRITICALITY         ignore
}

-- *** DedicatedMeasurementFailure ***
dedicatedMeasurementFailure NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      DedicatedMeasurementFailureIndication
    MESSAGE DISCRIMINATOR   dedicated
    PROCEDURE ID            { procedureCode id-dedicatedMeasurementFailure, ddMode common }
    CRITICALITY         ignore
}

-- *** DLPowerControl (FDD only) ***
downlinkPowerControlFDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      DL-PowerControlRequest
    MESSAGE DISCRIMINATOR   dedicated
    PROCEDURE ID        { procedureCode id-downlinkPowerControl, ddMode fdd }
    CRITICALITY         ignore
}
```

```
-- *** DLPowerTimeslotControl (TDD only) ***
downlinkPowerTimeslotControl NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      DL-PowerTimeslotControlRequest
    MESSAGE DISCRIMINATOR   dedicated
    PROCEDURE ID            { procedureCode id-downlinkPowerTimeslotControl, ddMode tdd }
    CRITICALITY         ignore
}

-- *** CompressedModeCommand (FDD only) ***
compressedModeCommand NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      CompressedModeCommand
    MESSAGE DISCRIMINATOR   dedicated
    PROCEDURE ID            { procedureCode id-compressedModeCommand, ddMode fdd }
    CRITICALITY         ignore
}

-- *** UnblockResourceIndication ***
unblockResource NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      UnblockResourceIndication
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID            { procedureCode id-unblockResource, ddMode common }
    CRITICALITY         ignore
}

-- *** ErrorIndication for Dedicated procedures ***
errorIndicationForDedicated NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      ErrorIndication
    MESSAGE DISCRIMINATOR   dedicated
    PROCEDURE ID            { procedureCode id-errorIndicationForDedicated, ddMode common }
    CRITICALITY         ignore
}

-- *** ErrorIndication for Common procedures ***
errorIndicationForCommon NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      ErrorIndication
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID            { procedureCode id-errorIndicationForCommon, ddMode common }
    CRITICALITY         ignore
}

-- *** CellSynchronisationReporting (TDD only) ***
cellSynchronisationReportingTDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      CellSynchronisationReportTDD
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID            { procedureCode id-cellSynchronisationReporting, ddMode tdd }
    CRITICALITY         ignore
}

-- *** CellSynchronisationTermination (TDD only) ***
cellSynchronisationTerminationTDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      CellSynchronisationTerminationRequestTDD
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID            { procedureCode id-cellSynchronisationTermination, ddMode tdd }
```

```
    CRITICALITY         ignore
}

-- *** CellSynchronisationFailure (TDD only) ***
cellSynchronisationFailureTDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      CellSynchronisationFailureIndicationTDD
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID            { procedureCode id-cellSynchronisationFailure, ddMode tdd }
    CRITICALITY         ignore
}

-- *** PrivateMessage for Dedicated procedures ***
privateMessageForDedicated NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      PrivateMessage
    MESSAGE DISCRIMINATOR   dedicated
    PROCEDURE ID            { procedureCode id-privateMessageForDedicated, ddMode common }
    CRITICALITY         ignore
}

-- *** PrivateMessage for Common procedures ***
privateMessageForCommon NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      PrivateMessage
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID            { procedureCode id-privateMessageForCommon, ddMode common }
    CRITICALITY         ignore
}

-- *** InformationReporting ***
informationReporting NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      InformationReport
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID            { procedureCode id-informationReporting, ddMode common }
    CRITICALITY         ignore
}

-- *** InformationExchangeTermination ***
informationExchangeTermination NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      InformationExchangeTerminationRequest
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID            { procedureCode id-informationExchangeTermination, ddMode common }
    CRITICALITY         ignore
}

-- *** InformationExchangeFailure ***
informationExchangeFailure NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      InformationExchangeFailureIndication
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID            { procedureCode id-informationExchangeFailure, ddMode common }
    CRITICALITY         ignore
}

END
```

9.3.3   PDU Definitions

```
-- *************************************************************
--
-- PDU definitions for NBAP.
--
-- *************************************************************

NBAP-PDU-Contents {
itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
umts-Access (20) modules (3) nbap (2) version1 (1) nbap-PDU-Contents (1) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

-- *************************************************************
--
-- IE parameter types from other modules.
--
-- *************************************************************

IMPORTS
    Active-Pattern-Sequence-Information,
    AddorDeleteIndicator,
    AICH-Power,
    AICH-TransmissionTiming,
    AllocationRetentionPriority,
    APPreambleSignature,
    APSubChannelNumber,
    AvailabilityStatus,
    BCCH-ModificationTime,
    BindingID,
    BlockingPriorityIndicator,
    BlockSTTD-Indicator,
    Cause,
    CCTrCH-ID,
    CDSubChannelNumbers,
    CellParameterID,
    CellSyncBurstAvailabilityIndicator,
    CellSyncBurstCode,
    CellSyncBurstCodeShift,
    CellSyncBurstRepetitionPeriod,
    CellSyncBurstSIR,
    CellSyncBurstTiming,
    CellSyncBurstTimingThreshold,
    CFN,
    Channel-Assignment-Indication,
    ChipOffset,
    C-ID,
```

```
Closedlooptimingadjustmentmode,
CommonChannelsCapacityConsumptionLaw,
Compressed-Mode-Deactivation-Flag,
CommonMeasurementType,
CommonMeasurementValue,
CommonMeasurementValueInformation,
CommonPhysicalChannelID,
Common-PhysicalChannel-Status-Information,
Common-TransportChannel-Status-Information,
CommonTransportChannelID,
CommonTransportChannel-InformationResponse,
CommunicationControlPortID,
ConfigurationGenerationID,
ConstantValue,
CriticalityDiagnostics,
CPCH-Allowed-Total-Rate,
CPCHScramblingCodeNumber,
CPCH-UL-DPCCH-SlotFormat,
CRNC-CommunicationContextID,
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-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,
        FrameAdjustmentValue,
        FrameHandlingPriority,
        FrameOffset,
        IB-OC-ID,
        IB-SG-DATA,
        IB-SG-POS,
        IB-SG-REP,
        IB-Type,
        IndicationType,
        InformationExchangeID,
     InformationReportCharacteristics,
     InformationType,
        InnerLoopDLPCStatus,
        IPDL-FDD-Parameters,
        IPDL-TDD-Parameters,
        IPDL-Indicator,
        LimitedPowerIncrease,
        Local-Cell-ID,
        MaxFPACH-Power,
        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,
    SFNSFN,
    SFNSFNChangeLimit,
    SFNSFNDriftRate,
    SFNSFNDriftRateQuality,
    SFNSFNQuality,
```

```
SFNSFNTimeStamp
ShutdownTimer,
SIB-Originator,
SpecialBurstScheduling,
SSDT-Cell-Identity,
SSDT-CellID-Length,
SSDT-Indication,
Start-Of-Audit-Sequence-Indicator,
STTD-Indicator,
SSDT-SupportIndicator,
SyncCase,
SYNCDlCodeId,
SyncFrameNumber,
SynchronisationReportCharacteristics,
SynchronisationReportType,
T-Cell,
T-RLFAILURE,
TDD-ChannelisationCode,
TDD-ChannelisationCodeLCR,
TDD-DL-Code-LCR-Information,
TDD-DPCHOffset,
TDD-TPC-DownlinkStepSize,
TDD-PhysicalChannelOffset,
TDD-UL-Code-LCR-Information,
TFCI2-BearerInformationResponse,
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,
UARFCN,
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
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,
```

ETSI

```
        id-Cell-InformationItem-AuditRsp,
        id-Cell-InformationItem-ResourceStatusInd,
        id-Cell-InformationList-AuditRsp,
        id-CellParameterID,
        id-CellSyncBurstTransInit-CellSyncInitiationRqstTDD,
        id-CellSyncBurstMeasureInit-CellSyncInitiationRqstTDD,
        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-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-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-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-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-DL-DPCH-LCR-InformationList-RL-SetupRqstTDD,
        id-DwPCH-LCR-Information ,
        id-DwPCH-LCR-Information-AuditRsp,
        id-DwPCH-LCR-InformationList-AuditRsp,
        id-DwPCH-LCR-Information-Cell-SetupRqstTDD,
        id-DwPCH-LCR-Information-Cell-ReconfRqstTDD,
        id-DwPCH-LCR-InformationList-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-ParametersItem-CTCH-SetupRqstTDD,
        id-FPACH-LCR-Parameters-CTCH-ReconfRqstTDD,
        id-PCCPCH-LCR-Information-Cell-SetupRqstTDD,
        id-PCH-Power-LCR-CTCH-SetupRqstTDD,
        id-PCH-Power-LCR-CTCH-ReconfRqstTDD,
        id-PICH-LCR-Parameters-CTCH-SetupRqstTDD,
        id-PICH-LCR-ParametersItem-CTCH-SetupRqstTDD,
        id-PRACH-LCR-ParameterList-CTCH-SetupRqstTDD,
        id-PRACH-LCR-ParametersListIE-CTCH-SetupRqstTDD,
        id-RL-InformationResponse-LCR-RL-SetupRspTDD ,
```

```
    id-Secondary-CCPCH-LCR-parameterListIE-CTCH-SetupRqstTDD,
    id-Secondary-CCPCH-LCR-parameterList-CTCH-SetupRqstTDD,
    id-TimeSlotConfigurationList-LCR-Cell-ReconfRqstTDD,
    id-TimeSlotConfigurationList-LCR-Cell-SetupRqstTDD,
    id-TimeslotISCP-LCR-InfoList-RL-SetupRqstTDD,
    id-TimeSlotLCR-CM-Rqst,
    id-UL-DPCH-LCR-Information-RL-SetupRqstTDD,
    id-UL-DPCH-LCR-InformationList-RL-SetupRqstTDD,
    id-DL-DPCH-InformationItem-LCR-RL-AdditionRqstTDD,
    id-UL-DPCH-InformationItem-LCR-RL-AdditionRqstTDD,
    id-TimeslotISCP-InformationList-LCR-RL-AdditionRqstTDD,
    id-DL-DPCH-LCR-InformationAddList-RL-ReconfPrepTDD,
    id-DL-DPCH-LCR-InformationAddListIE-RL-ReconfPrepTDD,
    id-DL-DPCH-LCR-InformationModify-AddList-RL-ReconfPrepTDD,
    id-DL-DPCH-LCR-InformationModify-AddListIE-RL-ReconfPrepTDD,
    id-DL-Timeslot-LCR-InformationModify-ModifyList-RL-ReconfPrepTDD,
    id-TimeslotISCPInfoList-LCR-DL-PC-RqstTDD,
    id-UL-DPCH-InformationAddListIE-RL-ReconfPrepTDD,
    id-UL-DPCH-LCR-InformationAddListIE-RL-ReconfPrepTDD,
    id-UL-DPCH-LCR-InformationModify-AddList,
    id-UL-DPCH-LCR-InformationModify-AddListIE-RL-ReconfPrepTDD,
    id-UL-TimeslotLCR-Information-RL-ReconfPrepTDD,
    id-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,


    maxNrOfCCTrCHs,
    maxNrOfCodes,
    maxNrOfCPCHs,
    maxNrOfDCHs,
    maxNrOfDLCodes,
    maxNrOfDLTSs,
    maxNrOfDLTSLCRs,
    maxNrOfDPCHs,
    maxNrOfDSCHs,
    maxNrOfFACHs,
    maxNrOfRLs,
    maxNrOfRLs-1,
    maxNrOfRLs-2,
    maxNrOfRLSets,
    maxNrOfPCPCHs,
    maxNrOfPDSCHs,
    maxNrOfPUSCHs,
    maxNrOfPDSCHSets,
    maxNrOfPUSCHSets,
    maxNrOfSCCPCHs,
    maxNrOfSCCPCHLCRs,
    maxNrOfULTSs,
```

```
        maxNrOfUSCHs,
        maxAPSigNum,
        maxCPCHCell,
        maxFACHCell,
        maxFPACHCell,
        maxNoofLen,
        maxRACHCell,
        maxPCPCHCell,
        maxPRACHCell,
        maxSCCPCHCell,
        maxSCPICHCell,
        maxCellinNodeB,
        maxCCPinNodeB,
        maxCommunicationContext,
        maxLocalCellinNodeB,
        maxNrOfSlotFormatsPRACH,
        maxIB,
        maxIBSEG
FROM NBAP-Constants;

-- **************************************************************
--
-- COMMON TRANSPORT CHANNEL SETUP REQUEST FDD
--
-- **************************************************************

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

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

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

CommonPhysicalChannelType-CTCH-SetupRqstFDD ::= CHOICE {
    secondary-CCPCH-parameters      Secondary-CCPCH-CTCH-SetupRqstFDD,
    pRACH-parameters                PRACH-CTCH-SetupRqstFDD,
    pCPCHes-parameters              PCPCH-CTCH-SetupRqstFDD,
    ...
}
```

```
Secondary-CCPCH-CTCH-SetupRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID             CommonPhysicalChannelID,
    fdd-S-CCPCH-Offset                  FDD-S-CCPCH-Offset,
    dl-ScramblingCode                   DL-ScramblingCode   OPTIONAL,
    -- This IE is present only 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 is present only if the Secondary CCPCH Slot Format is equal to any value 8 to 17
    multiplexingPosition                MultiplexingPosition,
    powerOffsetInformation              PowerOffsetInformation-CTCH-SetupRqstFDD,
    sTTD-Indicator                      STTD-Indicator,
    fACH-Parameters                     FACH-ParametersList-CTCH-SetupRqstFDD       OPTIONAL,
    -- One of the channels FACH or PCH or both must be present
    pCH-Parameters                      PCH-Parameters-CTCH-SetupRqstFDD            OPTIONAL,
    -- One of the channels FACH or PCH or both must be present
    iE-Extensions                       ProtocolExtensionContainer { { Secondary-CCPCHItem-CTCH-SetupRqstFDD-ExtIEs} }    OPTIONAL,
    ...
}

Secondary-CCPCHItem-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PowerOffsetInformation-CTCH-SetupRqstFDD ::= SEQUENCE {
    pO1-ForTFCI-Bits                    PowerOffset,
    pO3-ForPilotBits                    PowerOffset,
    iE-Extensions                       ProtocolExtensionContainer { { PowerOffsetInformation-CTCH-SetupRqstFDD-ExtIEs} }  OPTIONAL,
    ...
}

PowerOffsetInformation-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

FACH-ParametersList-CTCH-SetupRqstFDD ::= ProtocolIE-Single-Container {{ FACH-ParametersListIEs-CTCH-SetupRqstFDD }}

FACH-ParametersListIEs-CTCH-SetupRqstFDD NBAP-PROTOCOL-IES ::= {
    { ID id-FACH-ParametersListIE-CTCH-SetupRqstFDD   CRITICALITY reject TYPE FACH-ParametersListIE-CTCH-SetupRqstFDD   PRESENCE mandatory }
}

FACH-ParametersListIE-CTCH-SetupRqstFDD ::= SEQUENCE (SIZE (1..maxNrOfFACHs)) OF FACH-ParametersItem-CTCH-SetupRqstFDD

FACH-ParametersItem-CTCH-SetupRqstFDD ::= SEQUENCE {
    commonTransportChannelID            CommonTransportChannelID,
    transportFormatSet                  TransportFormatSet,
    toAWS                               ToAWS,
    toAWE                               ToAWE,
    maxFACH-Power                       DL-Power,
    iE-Extensions                       ProtocolExtensionContainer { { FACH-ParametersItem-CTCH-SetupRqstFDD-ExtIEs} }     OPTIONAL,
    ...
}
```

```
FACH-ParametersItem-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PCH-Parameters-CTCH-SetupRqstFDD ::= ProtocolIE-Single-Container {{ PCH-ParametersIE-CTCH-SetupRqstFDD }}

PCH-ParametersIE-CTCH-SetupRqstFDD NBAP-PROTOCOL-IES ::= {
    { ID id-PCH-ParametersItem-CTCH-SetupRqstFDD   CRITICALITY reject   TYPE PCH-ParametersItem-CTCH-SetupRqstFDD   PRESENCE mandatory }
}

PCH-ParametersItem-CTCH-SetupRqstFDD ::= SEQUENCE {
    commonTransportChannelID           CommonTransportChannelID,
    transportFormatSet                 TransportFormatSet,
    toAWS                              ToAWS,
    toAWE                              ToAWE,
    pCH-Power                          DL-Power,
    pICH-Parameters                       PICH-Parameters-CTCH-SetupRqstFDD,

    iE-Extensions                      ProtocolExtensionContainer { { PCH-ParametersItem-CTCH-SetupRqstFDD-ExtIEs} }   OPTIONAL,
    ...
}

PCH-ParametersItem-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PICH-Parameters-CTCH-SetupRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID                CommonPhysicalChannelID,
    fdd-dl-ChannelisationCodeNumber        FDD-DL-ChannelisationCodeNumber,
    pICH-Power                             PICH-Power,
    pICH-Mode                              PICH-Mode,
    sTTD-Indicator                         STTD-Indicator,
    iE-Extensions                          ProtocolExtensionContainer { { PICH-Parameters-CTCH-SetupRqstFDD-ExtIEs} }   OPTIONAL,
    ...
}

PICH-Parameters-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PRACH-CTCH-SetupRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID                CommonPhysicalChannelID,
    scramblingCodeNumber                   ScramblingCodeNumber,
    tFCS                                   TFCS,
    preambleSignatures                     PreambleSignatures,
    allowedSlotFormatInformation           AllowedSlotFormatInformationList-CTCH-SetupRqstFDD,
    rACH-SubChannelNumbers                 RACH-SubChannelNumbers,
    ul-punctureLimit                       PunctureLimit,
    preambleThreshold                      PreambleThreshold,
    rACH-Parameters                        RACH-Parameters-CTCH-SetupRqstFDD,
   aICH-Parameters                        AICH-Parameters-CTCH-SetupRqstFDD,
    iE-Extensions                          ProtocolExtensionContainer { { PRACHItem-CTCH-SetupRqstFDD-ExtIEs} }   OPTIONAL,
```

```
    ...
}

PRACHItem-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

AllowedSlotFormatInformationList-CTCH-SetupRqstFDD ::= SEQUENCE (SIZE (1.. maxNrOfSlotFormatsPRACH)) OF AllowedSlotFormatInformationItem-CTCH-
SetupRqstFDD

AllowedSlotFormatInformationItem-CTCH-SetupRqstFDD ::= SEQUENCE {
    rACHSlotFormat                          RACH-SlotFormat,
    iE-Extensions                           ProtocolExtensionContainer { { AllowedSlotFormatInformationItem-CTCH-SetupRqstFDD-ExtIEs} }
    OPTIONAL,
    ...
}

AllowedSlotFormatInformationItem-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RACH-Parameters-CTCH-SetupRqstFDD ::= ProtocolIE-Single-Container {{ RACH-ParametersIE-CTCH-SetupRqstFDD }}

RACH-ParametersIE-CTCH-SetupRqstFDD NBAP-PROTOCOL-IES ::= {
    { ID id-RACH-ParametersItem-CTCH-SetupRqstFDD   CRITICALITY reject   TYPE RACH-ParametersItem-CTCH-SetupRqstFDD PRESENCE mandatory }
}

RACH-ParametersItem-CTCH-SetupRqstFDD ::= SEQUENCE {
    commonTransportChannelID                CommonTransportChannelID,
    transportFormatSet                      TransportFormatSet,
    iE-Extensions                           ProtocolExtensionContainer { { RACH-ParametersItem-CTCH-SetupRqstFDD-ExtIEs} }   OPTIONAL,
    ...
 }

RACH-ParametersItem-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

AICH-Parameters-CTCH-SetupRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID                 CommonPhysicalChannelID,
    aICH-TransmissionTiming                 AICH-TransmissionTiming,
    fdd-dl-ChannelisationCodeNumber         FDD-DL-ChannelisationCodeNumber,
    aICH-Power                              AICH-Power,
    sTTD-Indicator                          STTD-Indicator,
    iE-Extensions                           ProtocolExtensionContainer { { AICH-Parameters-CTCH-SetupRqstFDD-ExtIEs} }    OPTIONAL,
    ...
}

AICH-Parameters-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PCPCH-CTCH-SetupRqstFDD ::= SEQUENCE {
```

```
    cPCH-Parameters                 CPCH-Parameters-CTCH-SetupRqstFDD,
    iE-Extensions                   ProtocolExtensionContainer { { PCPCHItem-CTCH-SetupRqstFDD-ExtIEs} }     OPTIONAL,
    ...
}

PCPCHItem-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CPCH-Parameters-CTCH-SetupRqstFDD ::= SEQUENCE {
    commonTransportChannelID        CommonTransportChannelID,
    transportFormatSet              TransportFormatSet,
    aPPreambleScramblingCode        CPCHScramblingCodeNumber,
    cDPreambleScramblingCode        CPCHScramblingCodeNumber,
    tFCS                            TFCS,
    cDSignatures                    PreambleSignatures         OPTIONAL,
    cDSubChannelNumbers         CDSubChannelNumbers         OPTIONAL,
    -- this IE may be present only if the CD Signatures is present --
    punctureLimit                   PunctureLimit,
    cPCH-UL-DPCCH-SlotFormat         CPCH-UL-DPCCH-SlotFormat,
    uL-SIR                          UL-SIR,
    initialDL-transmissionPower     DL-Power,
    maximumDLPower                  DL-Power,
    minimumDLPower                  DL-Power,
    pO2-ForTPC-Bits                 PowerOffset,
    pO3-ForPilotBits                PowerOffset,
    fDD-TPC-DownlinkStepSize         FDD-TPC-DownlinkStepSize,
    nStartMessage                   NStartMessage,
    nEOT                            NEOT,
    channel-Assignment-Indication   Channel-Assignment-Indication,
    cPCH-Allowed-Total-Rate         CPCH-Allowed-Total-Rate,
    pCPCHChannelInfomation          PCPCHChannelInformationList-CTCH-SetupRqstFDD,
    vCAMMapping-Information          VCAMMapping-InformationList-CTCH-SetupRqstFDD       OPTIONAL,
    -- this IE is only present if the Channel Assignment Indication is equal 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 is only 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 {
    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,
    --  One of the channels FACH or PCH or both must be present
    iE-Extensions                              ProtocolExtensionContainer  {{Secondary-CCPCHItem-CTCH-SetupRqstTDD-ExtIEs}}   OPTIONAL,
    ...
}

Secondary-CCPCHItem-CTCH-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    { ID    id-Secondary-CCPCH-LCR-parameterList-CTCH-SetupRqstTDD         CRITICALITY reject    EXTENSION  Secondary-CCPCH-LCR-parameterList-CTCH-
SetupRqstTDD         PRESENCE    optional   },
    ...
}

Secondary-CCPCH-parameterList-CTCH-SetupRqstTDD ::= ProtocolIE-Single-Container {{ Secondary-CCPCH-parameterListIEs-CTCH-SetupRqstTDD }}

Secondary-CCPCH-parameterListIEs-CTCH-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID id-Secondary-CCPCH-parameterListIE-CTCH-SetupRqstTDD  CRITICALITY reject  TYPE Secondary-CCPCH-parameterListIE-CTCH-SetupRqstTDD PRESENCE
mandatory }
}

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,
    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 },
    ...
}

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,
    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 },
    { ID    id-PICH-LCR-Parameters-CTCH-SetupRqstTDD              CRITICALITY reject      EXTENSION   PICH-LCR-Parameters-CTCH-SetupRqstTDD
    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 }
}

PICH-ParametersItem-CTCH-SetupRqstTDD ::= SEQUENCE {
    commonPhysicalChannelID                 CommonPhysicalChannelID,
    tdd-ChannelisationCode                  TDD-ChannelisationCode,
    timeSlot                                TimeSlot,
    midambleshiftAndBurstType               MidambleShiftAndBurstType,
    tdd-PhysicalChannelOffset               TDD-PhysicalChannelOffset,
    repetitionPeriod                        RepetitionPeriod,
    repetitionLength                        RepetitionLength,
    pagingIndicatorLength                   PagingIndicatorLength,
    pICH-Power                              PICH-Power,
    iE-Extensions                           ProtocolExtensionContainer { { PICH-ParametersItem-CTCH-SetupRqstTDD-ExtIEs} }    OPTIONAL,
    ...
}

PICH-ParametersItem-CTCH-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PICH-LCR-Parameters-CTCH-SetupRqstTDD ::= ProtocolIE-Single-Container {{ PICH-LCR-ParametersIE-CTCH-SetupRqstTDD }}

PICH-LCR-ParametersIE-CTCH-LCR-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID id-PICH-LCR-ParametersItem-CTCH-SetupRqstTDD   CRITICALITY reject   TYPE PICH-LCR-ParametersItem-CTCH-SetupRqstTDD   PRESENCE mandatory }
}

PICH-LCR-ParametersItem-CTCH-SetupRqstTDD ::= SEQUENCE {
    commonPhysicalChannelID            CommonPhysicalChannelID,
    tdd-ChannelisationCodeLCR          TDD-ChannelisationCodeLCR,
    timeSlotLCR                        TimeSlotLCR,
    midambleShiftLCR                   MidambleShiftLCR,
    tdd-PhysicalChannelOffset          TDD-PhysicalChannelOffset,
    repetitionPeriod                   RepetitionPeriod,
    repetitionLength                   RepetitionLength,
    pagingIndicatorLength              PagingIndicatorLength,
    pICH-Power                         PICH-Power,
    iE-Extensions                      ProtocolExtensionContainer { { PICH-LCR-ParametersItem-CTCH-SetupRqstTDD-ExtIEs} }    OPTIONAL,
    ...
}

PICH-LCR-ParametersItem-CTCH-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Secondary-CCPCH-LCR-parameterList-CTCH-SetupRqstTDD ::= ProtocolIE-Single-Container {{ Secondary-CCPCH-LCR-parameterListIEs-CTCH-SetupRqstTDD }}

Secondary-CCPCH-LCR-parameterListIEs-CTCH-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
```

```
    { ID id-Secondary-CCPCH-LCR-parameterListIE-CTCH-SetupRqstTDD   CRITICALITY reject   TYPE Secondary-CCPCH-LCR-parameterListIE-CTCH-SetupRqstTDD
    PRESENCE optional }
}

Secondary-CCPCH-LCR-parameterListIE-CTCH-SetupRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfSCCPCHs)) 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,
    iE-Extensions                               ProtocolExtensionContainer { { Secondary-CCPCH-LCR-parameterItem-CTCH-SetupRqstTDD-ExtIEs} }
    OPTIONAL,
    ...
}

Secondary-CCPCH-LCR-parameterItem-CTCH-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PRACH-CTCH-SetupRqstTDD ::= SEQUENCE {
    pRACH-Parameters-CTCH-SetupRqstTDD          PRACH-Parameters-CTCH-SetupRqstTDD,
    iE-Extensions                               ProtocolExtensionContainer { { PRACH-CTCH-SetupRqstTDD-ExtIEs } }     OPTIONAL,
    ...
}

PRACH-CTCH-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    { ID    id-PRACH-LCR-ParametersList-CTCH-SetupRqstTDD         CRITICALITY reject     EXTENSION   PRACH-LCR-ParametersList-CTCH-SetupRqstTDD
    PRESENCE    optional    },
    { ID    id-FPACH-LCR-Parameters-CTCH-SetupRqstTDD             CRITICALITY reject     EXTENSION   FPACH-LCR-Parameters-CTCH-SetupRqstTDD
    PRESENCE    optional    },
    ...
}

PRACH-Parameters-CTCH-SetupRqstTDD ::= ProtocolIE-Single-Container {{ PRACH-ParametersIE-CTCH-SetupRqstTDD }}

PRACH-ParametersIE-CTCH-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID id-PRACH-ParametersItem-CTCH-SetupRqstTDD   CRITICALITY reject TYPE PRACH-ParametersItem-CTCH-SetupRqstTDD PRESENCE mandatory }
}

PRACH-ParametersItem-CTCH-SetupRqstTDD ::= SEQUENCE {
    commonPhysicalChannelID                 CommonPhysicalChannelID,
    tFCS                                    TFCS,
    timeslot                                TimeSlot,
    tdd-ChannelisationCode                  TDD-ChannelisationCode,
    maxPRACH-MidambleShifts                 MaxPRACH-MidambleShifts,
    pRACH-Midamble                          PRACH-Midamble,
    rACH                                    RACH-Parameter-CTCH-SetupRqstTDD,
    iE-Extensions                           ProtocolExtensionContainer { { PRACH-ParametersItem-CTCH-SetupRqstTDD-ExtIEs} }     OPTIONAL,
    ...
```

```
}

PRACH-ParametersItem-CTCH-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RACH-Parameter-CTCH-SetupRqstTDD ::= ProtocolIE-Single-Container {{ RACH-ParameterIE-CTCH-SetupRqstTDD }}

RACH-ParameterIE-CTCH-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID id-RACH-ParameterItem-CTCH-SetupRqstTDD   CRITICALITY reject   TYPE RACH-ParameterItem-CTCH-SetupRqstTDD  PRESENCE mandatory }
}

RACH-ParameterItem-CTCH-SetupRqstTDD ::= SEQUENCE {
    commonTransportChannelID                    CommonTransportChannelID,
    uL-TransportFormatSet                       TransportFormatSet,
    iE-Extensions                               ProtocolExtensionContainer { { RACH-ParameterItem-CTCH-SetupRqstTDD-ExtIEs} }    OPTIONAL,
    ...
}

RACH-ParameterItem-CTCH-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PRACH-LCR-ParametersList-CTCH-SetupRqstTDD ::= ProtocolIE-Single-Container {{ PRACH-LCR-ParametersListIEs-CTCH-SetupRqstTDD }}

PRACH-LCR-ParametersListIEs-CTCH-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID id-PRACH-LCR-ParametersListIE-CTCH-SetupRqstTDD   CRITICALITY reject   TYPE PRACH-LCR-ParametersListIE-CTCH-SetupRqstTDD PRESENCE
optional }
}

PRACH-LCR-ParametersListIE-CTCH-SetupRqstTDD ::= SEQUENCE (SIZE (1..maxNoOfPRACHLCRs2)) OF PRACH-LCR-ParametersItem-CTCH-SetupRqstTDD

PRACH-LCR-ParametersItem-CTCH-SetupRqstTDD ::= SEQUENCE {
    commonPhysicalChannelID                     CommonPhysicalChannelID,
    tFCS                                        TFCS,
    timeslotLCR                                 TimeSlotLCR,
    tdd-ChannelisationCodeLCR                   TDD-ChannelisationCodeLCR,
    maxPRACH-MidambleShifts                     MaxPRACH-MidambleShifts,
    pRACH-Midamble                              PRACH-Midamble,
    rACH                                        RACH-Parameter-CTCH-SetupRqstTDD,
    iE-Extensions                               ProtocolExtensionContainer { { PRACH-LCR-ParametersItem-CTCH-SetupRqstTDD-ExtIEs} }    OPTIONAL,
    ...
}

PRACH-LCR-ParametersItem-CTCH-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

FPACH-LCR-Parameters-CTCH-SetupRqstTDD ::= ProtocolIE-Single-Container {{ FPACH-LCR-ParametersIE-CTCH-SetupRqstTDD }}

FPACH-LCR-ParametersIE-CTCH-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID id-FPACH-LCR-ParametersItem-CTCH-SetupRqstTDD   CRITICALITY reject  TYPE FPACH-LCR-ParametersItem-CTCH-SetupRqstTDD PRESENCE optional }
}
```

```
FPACH-LCR-ParametersItem-CTCH-SetupRqstTDD ::= SEQUENCE {
    commonPhysicalChannelID                    CommonPhysicalChannelID,
    tdd-ChannelisationCodeLCR                  TDD-ChannelisationCodeLCR,
    timeslotLCR                                TimeSlotLCR,
    midambleShiftLCR                           MidambleShiftLCR,
    MaxfPACH-Power                             MaxFPACH-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    },
    ...
}

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 },
    ...
}


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 },
    ...
}


FPACH-LCR-Parameters-CTCH-ReconfRqstTDD ::= SEQUENCE {
    CommonPhysicalChannelId         CommonPhysicalChannelID,
    maxfPACHPower                   MaxFPACH-Power      OPTIONAL,
    iE-Extensions                   ProtocolExtensionContainer { { FPACH-Parameters-CTCH-ReconfRqstTDD-ExtIEs} }      OPTIONAL,
    ...
}

-- ***************************************************************
--
-- 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 is present when the Blocking Priority IndicatorIE indicates 'Normal Priority'--
    ...
}

BlockResourceRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}


-- **************************************************************
--
-- BLOCK RESOURCE RESPONSE
--
```

ETSI

```
-- *************************************************************

BlockResourceResponse ::= SEQUENCE {
    protocolIEs              ProtocolIE-Container      {{BlockResourceResponse-IEs}},
    protocolExtensions       ProtocolExtensionContainer {{BlockResourceResponse-Extensions}}    OPTIONAL,
    ...
}

BlockResourceResponse-IEs NBAP-PROTOCOL-IES ::= {
    { ID   id-CriticalityDiagnostics      CRITICALITY    ignore    TYPE   CriticalityDiagnostics    PRESENCE optional},
    ...
}

BlockResourceResponse-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *************************************************************
--
-- BLOCK RESOURCE FAILURE
--
-- *************************************************************

BlockResourceFailure ::= SEQUENCE {
    protocolIEs              ProtocolIE-Container      {{BlockResourceFailure-IEs}},
    protocolExtensions       ProtocolExtensionContainer {{BlockResourceFailure-Extensions}}    OPTIONAL,
    ...
}

BlockResourceFailure-IEs NBAP-PROTOCOL-IES ::= {
    { ID   id-Cause                        CRITICALITY    ignore    TYPE   Cause                     PRESENCE mandatory  }|
    { ID   id-CriticalityDiagnostics       CRITICALITY    ignore    TYPE   CriticalityDiagnostics    PRESENCE optional },
    ...
}

BlockResourceFailure-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *************************************************************
--
-- UNBLOCK RESOURCE INDICATION
--
-- *************************************************************

UnblockResourceIndication ::= SEQUENCE {
    protocolIEs              ProtocolIE-Container      {{UnblockResourceIndication-IEs}},
    protocolExtensions       ProtocolExtensionContainer {{UnblockResourceIndication-Extensions}}    OPTIONAL,
    ...
}

UnblockResourceIndication-IEs NBAP-PROTOCOL-IES ::= {
    { ID   id-C-ID           CRITICALITY    ignore    TYPE   C-ID       PRESENCE   mandatory},
```

```
    ...
}

UnblockResourceIndication-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- **************************************************************
--
-- AUDIT REQUIRED INDICATION
--
-- **************************************************************

AuditRequiredIndication ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container     {{AuditRequiredIndication-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{AuditRequiredIndication-Extensions}}   OPTIONAL,
    ...
}

AuditRequiredIndication-IEs NBAP-PROTOCOL-IES ::= {
    ...
}

AuditRequiredIndication-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- **************************************************************
--
-- AUDIT REQUEST
--
-- **************************************************************

AuditRequest ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container     {{AuditRequest-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{AuditRequest-Extensions}}     OPTIONAL,
    ...
}

AuditRequest-IEs NBAP-PROTOCOL-IES ::= {
    { ID   id-Start-Of-Audit-Sequence-Indicator        CRITICALITY    reject  TYPE Start-Of-Audit-Sequence-Indicator   PRESENCE mandatory },
    ...
}

AuditRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- **************************************************************
--
-- AUDIT RESPONSE
--
-- **************************************************************
```

```
AuditResponse ::= SEQUENCE {
    protocolIEs                   ProtocolIE-Container    {{AuditResponse-IEs}},
    protocolExtensions            ProtocolExtensionContainer {{AuditResponse-Extensions}}        OPTIONAL,
    ...
}

AuditResponse-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-End-Of-Audit-Sequence-Indicator          CRITICALITY    ignore TYPE    End-Of-Audit-Sequence-Indicator    PRESENCE mandatory }|
    { ID    id-Cell-InformationList-AuditRsp             CRITICALITY    ignore         TYPE    Cell-InformationList-AuditRsp        PRESENCE
    optional     }|
    { ID    id-CCP-InformationList-AuditRsp              CRITICALITY    ignore         TYPE    CCP-InformationList-AuditRsp     PRESENCE optional
    }|
    -- CCP (Communication Control Port) --
    { ID    id-Local-Cell-InformationList-AuditRsp       CRITICALITY    ignore         TYPE    Local-Cell-InformationList-AuditRsp     PRESENCE
    optional     }|
    { ID    id-Local-Cell-Group-InformationList-AuditRsp    CRITICALITY    ignore      TYPE    Local-Cell-Group-InformationList-AuditRsp PRESENCE
    optional     }|
    { ID    id-CriticalityDiagnostics                    CRITICALITY    ignore         TYPE    CriticalityDiagnostics           PRESENCE optional
    },
    ...
}

AuditResponse-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Cell-InformationList-AuditRsp ::= SEQUENCE (SIZE (1..maxCellinNodeB)) OF ProtocolIE-Single-Container {{ Cell-InformationItemIE-AuditRsp}}

Cell-InformationItemIE-AuditRsp NBAP-PROTOCOL-IES ::= {
    { ID    id-Cell-InformationItem-AuditRsp       CRITICALITY    ignore    TYPE    Cell-InformationItem-AuditRsp        PRESENCE optional }
}

Cell-InformationItem-AuditRsp ::= SEQUENCE {
    c-ID                              C-ID,
    configurationGenerationID         ConfigurationGenerationID,
    resourceOperationalState          ResourceOperationalState,
    availabilityStatus                AvailabilityStatus,
    local-Cell-ID                     Local-Cell-ID,
    primary-SCH-Information            P-SCH-Information-AuditRsp             OPTIONAL,
    secondary-SCH-Information          S-SCH-Information-AuditRsp             OPTIONAL,
    primary-CPICH-Information          P-CPICH-Information-AuditRsp           OPTIONAL,
    secondary-CPICH-InformationList    S-CPICH-InformationList-AuditRsp       OPTIONAL,
    primary-CCPCH-Information          P-CCPCH-Information-AuditRsp           OPTIONAL,
    bCH-Information                    BCH-Information-AuditRsp               OPTIONAL,
    secondary-CCPCH-InformationList    S-CCPCH-InformationList-AuditRsp       OPTIONAL,
    pCH-Information                    PCH-Information-AuditRsp               OPTIONAL,
    pICH-Information                   PICH-Information-AuditRsp              OPTIONAL,
    fACH-InformationList               FACH-InformationList-AuditRsp          OPTIONAL,
    pRACH-InformationList              PRACH-InformationList-AuditRsp         OPTIONAL,
    rACH-InformationList               RACH-InformationList-AuditRsp          OPTIONAL,
    aICH-InformationList               AICH-InformationList-AuditRsp          OPTIONAL,
    pCPCH-InformationList              PCPCH-InformationList-AuditRsp         OPTIONAL,
```

```
    cPCH-InformationList                   CPCH-InformationList-AuditRsp                    OPTIONAL,
    aP-AICH-InformationList                AP-AICH-InformationList-AuditRsp                 OPTIONAL,
    cDCA-ICH-InformationList               CDCA-ICH-InformationList-AuditRsp                OPTIONAL,
    sCH-Information                        SCH-Information-AuditRsp                          OPTIONAL,
    iE-Extensions                          ProtocolExtensionContainer { { Cell-InformationItem-AuditRsp-ExtIEs} }    OPTIONAL,
    ...
}

Cell-InformationItem-AuditRsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-FPACH-LCR-InformationList-AuditRsp      CRITICALITY ignore  EXTENSION  FPACH-LCR-InforamtionList-AuditRsp       PRESENCE optional },
    { ID id-DwPCH-LCR-InformationList-AuditRsp      CRITICALITY ignore  EXTENSION  DwPCH-LCR-InforamtionList-AuditRsp       PRESENCE optional },
    ...
}

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 }
}


DwPCH-LCR-InformationList-AuditRsp ::= ProtocolIE-Single-Container {{ DWPCH-LCR-InformationIE-AuditRsp }}

DwPCH-LCR-InformationIE-AuditRsp NBAP-PROTOCOL-IES ::= {
    { ID id-DwPCH-LCR-Information-AuditRsp  CRITICALITY ignore  TYPE Common-PhysicalChannel-Status-Information     PRESENCE mandatory }
}

Local-Cell-InformationList-AuditRsp  ::=SEQUENCE (SIZE (1..maxLocalCellinNodeB)) OF ProtocolIE-Single-Container {{ Local-Cell-InformationItemIE-
AuditRsp }}

Local-Cell-InformationItemIE-AuditRsp NBAP-PROTOCOL-IES ::= {
    { ID   id-Local-Cell-InformationItem-AuditRsp          CRITICALITY    ignore        TYPE Local-Cell-InformationItem-AuditRsp    PRESENCE
    mandatory}
}
```

```
Local-Cell-InformationItem-AuditRsp ::= SEQUENCE {
    local-Cell-ID                               Local-Cell-ID,
    dl-or-global-capacityCredit                 DL-or-Global-CapacityCredit,
    ul-capacityCredit                           UL-CapacityCredit        OPTIONAL,
    commnonChannelsCapacityConsumptionLaw       CommonChannelsCapacityConsumptionLaw,
    dedicatedChannelsCapacityConsumptionLaw DedicatedChannelsCapacityConsumptionLaw,
    maximumDL-PowerCapability                   MaximumDL-PowerCapability      OPTIONAL,
    minSpreadingFactor                          MinSpreadingFactor             OPTIONAL,
    minimumDL-PowerCapability                   MinimumDL-PowerCapability      OPTIONAL,
    local-Cell-Group-ID                         Local-Cell-ID                  OPTIONAL,
    iE-Extensions                               ProtocolExtensionContainer {{ Local-Cell-InformationItem-AuditRsp-ExtIEs}}   OPTIONAL,
    ...
}

Local-Cell-InformationItem-AuditRsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
{ ID    id-ReferenceClockAvailability     CRITICALITY     ignore        EXTENSION ReferenceClockAvailability     PRESENCE optional },
    ...
}

Local-Cell-Group-InformationList-AuditRsp    ::= SEQUENCE (SIZE (1..maxLocalCellinNodeB)) OF ProtocolIE-Single-Container {{ Local-Cell-Group-
InformationItemIE-AuditRsp }}

Local-Cell-Group-InformationItemIE-AuditRsp NBAP-PROTOCOL-IES ::= {
    { ID    id-Local-Cell-Group-InformationItem-AuditRsp          CRITICALITY     ignore      TYPE Local-Cell-Group-InformationItem-AuditRsp
    PRESENCE     mandatory}
}

Local-Cell-Group-InformationItem-AuditRsp ::= SEQUENCE {
    local-Cell-Group-ID                         Local-Cell-ID,
    dl-or-global-capacityCredit                 DL-or-Global-CapacityCredit,
    ul-capacityCredit                           UL-CapacityCredit                         OPTIONAL,
    commnonChannelsCapacityConsumptionLaw       CommonChannelsCapacityConsumptionLaw,
    dedicatedChannelsCapacityConsumptionLaw DedicatedChannelsCapacityConsumptionLaw,
    iE-Extensions                               ProtocolExtensionContainer {{ Local-Cell-Group-InformationItem-AuditRsp-ExtIEs}}   OPTIONAL,
    ...
}

Local-Cell-Group-InformationItem-AuditRsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *************************************************************
--
-- AUDIT FAILURE
--
-- *************************************************************

AuditFailure ::= SEQUENCE {
    protocolIEs             ProtocolIE-Container    {{AuditFailure-IEs}},
    protocolExtensions      ProtocolExtensionContainer {{AuditFailure-Extensions}}        OPTIONAL,
    ...
}
```

```
AuditFailure-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-Cause                            CRITICALITY    ignore    TYPE    Cause                    PRESENCE mandatory   }|
    { ID    id-CriticalityDiagnostics           CRITICALITY    ignore    TYPE    CriticalityDiagnostics    PRESENCE optional },
    ...
}

AuditFailure-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ***************************************************************
--
-- COMMON MEASUREMENT INITIATION REQUEST
--
-- ***************************************************************

CommonMeasurementInitiationRequest ::= SEQUENCE {
    protocolIEs           ProtocolIE-Container    {{CommonMeasurementInitiationRequest-IEs}},
    protocolExtensions    ProtocolExtensionContainer  {{CommonMeasurementInitiationRequest-Extensions}}    OPTIONAL,
    ...
}

CommonMeasurementInitiationRequest-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-MeasurementID                              CRITICALITY reject    TYPE    MeasurementID                     PRESENCE mandatory
    }|
    { ID    id-CommonMeasurementObjectType-CM-Rqst        CRITICALITY reject    TYPE    CommonMeasurementObjectType-CM-Rqst    PRESENCE
    mandatory    }|
    -- This IE represents both the Common Measurement Object Type IE and the choice based on the Common Measurement Object Type
    -- as described in the tabular message format in subclause 9.1.
    { ID    id-CommonMeasurementType                      CRITICALITY reject    TYPE    CommonMeasurementType             PRESENCE mandatory
    }|
    { ID    id-MeasurementFilterCoefficient               CRITICALITY reject    TYPE    MeasurementFilterCoefficient      PRESENCE
    optional    }|
    { ID    id-ReportCharacteristics                      CRITICALITY reject    TYPE    ReportCharacteristics             PRESENCE mandatory
    }|
    { ID    id-SFNReportingIndicator                      CRITICALITY reject    TYPE    FNReportingIndicator              PRESENCE mandatory
    } |
    { ID    id-SFN                                        CRITICALITY reject    TYPE    SFN                               PRESENCE optional
    },
    ...
}

CommonMeasurementInitiationRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...,
    {ID id-CommonMeasurementAccuracy                      CRITICALITY reject         EXTENSION CommonMeasurementAccuracy      PRESENCE optional}
}

CommonMeasurementObjectType-CM-Rqst ::= CHOICE {
    cell                  Cell-CM-Rqst,
    rACH                  RACH-CM-Rqst,
    cPCH                  CPCH-CM-Rqst,
    ...
```

```
}

Cell-CM-Rqst ::= SEQUENCE {
    c-ID                          C-ID,
    timeSlot                      TimeSlot   OPTIONAL,
    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 }|
    {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-CommonMeasurementAchievedAccuracy        CRITICALITY ignore      EXTENSION CommonMeasurementAccuracy   PRESENCE optional}
}

CommonMeasurementObjectType-CM-Rsp ::= CHOICE {
    cell                        Cell-CM-Rsp,
    rACH                        RACH-CM-Rsp,
    cPCH                        CPCH-CM-Rsp,
    ...
 }

Cell-CM-Rsp ::= SEQUENCE {
    commonMeasurementValue        CommonMeasurementValue,
    iE-Extensions                 ProtocolExtensionContainer { { CellItem-CM-Rsp-ExtIEs} }    OPTIONAL,
    ...
 }

CellItem-CM-Rsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RACH-CM-Rsp ::= SEQUENCE {
    commonMeasurementValue        CommonMeasurementValue,
    iE-Extensions                 ProtocolExtensionContainer { { RACHItem-CM-Rsp-ExtIEs} }    OPTIONAL,
    ...
 }

RACHItem-CM-Rsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CPCH-CM-Rsp ::= SEQUENCE {
    commonMeasurementValue        CommonMeasurementValue,
    iE-Extensions                 ProtocolExtensionContainer { { CPCHItem-CM-Rsp-ExtIEs} }    OPTIONAL,
    ...
 }

CPCHItem-CM-Rsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ****************************************************************
--
-- COMMON MEASUREMENT INITIATION FAILURE
--
```

```
-- *************************************************************

CommonMeasurementInitiationFailure ::= SEQUENCE {
    protocolIEs            ProtocolIE-Container      {{CommonMeasurementInitiationFailure-IEs}},
    protocolExtensions     ProtocolExtensionContainer {{CommonMeasurementInitiationFailure-Extensions}}    OPTIONAL,
    ...
}

CommonMeasurementInitiationFailure-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-MeasurementID                CRITICALITY    ignore      TYPE    MeasurementID             PRESENCE mandatory   }|
    { ID    id-Cause                        CRITICALITY    ignore      TYPE    Cause                     PRESENCE mandatory   }|
    { ID    id-CriticalityDiagnostics       CRITICALITY    ignore      TYPE    CriticalityDiagnostics    PRESENCE optional },
    ...
}

CommonMeasurementInitiationFailure-Extensions NBAP-PROTOCOL-EXTENSION ::= {

    ...
}


-- *************************************************************
--
-- COMMON MEASUREMENT REPORT
--
-- *************************************************************

CommonMeasurementReport ::= SEQUENCE {
    protocolIEs            ProtocolIE-Container      {{CommonMeasurementReport-IEs}},
    protocolExtensions     ProtocolExtensionContainer {{CommonMeasurementReport-Extensions}}    OPTIONAL,
    ...
}

CommonMeasurementReport-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-MeasurementID                          CRITICALITY ignore      TYPE    MeasurementID                          PRESENCE mandatory   }|
    { ID    id-CommonMeasurementObjectType-CM-Rprt    CRITICALITY ignore      TYPE    CommonMeasurementObjectType-CM-Rprt    PRESENCE mandatory
    }|
    { ID    id-SFN                                    CRITICALITY ignore      TYPE    SFN                                    PRESENCE optional },
    ...
}

CommonMeasurementReport-Extensions NBAP-PROTOCOL-EXTENSION ::= {

    ...
}

CommonMeasurementObjectType-CM-Rprt ::= CHOICE {
    cell                        Cell-CM-Rprt,
    rACH                        RACH-CM-Rprt,
    cPCH                        CPCH-CM-Rprt,
    ...
 }

Cell-CM-Rprt ::= SEQUENCE {
    commonMeasurementValueInformation   CommonMeasurementValueInformation,
    iE-Extensions                       ProtocolExtensionContainer {{ CellItem-CM-Rprt-ExtIEs }}    OPTIONAL,
```

ETSI

```
    ...

 }

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                   CRITICALITY    reject      EXTENSION    IPDLParameter-Information-Cell-
SetupRqstFDD        PRESENCE    optional    },
    ...
}


Synchronisation-Configuration-Cell-SetupRqst ::= SEQUENCE {
    n-INSYNC-IND            N-INSYNC-IND,
    n-OUTSYNC-IND           N-OUTSYNC-IND,
    t-RLFAILURE             T-RLFAILURE,
    iE-Extensions           ProtocolExtensionContainer { { Synchronisation-Configuration-Cell-SetupRqst-ExtIEs} }    OPTIONAL,
    ...
}


Synchronisation-Configuration-Cell-SetupRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}


PrimarySCH-Information-Cell-SetupRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID                 CommonPhysicalChannelID,
    primarySCH-Power                        DL-Power,
    tSTD-Indicator                          TSTD-Indicator,
    iE-Extensions                           ProtocolExtensionContainer { { PrimarySCH-Information-Cell-SetupRqstFDD-ExtIEs} }    OPTIONAL,
    ...
}


PrimarySCH-Information-Cell-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}


SecondarySCH-Information-Cell-SetupRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID                 CommonPhysicalChannelID,
    secondarySCH-Power                      DL-Power,
    tSTD-Indicator                          TSTD-Indicator,
    iE-Extensions                           ProtocolExtensionContainer { { SecondarySCH-Information-Cell-SetupRqstFDD-ExtIEs} }    OPTIONAL,
    ...
```

```
}

SecondarySCH-Information-Cell-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PrimaryCPICH-Information-Cell-SetupRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID               CommonPhysicalChannelID,
    primaryCPICH-Power                    PrimaryCPICH-Power,
    transmitDiversityIndicator            TransmitDiversityIndicator,
    iE-Extensions                         ProtocolExtensionContainer { { PrimaryCPICH-Information-Cell-SetupRqstFDD-ExtIEs} }  OPTIONAL,
    ...
}

PrimaryCPICH-Information-Cell-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

SecondaryCPICH-InformationList-Cell-SetupRqstFDD ::= SEQUENCE (SIZE (1..maxSCPICHCell)) OF ProtocolIE-Single-Container{{ SecondaryCPICH-
InformationItemIE-Cell-SetupRqstFDD }}

SecondaryCPICH-InformationItemIE-Cell-SetupRqstFDD NBAP-PROTOCOL-IES ::= {
    { ID    id-SecondaryCPICH-InformationItem-Cell-SetupRqstFDD    CRITICALITY    reject    TYPE SecondaryCPICH-InformationItem-Cell-
SetupRqstFDD        PRESENCE   mandatory}
}

SecondaryCPICH-InformationItem-Cell-SetupRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID               CommonPhysicalChannelID,
    dl-ScramblingCode                     DL-ScramblingCode,
    fDD-DL-ChannelisationCodeNumber       FDD-DL-ChannelisationCodeNumber,
    secondaryCPICH-Power                  DL-Power,
    transmitDiversityIndicator            TransmitDiversityIndicator,
    iE-Extensions                         ProtocolExtensionContainer { { SecondaryCPICH-InformationItem-Cell-SetupRqstFDD-ExtIEs} }  OPTIONAL,
    ...
}

SecondaryCPICH-InformationItem-Cell-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PrimaryCCPCH-Information-Cell-SetupRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID               CommonPhysicalChannelID,
    bCH-information                       BCH-Information-Cell-SetupRqstFDD,
    sTTD-Indicator                        STTD-Indicator,
    iE-Extensions                         ProtocolExtensionContainer { { PrimaryCCPCH-Information-Cell-SetupRqstFDD-ExtIEs} }  OPTIONAL,
    ...
}

PrimaryCCPCH-Information-Cell-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

BCH-Information-Cell-SetupRqstFDD ::= SEQUENCE {
```

ETSI

```
    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    }|
    { ID    id-PCCPCH-Information-Cell-SetupRqstTDD              CRITICALITY    reject     TYPE  PCCPCH-Information-Cell-SetupRqstTDD
    PRESENCE    optional    }|
    { ID    id-TimeSlotConfigurationList-Cell-SetupRqstTDD       CRITICALITY    reject     TYPE  TimeSlotConfigurationList-Cell-SetupRqstTDD
    PRESENCE    optional    },
    ...
}

CellSetupRequestTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    { ID    id-TimeSlotConfigurationList-LCR-Cell-SetupRqstTDD      CRITICALITY    reject      EXTENSION  TimeSlotConfigurationList-LCR-Cell-
SetupRqstTDD         PRESENCE    optional    }|
    { ID    id-PCCPCH-LCR-Information-Cell-SetupRqstTDD           CRITICALITY    reject      EXTENSION  PCCPCH-LCR-Information-Cell-SetupRqstTDD
          PRESENCE    optional    }|
    { ID    id-DwPCH-LCR-Information-Cell-SetupRqstTDD            CRITICALITY    reject      EXTENSION  DwPCH-LCR-Information-Cell-SetupRqstTDD
          PRESENCE    optional    }|
    { 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,
    blockSTTD-Indicator                 BlockSTTD-Indicator,
    iE-Extensions                       ProtocolExtensionContainer { { PCCPCH-Information-Cell-SetupRqstTDD-ExtIEs} }   OPTIONAL,
    ...
}

PCCPCH-Information-Cell-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TimeSlotConfigurationList-Cell-SetupRqstTDD ::= SEQUENCE (SIZE (1..15)) OF TimeSlotConfigurationItem-Cell-SetupRqstTDD
```

ETSI

```
TimeSlotConfigurationItem-Cell-SetupRqstTDD ::= SEQUENCE {
    timeSlot                              TimeSlot,
    timeSlotStatus                        TimeSlotStatus,
    timeSlotDirection                     TimeSlotDirection,
    iE-Extensions                         ProtocolExtensionContainer { { TimeSlotConfigurationItem-Cell-SetupRqstTDD-ExtIEs} }     OPTIONAL,
    ...
}

TimeSlotConfigurationItem-Cell-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TimeSlotConfigurationList-LCR-Cell-SetupRqstTDD ::= SEQUENCE (SIZE (1..7)) OF TimeSlotConfigurationItem-LCR-Cell-SetupRqstTDD

TimeSlotConfigurationItem-LCR-Cell-SetupRqstTDD ::= SEQUENCE {
    timeSlotLCR                           TimeSlotLCR,
    timeSlotStatus                        TimeSlotStatus,
    timeSlotDirection                     TimeSlotDirection,
    iE-Extensions                         ProtocolExtensionContainer { { TimeSlotConfigurationItem-LCR-Cell-SetupRqstTDD-ExtIEs} }    OPTIONAL,
    ...
}

TimeSlotConfigurationItem-LCR-Cell-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PCCPCH-LCR-Information-Cell-SetupRqstTDD ::= SEQUENCE {
    commonPhysicalChannelID               CommonPhysicalChannelID,
    timeslotLCR                           TimeSlotLCR,
    tdd-PhysicalChannelOffset             TDD-PhysicalChannelOffset,
    repetitionPeriod                      RepetitionPeriod,
    repetitionLength                      RepetitionLength,
    pCCPCH-Power                          PCCPCH-Power,
    blockSTTD-Indicator                   BlockSTTD-Indicator,
    tSTD-Indicator                        TSTD-Indicator,
    iE-Extensions                         ProtocolExtensionContainer { { PCCPCH-Information-Cell-SetupRqstTDD-ExtIEs} }    OPTIONAL,
    ...
}

PCCPCH-LCR-Information-Cell-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DwPCH-LCR-Information-Cell-SetupRqstTDD ::= SEQUENCE {
    commonPhysicalChannelId       CommonPhysicalChannelId,
    tSTD-Indicator                TSTD-Indicator,
    sYNCDlCodeId                  SYNCDlCodeId,
    dwPCH-Power                   DwPCH-Power,
    iE-Extensions                 ProtocolExtensionContainer { { DwPCH-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                                             CRITICALITY reject       TYPE C-ID                                              PRESENCE
    mandatory   }|
    { ID   id-ConfigurationGenerationID                       CRITICALITY reject       TYPE ConfigurationGenerationID
    PRESENCE    mandatory   }|
    { ID   id-MaximumTransmissionPower                        CRITICALITY reject       TYPE MaximumTransmissionPower
    PRESENCE    optional    }|
    { ID   id-Synchronisation-Configuration-Cell-ReconfRqst   CRITICALITY    reject    TYPE Synchronisation-Configuration-Cell-ReconfRqst
    PRESENCE    optional    }|
    { ID   id-PrimarySCH-Information-Cell-ReconfRqstFDD        CRITICALITY reject       TYPE PrimarySCH-Information-Cell-ReconfRqstFDD
    PRESENCE    optional    }|
    { ID   id-SecondarySCH-Information-Cell-ReconfRqstFDD      CRITICALITY reject       TYPE SecondarySCH-Information-Cell-ReconfRqstFDD
    PRESENCE    optional    }|
    { ID   id-PrimaryCPICH-Information-Cell-ReconfRqstFDD      CRITICALITY reject       TYPE PrimaryCPICH-Information-Cell-ReconfRqstFDD
    PRESENCE    optional    }|
    { ID   id-SecondaryCPICH-InformationList-Cell-ReconfRqstFDD  CRITICALITY reject    TYPE SecondaryCPICH-InformationList-Cell-
ReconfRqstFDD        PRESENCE    optional    }|
    { ID   id-PrimaryCCPCH-Information-Cell-ReconfRqstFDD      CRITICALITY reject       TYPE PrimaryCCPCH-Information-Cell-ReconfRqstFDD
    PRESENCE    optional    },
    ...
}

CellReconfigurationRequestFDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    {ID id-IPDLParameter-Information-Cell-ReconfRqstFDD          CRITICALITY    reject    EXTENSION    IPDLParameter-Information-Cell-
ReconfRqstFDD        PRESENCE    optional    },
    ...
}

Synchronisation-Configuration-Cell-ReconfRqst ::= SEQUENCE {
    n-INSYNC-IND         N-INSYNC-IND,
    n-OUTSYNC-IND        N-OUTSYNC-IND,
    t-RLFAILURE          T-RLFAILURE,
    iE-Extensions        ProtocolExtensionContainer { { Synchronisation-Configuration-Cell-ReconfRqst-ExtIEs} }    OPTIONAL,
    ...
}
```

```
Synchronisation-Configuration-Cell-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PrimarySCH-Information-Cell-ReconfRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID                 CommonPhysicalChannelID,
    primarySCH-Power                        DL-Power,
    iE-Extensions                           ProtocolExtensionContainer { { PrimarySCH-Information-Cell-ReconfRqstFDD-ExtIEs} }    OPTIONAL,
    ...
 }

PrimarySCH-Information-Cell-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

SecondarySCH-Information-Cell-ReconfRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID                 CommonPhysicalChannelID,
    secondarySCH-Power                      DL-Power,
    iE-Extensions                           ProtocolExtensionContainer { { SecondarySCH-Information-Cell-ReconfRqstFDD-ExtIEs} }    OPTIONAL,
    ...
 }

SecondarySCH-Information-Cell-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PrimaryCPICH-Information-Cell-ReconfRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID                 CommonPhysicalChannelID,
    primaryCPICH-Power                      PrimaryCPICH-Power,
    iE-Extensions                           ProtocolExtensionContainer { { PrimaryCPICH-Information-Cell-ReconfRqstFDD-ExtIEs} }    OPTIONAL,
    ...
 }

PrimaryCPICH-Information-Cell-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

SecondaryCPICH-InformationList-Cell-ReconfRqstFDD ::= SEQUENCE (SIZE (1..maxSCPICHCell)) OF ProtocolIE-Single-Container{{ SecondaryCPICH-
InformationItemIE-Cell-ReconfRqstFDD }}

SecondaryCPICH-InformationItemIE-Cell-ReconfRqstFDD NBAP-PROTOCOL-IES ::= {
    { ID    id-SecondaryCPICH-InformationItem-Cell-ReconfRqstFDD        CRITICALITY    reject    TYPE SecondaryCPICH-InformationItem-Cell-
ReconfRqstFDD        PRESENCE    mandatory}
}

SecondaryCPICH-InformationItem-Cell-ReconfRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID                     CommonPhysicalChannelID,
    secondaryCPICH-Power                        DL-Power,
    iE-Extensions                               ProtocolExtensionContainer { { SecondaryCPICH-InformationItem-Cell-ReconfRqstFDD-ExtIEs} }
    OPTIONAL,
    ...
 }
```

```
SecondaryCPICH-InformationItem-Cell-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PrimaryCCPCH-Information-Cell-ReconfRqstFDD ::= SEQUENCE {
    bCH-information                         BCH-information-Cell-ReconfRqstFDD,
    iE-Extensions                          ProtocolExtensionContainer { { PrimaryCCPCH-Information-Cell-ReconfRqstFDD-ExtIEs} }   OPTIONAL,
    ...
 }

PrimaryCCPCH-Information-Cell-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

BCH-information-Cell-ReconfRqstFDD ::= SEQUENCE {
    commonTransportChannelID               CommonTransportChannelID,
    bCH-Power                              DL-Power,
    iE-Extensions                          ProtocolExtensionContainer { { BCH-information-Cell-ReconfRqstFDD-ExtIEs} }   OPTIONAL,
    ...
 }

BCH-information-Cell-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

IPDLParameter-Information-Cell-ReconfRqstFDD::= SEQUENCE {
    iPDL-FDD-Parameters                    IPDL-FDD-Parameters    OPTIONAL,
    iPDL-Indicator                         IPDL-Indicator,
    iE-Extensions                          ProtocolExtensionContainer { { IPDLParameter-Information-Cell-ReconfRqstFDD-ExtIEs} }   OPTIONAL,
    ...
}

IPDLParameter-Information-Cell-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *************************************************************
--
-- CELL RECONFIGURATION REQUEST TDD
--
-- *************************************************************

CellReconfigurationRequestTDD ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{CellReconfigurationRequestTDD-IEs}},
    protocolExtensions   ProtocolExtensionContainer  {{CellReconfigurationRequestTDD-Extensions}}   OPTIONAL,
    ...
}

CellReconfigurationRequestTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-C-ID                                   CRITICALITY    reject    TYPE C-ID                              PRESENCE
    mandatory   }|
    { ID    id-ConfigurationGenerationID              CRITICALITY    reject    TYPE ConfigurationGenerationID         PRESENCE
    mandatory   }|
```

```
    { ID    id-Synchronisation-Configuration-Cell-ReconfRqst          CRITICALITY    reject      TYPE Synchronisation-Configuration-Cell-ReconfRqst
    PRESENCE    optional    }|
    { ID    id-TimingAdvanceApplied                                   CRITICALITY    reject      TYPE TimingAdvanceApplied                    PRESENCE
    optional    }|
    { ID    id-SCH-Information-Cell-ReconfRqstTDD                      CRITICALITY    reject      TYPE SCH-Information-Cell-ReconfRqstTDD
    PRESENCE    optional    }|
    { ID    id-PCCPCH-Information-Cell-ReconfRqstTDD                   CRITICALITY    reject      TYPE PCCPCH-Information-Cell-ReconfRqstTDD
    PRESENCE    optional    }|
    { ID    id-MaximumTransmissionPower                               CRITICALITY    reject      TYPE MaximumTransmissionPower                PRESENCE
    optional    }|
    { ID    id-DPCHConstant                                           CRITICALITY    reject      TYPE ConstantValue                           PRESENCE
    optional    }|
    { ID    id-PUSCHConstant                                          CRITICALITY    reject      TYPE ConstantValue                           PRESENCE
    optional    }|
    { ID    id-PRACHConstant                                          CRITICALITY    reject      TYPE ConstantValue                           PRESENCE
    optional    }|
    { ID    id-TimeSlotConfigurationList-Cell-ReconfRqstTDD           CRITICALITY    reject      TYPE TimeSlotConfigurationList-Cell-ReconfRqstTDD
    PRESENCE    optional    },
    ...
}

CellReconfigurationRequestTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    { ID    id-TimeSlotConfigurationList-LCR-Cell-ReconfRqstTDD    CRITICALITY    reject      EXTENSION TimeSlotConfigurationList-LCR-Cell-
ReconfRqstTDD    PRESENCE optional},
    { ID    id-DwPCH-LCR-Information-Cell-ReconfRqstTDD    CRITICALITY    reject      EXTENSION DwPCH-LCR-Information-Cell-ReconfRqstTDD
    PRESENCE optional}|
    { 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                            DL-Power,
    iE-Extensions                           ProtocolExtensionContainer { { PCCPCH-Information-Cell-ReconfRqstTDD-ExtIEs} }    OPTIONAL,
    ...
}

PCCPCH-Information-Cell-ReconfRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

```
TimeSlotConfigurationList-Cell-ReconfRqstTDD ::= SEQUENCE (SIZE (1..15)) OF TimeSlotConfigurationItem-Cell-ReconfRqstTDD

TimeSlotConfigurationItem-Cell-ReconfRqstTDD ::= SEQUENCE {
    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    }|
    -- This IE represents both the Indication Type IE and the choice based on the indication type as described in the tabular message format in
subclause 9.1.
    { ID    id-Cause                                    CRITICALITY    ignore      TYPE    Cause                         PRESENCE optional },
    ...
}

ResourceStatusIndication-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

```
IndicationType-ResourceStatusInd ::= CHOICE {
    no-Failure                              No-Failure-ResourceStatusInd,
    serviceImpacting                        ServiceImpacting-ResourceStatusInd,
    ...
}

No-Failure-ResourceStatusInd ::= SEQUENCE {
    local-Cell-InformationList              Local-Cell-InformationList-ResourceStatusInd,
    local-Cell-Group-InformationList        Local-Cell-Group-InformationList-ResourceStatusInd  OPTIONAL,
    iE-Extensions                           ProtocolExtensionContainer { { No-FailureItem-ResourceStatusInd-ExtIEs} } OPTIONAL,
    ...
}

No-FailureItem-ResourceStatusInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

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 is present only if "AddorDeleteIndicator" equals add
    ul-capacityCredit                       UL-CapacityCredit      OPTIONAL,
    commnonChannelsCapacityConsumptionLaw   CommonChannelsCapacityConsumptionLaw    OPTIONAL,
    -- This IE is present only if "AddorDeleteIndicator" equals add
    dedicatedChannelsCapacityConsumptionLaw DedicatedChannelsCapacityConsumptionLaw     OPTIONAL,
    -- This IE is present only if "AddorDeleteIndicator" equals add
    maximumDL-PowerCapability               MaximumDL-PowerCapability      OPTIONAL,
    -- This IE is present only if "AddorDeleteIndicator" equals add
    minSpreadingFactor                      MinSpreadingFactor              OPTIONAL,
    -- This IE is present only if "AddorDeleteIndicator" equals add
    minimumDL-PowerCapability               MinimumDL-PowerCapability      OPTIONAL,
    -- This IE is present only if "AddorDeleteIndicator" equals add
    local-Cell-Group-ID                     Local-Cell-ID              OPTIONAL,
    iE-Extensions                           ProtocolExtensionContainer { { Local-Cell-InformationItem-ResourceStatusInd-ExtIEs} }OPTIONAL,
    ...
}

Local-Cell-InformationItem-ResourceStatusInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-FPACH-LCR-InformationList-ResourceStatusInd     CRITICALITY ignore     EXTENSION  FPACH-LCR-InformationList-ResourceStatusInd
    PRESENCE optional   },
    { ID id-DwPCH-LCR-Information-ResourceStatusInd CRITICALITY ignore     EXTENSION  DwPCH-LCR-Information-ResourceStatusInd   PRESENCE optional
    }|
    { ID    id-ReferenceClockAvailability        CRITICALITY     ignore        EXTENSION ReferenceClockAvailability        PRESENCE optional },
```

```
    -- This IE is present only if "AddorDeleteIndicator" equals 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,
    commnonChannelsCapacityConsumptionLaw      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,
    commnonChannelsCapacityConsumptionLaw      CommonChannelsCapacityConsumptionLaw   OPTIONAL,
    dedicatedChannelsCapacityConsumptionLaw DedicatedChannelsCapacityConsumptionLaw OPTIONAL,
```

```
    maximum-DL-PowerCapability                MaximumDL-PowerCapability        OPTIONAL,
    minSpreadingFactor                        MinSpreadingFactor               OPTIONAL,
    minimumDL-PowerCapability                 MinimumDL-PowerCapability        OPTIONAL,
    iE-Extensions                             ProtocolExtensionContainer { { Local-Cell-InformationItem2-ResourceStatusInd-ExtIEs} }    OPTIONAL,
    ...
}

Local-Cell-InformationItem2-ResourceStatusInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    { ID    id-ReferenceClockAvailability        CRITICALITY        ignore        EXTENSION ReferenceClockAvailability        PRESENCE optional },
    ...
}

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,
    commnonChannelsCapacityConsumptionLaw        CommonChannelsCapacityConsumptionLaw    OPTIONAL,
    dedicatedChannelsCapacityConsumptionLaw DedicatedChannelsCapacityConsumptionLaw OPTIONAL,
    iE-Extensions                             ProtocolExtensionContainer { { Local-Cell-Group-InformationItem2-ResourceStatusInd-ExtIEs} }    OPTIONAL,
    ...
}

Local-Cell-Group-InformationItem2-ResourceStatusInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

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,
    secondary-SCH-Information               S-SCH-Information-ResourceStatusInd      OPTIONAL,
    primary-CPICH-Information               P-CPICH-Information-ResourceStatusInd    OPTIONAL,
    secondary-CPICH-Information             S-CPICH-InformationList-ResourceStatusInd OPTIONAL,
    primary-CCPCH-Information               P-CCPCH-Information-ResourceStatusInd    OPTIONAL,
    bCH-Information                         BCH-Information-ResourceStatusInd        OPTIONAL,
    secondary-CCPCH-InformationList         S-CCPCH-InformationList-ResourceStatusInd OPTIONAL,
    pCH-Information                         PCH-Information-ResourceStatusInd        OPTIONAL,
    pICH-Information                        PICH-Information-ResourceStatusInd       OPTIONAL,
    fACH-InformationList                    FACH-InformationList-ResourceStatusInd   OPTIONAL,
    pRACH-InformationList                   PRACH-InformationList-ResourceStatusInd  OPTIONAL,
    rACH-InformationList                    RACH-InformationList-ResourceStatusInd   OPTIONAL,
    aICH-InformationList                    AICH-InformationList-ResourceStatusInd   OPTIONAL,
    pCPCH-InformationList                   PCPCH-InformationList-ResourceStatusInd  OPTIONAL,
    cPCH-InformationList                    CPCH-InformationList-ResourceStatusInd   OPTIONAL,
    aP-AICH-InformationList                 AP-AICH-InformationList-ResourceStatusInd OPTIONAL,
    cDCA-ICH-InformationList                CDCA-ICH-InformationList-ResourceStatusInd OPTIONAL,
    sCH-Information                         SCH-Information-ResourceStatusInd        OPTIONAL,
    iE-Extensions                           ProtocolExtensionContainer { { Cell-InformationItem-ResourceStatusInd-ExtIEs} } OPTIONAL,
    ...
}

Cell-InformationItem-ResourceStatusInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

P-SCH-Information-ResourceStatusInd ::= ProtocolIE-Single-Container {{ P-SCH-InformationIE-ResourceStatusInd }}

P-SCH-InformationIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
    { 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 ignoreTYPE 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 ignoreTYPE Common-PhysicalChannel-Status-Information     PRESENCE mandatory }
}

FPACH-LCR-InformationList-ResourceStatusInd ::= SEQUENCE (SIZE (0..maxFPACHCell)) OF ProtocolIE-Single-Container {{ FPACH-LCR-InformationItemIE-
ResourceStatusInd }}

FPACH-LCR-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
```

```
    { ID id-FPACH-LCR-Information  CRITICALITY ignore   TYPE Common-PhysicalChannel-Status-Information    PRESENCE mandatory }
}

DwPCH-LCR-Information-ResourceStatusInd ::= ProtocolIE-Single-Container {{ DwPCH-LCR-InformationIE-ResourceStatusInd }}

DwPCH-LCR-InformationIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
    { ID id-DwPCH-LCR-Information  CRITICALITY ignore  TYPE Common-PhysicalChannel-Status-Information    PRESENCE mandatory }
}

-- *************************************************************
--
-- SYSTEM INFORMATION UPDATE REQUEST
--
-- *************************************************************

SystemInformationUpdateRequest ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container   {{SystemInformationUpdateRequest-IEs}},
    protocolExtensions    ProtocolExtensionContainer {{SystemInformationUpdateRequest-Extensions}}    OPTIONAL,
    ...
}

SystemInformationUpdateRequest-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-C-ID                                          CRITICALITY reject     TYPE    C-ID                              PRESENCE mandatory
    }|
    { ID    id-BCCH-ModificationTime                         CRITICALITY reject     TYPE    BCCH-ModificationTime             PRESENCE optional
    }|
    { ID    id-MIB-SB-SIB-InformationList-SystemInfoUpdateRqst    CRITICALITY reject     TYPE  MIB-SB-SIB-InformationList-SystemInfoUpdateRqst
    PRESENCE    mandatory  },
    ...
}

SystemInformationUpdateRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

MIB-SB-SIB-InformationList-SystemInfoUpdateRqst ::= SEQUENCE (SIZE (1..maxIB)) OF MIB-SB-SIB-InformationItem-SystemInfoUpdateRqst

MIB-SB-SIB-InformationItem-SystemInfoUpdateRqst ::= SEQUENCE {
    iB-Type                          IB-Type,
    iB-OC-ID                         IB-OC-ID,
    deletionIndicator                DeletionIndicator-SystemInfoUpdate,
    iE-Extensions                    ProtocolExtensionContainer { { MIB-SB-SIB-InformationItem-SystemInfoUpdateRqst-ExtIEs} }    OPTIONAL,
    ...
}

MIB-SB-SIB-InformationItem-SystemInfoUpdateRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DeletionIndicator-SystemInfoUpdate ::= CHOICE {
    no-Deletion                      No-Deletion-SystemInfoUpdate,
    yes-Deletion                     NULL
```

```
}

No-Deletion-SystemInfoUpdate ::= SEQUENCE {
    sIB-Originator                              SIB-Originator              OPTIONAL,
    -- This IE shall be present if the IB-Type is equal 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 is "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 is "MIB", "SB1" or "SB2"
    iE-Extensions                               ProtocolExtensionContainer { { SegmentInformationItem-SystemInfoUpdate-ExtIEs} } OPTIONAL,
    ...
}

SegmentInformationItem-SystemInfoUpdate-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *************************************************************
--
-- SYSTEM INFORMATION UPDATE RESPONSE
--
-- *************************************************************

SystemInformationUpdateResponse ::= SEQUENCE {
    protocolIEs             ProtocolIE-Container   {{SystemInformationUpdateResponse-IEs}},
    protocolExtensions      ProtocolExtensionContainer  {{SystemInformationUpdateResponse-Extensions}}     OPTIONAL,
    ...
}

SystemInformationUpdateResponse-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-CriticalityDiagnostics       CRITICALITY     ignore      TYPE    CriticalityDiagnostics   PRESENCE optional},
    ...
}
```

```
SystemInformationUpdateResponse-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}


-- ****************************************************************
--
-- SYSTEM INFORMATION UPDATE FAILURE
--
-- ****************************************************************

SystemInformationUpdateFailure ::= SEQUENCE {
    protocolIEs            ProtocolIE-Container     {{SystemInformationUpdateFailure-IEs}},
    protocolExtensions     ProtocolExtensionContainer {{SystemInformationUpdateFailure-Extensions}}     OPTIONAL,
    ...
}

SystemInformationUpdateFailure-IEs NBAP-PROTOCOL-IES ::= {
    { ID   id-Cause                          CRITICALITY    ignore        TYPE    Cause                      PRESENCE mandatory   }|
    { ID   id-CriticalityDiagnostics         CRITICALITY    ignore        TYPE    CriticalityDiagnostics     PRESENCE optional },
    ...
}

SystemInformationUpdateFailure-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ****************************************************************
--
-- RADIO LINK SETUP REQUEST FDD
--
-- ****************************************************************

RadioLinkSetupRequestFDD ::= SEQUENCE {
    protocolIEs            ProtocolIE-Container     {{RadioLinkSetupRequestFDD-IEs}},
    protocolExtensions     ProtocolExtensionContainer {{RadioLinkSetupRequestFDD-Extensions}}     OPTIONAL,
    ...
}

RadioLinkSetupRequestFDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID   id-CRNC-CommunicationContextID                   CRITICALITY reject             TYPE CRNC-CommunicationContextID                     PRESENCE
      mandatory   }|
    { ID   id-UL-DPCH-Information-RL-SetupRqstFDD            CRITICALITY reject             TYPE UL-DPCH-Information-RL-SetupRqstFDD             PRESENCE
      mandatory   }|
    { ID   id-DL-DPCH-Information-RL-SetupRqstFDD            CRITICALITY reject             TYPE DL-DPCH-Information-RL-SetupRqstFDD             PRESENCE
      mandatory   }|
    { ID   id-DCH-FDD-Information            CRITICALITY reject             TYPE    DCH-FDD-Information          PRESENCE mandatory   }|
    { ID   id-DSCH-FDD-Information           CRITICALITY reject             TYPE    DSCH-FDD-Information         PRESENCE optional }|
    { ID   id-TFCI2-Bearer-Information-RL-SetupRqstFDD       CRITICALITY ignore             TYPE TFCI2-Bearer-Information-RL-SetupRqstFDD PRESENCE
      optional   }|
    { ID   id-RL-InformationList-RL-SetupRqstFDD            CRITICALITY notify             TYPE RL-InformationList-RL-SetupRqstFDD             PRESENCE
      mandatory   }|
```

```
    { ID id-Transmission-Gap-Pattern-Sequence-Information     CRITICALITY reject                TYPE Transmission-Gap-Pattern-Sequence-Information
    PRESENCE conditional }
    -- This IE shall be present when the Active Pattern Sequence Information IE is present, otherwise this IE is 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 is present only if "Min UL Channelisation Code length" equals 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 is only present if the DL DPCH slot format is equal to any of the value 12 to 16 --
    multiplexingPosition                    MultiplexingPosition,
    pDSCH-RL-ID                             RL-ID           OPTIONAL,
    -- This IE is present only if the DSCH Information group is present --
    pDSCH-CodeMapping                       PDSCH-CodeMapping       OPTIONAL,
    -- This IE is present only if the DSCH Information group is present --
    powerOffsetInformation                  PowerOffsetInformation-RL-SetupRqstFDD,
    fdd-TPC-DownlinkStepSize                FDD-TPC-DownlinkStepSize,
    limitedPowerIncrease                    LimitedPowerIncrease,
    innerLoopDLPCStatus                     InnerLoopDLPCStatus,
    iE-Extensions                           ProtocolExtensionContainer { { DL-DPCH-Information-RL-SetupRqstFDD-ExtIEs} } OPTIONAL,
    ...
}
```

```
DL-DPCH-Information-RL-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PowerOffsetInformation-RL-SetupRqstFDD ::= SEQUENCE {
    pO1-ForTFCI-Bits                        PowerOffset,
    pO2-ForTPC-Bits                         PowerOffset,
    pO3-ForPilotBits                        PowerOffset,
    iE-Extensions                           ProtocolExtensionContainer { { PowerOffsetInformation-RL-SetupRqstFDD-ExtIEs} } OPTIONAL,
    ...
}

PowerOffsetInformation-RL-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TFCI2-Bearer-Information-RL-SetupRqstFDD ::= SEQUENCE {
    toAWS                                   ToAWS,
    toAWE                                   ToAWE,
    iE-Extensions                           ProtocolExtensionContainer { { TFCI2-Bearer-Information-RL-SetupRqstFDD-ExtIEs} }   OPTIONAL,
    ...
}

TFCI2-Bearer-Information-RL-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-InformationList-RL-SetupRqstFDD ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF
    ProtocolIE-Single-Container{{ RL-InformationItemIE-RL-SetupRqstFDD }}

RL-InformationItemIE-RL-SetupRqstFDD NBAP-PROTOCOL-IES ::= {
    { ID   id-RL-InformationItem-RL-SetupRqstFDD          CRITICALITY    notify       TYPE RL-InformationItem-RL-SetupRqstFDD    PRESENCE
    mandatory}
}

RL-InformationItem-RL-SetupRqstFDD ::= SEQUENCE {
    rL-ID                         RL-ID,
    c-ID                          C-ID,
    firstRLS-indicator            FirstRLS-Indicator,
    frameOffset                   FrameOffset,
    chipOffset                    ChipOffset,
    propagationDelay              PropagationDelay        OPTIONAL,
    diversityControlField         DiversityControlField   OPTIONAL,
    -- This IE is present only if the RL is not the first one in the RL Information
    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 is present unless Diversity Mode IE in UL DPCH Information group is "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 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}}  OPTIONAL,
    ...
}

RadioLinkSetupRequestTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID   id-CRNC-CommunicationContextID                        CRITICALITY reject        TYPE  CRNC-CommunicationContextID
    PRESENCE    mandatory   }|
    { ID   id-UL-CCTrCH-InformationList-RL-SetupRqstTDD          CRITICALITY notify        TYPE  UL-CCTrCH-InformationList-RL-SetupRqstTDD
    PRESENCE    optional    }|
    { ID   id-DL-CCTrCH-InformationList-RL-SetupRqstTDD          CRITICALITY notify        TYPE  DL-CCTrCH-InformationList-RL-SetupRqstTDD
    PRESENCE    optional    }|
    { ID   id-DCH-TDD-Information             CRITICALITY reject        TYPE   DCH-TDD-Information        PRESENCE optional }|
    { ID   id-DSCH-TDD-Information            CRITICALITY reject        TYPE   DSCH-TDD-Information       PRESENCE optional }|
    { ID   id-USCH-Information             CRITICALITY reject        TYPE   USCH-Information        PRESENCE optional }|
    { ID   id-RL-Information-RL-SetupRqstTDD                     CRITICALITY reject        TYPE  RL-Information-RL-SetupRqstTDD
    PRESENCE    mandatory   },
    ...
}

RadioLinkSetupRequestTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-CCTrCH-InformationList-RL-SetupRqstTDD ::= SEQUENCE (SIZE(1..maxNrOfCCTrCHs)) OF
    ProtocolIE-Single-Container{{ UL-CCTrCH-InformationItemIE-RL-SetupRqstTDD }}

UL-CCTrCH-InformationItemIE-RL-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID   id-UL-CCTrCH-InformationItem-RL-SetupRqstTDD         CRITICALITY    notify        TYPE UL-CCTrCH-InformationItem-RL-SetupRqstTDD
    PRESENCE    mandatory}
}

UL-CCTrCH-InformationItem-RL-SetupRqstTDD ::= SEQUENCE {
    cCTrCH-ID                        CCTrCH-ID,
    tFCS                             TFCS,
    tFCI-Coding                      TFCI-Coding,
    punctureLimit                    PunctureLimit,
```

```
    uL-DPCH-Information                      UL-DPCH-Information-RL-SetupRqstTDD     OPTIONAL,
    iE-Extensions                            ProtocolExtensionContainer { { UL-CCTrCH-InformationItem-RL-SetupRqstTDD-ExtIEs} }     OPTIONAL,
    ...
}

UL-CCTrCH-InformationItem-RL-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-UL-DPCH-LCR-Information-RL-SetupRqstTDD CRITICALITY notify     EXTENSION   UL-DPCH-LCR-Information-RL-SetupRqstTDD   PRESENCE optional
    },
    ...
}

UL-DPCH-Information-RL-SetupRqstTDD ::= ProtocolIE-Single-Container{{ UL-DPCH-InformationIE-RL-SetupRqstTDD }}

UL-DPCH-InformationIE-RL-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID id-UL-DPCH-InformationList-RL-SetupRqstTDD    CRITICALITY notify  TYPE UL-DPCH-InformationItem-RL-SetupRqstTDD     PRESENCE mandatory   }
}

UL-DPCH-InformationItem-RL-SetupRqstTDD ::= SEQUENCE {
    repetitionPeriod                         RepetitionPeriod,
    repetitionLength                         RepetitionLength,
    tdd-DPCHOffset                           TDD-DPCHOffset,
    uL-Timeslot-Information             UL-Timeslot-Information,
    iE-Extensions                            ProtocolExtensionContainer { { UL-DPCH-InformationItem-RL-SetupRqstTDD-ExtIEs} }   OPTIONAL,
    ...
}

UL-DPCH-InformationItem-RL-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-DPCH-LCR-Information-RL-SetupRqstTDD ::= ProtocolIE-Single-Container{{ UL-DPCH-LCR-InformationIE-RL-SetupRqstTDD }}

UL-DPCH-LCR-InformationIE-RL-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID id-UL-DPCH-LCR-InformationList-RL-SetupRqstTDD    CRITICALITY notify  TYPE UL-DPCH-LCR-InformationItem-RL-SetupRqstTDD     PRESENCE
optional   }
}

UL-DPCH-LCR-InformationItem-RL-SetupRqstTDD ::= SEQUENCE {
    repetitionPeriod                         RepetitionPeriod,
    repetitionLength                         RepetitionLength,
    tdd-DPCHOffset                           TDD-DPCHOffset,
    uL-TimeslotLCR-Information                UL-TimeslotLCR-Information,
    iE-Extensions                            ProtocolExtensionContainer { { UL-DPCH-LCR-InformationItem-RL-SetupRqstTDD-ExtIEs} }     OPTIONAL,
    ...
}

UL-DPCH-LCR-InformationItem-RL-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CCTrCH-InformationList-RL-SetupRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container{{ DL-CCTrCH-InformationItemIE-RL-
SetupRqstTDD }}
```

```
DL-CCTrCH-InformationItemIE-RL-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID    id-DL-CCTrCH-InformationItem-RL-SetupRqstTDD                 CRITICALITY     notify     TYPE DL-CCTrCH-InformationItem-RL-SetupRqstTDD
    PRESENCE    mandatory}
}

DL-CCTrCH-InformationItem-RL-SetupRqstTDD ::= SEQUENCE {
    cCTrCH-ID                           CCTrCH-ID,
    tFCS                                TFCS,
    tFCI-Coding                         TFCI-Coding,
    punctureLimit                       PunctureLimit,
    tdd-TPC-DownlinkStepSize             TDD-TPC-DownlinkStepSize,
    cCTrCH-TPCList                       CCTrCH-TPCList-RL-SetupRqstTDD          OPTIONAL,
    dL-DPCH-Information                  DL-DPCH-Information-RL-SetupRqstTDD     OPTIONAL,
    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
    },
    ...
}

CCTrCH-TPCList-RL-SetupRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF CCTrCH-TPCItem-RL-SetupRqstTDD

CCTrCH-TPCItem-RL-SetupRqstTDD   ::= SEQUENCE {
    cCTrCH-ID                           CCTrCH-ID,
    iE-Extensions                       ProtocolExtensionContainer { { CCTrCH-TPCItem-RL-SetupRqstTDD-ExtIEs} }    OPTIONAL,
    ...
}

CCTrCH-TPCItem-RL-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-Information-RL-SetupRqstTDD ::= ProtocolIE-Single-Container{{ DL-DPCH-InformationIE-RL-SetupRqstTDD }}

DL-DPCH-InformationIE-RL-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID id-DL-DPCH-InformationList-RL-SetupRqstTDD    CRITICALITY notify  TYPE DL-DPCH-InformationItem-RL-SetupRqstTDD    PRESENCE mandatory   }
}

DL-DPCH-InformationItem-RL-SetupRqstTDD  ::= SEQUENCE {
    repetitionPeriod                    RepetitionPeriod,
    repetitionLength                    RepetitionLength,
    tdd-DPCHOffset                      TDD-DPCHOffset,
    dL-Timeslot-Information         DL-Timeslot-Information,
    iE-Extensions                       ProtocolExtensionContainer { { DL-DPCH-InformationItem-RL-SetupRqstTDD-ExtIEs} }    OPTIONAL,
    ...
}

DL-DPCH-InformationItem-RL-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

ETSI

```
DL-DPCH-LCR-Information-RL-SetupRqstTDD ::= ProtocolIE-Single-Container{{ DL-DPCH-LCR-InformationIE-RL-SetupRqstTDD }}

DL-DPCH-LCR-InformationIE-RL-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID id-DL-DPCH-LCR-InformationList-RL-SetupRqstTDD    CRITICALITY notify  TYPE DL-DPCH-LCR-InformationItem-RL-SetupRqstTDD    PRESENCE
mandatory    }
}

DL-DPCH-LCR-InformationItem-RL-SetupRqstTDD ::= SEQUENCE {
    repetitionPeriod                       RepetitionPeriod,
    repetitionLength                       RepetitionLength,
    tdd-DPCHOffset                         TDD-DPCHOffset,
    DL-TimeslotLCR-Information             DL-TimeslotLCR-Information,
    tstdIndicator                          TSTD-Indicator
    iE-Extensions                          ProtocolExtensionContainer { { DL-DPCH-LCR-InformationItem-RL-SetupRqstTDD-ExtIEs} }    OPTIONAL,
    ...
}

DL-DPCH-LCR-InformationItem-RL-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-Information-RL-SetupRqstTDD ::= SEQUENCE {
    rL-ID                                  RL-ID,
    c-ID                                   C-ID,
    frameOffset                            FrameOffset,
    specialBurstScheduling                 SpecialBurstScheduling,
    initialDL-transmissionPower            DL-Power,
    maximumDL-power                        DL-Power,
    minimumDL-power                        DL-Power,
    dL-TimeSlotISCPInfo                    DL-TimeslotISCPInfo OPTIONAL,
    iE-Extensions                          ProtocolExtensionContainer { { RL-Information-RL-SetupRqstTDD-ExtIEs} }    OPTIONAL,
    ...
}

RL-Information-RL-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-TimeslotISCP-LCR-InfoList-RL-SetupRqstTDD    CRITICALITY reject    TYPE    TimeslotISCP-LCR-InfoList-RL-SetupRqstTDD    PRESENCE
optional    },
    ...
}

TimeslotISCP-LCR-InfoList-RL-SetupRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfDLTSLCRs)) OF TimeslotISCP-LCR-InfoItem-RL-SetupRqstTDD

TimeslotISCP-LCR-InfoItem-RL-SetupRqstTDD ::= SEQUENCE {
    timeSlotLCR             TimeSlotLCR,
    dL-TimeslotISCP         DL-TimeslotISCP,
    iE-Extensions           ProtocolExtensionContainer { {TimeslotISCP-LCR-InfoItem-RL-SetupRqstTDD-ExtIEs} }         OPTIONAL,
    ...
    }

TimeslotISCP-LCR-InfoItem-RL-SetupRqstTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

```
-- *************************************************************
--
-- RADIO LINK SETUP RESPONSE FDD
--
-- *************************************************************

RadioLinkSetupResponseFDD ::= SEQUENCE {
    protocolIEs           ProtocolIE-Container    {{RadioLinkSetupResponseFDD-IEs}},
    protocolExtensions    ProtocolExtensionContainer {{RadioLinkSetupResponseFDD-Extensions}}    OPTIONAL,
    ...
}

RadioLinkSetupResponseFDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-CRNC-CommunicationContextID                        CRITICALITY ignore        TYPE  CRNC-CommunicationContextID
    PRESENCE    mandatory    }|
    { ID    id-NodeB-CommunicationContextID                       CRITICALITY ignore        TYPE  NodeB-CommunicationContextID          PRESENCE
    mandatory    }|
    { ID    id-CommunicationControlPortID                         CRITICALITY ignore        TYPE  CommunicationControlPortID            PRESENCE
    mandatory    }|
    { ID    id-RL-InformationResponseList-RL-SetupRspFDD          CRITICALITY ignore        TYPE  RL-InformationResponseList-RL-SetupRspFDD
    PRESENCE    mandatory    }|
    { ID    id-TFCI2-BearerInformationResponse  CRITICALITY ignore        TYPE    TFCI2-BearerInformationResponse PRESENCE optional }|
    { ID    id-CriticalityDiagnostics                             CRITICALITY ignore        TYPE  CriticalityDiagnostics                PRESENCE
    optional    },
    ...
}

RadioLinkSetupResponseFDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-InformationResponseList-RL-SetupRspFDD ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container{{ RL-InformationResponseItemIE-RL-
SetupRspFDD }}

RL-InformationResponseItemIE-RL-SetupRspFDD NBAP-PROTOCOL-IES ::= {
    { ID    id-RL-InformationResponseItem-RL-SetupRspFDD          CRITICALITY    ignore    TYPE RL-InformationResponseItem-RL-SetupRspFDD
    PRESENCE    mandatory}
}

RL-InformationResponseItem-RL-SetupRspFDD ::= SEQUENCE {
    rL-ID                              RL-ID,
    rL-Set-ID                          RL-Set-ID,
    received-total-wide-band-power                           Received-total-wide-band-power-Value,
    diversityIndication         DiversityIndication-RL-SetupRspFDD,
    -- This IE represents both the Diversity Indication IE and the choice based on the diversity indication as described in
    -- the tabular message format in subclause 9.1.
    dSCH-InformationResponseList                DSCH-InformationResponseList-RL-SetupRspFDD   OPTIONAL,
    sSDT-SupportIndicator                       SSDT-SupportIndicator,
    iE-Extensions                               ProtocolExtensionContainer { { RL-InformationResponseItem-RL-SetupRspFDD-ExtIEs} }    OPTIONAL,
    ...
}
```

```
RL-InformationResponseItem-RL-SetupRspFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

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    }|
    { 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    },
    ...
}

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}}  OPTIONAL,
    ...
}

RadioLinkSetupFailureFDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-CRNC-CommunicationContextID                             CRITICALITY    ignore      TYPE  CRNC-CommunicationContextID
                PRESENCE    mandatory   }|
    { ID    id-NodeB-CommunicationContextID                           CRITICALITY    ignore      TYPE  NodeB-CommunicationContextID
                PRESENCE    conditional }|
    -- This IE is present if at least one of the radio links has been successfully set up
    { ID    id-CommunicationControlPortID                             CRITICALITY    ignore      TYPE  CommunicationControlPortID
                PRESENCE    optional    }|
    { ID    id-CauseLevel-RL-SetupFailureFDD                          CRITICALITY    ignore      TYPE  CauseLevel-RL-SetupFailureFDD     PRESENCE
mandatory   }|
    { ID    id-CriticalityDiagnostics                                 CRITICALITY    ignore      TYPE  CriticalityDiagnostics
                PRESENCE    optional    },
    ...
}

RadioLinkSetupFailureFDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CauseLevel-RL-SetupFailureFDD ::= CHOICE {
    generalCause        GeneralCauseList-RL-SetupFailureFDD,
    rLSpecificCause     RLSpecificCauseList-RL-SetupFailureFDD,
    ...
}

GeneralCauseList-RL-SetupFailureFDD ::= SEQUENCE {
    cause                                   Cause,
    iE-Extensions                           ProtocolExtensionContainer { { GeneralCauseItem-RL-SetupFailureFDD-ExtIEs} }   OPTIONAL,
    ...
}
```

```
GeneralCauseItem-RL-SetupFailureFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RLSpecificCauseList-RL-SetupFailureFDD ::= SEQUENCE {
    unsuccessful-RL-InformationRespList-RL-SetupFailureFDD     Unsuccessful-RL-InformationRespList-RL-SetupFailureFDD,
    successful-RL-InformationRespList-RL-SetupFailureFDD       Successful-RL-InformationRespList-RL-SetupFailureFDD  OPTIONAL,
    iE-Extensions                           ProtocolExtensionContainer { { RLSpecificCauseItem-RL-SetupFailureFDD-ExtIEs} }   OPTIONAL,
    ...
}

RLSpecificCauseItem-RL-SetupFailureFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Unsuccessful-RL-InformationRespList-RL-SetupFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfRLs))  OF ProtocolIE-Single-Container {{ Unsuccessful-RL-
InformationRespItemIE-RL-SetupFailureFDD }}

Unsuccessful-RL-InformationRespItemIE-RL-SetupFailureFDD NBAP-PROTOCOL-IES ::= {
    { ID    id-Unsuccessful-RL-InformationRespItem-RL-SetupFailureFDD        CRITICALITY      ignore     TYPE Unsuccessful-RL-InformationRespItem-RL-
SetupFailureFDD     PRESENCE     mandatory}
}

Unsuccessful-RL-InformationRespItem-RL-SetupFailureFDD ::= SEQUENCE {
    rL-ID                                     RL-ID,
    cause                                     Cause,
    iE-Extensions                             ProtocolExtensionContainer { { Unsuccessful-RL-InformationRespItem-RL-SetupFailureFDD-ExtIEs} }
    OPTIONAL,
    ...
}

Unsuccessful-RL-InformationRespItem-RL-SetupFailureFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Successful-RL-InformationRespList-RL-SetupFailureFDD ::= SEQUENCE (SIZE (1.. maxNrOfRLs)) OF ProtocolIE-Single-Container {{ Successful-RL-
InformationRespItemIE-RL-SetupFailureFDD }}

Successful-RL-InformationRespItemIE-RL-SetupFailureFDD NBAP-PROTOCOL-IES ::= {
    { ID    id-Successful-RL-InformationRespItem-RL-SetupFailureFDD          CRITICALITY      ignore     TYPE Successful-RL-InformationRespItem-RL-
SetupFailureFDD     PRESENCE     mandatory}
}

Successful-RL-InformationRespItem-RL-SetupFailureFDD ::= SEQUENCE {
    rL-ID                                     RL-ID,
    rL-Set-ID                                 RL-Set-ID,
    received-total-wide-band-power                          Received-total-wide-band-power-Value,
    diversityIndication                       DiversityIndication-RL-SetupFailureFDD,
    -- This IE represents both the Diversity Indication IE and the choice based on the diversity indication as described in
    -- the tabular message format in subclause 9.1.
    dSCH-InformationResponseList              DSCH-InformationRespList-RL-SetupFailureFDD     OPTIONAL,
    tFCI2-BearerInformationResponse           TFCI2-BearerInformationResponse OPTIONAL,
```

```
    sSDT-SupportIndicator                       SSDT-SupportIndicator,
    iE-Extensions                               ProtocolExtensionContainer { { Successful-RL-InformationRespItem-RL-SetupFailureFDD-ExtIEs} }
    OPTIONAL,
    ...
}

Successful-RL-InformationRespItem-RL-SetupFailureFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

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,
    ...
}
```

ETSI

```
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,
```

ETSI

```
    transmitDiversityIndicator                  TransmitDiversityIndicator      OPTIONAL,
    iE-Extensions                               ProtocolExtensionContainer { { RL-InformationItem-RL-AdditionRqstFDD-ExtIEs} }    OPTIONAL,
    ...
}

RL-InformationItem-RL-AdditionRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ************************************************************
--
-- RADIO LINK ADDITION REQUEST TDD
--
-- ************************************************************

RadioLinkAdditionRequestTDD ::= SEQUENCE {
    protocolIEs           ProtocolIE-Container    {{RadioLinkAdditionRequestTDD-IEs}},
    protocolExtensions    ProtocolExtensionContainer  {{RadioLinkAdditionRequestTDD-Extensions}}    OPTIONAL,
    ...
}

RadioLinkAdditionRequestTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-NodeB-CommunicationContextID                    CRITICALITY    reject    TYPE NodeB-CommunicationContextID
    PRESENCE    mandatory   }|
    { ID    id-UL-CCTrCH-InformationList-RL-AdditionRqstTDD     CRITICALITY    reject    TYPE UL-CCTrCH-InformationList-RL-AdditionRqstTDD
      PRESENCE    optional    }|
    { ID    id-DL-CCTrCH-InformationList-RL-AdditionRqstTDD     CRITICALITY    reject    TYPE DL-CCTrCH-InformationList-RL-AdditionRqstTDD
      PRESENCE    optional    }|
    { ID    id-RL-Information-RL-AdditionRqstTDD                CRITICALITY    reject    TYPE RL-Information-RL-AdditionRqstTDD
    PRESENCE    mandatory   },
    ...
}

RadioLinkAdditionRequestTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-CCTrCH-InformationList-RL-AdditionRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF UL-CCTrCH-InformationItem-RL-AdditionRqstTDD

UL-CCTrCH-InformationItem-RL-AdditionRqstTDD ::= SEQUENCE {
    cCTrCH-ID                             CCTrCH-ID,
    uL-DPCH-Information                   UL-DPCH-InformationList-RL-AdditionRqstTDD     OPTIONAL,
    iE-Extensions                         ProtocolExtensionContainer { { UL-CCTrCH-InformationItem-RL-AdditionRqstTDD-ExtIEs} }   OPTIONAL,
    ...
}

UL-CCTrCH-InformationItem-RL-AdditionRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...,
    { ID    id-UL-DPCH-InformationItem-LCR-RL-AdditionRqstTDD          CRITICALITY     notify      EXTENSION   UL-DPCH-InformationItem-LCR-RL-
AdditionRqstTDD          PRESENCE    optional }
}

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}
}

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 }
}

DL-DPCH-InformationList-RL-AdditionRqstTDD ::= ProtocolIE-Single-Container {{ DL-DPCH-InformationItemIE-RL-AdditionRqstTDD }}

DL-DPCH-InformationItemIE-RL-AdditionRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID   id-DL-DPCH-InformationItem-RL-AdditionRqstTDD            CRITICALITY    notify    TYPE DL-DPCH-InformationItem-RL-AdditionRqstTDD
        PRESENCE    mandatory}
}

DL-DPCH-InformationItem-RL-AdditionRqstTDD ::= SEQUENCE {
    repetitionPeriod                        RepetitionPeriod,
    repetitionLength                        RepetitionLength,
    tdd-DPCHOffset                          TDD-DPCHOffset,
    dL-Timeslot-Information          DL-Timeslot-Information,
    iE-Extensions                           ProtocolExtensionContainer { { DL-DPCH-InformationItem-RL-AdditionRqstTDD-ExtIEs} }        OPTIONAL,
    ...
}

DL-DPCH-InformationItem-RL-AdditionRqstTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

```
RL-Information-RL-AdditionRqstTDD ::= SEQUENCE {
    rL-ID                                   RL-ID,
    c-ID                                    C-ID,
    frameOffset                             FrameOffset,
    diversityControlField                   DiversityControlField,
    initial-DL-Transmission-Power           DL-Power            OPTIONAL,
    maximumDL-Power                         DL-Power            OPTIONAL,
    minimumDL-Power                         DL-Power            OPTIONAL,
    dL-TimeSlotISCPInfo                     DL-TimeslotISCPInfo OPTIONAL,
    iE-Extensions                           ProtocolExtensionContainer { { RL-information-RL-AdditionRqstTDD-ExtIEs} }        OPTIONAL,
    ...
 }

RL-information-RL-AdditionRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...,
    { ID   id-TIMESLOTISCP-InformationList-LCR-RL-AdditionRqstTDD         CRITICALITY    notify    EXTENSION    TIMESLOTISCP-InformationList-
LCR-RL-AdditionRqstTDD          PRESENCE    optional }
}

UL-DPCH-InformationItem-LCR-RL-AdditionRqstTDD ::= SEQUENCE {
    repetitionPeriod                        RepetitionPeriod,
    repetitionLength                        RepetitionLength,
    tdd-DPCHOffset                          TDD-DPCHOffset,
    uL-TimeslotLCR-Information               UL-TimeslotLCR-Information,
    iE-Extensions                           ProtocolExtensionContainer { { UL-DPCH-InformationItem-LCR-RL-AdditionRqstTDD-ExtIEs} }     OPTIONAL,
    ...
}

UL-DPCH-InformationItem-LCR-RL-AdditionRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-InformationItem-LCR-RL-AdditionRqstTDD ::= SEQUENCE {
    repetitionPeriod                        RepetitionPeriod,
    repetitionLength                        RepetitionLength,
    tdd-DPCHOffset                          TDD-DPCHOffset,
    dL-TimeslotLCR-Information               DL-TimeslotLCR-Information,
    iE-Extensions                           ProtocolExtensionContainer { { UL-DPCH-InformationItem-LCR-RL-AdditionRqstTDD-ExtIEs} }     OPTIONAL,
    ...
}

DL-DPCH-InformationItem-LCR-RL-AdditionRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TIMESLOTISCP-InformationList-LCR-RL-AdditionRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfDLTSLCRs)) OF TimeslotISCPInfoList-RL-AdditionRqstTDD

TimeslotISCPInfoList-RL-AdditionRqstTDD ::= SEQUENCE {
    timeSlotLCR             TimeSlotLCR,
    dL-TimeslotISCP         DL-TimeslotISCP,
    iE-Extensions           ProtocolExtensionContainer { {TimeslotISCPInfoList-LCR-RL-AdditionRqstTDD-ExtIEs} }        OPTIONAL,
    ...
```

```
    }

TimeslotISCPInfoList-LCR-RL-AdditionRqstTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *************************************************************
--
-- RADIO LINK ADDITION RESPONSE FDD
--
-- *************************************************************

RadioLinkAdditionResponseFDD ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{RadioLinkAdditionResponseFDD-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{RadioLinkAdditionResponseFDD-Extensions}}      OPTIONAL,
    ...
}

RadioLinkAdditionResponseFDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID   id-CRNC-CommunicationContextID                    CRITICALITY   ignore      TYPE CRNC-CommunicationContextID
    PRESENCE   mandatory   }|
    { ID   id-RL-InformationResponseList-RL-AdditionRspFDD   CRITICALITY   ignore      TYPE RL-InformationResponseList-RL-
AdditionRspFDD PRESENCE   mandatory   }|
    { ID   id-CriticalityDiagnostics                         CRITICALITY   ignore      TYPE CriticalityDiagnostics
    PRESENCE   optional   },
    ...
}

RadioLinkAdditionResponseFDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-InformationResponseList-RL-AdditionRspFDD ::= SEQUENCE (SIZE (1..maxNrOfRLs-1)) OF ProtocolIE-Single-Container {{ RL-InformationResponseItemIE-
RL-AdditionRspFDD }}

RL-InformationResponseItemIE-RL-AdditionRspFDD NBAP-PROTOCOL-IES ::= {
    { ID   id-RL-InformationResponseItem-RL-AdditionRspFDD   CRITICALITY   ignore      TYPE  RL-InformationResponseItem-RL-AdditionRspFDD
    PRESENCE   mandatory}
}

RL-InformationResponseItem-RL-AdditionRspFDD ::= SEQUENCE {
    rL-ID                                  RL-ID,
    rL-Set-ID                              RL-Set-ID,
    received-total-wide-band-power                          Received-total-wide-band-power-Value,
    diversityIndication                    DiversityIndication-RL-AdditionRspFDD,
    -- This IE represents both the Diversity Indication IE and the choice based on the diversity indication as described in
    -- the tabular message format in subclause 9.1.
    sSDT-SupportIndicator                  SSDT-SupportIndicator,
    iE-Extensions                          ProtocolExtensionContainer { { RL-InformationResponseItem-RL-AdditionRspFDD-ExtIEs} }
    OPTIONAL,
    ...
}
```

```
RL-InformationResponseItem-RL-AdditionRspFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DiversityIndication-RL-AdditionRspFDD ::= CHOICE {
    combining                                   Combining-RL-AdditionRspFDD,
    non-combining                               Non-Combining-RL-AdditionRspFDD
}

Combining-RL-AdditionRspFDD ::= SEQUENCE {
    rL-ID                                       RL-ID,
    iE-Extensions                               ProtocolExtensionContainer { { CombiningItem-RL-AdditionRspFDD-ExtIEs} }   OPTIONAL,
    ...
}

CombiningItem-RL-AdditionRspFDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Non-Combining-RL-AdditionRspFDD ::= SEQUENCE {
    dCH-InformationResponse                     DCH-InformationResponse,
    iE-Extensions                               ProtocolExtensionContainer { { Non-CombiningItem-RL-AdditionRspFDD-ExtIEs} }     OPTIONAL,
    ...
}

Non-CombiningItem-RL-AdditionRspFDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ************************************************************
--
-- RADIO LINK ADDITION RESPONSE TDD
--
-- ************************************************************

RadioLinkAdditionResponseTDD ::= SEQUENCE {
    protocolIEs           ProtocolIE-Container    {{RadioLinkAdditionResponseTDD-IEs}},
    protocolExtensions    ProtocolExtensionContainer {{RadioLinkAdditionResponseTDD-Extensions}}    OPTIONAL,
    ...
}

RadioLinkAdditionResponseTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-CRNC-CommunicationContextID                   CRITICALITY ignore      TYPE  CRNC-CommunicationContextID
    PRESENCE    mandatory   }|
    { ID    id-RL-InformationResponse-RL-AdditionRspTDD      CRITICALITY ignore      TYPE  RL-InformationResponse-RL-AdditionRspTDD
    PRESENCE    mandatory   }|
    { ID    id-CriticalityDiagnostics                        CRITICALITY ignore      TYPE  CriticalityDiagnostics              PRESENCE
    optional    },
    ...
}

RadioLinkAdditionResponseTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
```

```
}

RL-InformationResponse-RL-AdditionRspTDD ::= SEQUENCE {
    rL-ID                                      RL-ID,
    uL-TimeSlot-ISCP-Info                      UL-TimeSlot-ISCP-Info,
    ul-PhysCH-SF-Variation                     UL-PhysCH-SF-Variation,
    dCH-Information                            DCH-Information-RL-AdditionRspTDD           OPTIONAL,
    dSCH-InformationResponseList               DSCH-InformationResponseList-RL-AdditionRspTDD   OPTIONAL,
    uSCH-InformationResponseList               USCH-InformationResponseList-RL-AdditionRspTDD   OPTIONAL,
    iE-Extensions                              ProtocolExtensionContainer { { RL-InformationResponse-RL-AdditionRspTDD-ExtIEs} }   OPTIONAL,
    ...
}

RL-InformationResponse-RL-AdditionRspTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-Information-RL-AdditionRspTDD ::= SEQUENCE {
    diversityIndication                DiversityIndication-RL-AdditionRspTDD,
    -- This IE represents both the Diversity Indication IE and the choice based on the diversity indication as described in
    -- the tabular message format in subclause 9.1.
    iE-Extensions                  ProtocolExtensionContainer { { DCH-Information-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
    ...
}

DCH-Information-RL-AdditionRspTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DiversityIndication-RL-AdditionRspTDD ::= CHOICE {
    combining                                  Combining-RL-AdditionRspTDD,
    non-Combining                              Non-Combining-RL-AdditionRspTDD
}

Combining-RL-AdditionRspTDD ::= SEQUENCE {
    rL-ID                                      RL-ID,
    iE-Extensions                              ProtocolExtensionContainer { { CombiningItem-RL-AdditionRspTDD-ExtIEs} }   OPTIONAL,
    ...
}

CombiningItem-RL-AdditionRspTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Non-Combining-RL-AdditionRspTDD ::= SEQUENCE {
    dCH-InformationResponse            DCH-InformationResponse,
    iE-Extensions                              ProtocolExtensionContainer { { Non-CombiningItem-RL-AdditionRspTDD-ExtIEs} }       OPTIONAL,
    ...
}

Non-CombiningItem-RL-AdditionRspTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

ETSI

```
DSCH-InformationResponseList-RL-AdditionRspTDD ::= ProtocolIE-Single-Container {{ DSCH-InformationResponseListIEs-RL-AdditionRspTDD }}

DSCH-InformationResponseListIEs-RL-AdditionRspTDD NBAP-PROTOCOL-IES ::= {
    { ID id-DSCH-InformationResponse   CRITICALITY ignore   TYPE DSCH-InformationResponse      PRESENCE mandatory }
}

USCH-InformationResponseList-RL-AdditionRspTDD ::= ProtocolIE-Single-Container {{ USCH-InformationResponseListIEs-RL-AdditionRspTDD }}

USCH-InformationResponseListIEs-RL-AdditionRspTDD NBAP-PROTOCOL-IES ::= {
    { ID id-USCH-InformationResponse   CRITICALITY ignore   TYPE USCH-InformationResponse      PRESENCE mandatory }
}

-- **************************************************************
--
-- RADIO LINK ADDITION FAILURE FDD
--
-- **************************************************************

RadioLinkAdditionFailureFDD ::= SEQUENCE {
    protocolIEs            ProtocolIE-Container    {{RadioLinkAdditionFailureFDD-IEs}},
    protocolExtensions     ProtocolExtensionContainer  {{RadioLinkAdditionFailureFDD-Extensions}}      OPTIONAL,
    ...
}

RadioLinkAdditionFailureFDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-CRNC-CommunicationContextID         CRITICALITY    ignore    TYPE    CRNC-CommunicationContextID        PRESENCE mandatory   }|
    { ID    id-CauseLevel-RL-AdditionFailureFDD    CRITICALITY    ignore    TYPE    CauseLevel-RL-AdditionFailureFDD   PRESENCE mandatory   }|
    { ID    id-CriticalityDiagnostics              CRITICALITY    ignore    TYPE    CriticalityDiagnostics             PRESENCE optional    },
    ...
}

RadioLinkAdditionFailureFDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CauseLevel-RL-AdditionFailureFDD ::= CHOICE {
    generalCause       GeneralCauseList-RL-AdditionFailureFDD,
    rLSpecificCause    RLSpecificCauseList-RL-AdditionFailureFDD,
    ...
}

GeneralCauseList-RL-AdditionFailureFDD ::= SEQUENCE {
    cause                                Cause,
    iE-Extensions                        ProtocolExtensionContainer { { GeneralCauseItem-RL-AdditionFailureFDD-ExtIEs} }      OPTIONAL,
    ...
}

GeneralCauseItem-RL-AdditionFailureFDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RLSpecificCauseList-RL-AdditionFailureFDD ::= SEQUENCE {
```

ETSI

```
    unsuccessful-RL-InformationRespList-RL-AdditionFailureFDD     Unsuccessful-RL-InformationRespList-RL-AdditionFailureFDD,
    successful-RL-InformationRespList-RL-AdditionFailureFDD       Successful-RL-InformationRespList-RL-AdditionFailureFDD OPTIONAL,
    iE-Extensions                             ProtocolExtensionContainer { { RLSpecificCauseItem-RL-AdditionFailureFDD-ExtIEs} }     OPTIONAL,
    ...
}

RLSpecificCauseItem-RL-AdditionFailureFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Unsuccessful-RL-InformationRespList-RL-AdditionFailureFDD ::= SEQUENCE  (SIZE (1..maxNrOfRLs-1)) OF ProtocolIE-Single-Container {{ Unsuccessful-RL-
InformationRespItemIE-RL-AdditionFailureFDD }}

Unsuccessful-RL-InformationRespItemIE-RL-AdditionFailureFDD NBAP-PROTOCOL-IES ::= {
    { ID   id-Unsuccessful-RL-InformationRespItem-RL-AdditionFailureFDD      CRITICALITY    ignore   TYPE Unsuccessful-RL-InformationRespItem-
RL-AdditionFailureFDD   PRESENCE   mandatory}
}

Unsuccessful-RL-InformationRespItem-RL-AdditionFailureFDD ::= SEQUENCE {
    rL-ID                                 RL-ID,
    cause                                 Cause,
    iE-Extensions                         ProtocolExtensionContainer { { Unsuccessful-RL-InformationRespItem-RL-AdditionFailureFDD-ExtIEs} }
        OPTIONAL,
    ...
}

Unsuccessful-RL-InformationRespItem-RL-AdditionFailureFDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Successful-RL-InformationRespList-RL-AdditionFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfRLs-2)) OF ProtocolIE-Single-Container {{ Successful-RL-
InformationRespItemIE-RL-AdditionFailureFDD }}

Successful-RL-InformationRespItemIE-RL-AdditionFailureFDD NBAP-PROTOCOL-IES ::= {
    { ID    id-Successful-RL-InformationRespItem-RL-AdditionFailureFDD      CRITICALITY     ignore    TYPE  Successful-RL-InformationRespItem-RL-
AdditionFailureFDD     PRESENCE   mandatory}
}

Successful-RL-InformationRespItem-RL-AdditionFailureFDD ::= SEQUENCE {
    rL-ID                                 RL-ID,
    rL-Set-ID                             RL-Set-ID,
    received-total-wide-band-power        Received-total-wide-band-power-Value,
    diversityIndication                   DiversityIndication-RL-AdditionFailureFDD,
    -- This IE represents both the Diversity Indication IE and the choice based on the diversity indication as described in
    -- the tabular message format in subclause 9.1.
    sSDT-SupportIndicator                 SSDT-SupportIndicator,
    iE-Extensions                         ProtocolExtensionContainer { { Successful-RL-InformationRespItem-RL-AdditionFailureFDD-ExtIEs} }
    OPTIONAL,
    ...
}

Successful-RL-InformationRespItem-RL-AdditionFailureFDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
```

```
}

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
--
-- *************************************************************
```

ETSI

```
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 is present only if minUL-ChannelisationCodeLength equals 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 is only present if the DL DPCH Slot Format is equal to any of the value from 12 to 16
    multiplexingPosition                    MultiplexingPosition           OPTIONAL,
    pDSCH-CodeMapping                       PDSCH-CodeMapping              OPTIONAL,
    pDSCH-RL-ID                             RL-ID                          OPTIONAL,
    limitedPowerIncrease                    LimitedPowerIncrease           OPTIONAL,
    iE-Extensions                           ProtocolExtensionContainer { { DL-DPCH-Information-RL-ReconfPrepFDD-ExtIEs} }    OPTIONAL,
    ...
}

DL-DPCH-Information-RL-ReconfPrepFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-DeleteList-RL-ReconfPrepFDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-DeleteItem-RL-ReconfPrepFDD

DCH-DeleteItem-RL-ReconfPrepFDD ::= SEQUENCE {
    dCH-ID                                  DCH-ID,
    iE-Extensions                           ProtocolExtensionContainer { { DCH-DeleteItem-RL-ReconfPrepFDD-ExtIEs} }    OPTIONAL,
    ...
}

DCH-DeleteItem-RL-ReconfPrepFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DSCH-ModifyList-RL-ReconfPrepFDD ::= SEQUENCE (SIZE (1..maxNrOfDSCHs)) OF ProtocolIE-Single-Container {{DSCH-ModifyItemIE-RL-ReconfPrepFDD }}

DSCH-ModifyItemIE-RL-ReconfPrepFDD NBAP-PROTOCOL-IES ::= {
    { ID    id-DSCH-ModifyItem-RL-ReconfPrepFDD    CRITICALITY reject    TYPE    DSCH-ModifyItem-RL-ReconfPrepFDD   PRESENCE mandatory}
}

DSCH-ModifyItem-RL-ReconfPrepFDD ::= SEQUENCE {
    dSCH-ID                                 DSCH-ID,
    dl-TransportFormatSet                   TransportFormatSet        OPTIONAL,
    allocationRetentionPriority             AllocationRetentionPriority OPTIONAL,
    frameHandlingPriority                   FrameHandlingPriority     OPTIONAL,
    toAWS                                   ToAWS                     OPTIONAL,
    toAWE                                   ToAWE                     OPTIONAL,
    transportBearerRequestIndicator         TransportBearerRequestIndicator,
    iE-Extensions                           ProtocolExtensionContainer { { DSCH-ModifyItem-RL-ReconfPrepFDD-ExtIEs} }    OPTIONAL,
    ...
}

DSCH-ModifyItem-RL-ReconfPrepFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
```

ETSI

```
        ...
}

DSCH-DeleteList-RL-ReconfPrepFDD ::= SEQUENCE (SIZE (1..maxNrOfDSCHs)) OF ProtocolIE-Single-Container {{DSCH-DeleteItemIE-RL-ReconfPrepFDD }}

DSCH-DeleteItemIE-RL-ReconfPrepFDD NBAP-PROTOCOL-IES ::= {
    { ID   id-DSCH-DeleteItem-RL-ReconfPrepFDD   CRITICALITY reject    TYPE   DSCH-DeleteItem-RL-ReconfPrepFDD  PRESENCE mandatory}
}

DSCH-DeleteItem-RL-ReconfPrepFDD ::= SEQUENCE {
    dSCH-ID                                     DSCH-ID,
    iE-Extensions                               ProtocolExtensionContainer { { DSCH-DeleteItem-RL-ReconfPrepFDD-ExtIEs} }     OPTIONAL,
    ...
}

DSCH-DeleteItem-RL-ReconfPrepFDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TFCI2-BearerSpecificInformation-RL-ReconfPrepFDD ::= CHOICE {
    addOrModify             AddOrModify-TFCI2-RL-ReconfPrepFDD,
    delete                  NULL
}

AddOrModify-TFCI2-RL-ReconfPrepFDD ::= SEQUENCE {
    toAWS                                       ToAWS,
    toAWE                                       ToAWE,
    iE-Extensions                               ProtocolExtensionContainer { { AddOrModify-TFCI2-RL-ReconfPrepFDD-ExtIEs} }   OPTIONAL,
    ...
}

AddOrModify-TFCI2-RL-ReconfPrepFDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-InformationList-RL-ReconfPrepFDD ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container {{ RL-InformationItemIE-RL-ReconfPrepFDD }}

RL-InformationItemIE-RL-ReconfPrepFDD NBAP-PROTOCOL-IES ::= {
    { ID   id-RL-InformationItem-RL-ReconfPrepFDD        CRITICALITY    reject        TYPE RL-InformationItem-RL-ReconfPrepFDD    PRESENCE
    mandatory}
}

RL-InformationItem-RL-ReconfPrepFDD ::= SEQUENCE {
    rL-ID                                       RL-ID,
    dl-CodeInformation                          FDD-DL-CodeInformation    OPTIONAL,
    maxDL-Power                                 DL-Power                                OPTIONAL,
    minDL-Power                                 DL-Power                                OPTIONAL,
    sSDT-Indication                             SSDT-Indication                         OPTIONAL,
    sSDT-Cell-Identity                          SSDT-Cell-Identity                      OPTIONAL,
    -- The IE may be present if the SSDT Indication is set to SSDT Active in the UE
    transmitDiversityIndicator                  TransmitDiversityIndicator              OPTIONAL,
    -- This IE is present if Diversity Mode IE in UL DPCH Information group is present, unless it is equal 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      CRITICALITY    reject    TYPE UL-CCTrCH-InformationModifyList-RL-
ReconfPrepTDD         PRESENCE    optional        } |
    { ID    id-UL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD      CRITICALITY    reject    TYPE UL-CCTrCH-InformationDeleteList-RL-
ReconfPrepTDD         PRESENCE    optional        } |
    { ID    id-DL-CCTrCH-InformationAddList-RL-ReconfPrepTDD         CRITICALITY reject      TYPE   DL-CCTrCH-InformationAddList-RL-ReconfPrepTDD
            PRESENCE    optional       } |
    { ID    id-DL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD      CRITICALITY reject      TYPE   DL-CCTrCH-InformationModifyList-RL-
ReconfPrepTDD         PRESENCE    optional       } |
    { ID    id-DL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD      CRITICALITY reject      TYPE   DL-CCTrCH-InformationDeleteList-RL-
ReconfPrepTDD         PRESENCE    optional       } |
    { ID    id-TDD-DCHs-to-Modify                    CRITICALITY    reject     TYPE    TDD-DCHs-to-Modify              PRESENCE optional
    } |
    { ID    id-DCHs-to-Add-TDD                       CRITICALITY    reject     TYPE    DCH-TDD-Information              PRESENCE optional
    } |
    { ID    id-DCH-DeleteList-RL-ReconfPrepTDD                 CRITICALITY    reject      TYPE DCH-DeleteList-RL-ReconfPrepTDD
    PRESENCE    optional        } |
    { ID    id-DSCH-Information-ModifyList-RL-ReconfPrepTDD       CRITICALITY    reject      TYPE DSCH-Information-ModifyList-RL-ReconfPrepTDD
    PRESENCE    optional        } |
    { ID    id-DSCHs-to-Add-TDD          CRITICALITY    reject     TYPE    DSCH-TDD-Information       PRESENCE optional    } |
    { ID    id-DSCH-Information-DeleteList-RL-ReconfPrepTDD       CRITICALITY reject      TYPE DSCH-Information-DeleteList-RL-ReconfPrepTDD
    PRESENCE    optional        } |
    { ID    id-USCH-Information-ModifyList-RL-ReconfPrepTDD       CRITICALITY    reject      TYPE USCH-Information-ModifyList-RL-ReconfPrepTDD
    PRESENCE    optional        } |
    { ID    id-USCH-Information-Add          CRITICALITY    reject     TYPE    USCH-Information       PRESENCE optional    } |
    { ID    id-USCH-Information-DeleteList-RL-ReconfPrepTDD       CRITICALITY reject      TYPE USCH-Information-DeleteList-RL-ReconfPrepTDD
    PRESENCE    optional        } |
```

```
    { ID    id-RL-Information-RL-ReconfPrepTDD                        CRITICALITY    reject    TYPE RL-Information-RL-ReconfPrepTDD
    PRESENCE    optional        },
    ...
}

RadioLinkReconfigurationPrepareTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-CCTrCH-InformationAddList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF UL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD

UL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD ::= SEQUENCE {
    cCTrCH-ID                               CCTrCH-ID,
    tFCS                                    TFCS,
    tFCI-Coding                             TFCI-Coding,
    punctureLimit                           PunctureLimit,
    ul-DPCH-InformationList                 UL-DPCH-InformationAddList-RL-ReconfPrepTDD OPTIONAL,
    iE-Extensions                           ProtocolExtensionContainer { { UL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD-ExtIEs} }    OPTIONAL,
    ...
}

UL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...,
    { ID id-UL-DPCH-InformationAddListIE-RL-ReconfPrepTDD  CRITICALITY reject    EXTENSION UL-DPCH-InformationAddItem-RL-ReconfPrepTDD
    PRESENCE OPTIONAL }
}

UL-DPCH-InformationAddList-RL-ReconfPrepTDD ::= ProtocolIE-Single-Container {{ UL-DPCH-InformationAddListIEs-RL-ReconfPrepTDD }}

UL-DPCH-InformationAddListIEs-RL-ReconfPrepTDD NBAP-PROTOCOL-IES ::= {
    { ID id-UL-DPCH-InformationAddListIE-RL-ReconfPrepTDD  CRITICALITY reject    TYPE UL-DPCH-InformationAddItem-RL-ReconfPrepTDD    PRESENCE
mandatory }
}

UL-DPCH-InformationAddItem-RL-ReconfPrepTDD ::= SEQUENCE {
    repetitionPeriod                        RepetitionPeriod,
    repetitionLength                        RepetitionLength,
    tdd-DPCHOffset                          TDD-DPCHOffset,
    uL-Timeslot-Information            UL-Timeslot-Information,
    iE-Extensions                           ProtocolExtensionContainer { { UL-DPCH-InformationAddItem-RL-ReconfPrepTDD-ExtIEs} }    OPTIONAL,
    ...
}

UL-DPCH-InformationAddItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-DPCH-LCR-InformationAddList-RL-ReconfPrepTDD ::= ProtocolIE-Single-Container {{ UL-DPCH-LCR-InformationAddListIEs-RL-ReconfPrepTDD }}

UL-DPCH-LCR-InformationAddListIEs-RL-ReconfPrepTDD NBAP-PROTOCOL-IES ::= {
    { ID id-UL-DPCH-LCR-InformationAddListIE-RL-ReconfPrepTDD  CRITICALITY reject    TYPE UL-DPCH-LCR-InformationAddItem-RL-ReconfPrepTDD
    PRESENCE mandatory }
}
```

```
UL-DPCH-LCR-InformationAddItem-RL-ReconfPrepTDD ::= SEQUENCE {
    repetitionPeriod                        RepetitionPeriod,
    repetitionLength                        RepetitionLength,
    tdd-DPCHOffset                          TDD-DPCHOffset,
    uL-Timeslot-InformationLCR              UL-Timeslot-InformationLCR,
    iE-Extensions                           ProtocolExtensionContainer { { UL-DPCHLCR--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 }
}

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 ::= {
```

```
    ...,
    { ID id-UL-TimeslotLCR-Information-RL-ReconfPrepTDD      CRITICALITY reject      EXTENSION   UL-Timeslot-InformationModify-ModifyList-RL-
ReconfPrepTDD       PRESENCE optional }
}

UL-DPCH-LCR-InformationModify-AddList-RL-ReconfPrepTDD ::= ProtocolIE-Single-Container {{ UL-DPCH-LCR-InformationModify-AddListIEs-RL-
ReconfPrepTDD }}

UL-DPCH-LCR-InformationModify-AddListIEs-RL-ReconfPrepTDD NBAP-PROTOCOL-IES ::= {
    { ID id-UL-DPCH-LCR-InformationModify-AddListIE-RL-ReconfPrepTDD  CRITICALITY reject      TYPE UL-DPCH-LCR-InformationModify-AddItem-RL-
ReconfPrepTDD       PRESENCE mandatory }
}

UL-DPCH-LCR-InformationModify-AddItem-RL-ReconfPrepTDD ::= SEQUENCE {
    repetitionPeriod                        RepetitionPeriod,
    repetitionLength                        RepetitionLength,
    tdd-DPCHOffset                          TDD-DPCHOffset,
    uL-Timeslot-InformationLCR              UL-Timeslot-InformationLCR,
    iE-Extensions                               ProtocolExtensionContainer { { UL-DPCH-LCR-InformationModify-AddItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}

UL-DPCH-LCR-InformationModify-AddItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-DPCH-InformationModify-ModifyList-RL-ReconfPrepTDD ::= ProtocolIE-Single-Container {{ UL-DPCH-InformationModify-ModifyListIEs-RL-ReconfPrepTDD }}

UL-DPCH-InformationModify-ModifyListIEs-RL-ReconfPrepTDD NBAP-PROTOCOL-IES ::= {
    { ID id-UL-DPCH-InformationModify-ModifyListIE-RL-ReconfPrepTDD  CRITICALITY reject     TYPE UL-DPCH-InformationModify-ModifyItem-RL-
ReconfPrepTDD       PRESENCE mandatory }
}

UL-DPCH-InformationModify-ModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    repetitionPeriod                        RepetitionPeriod   OPTIONAL,
    repetitionLength                        RepetitionLength   OPTIONAL,
    tdd-DPCHOffset                          TDD-DPCHOffset     OPTIONAL,
    uL-Timeslot-InformationModify-ModifyList-RL-ReconfPrepTDD          UL-Timeslot-InformationModify-ModifyList-RL-ReconfPrepTDD     OPTIONAL,
    iE-Extensions                               ProtocolExtensionContainer { { UL-DPCH-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}

UL-DPCH-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-Timeslot-InformationModify-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfULTSs)) OF UL-Timeslot-InformationModify-ModifyItem-RL-
ReconfPrepTDD

UL-Timeslot-InformationModify-ModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    timeSlot                            TimeSlot,
```

ETSI

```
    midambleShiftAndBurstType                 MidambleShiftAndBurstType        OPTIONAL,
    tFCI-Presence                             TFCI-Presence         OPTIONAL,
    uL-Code-InformationModify-ModifyList-RL-ReconfPrepTDD              UL-Code-InformationModify-ModifyList-RL-ReconfPrepTDD       OPTIONAL,
    iE-Extensions                             ProtocolExtensionContainer { { UL-Timeslot-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}

UL-Timeslot-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-Code-InformationModify-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF UL-Code-InformationModify-ModifyItem-RL-ReconfPrepTDD

UL-Code-InformationModify-ModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    dPCH-ID                                   DPCH-ID,
    tdd-ChannelisationCode                    TDD-ChannelisationCode        OPTIONAL,
    iE-Extensions                             ProtocolExtensionContainer { { UL-Code-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}

UL-Code-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-Timeslot-InformationModify-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfULTSLCRs)) OF UL-Timeslot-InformationModify-ModifyItem-RL-
ReconfPrepTDD

UL-Timeslot-LCR-InformationModify-ModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    timeSlotLCR                               TimeSlotLCR,
    midambleShiftAndBurstTypeLCR              MidambleShiftAndBurstTypeLCR         OPTIONAL,
    tFCI-Presence                             TFCI-Presence         OPTIONAL,
    uL-Code-InformationModify-ModifyList-RL-ReconfPrepTDDLCR              UL-Code-InformationModify-ModifyList-RL-ReconfPrepTDDLCR       OPTIONAL,
    iE-Extensions                             ProtocolExtensionContainer { { UL-Timeslot-LCR-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}

UL-Timeslot-LCR-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-Code-InformationModify-ModifyList-RL-ReconfPrepTDDLCR ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF UL-Code-InformationModify-ModifyItem-RL-
ReconfPrepTDD

UL-Code-InformationModify-ModifyItem-RL-ReconfPrepTDDLCR ::= SEQUENCE {
    dPCH-ID                                   DPCH-ID,
    tdd-ChannelisationCodeLCR                 TDD-ChannelisationCodeLCR        OPTIONAL,
    iE-Extensions                             ProtocolExtensionContainer { { UL-Code-InformationModify-ModifyItem-RL-ReconfPrepTDDLCR-ExtIEs} }
    OPTIONAL,
    ...
}
```

```
UL-Code-InformationModify-ModifyItem-RL-ReconfPrepTDDLCR-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

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 }
}

CCTrCH-TPCAddList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF CCTrCH-TPCAddItem-RL-ReconfPrepTDD

CCTrCH-TPCAddItem-RL-ReconfPrepTDD   ::= SEQUENCE {
    cCTrCH-ID                          CCTrCH-ID,
    iE-Extensions                      ProtocolExtensionContainer { { CCTrCH-TPCAddItem-RL-ReconfPrepTDD-ExtIEs} }   OPTIONAL,
    ...
}

CCTrCH-TPCAddItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-InformationAddList-RL-ReconfPrepTDD ::= ProtocolIE-Single-Container {{ DL-DPCH-InformationAddListIEs-RL-ReconfPrepTDD }}

DL-DPCH-InformationAddListIEs-RL-ReconfPrepTDD NBAP-PROTOCOL-IES ::= {
    { ID id-DL-DPCH-InformationAddListIE-RL-ReconfPrepTDD  CRITICALITY reject    TYPE DL-DPCH-InformationAddItem-RL-ReconfPrepTDD    PRESENCE
mandatory }
}

DL-DPCH-InformationAddItem-RL-ReconfPrepTDD ::= SEQUENCE {
    repetitionPeriod                   RepetitionPeriod,
    repetitionLength                   RepetitionLength,
    tdd-DPCHOffset                     TDD-DPCHOffset,
    dL-Timeslot-Information            DL-Timeslot-Information,
    iE-Extensions                      ProtocolExtensionContainer { { DL-DPCH-InformationAddItem-RL-ReconfPrepTDD-ExtIEs} }   OPTIONAL,
    ...
}

DL-DPCH-InformationAddItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-LCR-InformationAddList-RL-ReconfPrepTDD ::= ProtocolIE-Single-Container {{ DL-DPCH-LCR-InformationAddListIEs-RL-ReconfPrepTDD }}

DL-DPCH-LCR-InformationAddListIEs-RL-ReconfPrepTDD NBAP-PROTOCOL-IES ::= {
    { ID id-DL-DPCH-LCR-InformationAddListIE-RL-ReconfPrepTDD  CRITICALITY reject    TYPE DL-DPCH-LCR-InformationAddItem-RL-ReconfPrepTDD
    PRESENCE mandatory }
}

DL-DPCH-LCR-InformationAddItem-RL-ReconfPrepTDD ::= SEQUENCE {
    repetitionPeriod                   RepetitionPeriod,
    repetitionLength                   RepetitionLength,
    tdd-DPCHOffset                     TDD-DPCHOffset,
    dL-Timeslot-InformationLCR         DL-Timeslot-InformationLCR,
    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-InformationAddItem-RL-
ReconfPrepTDD      PRESENCE optional }
}

CCTrCH-TPCModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF CCTrCH-TPCModifyItem-RL-ReconfPrepTDD

CCTrCH-TPCModifyItem-RL-ReconfPrepTDD    ::= SEQUENCE {
    cCTrCH-ID                             CCTrCH-ID,
    iE-Extensions                         ProtocolExtensionContainer { { CCTrCH-TPCModifyItem-RL-ReconfPrepTDD-ExtIEs} }     OPTIONAL,
    ...
}

CCTrCH-TPCModifyItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-InformationModify-AddList-RL-ReconfPrepTDD ::= ProtocolIE-Single-Container {{ DL-DPCH-InformationModify-AddListIEs-RL-ReconfPrepTDD }}

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 ::= ProtocolIE-Single-Container {{ DL-DPCH-LCR-InformationModify-AddListIEs-RL-
ReconfPrepTDD }}

DL-DPCH-LCR-InformationModify-AddListIEs-RL-ReconfPrepTDD NBAP-PROTOCOL-IES ::= {
     { ID id-DL-DPCH-LCR-InformationModify-AddListIE-RL-ReconfPrepTDD   CRITICALITY reject       TYPE DL-DPCH-LCR-InformationModify-AddItem-RL-
ReconfPrepTDD       PRESENCE mandatory }
}

DL-DPCH-LCR-InformationModify-AddItem-RL-ReconfPrepTDD ::= SEQUENCE {
     repetitionPeriod                        RepetitionPeriod,
     repetitionLength                        RepetitionLength,
     tdd-DPCHOffset                          TDD-DPCHOffset,
     dL-Timeslot-InformationLCR              DL-Timeslot-InformationLCR,
     iE-Extensions                           ProtocolExtensionContainer { { DL-DPCH-LCR-InformationModify-AddItem-RL-ReconfPrepTDD-ExtIEs} }
     OPTIONAL,
     ...
}

DL-DPCH-LCR-InformationModify-AddItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
     ...
}

DL-DPCH-InformationModify-ModifyList-RL-ReconfPrepTDD ::= ProtocolIE-Single-Container {{ DL-DPCH-InformationModify-ModifyListIEs-RL-ReconfPrepTDD }}

DL-DPCH-InformationModify-ModifyListIEs-RL-ReconfPrepTDD NBAP-PROTOCOL-IES ::= {
     { ID id-DL-DPCH-InformationModify-ModifyListIE-RL-ReconfPrepTDD   CRITICALITY reject     TYPE DL-DPCH-InformationModify-ModifyItem-RL-
ReconfPrepTDD       PRESENCE mandatory }
}

DL-DPCH-InformationModify-ModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
     repetitionPeriod                        RepetitionPeriod        OPTIONAL,
     repetitionLength                        RepetitionLength        OPTIONAL,
     tdd-DPCHOffset                          TDD-DPCHOffset          OPTIONAL,
     dL-Timeslot-InformationAddModify-ModifyList-RL-ReconfPrepTDD        DL-Timeslot-InformationModify-ModifyList-RL-ReconfPrepTDD        OPTIONAL,
     iE-Extensions                           ProtocolExtensionContainer { { DL-DPCH-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs} }
     OPTIONAL,
     ...
}

DL-DPCH-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
     ...,
     { ID id-DL-Timeslot-LCR-InformationModify-ModifyList-RL-ReconfPrepTDD   CRITICALITY reject       EXTENSION       DL-Timeslot-LCR-
InformationModify-ModifyList-RL-ReconfPrepTDD       PRESENCE optional }
}
```

```
DL-Timeslot-InformationModify-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfDLTSs)) OF DL-Timeslot-InformationModify-ModifyItem-RL-
ReconfPrepTDD

DL-Timeslot-InformationModify-ModifyItem-RL-ReconfPrepTDD    ::= SEQUENCE {
    timeSlot                              TimeSlot,
    midambleShiftAndBurstType             MidambleShiftAndBurstType          OPTIONAL,
    tFCI-Presence                         TFCI-Presence          OPTIONAL,
    dL-Code-InformationModify-ModifyList-RL-ReconfPrepTDD          DL-Code-InformationModify-ModifyList-RL-ReconfPrepTDD        OPTIONAL,
    iE-Extensions                         ProtocolExtensionContainer { { DL-Timeslot-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}


DL-Timeslot-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
DL-Code-InformationModify-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (0..maxNrOfDPCHs)) OF DL-Code-InformationModify-ModifyItem-RL-ReconfPrepTDD

DL-Code-InformationModify-ModifyItem-RL-ReconfPrepTDD    ::= SEQUENCE {
    dPCH-ID                               DPCH-ID,
    tdd-ChannelisationCode                TDD-ChannelisationCode       OPTIONAL,
    iE-Extensions                         ProtocolExtensionContainer { { DL-Code-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}


DL-Code-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-Timeslot-LCR-InformationModify-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfDLTSLCRs)) OF DL-Timeslot-InformationModify-ModifyItem-
RL-ReconfPrepTDD

DL-Timeslot-LCR-InformationModify-ModifyItem-RL-ReconfPrepTDD    ::= SEQUENCE {
    timeSlotLCR                           TimeSlotLCR,
    midambleShiftAndBurstTypeLCR          MidambleShiftAndBurstTypeLCR          OPTIONAL,
    tFCI-Presence                         TFCI-Presence          OPTIONAL,
    dL-Code-LCR-InformationModify-ModifyList-RL-ReconfPrepTDD          DL-Code-LCR-InformationModify-ModifyList-RL-ReconfPrepTDD       OPTIONAL,
    iE-Extensions                         ProtocolExtensionContainer { { DL-Timeslot-LCR-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}


DL-LCR-Timeslot-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
DL-Code-LCR-InformationModify-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (0..maxNrOfDPCHs)) OF DL-Code-InformationModify-ModifyItem-RL-
ReconfPrepTDD

DL-Code-LCR-InformationModify-ModifyItem-RL-ReconfPrepTDD    ::= SEQUENCE {
    dPCH-ID                               DPCH-ID,
    tdd-ChannelisationCodeLCR             TDD-ChannelisationCodeLCR       OPTIONAL,
```

ETSI

```
    iE-Extensions                         ProtocolExtensionContainer { { DL-Code-LCR-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}

DL-Code-LCR-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-InformationModify-DeleteList-RL-ReconfPrepTDD ::= ProtocolIE-Single-Container {{ DL-DPCH-InformationModify-DeleteListIEs-RL-ReconfPrepTDD }}

DL-DPCH-InformationModify-DeleteListIEs-RL-ReconfPrepTDD NBAP-PROTOCOL-IES ::= {
    { ID id-DL-DPCH-InformationModify-DeleteListIE-RL-ReconfPrepTDD   CRITICALITY reject     TYPE DL-DPCH-InformationModify-DeleteListIE-RL-
ReconfPrepTDD       PRESENCE mandatory }
}

DL-DPCH-InformationModify-DeleteListIE-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF DL-DPCH-InformationModify-DeleteItem-RL-
ReconfPrepTDD

DL-DPCH-InformationModify-DeleteItem-RL-ReconfPrepTDD ::= SEQUENCE {
    dPCH-ID                               DPCH-ID,
    iE-Extensions                         ProtocolExtensionContainer { { DL-DPCH-InformationModify-DeleteItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}

DL-DPCH-InformationModify-DeleteItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF DL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD

DL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD ::= SEQUENCE {
    cCTrCH-ID                             CCTrCH-ID,
    iE-Extensions                         ProtocolExtensionContainer { { DL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}

DL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-DeleteList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-DeleteItem-RL-ReconfPrepTDD

DCH-DeleteItem-RL-ReconfPrepTDD ::= SEQUENCE {
    dCH-ID                                DCH-ID,
    iE-Extensions                         ProtocolExtensionContainer { { DCH-DeleteItem-RL-ReconfPrepTDD-ExtIEs} }    OPTIONAL,
    ...
}

DCH-DeleteItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
```

```
}

DSCH-Information-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfDSCHs)) OF DSCH-Information-ModifyItem-RL-ReconfPrepTDD

DSCH-Information-ModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    dSCH-ID                              DSCH-ID,
    cCTrCH-ID                            CCTrCH-ID                OPTIONAL,
    transportFormatSet                   TransportFormatSet       OPTIONAL,
    allocationRetentionPriority          AllocationRetentionPriority OPTIONAL,
    frameHandlingPriority                FrameHandlingPriority    OPTIONAL,
    toAWS                                ToAWS                    OPTIONAL,
    toAWE                                ToAWE                    OPTIONAL,
    transportBearerRequestIndicator      TransportBearerRequestIndicator,
    iE-Extensions                        ProtocolExtensionContainer { { DSCH-Information-ModifyItem-RL-ReconfPrepTDD-ExtIEs} }   OPTIONAL,
    ...
 }


DSCH-Information-ModifyItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DSCH-Information-DeleteList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfDSCHs)) OF DSCH-Information-DeleteItem-RL-ReconfPrepTDD

DSCH-Information-DeleteItem-RL-ReconfPrepTDD ::= SEQUENCE {
    dSCH-ID                              DSCH-ID,
    iE-Extensions                        ProtocolExtensionContainer { { DSCH-Information-DeleteItem-RL-ReconfPrepTDD-ExtIEs} }   OPTIONAL,
    ...
}

DSCH-Information-DeleteItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

USCH-Information-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfUSCHs)) OF USCH-Information-ModifyItem-RL-ReconfPrepTDD

USCH-Information-ModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    uSCH-ID                              USCH-ID,
    transportFormatSet                   TransportFormatSet       OPTIONAL,
    allocationRetentionPriority          AllocationRetentionPriority OPTIONAL,
    cCTrCH-ID                            CCTrCH-ID                OPTIONAL,
    transportBearerRequestIndicator      TransportBearerRequestIndicator,
    iE-Extensions                        ProtocolExtensionContainer { { USCH-Information-ModifyItem-RL-ReconfPrepTDD-ExtIEs} }   OPTIONAL,
    ...
}

USCH-Information-ModifyItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

USCH-Information-DeleteList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfUSCHs)) OF USCH-Information-DeleteItem-RL-ReconfPrepTDD

USCH-Information-DeleteItem-RL-ReconfPrepTDD ::= SEQUENCE {
    uSCH-ID                              USCH-ID,
```

```
    iE-Extensions                           ProtocolExtensionContainer { { USCH-Information-DeleteItem-RL-ReconfPrepTDD-ExtIEs} }   OPTIONAL,
    ...

}

USCH-Information-DeleteItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-Information-RL-ReconfPrepTDD ::= SEQUENCE {
    rL-ID                                    RL-ID,
    maxDL-Power                              DL-Power           OPTIONAL,
    minDL-Power                              DL-Power           OPTIONAL,
    iE-Extensions                            ProtocolExtensionContainer { { RL-Information-RL-ReconfPrepTDD-ExtIEs} }    OPTIONAL,
    ...
}

RL-Information-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *************************************************************
--
-- RADIO LINK RECONFIGURATION READY
--
-- *************************************************************

RadioLinkReconfigurationReady ::= SEQUENCE {
    protocolIEs           ProtocolIE-Container    {{RadioLinkReconfigurationReady-IEs}},
    protocolExtensions    ProtocolExtensionContainer {{RadioLinkReconfigurationReady-Extensions}}    OPTIONAL,
    ...
}

RadioLinkReconfigurationReady-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-CRNC-CommunicationContextID                CRITICALITY    ignore    TYPE CRNC-CommunicationContextID
    PRESENCE    mandatory   } |
    { ID    id-RL-InformationResponseList-RL-ReconfReady         CRITICALITY    ignore    TYPE RL-InformationResponseList-RL-ReconfReady
    PRESENCE    optional    } |
    { ID    id-CriticalityDiagnostics                    CRITICALITY    ignore    TYPE CriticalityDiagnostics                PRESENCE
    optional    },
    ...
}

RadioLinkReconfigurationReady-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-InformationResponseList-RL-ReconfReady    ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container {{ RL-InformationResponseItemIE-RL-
ReconfReady}}

RL-InformationResponseItemIE-RL-ReconfReady NBAP-PROTOCOL-IES ::= {
    { ID    id-RL-InformationResponseItem-RL-ReconfReady         CRITICALITY    ignore    TYPE RL-InformationResponseItem-RL-ReconfReady
    PRESENCE    mandatory}
```

```
}

RL-InformationResponseItem-RL-ReconfReady ::= SEQUENCE {
    rL-ID                                     RL-ID,
    dCH-InformationResponseList-RL-ReconfReady        DCH-InformationResponseList-RL-ReconfReady  OPTIONAL,
    dSCH-InformationResponseList-RL-ReconfReady        DSCH-InformationResponseList-RL-ReconfReady OPTIONAL,
    uSCH-InformationResponseList-RL-ReconfReady        USCH-InformationResponseList-RL-ReconfReady OPTIONAL,
    tFCI2-BearerInformationResponse           TFCI2-BearerInformationResponse OPTIONAL,
    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 ::= {
    ...
}

-- *************************************************************
```

ETSI

```
--
-- 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,
    -- This IE is group present only if Downlink compressed mode method is set to "SF/2"in the Transmission Gap Pattern Sequence Information IE.
    iE-Extensions                            ProtocolExtensionContainer { { RL-InformationItem-RL-ReconfRqstFDD-ExtIEs} }      OPTIONAL,
    ...
}

RL-InformationItem-RL-ReconfRqstFDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *************************************************************
--
-- RADIO LINK RECONFIGURATION REQUEST TDD
--
-- *************************************************************

RadioLinkReconfigurationRequestTDD ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container     {{RadioLinkReconfigurationRequestTDD-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{RadioLinkReconfigurationRequestTDD-Extensions}}    OPTIONAL,
    ...
}

RadioLinkReconfigurationRequestTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID   id-NodeB-CommunicationContextID                      CRITICALITY    reject      TYPE  NodeB-CommunicationContextID
    PRESENCE    mandatory   } |
    { ID   id-UL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD   CRITICALITY    notify      TYPE  UL-CCTrCH-InformationModifyList-RL-
ReconfRqstTDD      PRESENCE    optional    } |
    { ID   id-UL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD   CRITICALITY    notify      TYPE  UL-CCTrCH-InformationDeleteList-RL-
ReconfRqstTDD      PRESENCE    optional    } |
    { ID   id-DL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD   CRITICALITY    notify      TYPE  DL-CCTrCH-InformationModifyList-RL-
ReconfRqstTDD      PRESENCE    optional    } |
    { ID   id-DL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD   CRITICALITY    notify      TYPE  DL-CCTrCH-InformationDeleteList-RL-
ReconfRqstTDD      PRESENCE    optional    } |
    { ID   id-TDD-DCHs-to-Modify                                 CRITICALITY    reject      TYPE  TDD-DCHs-to-Modify            PRESENCE optional } |
```

```
         { ID    id-DCHs-to-Add-TDD                           CRITICALITY    reject          TYPE DCH-TDD-Information                  PRESENCE optional
    } |
    { ID   id-DCH-DeleteList-RL-ReconfRqstTDD                   CRITICALITY    reject    TYPE DCH-DeleteList-RL-ReconfRqstTDD
    PRESENCE    optional    } |
    { ID   id-RL-Information-RL-ReconfRqstTDD                    CRITICALITY    ignore     TYPE RL-Information-RL-ReconfRqstTDD
    PRESENCE    optional    },
    ...
}


RadioLinkReconfigurationRequestTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}


UL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container {{ UL-CCTrCH-
InformationModifyItemIE-RL-ReconfRqstTDD}}


UL-CCTrCH-InformationModifyItemIE-RL-ReconfRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID   id-UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD        CRITICALITY    notify    TYPE  UL-CCTrCH-InformationModifyItem-RL-
ReconfRqstTDD       PRESENCE    mandatory}
}


UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD ::= SEQUENCE {
    cCTrCH-ID                                    CCTrCH-ID,
    tFCS                                         TFCS           OPTIONAL,
    punctureLimit                                PunctureLimit  OPTIONAL,
    iE-Extensions                                ProtocolExtensionContainer { { UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD-ExtIEs} }
    OPTIONAL,
    ...
}


UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}


UL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container {{ UL-CCTrCH-
InformationDeleteItemIE-RL-ReconfRqstTDD}}


UL-CCTrCH-InformationDeleteItemIE-RL-ReconfRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID   id-UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD        CRITICALITY    notify     TYPE  UL-CCTrCH-InformationDeleteItem-RL-
ReconfRqstTDD       PRESENCE    mandatory}
}


UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD ::= SEQUENCE {
    cCTrCH-ID                                    CCTrCH-ID,
    iE-Extensions                                ProtocolExtensionContainer { { UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD-ExtIEs} }
    OPTIONAL,
    ...
}


UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

```
DL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container {{ DL-CCTrCH-
InformationModifyItemIE-RL-ReconfRqstTDD}}

DL-CCTrCH-InformationModifyItemIE-RL-ReconfRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID   id-DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD      CRITICALITY   notify    TYPE DL-CCTrCH-InformationModifyItem-RL-
ReconfRqstTDD     PRESENCE   mandatory}
}

DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD ::= SEQUENCE {
    cCTrCH-ID                                   CCTrCH-ID,
    tFCS                                        TFCS            OPTIONAL,
    punctureLimit                               PunctureLimit   OPTIONAL,
    iE-Extensions                               ProtocolExtensionContainer { { DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD-ExtIEs} }
    OPTIONAL,
    ...
}

DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container {{ DL-CCTrCH-
InformationDeleteItemIE-RL-ReconfRqstTDD}}

DL-CCTrCH-InformationDeleteItemIE-RL-ReconfRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID   id-DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD      CRITICALITY   notify    TYPE DL-CCTrCH-InformationDeleteItem-RL-
ReconfRqstTDD     PRESENCE   mandatory}
}

DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD ::= SEQUENCE {
    cCTrCH-ID                                   CCTrCH-ID,
    iE-Extensions                               ProtocolExtensionContainer { { DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD-ExtIEs} }
    OPTIONAL,
    ...
}

DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-DeleteList-RL-ReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-DeleteItem-RL-ReconfRqstTDD

DCH-DeleteItem-RL-ReconfRqstTDD ::= SEQUENCE {
    dCH-ID                                      DCH-ID,
    iE-Extensions                               ProtocolExtensionContainer { { DCH-DeleteItem-RL-ReconfRqstTDD-ExtIEs} }      OPTIONAL,
    ...
}

DCH-DeleteItem-RL-ReconfRqstTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-Information-RL-ReconfRqstTDD ::= SEQUENCE {
```

```
    rL-ID                                        RL-ID,
    maxDL-Power                                  DL-Power        OPTIONAL,
    minDL-Power                                  DL-Power        OPTIONAL,
    iE-Extensions                                ProtocolExtensionContainer { { RL-InformationItem-RL-ReconfRqstTDD-ExtIEs} }      OPTIONAL,
    ...
}

RL-InformationItem-RL-ReconfRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}


-- *************************************************************
--
-- RADIO LINK RECONFIGURATION RESPONSE
--
-- *************************************************************

RadioLinkReconfigurationResponse ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{RadioLinkReconfigurationResponse-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{RadioLinkReconfigurationResponse-Extensions}}   OPTIONAL,
    ...
}

RadioLinkReconfigurationResponse-IEs NBAP-PROTOCOL-IES ::= {
    { ID   id-CRNC-CommunicationContextID               CRITICALITY ignore    TYPE    CRNC-CommunicationContextID              PRESENCE
    mandatory   } |
    { ID   id-RL-InformationResponseList-RL-ReconfRsp   CRITICALITY ignore    TYPE    RL-InformationResponseList-RL-ReconfRsp      PRESENCE
    optional    } |
    { ID   id-CriticalityDiagnostics                    CRITICALITY ignore    TYPE    CriticalityDiagnostics                   PRESENCE
    optional    },
    ...
}

RadioLinkReconfigurationResponse-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-InformationResponseList-RL-ReconfRsp ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container {{RL-InformationResponseItemIE-RL-
ReconfRsp}}

RL-InformationResponseItemIE-RL-ReconfRsp NBAP-PROTOCOL-IES ::= {
    { ID   id-RL-InformationResponseItem-RL-ReconfRsp       CRITICALITY    ignore        TYPE RL-InformationResponseItem-RL-ReconfRsp
    PRESENCE    mandatory}
}

RL-InformationResponseItem-RL-ReconfRsp ::= SEQUENCE {
    rL-ID                                      RL-ID,
    dCH-InformationResponseList-RL-ReconfRsp       DCH-InformationResponseList-RL-ReconfRsp      OPTIONAL,
    iE-Extensions                              ProtocolExtensionContainer { { RL-InformationResponseItem-RL-ReconfRsp-ExtIEs} }     OPTIONAL,
    ...
}
```

```
RL-InformationResponseItem-RL-ReconfRsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}


DCH-InformationResponseList-RL-ReconfRsp::= ProtocolIE-Single-Container {{ DCH-InformationResponseListIEs-RL-ReconfRsp }}


DCH-InformationResponseListIEs-RL-ReconfRsp NBAP-PROTOCOL-IES ::= {
    { ID id-DCH-InformationResponse   CRITICALITY ignore TYPE DCH-InformationResponse    PRESENCE mandatory }
}


-- *************************************************************
--
-- RADIO LINK DELETION REQUEST
--
-- *************************************************************

RadioLinkDeletionRequest ::= SEQUENCE {
    protocolIEs           ProtocolIE-Container   {{RadioLinkDeletionRequest-IEs}},
    protocolExtensions    ProtocolExtensionContainer {{RadioLinkDeletionRequest-Extensions}}  OPTIONAL,
    ...
}

RadioLinkDeletionRequest-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-NodeB-CommunicationContextID                  CRITICALITY    reject            TYPE  NodeB-CommunicationContextID             PRESENCE
    mandatory        } |
    { ID    id-CRNC-CommunicationContextID                   CRITICALITY    reject              TYPE CRNC-CommunicationContextID            PRESENCE
    mandatory   }|
    { ID    id-RL-informationList-RL-DeletionRqst            CRITICALITY    notify           TYPE  RL-informationList-RL-DeletionRqst        PRESENCE
    mandatory        } ,
    ...
}

RadioLinkDeletionRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-informationList-RL-DeletionRqst ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container {{RL-informationItemIE-RL-DeletionRqst}}


RL-informationItemIE-RL-DeletionRqst NBAP-PROTOCOL-IES ::= {
    { ID    id-RL-informationItem-RL-DeletionRqst            CRITICALITY    notify         TYPE  RL-informationItem-RL-DeletionRqst
    PRESENCE    mandatory}
}

RL-informationItem-RL-DeletionRqst ::= SEQUENCE {
    rL-ID                                   RL-ID,
    iE-Extensions                           ProtocolExtensionContainer { { RL-informationItem-RL-DeletionRqst-ExtIEs} }    OPTIONAL,
    ...
 }

RL-informationItem-RL-DeletionRqst-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
```

```
}


-- ***************************************************************
--
-- RADIO LINK DELETION RESPONSE
--
-- ***************************************************************

RadioLinkDeletionResponse ::= SEQUENCE {
    protocolIEs            ProtocolIE-Container     {{RadioLinkDeletionResponse-IEs}},
    protocolExtensions     ProtocolExtensionContainer {{RadioLinkDeletionResponse-Extensions}}     OPTIONAL,
    ...
}

RadioLinkDeletionResponse-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-CRNC-CommunicationContextID          CRITICALITY    ignore         TYPE    CRNC-CommunicationContextID          PRESENCE mandatory
    }|
    { ID    id-CriticalityDiagnostics               CRITICALITY    ignore         TYPE    CriticalityDiagnostics               PRESENCE optional },
    ...
}

RadioLinkDeletionResponse-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}


-- ***************************************************************
--
-- DL POWER CONTROL REQUEST FDD
--
-- ***************************************************************

DL-PowerControlRequest ::= SEQUENCE {
    protocolIEs            ProtocolIE-Container     {{DL-PowerControlRequest-IEs}},
    protocolExtensions     ProtocolExtensionContainer {{DL-PowerControlRequest-Extensions}}     OPTIONAL,
    ...
}

DL-PowerControlRequest-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-NodeB-CommunicationContextID          CRITICALITY ignore          TYPE    NodeB-CommunicationContextID          PRESENCE mandatory   } |
    { ID id-PowerAdjustmentType                   CRITICALITY ignore  TYPE PowerAdjustmentType              PRESENCE mandatory} |
    { ID id-DLReferencePower                      CRITICALITY ignore  TYPE DL-Power                         PRESENCE conditional} |
    -- This IE is present only 'Adjustment Type' equals 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 is present only 'Adjustment Type' equals to 'Individual'
    { ID id-MaxAdjustmentStep                     CRITICALITY ignore  TYPE MaxAdjustmentStep        PRESENCE conditional} |
    -- This IE is present only ''Adjustment Type " equals to 'Common' or 'Individual'
    { ID id-AdjustmentPeriod                      CRITICALITY ignore  TYPE AdjustmentPeriod         PRESENCE conditional }|
    -- This IE is present only ''Adjustment Type " equals to 'Common' or 'Individual'
    { ID id-AdjustmentRatio        CRITICALITY ignore  TYPE ScaledAdjustmentRatio         PRESENCE conditional },
    -- This IE is present only ''Adjustment Type " equals to 'Common' or 'Individual'
    ...
```

```
}

DL-PowerControlRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-ReferencePowerInformationList-DL-PC-Rqst ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container {{DL-ReferencePowerInformationItemIE-
DL-PC-Rqst }}

DL-ReferencePowerInformationItemIE-DL-PC-Rqst NBAP-PROTOCOL-IES ::= {
    { ID id-DL-ReferencePowerInformationItem-DL-PC-Rqst    CRITICALITY    ignore    TYPE    DL-ReferencePowerInformationItem-DL-PC-Rqst
    PRESENCE    mandatory
}
}

DL-ReferencePowerInformationItem-DL-PC-Rqst ::= SEQUENCE {
    rL-ID                                RL-ID,
    dl-ReferencePower                    DL-Power,
    iE-Extensions                        ProtocolExtensionContainer { { DL-ReferencePowerInformationItem-DL-PC-Rqst-ExtIEs } }    OPTIONAL,
    ...
}

DL-ReferencePowerInformationItem-DL-PC-Rqst-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ***************************************************************
--
-- DL POWER TIMESLOT CONTROL REQUEST TDD
--
-- ***************************************************************

DL-PowerTimeslotControlRequest ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{DL-PowerTimeslotControlRequest-IEs}},
    protocolExtensions   ProtocolExtensionContainer  {{DL-PowerTimeslotControlRequest-Extensions}}    OPTIONAL,
    ...
}

DL-PowerTimeslotControlRequest-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-NodeB-CommunicationContextID           CRITICALITY ignore       TYPE    NodeB-CommunicationContextID         PRESENCE mandatory
    } |
    { ID id-TimeslotISCPInfo         CRITICALITY ignore          TYPE    DL-TimeslotISCPInfo    PRESENCE optional },

    ...
}

DL-PowerTimeslotControlRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...,
    { ID id-TimeslotISCPInfoList-LCR-DL-PC-RqstTDD      CRITICALITY ignore        EXTENSION   TimeslotISCPInfoList-LCR-DL-PC-RqstTDD      PRESENCE
optional }
}

TimeslotISCPInfoList-LCR-DL-PC-RqstTDD ::= SEQUENCE (SIZE (1..maxNrOfDLTSLCR)) OF TimeslotISCPInfoItem-DL-PC-RqstTDD
```

ETSI

```
TimeslotISCPInfoItem-LCR-DL-PC-RqstTDD ::= SEQUENCE {
    rL-ID                       RL-ID,
    timeSlotLCR                 TimeSlotLCR,
    dL-TimeslotISCP             DL-TimeslotISCP,
    iE-Extensions               ProtocolExtensionContainer { {TimeslotISCPInfoItem-LCR-DL-PC-RqstTDD-ExtIEs} }         OPTIONAL,
    ...
    }


TimeslotISCPInfoItem-LCR-DL-PC-RqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}


-- ****************************************************************
--
-- DEDICATED MEASUREMENT INITIATION REQUEST
--
-- ****************************************************************

DedicatedMeasurementInitiationRequest ::= SEQUENCE {
    protocolIEs             ProtocolIE-Container     {{DedicatedMeasurementInitiationRequest-IEs}},
    protocolExtensions      ProtocolExtensionContainer {{DedicatedMeasurementInitiationRequest-Extensions}}     OPTIONAL,
    ...
}


DedicatedMeasurementInitiationRequest-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-NodeB-CommunicationContextID             CRITICALITY     reject      TYPE    NodeB-CommunicationContextID        PRESENCE
    mandatory    } |
    { ID    id-MeasurementID                            CRITICALITY     reject      TYPE    MeasurementID                       PRESENCE mandatory
    } |
    { ID    id-DedicatedMeasurementObjectType-DM-Rqst   CRITICALITY     reject      TYPE    DedicatedMeasurementObjectType-DM-Rqst     PRESENCE
    mandatory    } |
    -- This IE represents both the Dedicated Measurement Object Type IE and the choice based on the Dedicated Measurement Object Type
    -- as described in the tabular message format in subclause 9.1.
    { ID    id-DedicatedMeasurementType                 CRITICALITY     reject      TYPE    DedicatedMeasurementType            PRESENCE
    mandatory    } |
    { ID    id-MeasurementFilterCoefficient             CRITICALITY     reject      TYPE    MeasurementFilterCoefficient       PRESENCE
    optional     } |
    { ID    id-ReportCharacteristics                    CRITICALITY     reject      TYPE    ReportCharacteristics              PRESENCE
    mandatory    } |
    { ID    id-CFNReportingIndicator                    CRITICALITY     reject      TYPE    FNReportingIndicator               PRESENCE
    mandatory    } |
    { ID    id-CFN                                              CRITICALITY     reject      TYPE    CFN                                            PRESENCE optional } ,
    ...
}


DedicatedMeasurementInitiationRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}


DedicatedMeasurementObjectType-DM-Rqst ::= CHOICE {
    rL                      RL-DM-Rqst,
    rLS                     RL-Set-DM-Rqst,
```

ETSI

```
    all-RL                    AllRL-DM-Rqst,
    all-RLS                   AllRL-Set-DM-Rqst,
    ...
}

RL-DM-Rqst ::= SEQUENCE {
    rL-InformationList                RL-InformationList-DM-Rqst,
    iE-Extensions                     ProtocolExtensionContainer { { RLItem-DM-Rqst-ExtIEs } }    OPTIONAL,
    ...
}

RLItem-DM-Rqst-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-InformationList-DM-Rqst ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container {{ RL-InformationItemIE-DM-Rqst }}

RL-InformationItemIE-DM-Rqst NBAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationItem-DM-Rqst   CRITICALITY reject  TYPE RL-InformationItem-DM-Rqst     PRESENCE mandatory }
}

RL-InformationItem-DM-Rqst ::= SEQUENCE {
        rL-ID                     RL-ID,
        dPCH-ID                   DPCH-ID          OPTIONAL,
        iE-Extensions             ProtocolExtensionContainer { { RL-InformationItem-DM-Rqst-ExtIEs } }    OPTIONAL,
        ...
    }

RL-InformationItem-DM-Rqst-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-Set-DM-Rqst ::= SEQUENCE {
    rL-Set-InformationList-DM-Rqst        RL-Set-InformationList-DM-Rqst,
    iE-Extensions                         ProtocolExtensionContainer { { RL-SetItem-DM-Rqst-ExtIEs } }     OPTIONAL,
    ...
}

RL-SetItem-DM-Rqst-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-Set-InformationList-DM-Rqst                    ::= SEQUENCE (SIZE(1..maxNrOfRLSets)) OF RL-Set-InformationItem-DM-Rqst

RL-Set-InformationItem-DM-Rqst ::= SEQUENCE {
    rL-Set-ID                 RL-Set-ID,
    iE-Extensions             ProtocolExtensionContainer { { RL-Set-InformationItem-DM-Rqst-ExtIEs} } OPTIONAL,
    ...
}

RL-Set-InformationItem-DM-Rqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

```
AllRL-DM-Rqst ::= NULL


AllRL-Set-DM-Rqst ::= NULL

-- *****************************************************************
--
-- DEDICATED MEASUREMENT INITIATION RESPONSE
--
-- *****************************************************************

DedicatedMeasurementInitiationResponse ::= SEQUENCE {
    protocolIEs           ProtocolIE-Container    {{DedicatedMeasurementInitiationResponse-IEs}},
    protocolExtensions    ProtocolExtensionContainer {{DedicatedMeasurementInitiationResponse-Extensions}}   OPTIONAL,
    ...
}

DedicatedMeasurementInitiationResponse-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-CRNC-CommunicationContextID                CRITICALITY    ignore    TYPE    CRNC-CommunicationContextID              PRESENCE
    mandatory    } |
    { ID    id-MeasurementID                              CRITICALITY    ignore    TYPE    MeasurementID                       PRESENCE mandatory
    } |
    { ID    id-DedicatedMeasurementObjectType-DM-Rsp      CRITICALITY    ignore    TYPE    DedicatedMeasurementObjectType-DM-Rsp    PRESENCE
    optional    } |
    { ID    id-CriticalityDiagnostics                     CRITICALITY    ignore    TYPE    CriticalityDiagnostics                  PRESENCE
    optional    },
    ...
}

DedicatedMeasurementInitiationResponse-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DedicatedMeasurementObjectType-DM-Rsp ::= CHOICE {
    rL                    RL-DM-Rsp,
    rLS                   RL-Set-DM-Rsp,
    all-RL                RL-DM-Rsp,
    all-RLS               RL-Set-DM-Rsp,
    ...
}

RL-DM-Rsp ::= SEQUENCE {
    rL-InformationList-DM-Rsp         RL-InformationList-DM-Rsp,
    iE-Extensions                     ProtocolExtensionContainer { { RLItem-DM-Rsp-ExtIEs } }   OPTIONAL,
    ...
}

RLItem-DM-Rsp-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-InformationList-DM-Rsp ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container {{ RL-InformationItemIE-DM-Rsp }}
```

```
RL-InformationItemIE-DM-Rsp NBAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationItem-DM-Rsp   CRITICALITY ignore   TYPE RL-InformationItem-DM-Rsp      PRESENCE mandatory }
}

RL-InformationItem-DM-Rsp ::= SEQUENCE {
    rL-ID                           RL-ID,
    dPCH-ID                         DPCH-ID       OPTIONAL,
    dedicatedMeasurementValue       DedicatedMeasurementValue,
    cFN                             CFN           OPTIONAL,
    iE-Extensions                   ProtocolExtensionContainer { { RL-InformationItem-DM-Rsp-ExtIEs } }     OPTIONAL,
    ...
}

RL-InformationItem-DM-Rsp-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-Set-DM-Rsp ::= SEQUENCE {
    rL-Set-InformationList-DM-Rsp       RL-Set-InformationList-DM-Rsp,
    iE-Extensions                       ProtocolExtensionContainer { { RL-SetItem-DM-Rsp-ExtIEs } }     OPTIONAL,
    ...
}

RL-SetItem-DM-Rsp-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-Set-InformationList-DM-Rsp ::= SEQUENCE (SIZE (1..maxNrOfRLSets)) OF ProtocolIE-Single-Container {{ RL-Set-InformationItemIE-DM-Rsp }}

RL-Set-InformationItemIE-DM-Rsp NBAP-PROTOCOL-IES ::= {
    { ID id-RL-Set-InformationItem-DM-Rsp       CRITICALITY ignore      TYPE    RL-Set-InformationItem-DM-Rsp PRESENCE mandatory}
}

RL-Set-InformationItem-DM-Rsp ::= SEQUENCE {
    rL-Set-ID                  RL-Set-ID,
    dedicatedMeasurementValue  DedicatedMeasurementValue,
    cFN                        CFN           OPTIONAL,
    iE-Extensions              ProtocolExtensionContainer { { RL-Set-InformationItem-DM-Rsp-ExtIEs} } OPTIONAL,
    ...
}

RL-Set-InformationItem-DM-Rsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *************************************************************
--
-- DEDICATED MEASUREMENT INITIATION FAILURE
--
-- *************************************************************

DedicatedMeasurementInitiationFailure ::= SEQUENCE {
```

```
    protocolIEs              ProtocolIE-Container    {{DedicatedMeasurementInitiationFailure-IEs}},
    protocolExtensions       ProtocolExtensionContainer {{DedicatedMeasurementInitiationFailure-Extensions}}    OPTIONAL,
    ...
}

DedicatedMeasurementInitiationFailure-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-CRNC-CommunicationContextID         CRITICALITY    ignore      TYPE    CRNC-CommunicationContextID    PRESENCE mandatory   } |
    { ID    id-MeasurementID                       CRITICALITY    ignore      TYPE    MeasurementID                  PRESENCE mandatory   } |
    { ID    id-Cause                               CRITICALITY    ignore      TYPE    Cause                          PRESENCE mandatory   } |
    { ID    id-CriticalityDiagnostics              CRITICALITY    ignore      TYPE    CriticalityDiagnostics         PRESENCE optional },
    ...
}

DedicatedMeasurementInitiationFailure-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- **************************************************************
--
-- DEDICATED MEASUREMENT REPORT
--
-- **************************************************************

DedicatedMeasurementReport ::= SEQUENCE {
    protocolIEs              ProtocolIE-Container    {{DedicatedMeasurementReport-IEs}},
    protocolExtensions       ProtocolExtensionContainer {{DedicatedMeasurementReport-Extensions}}    OPTIONAL,
    ...
}

DedicatedMeasurementReport-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-CRNC-CommunicationContextID                    CRITICALITY    ignore      TYPE CRNC-CommunicationContextID               PRESENCE
    mandatory   } |
    { ID    id-MeasurementID                                  CRITICALITY    ignore      TYPE MeasurementID                             PRESENCE
    mandatory   } |
    { ID    id-DedicatedMeasurementObjectType-DM-Rprt         CRITICALITY    ignore      TYPE DedicatedMeasurementObjectType-DM-Rprt    PRESENCE
    mandatory   } ,
    ...
}

DedicatedMeasurementReport-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DedicatedMeasurementObjectType-DM-Rprt ::= CHOICE {
    rL                           RL-DM-Rprt,
    rLS                          RL-Set-DM-Rprt,
    all-RL                       RL-DM-Rprt,
    all-RLS                      RL-Set-DM-Rprt,
    ...
}

RL-DM-Rprt ::= SEQUENCE {
    rL-InformationList-DM-Rprt        RL-InformationList-DM-Rprt,
```

```
    iE-Extensions                         ProtocolExtensionContainer { { RLItem-DM-Rprt-ExtIEs } }     OPTIONAL,
    ...
}


RLItem-DM-Rprt-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}


RL-InformationList-DM-Rprt ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container {{ RL-InformationItemIE-DM-Rprt }}


RL-InformationItemIE-DM-Rprt NBAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationItem-DM-Rprt   CRITICALITY ignore TYPE RL-InformationItem-DM-Rprt     PRESENCE mandatory }
}


RL-InformationItem-DM-Rprt ::= SEQUENCE {
    rL-ID                         RL-ID,
    dPCH-ID                       DPCH-ID    OPTIONAL,
    dedicatedMeasurementValueInformation    DedicatedMeasurementValueInformation,
    iE-Extensions                 ProtocolExtensionContainer { { RL-InformationItem-DM-Rprt-ExtIEs } }     OPTIONAL,
    ...
}


RL-InformationItem-DM-Rprt-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}


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,
    ...,
    cCTrCH                  CCTrCH-RL-FailureInd
}

RL-RL-FailureInd ::= SEQUENCE {
    rL-InformationList-RL-FailureInd        RL-InformationList-RL-FailureInd,
    iE-Extensions                           ProtocolExtensionContainer { { RLItem-RL-FailureInd-ExtIEs } }   OPTIONAL,
    ...
 }

RLItem-RL-FailureInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-InformationList-RL-FailureInd ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container {{ RL-InformationItemIE-RL-FailureInd}}

RL-InformationItemIE-RL-FailureInd NBAP-PROTOCOL-IES ::= {
    { ID    id-RL-InformationItem-RL-FailureInd          CRITICALITY     ignore       TYPE    RL-InformationItem-RL-FailureInd     PRESENCE
    mandatory}
 }

RL-InformationItem-RL-FailureInd ::= SEQUENCE {
    rL-ID                                 RL-ID,
    cause                                 Cause,
    iE-Extensions                         ProtocolExtensionContainer { { RL-InformationItem-RL-FailureInd-ExtIEs } }    OPTIONAL,
    ...
 }

RL-InformationItem-RL-FailureInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-Set-RL-FailureInd ::= SEQUENCE {
    rL-Set-InformationList-RL-FailureInd        RL-Set-InformationList-RL-FailureInd,
```

```
    iE-Extensions                               ProtocolExtensionContainer { { RL-SetItem-RL-FailureInd-ExtIEs } }      OPTIONAL,
    ...
 }


RL-SetItem-RL-FailureInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-Set-InformationList-RL-FailureInd ::= SEQUENCE (SIZE (1..maxNrOfRLSets)) OF ProtocolIE-Single-Container {{ RL-Set-InformationItemIE-RL-
FailureInd }}

RL-Set-InformationItemIE-RL-FailureInd NBAP-PROTOCOL-IES ::= {
    { ID id-RL-Set-InformationItem-RL-FailureInd   CRITICALITY ignore     TYPE RL-Set-InformationItem-RL-FailureInd    PRESENCE mandatory   }
}

RL-Set-InformationItem-RL-FailureInd ::= SEQUENCE {
    rL-Set-ID                RL-Set-ID,
    cause                    Cause,
    iE-Extensions            ProtocolExtensionContainer { { RL-Set-InformationItem-RL-FailureInd-ExtIEs} } OPTIONAL,
    ...
}

RL-Set-InformationItem-RL-FailureInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CCTrCH-RL-FailureInd ::= SEQUENCE {
    rL-ID                                  RL-ID,
    cCTrCH-InformationList-RL-FailureInd        CCTrCH-InformationList-RL-FailureInd,
    iE-Extensions                          ProtocolExtensionContainer { { CCTrCHItem-RL-FailureInd-ExtIEs } }     OPTIONAL,
    ...
 }

CCTrCHItem-RL-FailureInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CCTrCH-InformationList-RL-FailureInd ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container {{ CCTrCH-InformationItemIE-RL-
FailureInd}}

CCTrCH-InformationItemIE-RL-FailureInd NBAP-PROTOCOL-IES ::= {
    { ID   id-CCTrCH-InformationItem-RL-FailureInd         CRITICALITY    ignore       TYPE  CCTrCH-InformationItem-RL-FailureInd
    PRESENCE    mandatory}
 }

CCTrCH-InformationItem-RL-FailureInd ::= SEQUENCE {
    cCTrCH-ID                              CCTrCH-ID,
    cause                                  Cause,
    iE-Extensions                          ProtocolExtensionContainer { { CCTrCH-InformationItem-RL-FailureInd-ExtIEs } }    OPTIONAL,
    ...
 }

CCTrCH-InformationItem-RL-FailureInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
```

```
    ...
}

-- **************************************************************
--
-- RADIO LINK PREEMPTION REQUIRED INDICATION
--
-- **************************************************************

RadioLinkPreemptionRequiredIndication ::= SEQUENCE {
    protocolIEs              ProtocolIE-Container     {{RadioLinkPreemptionRequiredIndication-IEs}},
    protocolExtensions           ProtocolExtensionContainer {{RadioLinkPreemptionRequiredIndication-Extensions}}            OPTIONAL,
    ...
}

RadioLinkPreemptionRequiredIndication-IEs NBAP-PROTOCOL-IES ::= {
    { ID   id-CRNC-CommunicationContextID              CRITICALITY    ignore      TYPE CRNC-CommunicationContextID         PRESENCE
    mandatory       } |
    { ID id-RL-InformationList-RL-PreemptRequiredInd   CRITICALITY ignore  TYPE RL-InformationList-RL-PreemptRequiredInd   PRESENCE optional },
    ...
}

RadioLinkPreemptionRequiredIndication-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-InformationList-RL-PreemptRequiredInd               ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container { {RL-InformationItemIE-RL-
PreemptRequiredInd}}

RL-InformationItemIE-RL-PreemptRequiredInd NBAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationItem-RL-PreemptRequiredInd      CRITICALITY ignore  TYPE RL-InformationItem-RL-PreemptRequiredInd     PRESENCE mandatory
    },
    ...
}

RL-InformationItem-RL-PreemptRequiredInd::= SEQUENCE {
    rL-ID                    RL-ID,
    iE-Extensions            ProtocolExtensionContainer { {RL-InformationItem-RL-PreemptRequiredInd-ExtIEs} } OPTIONAL,
    ...
}

RL-InformationItem-RL-PreemptRequiredInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- **************************************************************
--
-- RADIO LINK RESTORE INDICATION
--
-- **************************************************************

RadioLinkRestoreIndication ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{RadioLinkRestoreIndication-IEs}},
```

```
    protocolExtensions       ProtocolExtensionContainer {{RadioLinkRestoreIndication-Extensions}}    OPTIONAL,
    ...
}

RadioLinkRestoreIndication-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-CRNC-CommunicationContextID                 CRITICALITY     ignore      TYPE    CRNC-CommunicationContextID         PRESENCE
    mandatory   } |
    { ID    id-Reporting-Object-RL-RestoreInd              CRITICALITY     ignore      TYPE    Reporting-Object-RL-RestoreInd    PRESENCE mandatory
    },
    ...
}

RadioLinkRestoreIndication-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Reporting-Object-RL-RestoreInd ::= CHOICE {
    rL                   RL-RL-RestoreInd,
    rL-Set               RL-Set-RL-RestoreInd,
    ...,
    cCTrCH               CCTrCH-RL-RestoreInd
}

RL-RL-RestoreInd ::= SEQUENCE {
    rL-InformationList-RL-RestoreInd        RL-InformationList-RL-RestoreInd,
    iE-Extensions                           ProtocolExtensionContainer { { RLItem-RL-RestoreInd-ExtIEs } }    OPTIONAL,
    ...
 }

RLItem-RL-RestoreInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-InformationList-RL-RestoreInd ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container {{RL-InformationItemIE-RL-RestoreInd}}

RL-InformationItemIE-RL-RestoreInd NBAP-PROTOCOL-IES ::= {
    { ID    id-RL-InformationItem-RL-RestoreInd            CRITICALITY     ignore      TYPE    RL-InformationItem-RL-RestoreInd       PRESENCE
    mandatory}
 }

RL-InformationItem-RL-RestoreInd ::= SEQUENCE {
    rL-ID                          RL-ID,
    iE-Extensions                  ProtocolExtensionContainer { { RL-InformationItem-RL-RestoreInd-ExtIEs } }    OPTIONAL,
    ...
 }

RL-InformationItem-RL-RestoreInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-Set-RL-RestoreInd ::= SEQUENCE {
    rL-Set-InformationList-RL-RestoreInd    RL-Set-InformationList-RL-RestoreInd,
    iE-Extensions                           ProtocolExtensionContainer { { RL-SetItem-RL-RestoreInd-ExtIEs } }    OPTIONAL,
```

```
    ...
 }

RL-SetItem-RL-RestoreInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-Set-InformationList-RL-RestoreInd ::= SEQUENCE (SIZE (1..maxNrOfRLSets)) OF ProtocolIE-Single-Container {{ RL-Set-InformationItemIE-RL-
RestoreInd }}

RL-Set-InformationItemIE-RL-RestoreInd NBAP-PROTOCOL-IES ::= {
    { ID id-RL-Set-InformationItem-RL-RestoreInd   CRITICALITY ignore     TYPE RL-Set-InformationItem-RL-RestoreInd PRESENCE mandatory   }
 }

RL-Set-InformationItem-RL-RestoreInd ::= SEQUENCE {
    rL-Set-ID                 RL-Set-ID,
    iE-Extensions             ProtocolExtensionContainer { { RL-Set-InformationItem-RL-RestoreInd-ExtIEs} } OPTIONAL,
    ...
}

RL-Set-InformationItem-RL-RestoreInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CCTrCH-RL-RestoreInd ::= SEQUENCE {
    rL-ID                                     RL-ID,
    cCTrCH-InformationList-RL-RestoreInd      CCTrCH-InformationList-RL-RestoreInd,
    iE-Extensions                             ProtocolExtensionContainer { { CCTrCHItem-RL-RestoreInd-ExtIEs } }     OPTIONAL,
    ...
 }

CCTrCHItem-RL-RestoreInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CCTrCH-InformationList-RL-RestoreInd ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container {{ CCTrCH-InformationItemIE-RL-
RestoreInd}}

CCTrCH-InformationItemIE-RL-RestoreInd NBAP-PROTOCOL-IES ::= {
    { ID    id-CCTrCH-InformationItem-RL-RestoreInd        CRITICALITY    ignore        TYPE  CCTrCH-InformationItem-RL-RestoreInd
    PRESENCE    mandatory}
 }

CCTrCH-InformationItem-RL-RestoreInd ::= SEQUENCE {
    cCTrCH-ID                                 CCTrCH-ID,
    iE-Extensions                             ProtocolExtensionContainer { { CCTrCH-InformationItem-RL-RestoreInd-ExtIEs } }    OPTIONAL,
    ...
 }

CCTrCH-InformationItem-RL-RestoreInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

```
-- **************************************************************
--
-- COMPRESSED MODE COMMAND FDD
--
-- **************************************************************

CompressedModeCommand ::= SEQUENCE {
    protocolIEs            ProtocolIE-Container     {{CompressedModeCommand-IEs}},
    protocolExtensions     ProtocolExtensionContainer {{CompressedModeCommand-Extensions}}              OPTIONAL,
    ...
}


CompressedModeCommand-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-NodeB-CommunicationContextID           CRITICALITY     ignore     TYPE    NodeB-CommunicationContextID         PRESENCE mandatory
    } |
    { ID    id-Active-Pattern-Sequence-Information  CRITICALITY     ignore     TYPE    Active-Pattern-Sequence-Information    PRESENCE mandatory },
    ...
}


CompressedModeCommand-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}


-- **************************************************************
--
-- ERROR INDICATION
--
-- **************************************************************

ErrorIndication ::= SEQUENCE {
    protocolIEs            ProtocolIE-Container     {{ErrorIndication-IEs}},
    protocolExtensions     ProtocolExtensionContainer {{ErrorIndication-Extensions}}     OPTIONAL,
    ...
}

ErrorIndication-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-CRNC-CommunicationContextID       CRITICALITY     ignore        TYPE    CRNC-CommunicationContextID       PRESENCE optional } |
    { ID    id-NodeB-CommunicationContextID      CRITICALITY     ignore        TYPE    NodeB-CommunicationContextID      PRESENCE optional } |
    { ID    id-Cause                             CRITICALITY     ignore        TYPE    Cause                             PRESENCE conditional } |
    -- At least either or Cause IE or Criticality Diagnostic IE shall be present--
    { ID    id-CriticalityDiagnostics            CRITICALITY     ignore        TYPE    CriticalityDiagnostics            PRESENCE conditional },
    -- At least either or Cause IE or Criticality Diagnostic IE shall be present--
    ...
}
```

```
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-PSCH-ReconfRqst        PRESENCE
    optional}
}

PDSCH-Information-AddList-PSCH-ReconfRqst ::= ProtocolIE-Single-Container {{ PDSCH-Information-AddListIEs-PSCH-ReconfRqst }}

PDSCH-Information-AddListIEs-PSCH-ReconfRqst    NBAP-PROTOCOL-IES ::= {
    {ID id-PDSCH-Information-AddListIE-PSCH-ReconfRqst CRITICALITY reject     TYPE    PDSCH-Information-AddItem-PSCH-ReconfRqst       PRESENCE
    mandatory}
}

PDSCH-Information-AddItem-PSCH-ReconfRqst ::= SEQUENCE {
    repetitionPeriod                         RepetitionPeriod,
    repetitionLength                         RepetitionLength,
    tdd-PhysicalChannelOffset                TDD-PhysicalChannelOffset,
    dL-Timeslot-InformationAddList-PSCH-ReconfRqst         DL-Timeslot-InformationAddList-PSCH-ReconfRqst,
    iE-Extensions                            ProtocolExtensionContainer { {PDSCH-Information-AddItem-PSCH-ReconfRqst-ExtIEs} }   OPTIONAL,
    ...
    }

PDSCH-Information-AddItem-PSCH-ReconfRqst-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-Timeslot-InformationAddList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1.. maxNrOfDLTSs)) OF DL-Timeslot-InformationAddItem-PSCH-ReconfRqst

DL-Timeslot-InformationAddItem-PSCH-ReconfRqst ::= SEQUENCE {
    timeSlot                                 TimeSlot,
    midambleShiftAndBurstType                MidambleShiftAndBurstType,
    tFCI-Presence                            TFCI-Presence,
    dL-Code-InformationAddList-PSCH-ReconfRqst             DL-Code-InformationAddList-PSCH-ReconfRqst,
    iE-Extensions                            ProtocolExtensionContainer { { DL-Timeslot-InformationAddItem-PSCH-ReconfRqst-ExtIEs} }    OPTIONAL,
    ...
}

DL-Timeslot-InformationAddItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

```
DL-Code-InformationAddList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfULTSs)) OF DL-Code-InformationAddItem-PSCH-ReconfRqst

DL-Code-InformationAddItem-PSCH-ReconfRqst ::= SEQUENCE {
    pDSCH-ID                              PDSCH-ID,
    tdd-ChannelisationCode                TDD-ChannelisationCode,
    iE-Extensions                         ProtocolExtensionContainer { { DL-Code-InformationAddItem-PSCH-ReconfRqst-ExtIEs} }   OPTIONAL,
    ...
}

DL-Code-InformationAddItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PDSCH-AddInformation-LCR-PSCH-ReconfRqst ::= ProtocolIE-Single-Container {{ PDSCH-AddInformation-LCR-AddListIEs-PSCH-ReconfRqst }}

PDSCH-AddInformation-LCR-AddListIEs-PSCH-ReconfRqst NBAP-PROTOCOL-IES ::= {
    {ID id-PDSCH-AddInformation-LCR-AddListIE-PSCH-ReconfRqst   CRITICALITY reject     TYPE    PDSCH-AddInformation-LCR-AddItem-PSCH-ReconfRqst
    PRESENCE    optional}
}

PDSCH-AddInformation-LCR-AddItem-PSCH-ReconfRqst ::= SEQUENCE {
    repetitionPeriod                         RepetitionPeriod,
    repetitionLength                         RepetitionLength,
    tdd-PhysicalChannelOffset             TDD-PhysicalChannelOffset,
    dL-Timeslot-InformationAddList-LCR-PSCH-ReconfRqst          DL-Timeslot-InformationAddList-LCR-PSCH-ReconfRqst,
    iE-Extensions                            ProtocolExtensionContainer { {PDSCH-AddInformation-LCR-AddItem-PSCH-ReconfRqst-ExtIEs} }   OPTIONAL,
      ...
    }

PDSCH-AddInformation-LCR-AddItem-PSCH-ReconfRqst-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...,
}

DL-Timeslot-InformationAddList-LCR-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1.. maxNrOfDLTSLCRs)) OF DL-Timeslot-InformationAddItem-LCR-PSCH-ReconfRqst

DL-Timeslot-InformationAddItem-LCR-PSCH-ReconfRqst ::= SEQUENCE {
    timeSlotLCR                          TimeSlotLCR,
    tFCI-Presence                        TFCI-Presence,
    dL-Code-InformationAddList-LCR-PSCH-ReconfRqst          DL-Code-InformationAddList-LCR-PSCH-ReconfRqst,
    iE-Extensions                        ProtocolExtensionContainer { { DL-Timeslot-InformationAddItem-LCR-PSCH-ReconfRqst-ExtIEs} }   OPTIONAL,
    ...
}

DL-Timeslot-InformationAddItem-LCR-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-Code-InformationAddList-LCR-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfULTSs)) OF DL-Code-InformationAddItem-LCR-PSCH-ReconfRqst

DL-Code-InformationAddItem-LCR-PSCH-ReconfRqst ::= SEQUENCE {
    pDSCH-ID                          PDSCH-ID,
    tdd-ChannelisationCodeLCR         TDD-ChannelisationCodeLCR,
    iE-Extensions                     ProtocolExtensionContainer { { DL-Code-InformationAddItem-LCR-PSCH-ReconfRqst-ExtIEs} }     OPTIONAL,
```

```
    ...
}

DL-Code-InformationAddItem-LCR-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PDSCHSets-ModifyList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfPDSCHSets)) OF PDSCHSets-ModifyItem-PSCH-ReconfRqst

PDSCHSets-ModifyItem-PSCH-ReconfRqst     ::= SEQUENCE {
    pDSCHSet-ID                              PDSCHSet-ID,
    pDSCH-InformationList                    PDSCH-Information-ModifyList-PSCH-ReconfRqst,
    iE-Extensions                            ProtocolExtensionContainer { {PDSCHSets-ModifyItem-PSCH-ReconfRqst-ExtIEs} }   OPTIONAL,
    ...
}

PDSCHSets-ModifyItem-PSCH-ReconfRqst-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...,
    {ID id-PDSCH-ModifyInformation-LCR-PSCH-ReconfRqst  CRITICALITY reject     EXTENSION   PDSCH-ModifyInformation-LCR-PSCH-ReconfRqst
    PRESENCE    optional}
}

PDSCH-Information-ModifyList-PSCH-ReconfRqst ::= ProtocolIE-Single-Container {{ PDSCH-Information-ModifyListIEs-PSCH-ReconfRqst }}

PDSCH-Information-ModifyListIEs-PSCH-ReconfRqst NBAP-PROTOCOL-IES ::= {
    {ID id-PDSCH-Information-ModifyListIE-PSCH-ReconfRqst  CRITICALITY reject     TYPE    PDSCH-Information-ModifyItem-PSCH-ReconfRqst
    PRESENCE    mandatory}
}

PDSCH-Information-ModifyItem-PSCH-ReconfRqst ::= SEQUENCE {
    repetitionPeriod                         RepetitionPeriod                 OPTIONAL,
    repetitionLength                         RepetitionLength                 OPTIONAL,
    tdd-PhysicalChannelOffset                TDD-PhysicalChannelOffset        OPTIONAL,
    dL-Timeslot-InformationModifyList-PSCH-ReconfRqst        DL-Timeslot-InformationModifyList-PSCH-ReconfRqst    OPTIONAL,
    iE-Extensions                            ProtocolExtensionContainer { {PDSCH-Information-ModifyItem-PSCH-ReconfRqst-ExtIEs} }   OPTIONAL,
        ...
    }

PDSCH-Information-ModifyItem-PSCH-ReconfRqst-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-Timeslot-InformationModifyList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1.. maxNrOfDLTSs)) OF DL-Timeslot-InformationModifyItem-PSCH-ReconfRqst

DL-Timeslot-InformationModifyItem-PSCH-ReconfRqst ::= SEQUENCE {
    timeSlot                            TimeSlot,
    midambleShiftAndBurstType           MidambleShiftAndBurstType   OPTIONAL,
    tFCI-Presence                       TFCI-Presence   OPTIONAL,
    dL-Code-InformationModifyList-PSCH-ReconfRqst           DL-Code-InformationModifyList-PSCH-ReconfRqst    OPTIONAL,
    iE-Extensions                       ProtocolExtensionContainer { { DL-Timeslot-InformationModifyItem-PSCH-ReconfRqst-ExtIEs} }     OPTIONAL,
    ...
}
```

```
DL-Timeslot-InformationModifyItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-Code-InformationModifyList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfPDSCHs)) OF DL-Code-InformationModifyItem-PSCH-ReconfRqst

DL-Code-InformationModifyItem-PSCH-ReconfRqst ::= SEQUENCE {
    pDSCH-ID                            PDSCH-ID,
    tdd-ChannelisationCode              TDD-ChannelisationCode,
    iE-Extensions                       ProtocolExtensionContainer { { DL-Code-InformationModifyItem-PSCH-ReconfRqst-ExtIEs} }   OPTIONAL,
    ...
}

DL-Code-InformationModifyItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PDSCH-ModifyInformation-LCR-PSCH-ReconfRqst NBAP-PROTOCOL-IES ::= {
    {ID id-PDSCH-ModifyInformation-LCR-ModifyListIE-PSCH-ReconfRqst CRITICALITY reject     TYPE  PDSCH-ModifyInformation-LCR-ModifyItem-PSCH-
ReconfRqst          PRESENCE    mandatory}
}

PDSCH-ModifyInformation-LCR-ModifyItem-PSCH-ReconfRqst ::= SEQUENCE {
    repetitionPeriod                         RepetitionPeriod                    OPTIONAL,
    repetitionLength                         RepetitionLength                    OPTIONAL,
    tdd-PhysicalChannelOffset                TDD-PhysicalChannelOffset     OPTIONAL,
    dL-Timeslot-LCR-InformationModifyList-PSCH-ReconfRqst          DL-Timeslot-LCR-InformationModifyList-PSCH-ReconfRqst     OPTIONAL,
    iE-Extensions                            ProtocolExtensionContainer { {PDSCH-ModifyInformation-LCR-ModifyListIE-PSCH-ReconfRqst-ExtIEs} }
    OPTIONAL,
        ...
    }

PDSCH-ModifyInformation-LCR-ModifyListIE-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-Timeslot-LCR-InformationModifyList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1.. maxNrOfDLTSLCRs)) OF DL-Timeslot-InformationModifyItem-PSCH-ReconfRqst

DL-Timeslot-LCR-InformationModifyItem-PSCH-ReconfRqst ::= SEQUENCE {
    timeSlotLCR                         TimeSlotLCR,
    midambleShiftLCR                    MidambleShiftLCR    OPTIONAL,
    tFCI-Presence                       TFCI-Presence   OPTIONAL,
    dL-Code-LCR-InformationModifyList-PSCH-ReconfRqst          DL-Code-LCR-InformationModifyList-PSCH-ReconfRqst    OPTIONAL,
    iE-Extensions                       ProtocolExtensionContainer { { DL-Timeslot-InformationModifyItem-PSCH-ReconfRqst-ExtIEs} }     OPTIONAL,
    ...
}

DL-Timeslot-LCR-InformationModifyItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-Code-LCR-InformationModifyList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfPDSCHs)) OF DL-Code-InformationModifyItem-PSCH-ReconfRqst
```

```
DL-Code-LCR-InformationModifyItem-PSCH-ReconfRqst ::= SEQUENCE {
    pDSCH-ID                                PDSCH-ID,
    tdd-ChannelisationCodeLCR               TDD-ChannelisationCodeLCR,
    iE-Extensions                           ProtocolExtensionContainer { { DL-Code-InformationModifyItem-PSCH-ReconfRqst-ExtIEs} }   OPTIONAL,
    ...
}

DL-Code-LCR-InformationModifyItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PDSCHSets-DeleteList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfPDSCHSets)) OF PDSCHSets-DeleteItem-PSCH-ReconfRqst

PDSCHSets-DeleteItem-PSCH-ReconfRqst    ::= SEQUENCE {
    pDSCHSet-ID                             PDSCHSet-ID,
    iE-Extensions                           ProtocolExtensionContainer { {PDSCHSets-DeleteItem-PSCH-ReconfRqst-ExtIEs} }   OPTIONAL,
    ...
}

PDSCHSets-DeleteItem-PSCH-ReconfRqst-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PUSCHSets-AddList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfPUSCHSets)) OF PUSCHSets-AddItem-PSCH-ReconfRqst

PUSCHSets-AddItem-PSCH-ReconfRqst    ::= SEQUENCE {
    pUSCHSet-ID                             PUSCHSet-ID,
    pUSCH-InformationList                   PUSCH-Information-AddList-PSCH-ReconfRqst   OPTIONAL,
    iE-Extensions                           ProtocolExtensionContainer { {PUSCHSets-AddItem-PSCH-ReconfRqst-ExtIEs} }   OPTIONAL,
    ...
}

PUSCHSets-AddItem-PSCH-ReconfRqst-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...,
    {ID id-PUSCH-AddInformation-LCR-PSCH-ReconfRqst CRITICALITY reject     EXTENSION   PUSCH-AddInformation-LCR-PSCH-ReconfRqst       PRESENCE
    optional}
}

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..maxNrOfPDSCHs)) OF UL-Code-InformationAddItem-PSCH-ReconfRqst

UL-Code-InformationAddItem-PSCH-ReconfRqst ::= SEQUENCE {
    pUSCH-ID                                PUSCH-ID,
    tdd-ChannelisationCode                  TDD-ChannelisationCode,
    iE-Extensions                           ProtocolExtensionContainer { { UL-Code-InformationAddItem-PSCH-ReconfRqst-ExtIEs} }   OPTIONAL,
    ...
}

UL-Code-InformationAddItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PUSCH-AddInformation-LCR-PSCH-ReconfRqst ::= ProtocolIE-Single-Container {{ PUSCH-AddInformation-LCR-AddListIEs-PSCH-ReconfRqst }}

PUSCH-AddInformation-LCR-AddListIEs-PSCH-ReconfRqst NBAP-PROTOCOL-IES ::= {
    {ID id-PUSCH-AddInformation-LCR-AddListIE-PSCH-ReconfRqst   CRITICALITY reject     TYPE    PUSCH-AddInformation-LCR-AddItem-PSCH-ReconfRqst
    PRESENCE    optional}
}

PUSCH-AddInformation-LCR-AddItem-PSCH-ReconfRqst ::= SEQUENCE {
    repetitionPeriod                        RepetitionPeriod,
    repetitionLength                        RepetitionLength,
    tdd-PhysicalChannelOffset               TDD-PhysicalChannelOffset,
    uL-Timeslot-InformationAddList-LCR-PSCH-ReconfRqst          UL-Timeslot-InformationAddList-LCR-PSCH-ReconfRqst,
    iE-Extensions                           ProtocolExtensionContainer { {PUSCH-AddInformation-LCR-AddItem-PSCH-ReconfRqst-ExtIEs} }   OPTIONAL,
    ...
}

PUSCH-AddInformation-LCR-AddItem-PSCH-ReconfRqst-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

```
UL-Timeslot-InformationAddList-LCR-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1.. maxNrOfDLTSLCRs)) OF UL-Timeslot-InformationAddItem-LCR-PSCH-ReconfRqst

UL-Timeslot-InformationAddItem-LCR-PSCH-ReconfRqst ::= SEQUENCE {
    timeSlotLCR                             TimeSlotLCR,
    midambleShiftLCR                        MidambleShiftLCR,
    tFCI-Presence                           TFCI-Presence,
    uL-Code-InformationAddList-LCR-PSCH-ReconfRqst          UL-Code-InformationAddList-LCR-PSCH-ReconfRqst,
    iE-Extensions                           ProtocolExtensionContainer { { UL-Timeslot-InformationAddItem-LCR-PSCH-ReconfRqst-ExtIEs} }   OPTIONAL,
    ...
}

UL-Timeslot-InformationAddItem-LCR-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-Code-InformationAddList-LCR-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfULTSs)) OF UL-Code-InformationAddItem-LCR-PSCH-ReconfRqst

UL-Code-InformationAddItem-LCR-PSCH-ReconfRqst ::= SEQUENCE {
    pUSCH-ID                        PUSCH-ID,
    tdd-ChannelisationCodeLCR       TDD-ChannelisationCodeLCR,
    iE-Extensions                   ProtocolExtensionContainer { { UL-Code-InformationAddItem-LCR-PSCH-ReconfRqst-ExtIEs} }    OPTIONAL,
    ...
}

UL-Code-InformationAddItem-LCR-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PUSCHSets-ModifyList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfPUSCHSets)) OF PUSCHSets-ModifyItem-PSCH-ReconfRqst

PUSCHSets-ModifyItem-PSCH-ReconfRqst      ::= SEQUENCE {
    pUSCHSet-ID                             PUSCHSet-ID,
    pUSCH-InformationList                   PUSCH-Information-ModifyList-PSCH-ReconfRqst     OPTIONAL,
    iE-Extensions                           ProtocolExtensionContainer { {PUSCHSets-ModifyItem-PSCH-ReconfRqst-ExtIEs} }   OPTIONAL,
    ...
}

PUSCHSets-ModifyItem-PSCH-ReconfRqst-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...,
    {ID id-PUSCH-ModifyInformation-LCR-PSCH-ReconfRqst  CRITICALITY reject     EXTENSION    PUSCH-ModifyInformation-LCR-PSCH-ReconfRqst
    PRESENCE    optional}
}

PUSCH-Information-ModifyList-PSCH-ReconfRqst ::= ProtocolIE-Single-Container {{ PUSCH-Information-ModifyListIEs-PSCH-ReconfRqst }}

PUSCH-Information-ModifyListIEs-PSCH-ReconfRqst NBAP-PROTOCOL-IES ::= {
    {ID id-PUSCH-Information-ModifyListIE-PSCH-ReconfRqst   CRITICALITY reject     TYPE    PUSCH-Information-ModifyItem-PSCH-ReconfRqst
    PRESENCE    mandatory}
}

PUSCH-Information-ModifyItem-PSCH-ReconfRqst ::= SEQUENCE {
    repetitionPeriod                        RepetitionPeriod                   OPTIONAL,
    repetitionLength                        RepetitionLength                   OPTIONAL,
```

```
    tdd-PhysicalChannelOffset                     TDD-PhysicalChannelOffset          OPTIONAL,
    uL-Timeslot-InformationModifyList-PSCH-ReconfRqst            UL-Timeslot-InformationModifyList-PSCH-ReconfRqst    OPTIONAL,
    iE-Extensions                                 ProtocolExtensionContainer { {PUSCH-Information-ModifyItem-PSCH-ReconfRqst-ExtIEs} }     OPTIONAL,
        ...
    }

PUSCH-Information-ModifyItem-PSCH-ReconfRqst-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-Timeslot-InformationModifyList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfULTSs)) OF UL-Timeslot-InformationModifyItem-PSCH-ReconfRqst

UL-Timeslot-InformationModifyItem-PSCH-ReconfRqst ::= SEQUENCE {
    timeSlot                           TimeSlot,
    midambleShiftAndBurstType          MidambleShiftAndBurstType   OPTIONAL,
    tFCI-Presence                      TFCI-Presence   OPTIONAL,
    uL-Code-InformationModifyList-PSCH-ReconfRqst             UL-Code-InformationModifyList-PSCH-ReconfRqst   OPTIONAL,
    iE-Extensions                      ProtocolExtensionContainer { { UL-Timeslot-InformationModifyItem-PSCH-ReconfRqst-ExtIEs} }     OPTIONAL,
    ...
}

UL-Timeslot-InformationModifyItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-Code-InformationModifyList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfPUSCHs)) OF UL-Code-InformationModifyItem-PSCH-ReconfRqst

UL-Code-InformationModifyItem-PSCH-ReconfRqst ::= SEQUENCE {
    pUSCH-ID                           PUSCH-ID,
    tdd-ChannelisationCode             TDD-ChannelisationCode,
    iE-Extensions                      ProtocolExtensionContainer { { UL-Code-InformationModifyItem-PSCH-ReconfRqst-ExtIEs} }   OPTIONAL,
    ...
}

UL-Code-InformationModifyItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PUSCH-ModifyInformation-LCR-PSCH-ReconfRqst ::= ProtocolIE-Single-Container {{ PUSCH-ModifyInformation-LCR-ModifyListIEs-PSCH-ReconfRqst }}

PUSCH-ModifyInformation-LCR-ModifyListIEs-PSCH-ReconfRqst   NBAP-PROTOCOL-IES ::= {
    {ID id-PUSCH-ModifyInformation-LCR-ModifyListIE-PSCH-ReconfRqst CRITICALITY reject     TYPE  PUSCH-ModifyInformation-LCR-ModifyItem-PSCH-
ReconfRqst          PRESENCE    optional}
}

PUSCH-ModifyInformation-LCR-ModifyItem-PSCH-ReconfRqst ::= SEQUENCE {
    repetitionPeriod                   RepetitionPeriod     OPTIONAL,
    repetitionLength                   RepetitionLength     OPTIONAL,
    tdd-PhysicalChannelOffset          TDD-PhysicalChannelOffset   OPTIONAL,
    uL-Timeslot-InformationModifyList-LCR-PSCH-ReconfRqst          UL-Timeslot-InformationModifyList-LCR-PSCH-ReconfRqst     OPTIONAL,
    iE-Extensions                      ProtocolExtensionContainer { {PUSCH-ModifyInformation-LCR-ModifyItem-PSCH-ReconfRqst-ExtIEs} }
    OPTIONAL,
        ...
```

```
    }

PUSCH-ModifyInformation-LCR-ModifyItem-PSCH-ReconfRqst-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...,
}

UL-Timeslot-LCR-InformationModifyList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfULTSLCRs)) OF UL-Timeslot-InformationModifyItem-PSCH-ReconfRqst

UL-Timeslot-LCR-InformationModifyItem-PSCH-ReconfRqst ::= SEQUENCE {
    timeSlotLCR                             TimeSlotLCR,
    midambleShiftLCR                        MidambleShiftLCR,
    tFCI-Presence                           TFCI-Presence       OPTIONAL,
    uL-Code-InformationModifyList-PSCH-ReconfRqst           UL-Code-InformationModifyList-PSCH-ReconfRqst    OPTIONAL,
    iE-Extensions                           ProtocolExtensionContainer { { UL-Timeslot-LCR-InformationModifyItem-PSCH-ReconfRqst-ExtIEs} }
    OPTIONAL,
    ...
}

UL-Timeslot-LCR-InformationModifyItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-Code-LCR-InformationModifyList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfPDSCHs)) OF UL-Code-InformationModifyItem-PSCH-ReconfRqst

UL-Code-LCR-InformationModifyItem-PSCH-ReconfRqst ::= SEQUENCE {
    pUSCH-ID                                PUSCH-ID,
    tdd-ChannelisationCodeLCR               TDD-ChannelisationCodeLCR,
    iE-Extensions                           ProtocolExtensionContainer { { UL-Code-LCR-InformationModifyItem-PSCH-ReconfRqst-ExtIEs} }    OPTIONAL,
    ...
}

UL-Code-LCR-InformationModifyItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PUSCHSets-DeleteList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfPUSCHSets)) OF PUSCHSets-DeleteItem-PSCH-ReconfRqst

PUSCHSets-DeleteItem-PSCH-ReconfRqst    ::= SEQUENCE {
    pUSCHSet-ID                             PUSCHSet-ID,
    iE-Extensions                           ProtocolExtensionContainer { {PUSCHSets-DeleteItem-PSCH-ReconfRqst-ExtIEs} }    OPTIONAL,
    ...
}

PUSCHSets-DeleteItem-PSCH-ReconfRqst-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *************************************************************
--
-- PHYSICAL SHARED CHANNEL RECONFIGURATION RESPONSE TDD
--
-- *************************************************************
```

```
PhysicalSharedChannelReconfigurationResponseTDD ::= SEQUENCE {
    protocolIEs         ProtocolIE-Container  {{PhysicalSharedChannelReconfigurationResponseTDD-IEs}},
    protocolExtensions  ProtocolExtensionContainer {{PhysicalSharedChannelReconfigurationResponseTDD-Extensions}}         OPTIONAL,
    ...
}

PhysicalSharedChannelReconfigurationResponseTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID   id-CriticalityDiagnostics      CRITICALITY    ignore    TYPE      CriticalityDiagnostics   PRESENCE optional },
    ...
}

PhysicalSharedChannelReconfigurationResponseTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}


-- *************************************************************
--
-- PHYSICAL SHARED CHANNEL RECONFIGURATION FAILURE TDD
--
-- *************************************************************

PhysicalSharedChannelReconfigurationFailureTDD ::= SEQUENCE {
    protocolIEs         ProtocolIE-Container  {{PhysicalSharedChannelReconfigurationFailureTDD-IEs}},
    protocolExtensions  ProtocolExtensionContainer {{PhysicalSharedChannelReconfigurationFailureTDD-Extensions}}         OPTIONAL,
    ...
}

PhysicalSharedChannelReconfigurationFailureTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID   id-CauseLevel-PSCH-ReconfFailureTDD    CRITICALITY ignore  TYPE CauseLevel-PSCH-ReconfFailureTDD PRESENCE mandatory }|
    { ID   id-CriticalityDiagnostics       CRITICALITY ignore     TYPE     CriticalityDiagnostics   PRESENCE optional },
    ...
}

PhysicalSharedChannelReconfigurationFailureTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CauseLevel-PSCH-ReconfFailureTDD ::= CHOICE {
    generalCause          GeneralCauseList-PSCH-ReconfFailureTDD,
    setSpecificCause      SetSpecificCauseList-PSCH-ReconfFailureTDD,
    ...
}

GeneralCauseList-PSCH-ReconfFailureTDD ::= SEQUENCE {
    cause                 Cause,
    iE-Extensions         ProtocolExtensionContainer { { GeneralCauseItem-PSCH-ReconfFailureTDD-ExtIEs} }    OPTIONAL,
    ...
}

GeneralCauseItem-PSCH-ReconfFailureTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

```
SetSpecificCauseList-PSCH-ReconfFailureTDD ::= SEQUENCE {
    unsuccessful-PDSCHSetList-PSCH-ReconfFailureTDD Unsuccessful-PDSCHSetList-PSCH-ReconfFailureTDD     OPTIONAL,
    unsuccessful-PUSCHSetList-PSCH-ReconfFailureTDD Unsuccessful-PUSCHSetList-PSCH-ReconfFailureTDD     OPTIONAL,
    iE-Extensions                                   ProtocolExtensionContainer { { SetSpecificCauseItem-PSCH-ReconfFailureTDD-ExtIEs} }    OPTIONAL,
    ...
}

SetSpecificCauseItem-PSCH-ReconfFailureTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Unsuccessful-PDSCHSetList-PSCH-ReconfFailureTDD ::= SEQUENCE (SIZE (0.. maxNrOfPDSCHSets)) OF ProtocolIE-Single-Container {{ Unsuccessful-
PDSCHSetItemIE-PSCH-ReconfFailureTDD }}

Unsuccessful-PDSCHSetItemIE-PSCH-ReconfFailureTDD NBAP-PROTOCOL-IES ::= {
    { ID   id-Unsuccessful-PDSCHSetItem-PSCH-ReconfFailureTDD  CRITICALITY ignore  TYPE Unsuccessful-PDSCHSetItem-PSCH-ReconfFailureTDDPRESENCE
mandatory}
}

Unsuccessful-PDSCHSetItem-PSCH-ReconfFailureTDD ::= SEQUENCE {
    pDSCHSet-ID           PDSCHSet-ID,
    cause                 Cause,
    iE-Extensions         ProtocolExtensionContainer { {Unsuccessful-PDSCHSetItem-PSCH-ReconfFailureTDD-ExtIEs} }    OPTIONAL,
    ...
}

Unsuccessful-PDSCHSetItem-PSCH-ReconfFailureTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Unsuccessful-PUSCHSetList-PSCH-ReconfFailureTDD ::= SEQUENCE (SIZE (0.. maxNrOfPUSCHSets)) OF ProtocolIE-Single-Container {{ Unsuccessful-
PUSCHSetItemIE-PSCH-ReconfFailureTDD }}

Unsuccessful-PUSCHSetItemIE-PSCH-ReconfFailureTDD NBAP-PROTOCOL-IES ::= {
    { ID   id-Unsuccessful-PUSCHSetItem-PSCH-ReconfFailureTDD  CRITICALITY ignore  TYPE Unsuccessful-PUSCHSetItem-PSCH-ReconfFailureTDDPRESENCE
mandatory}
}

Unsuccessful-PUSCHSetItem-PSCH-ReconfFailureTDD ::= SEQUENCE {
    pUSCHSet-ID           PUSCHSet-ID,
    cause                 Cause,
    iE-Extensions         ProtocolExtensionContainer { {Unsuccessful-PUSCHSetItem-PSCH-ReconfFailureTDD-ExtIEs} }    OPTIONAL,
    ...
}

Unsuccessful-PUSCHSetItem-PSCH-ReconfFailureTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ************************************************************
--
```

```
-- RESET REQUEST
--
-- *************************************************************

ResetRequest ::= SEQUENCE {
    protocolIEs            ProtocolIE-Container    {{ResetRequest-IEs}},
    protocolExtensions     ProtocolExtensionContainer  {{ResetRequest-Extensions}}    OPTIONAL,
    ...
}

ResetRequest-IEs NBAP-PROTOCOL-IES ::= {
    {ID id-ResetIndicator      CRITICALITY ignore     TYPE    ResetIndicator     PRESENCE    mandatory},
    ...
}

ResetRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

ResetIndicator ::= CHOICE {
    communicationContext          CommunicationContextList-Reset,
    communicationControlPort      CommunicationControlPortList-Reset,
    nodeB                         NULL,
    ...
}

CommunicationContextList-Reset ::= SEQUENCE {
    communicationContextInfoList-Reset     CommunicationContextInfoList-Reset,
    iE-Extensions                          ProtocolExtensionContainer { {CommunicationContextItem-Reset-ExtIEs} }   OPTIONAL,
    ...
}

CommunicationContextItem-Reset-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CommunicationContextInfoList-Reset ::= SEQUENCE (SIZE (1.. maxCommunicationContext))    OF ProtocolIE-Single-Container
{{ CommunicationContextInfoItemIE-Reset }}

CommunicationContextInfoItemIE-Reset NBAP-PROTOCOL-IES ::= {
```

```
    {ID id-CommunicationContextInfoItem-Reset        CRITICALITY reject      TYPE CommunicationContextInfoItem-Reset    PRESENCE mandatory}
}

CommunicationContextInfoItem-Reset ::= SEQUENCE {
    communicationContextType-Reset          CommunicationContextType-Reset,
    iE-Extensions                           ProtocolExtensionContainer { { CommunicationContextInfoItem-Reset-ExtIEs} }    OPTIONAL,
    ...
}

CommunicationContextInfoItem-Reset-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CommunicationContextType-Reset ::= CHOICE {
    cRNC-CommunicationContextID             CRNC-CommunicationContextID,
    nodeB-CommunicationContextID            NodeB-CommunicationContextID,
    ...
}

CommunicationControlPortList-Reset ::= SEQUENCE {
    communicationControlPortInfoList-Reset      CommunicationControlPortInfoList-Reset,
    iE-Extensions                           ProtocolExtensionContainer { {CommunicationControlPortItem-Reset-ExtIEs} }    OPTIONAL,
    ...
}

CommunicationControlPortItem-Reset-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CommunicationControlPortInfoList-Reset ::= SEQUENCE (SIZE (1.. maxCCPinNodeB))  OF ProtocolIE-Single-Container {{CommunicationControlPortInfoItemIE-
Reset }}

CommunicationControlPortInfoItemIE-Reset NBAP-PROTOCOL-IES ::= {
    {ID id-CommunicationControlPortInfoItem-Reset        CRITICALITY reject     TYPE CommunicationControlPortInfoItem-Reset    PRESENCE mandatory}
}

CommunicationControlPortInfoItem-Reset ::= SEQUENCE {
    communicationControlPortID         CommunicationControlPortID,
    iE-Extensions                      ProtocolExtensionContainer { {CommunicationControlPortInfoItem-Reset-ExtIEs} }OPTIONAL,
    ...
```

```
}

CommunicationControlPortInfoItem-Reset-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}


-- *************************************************************
--
-- RESET RESPONSE
--
-- *************************************************************

ResetResponse ::= SEQUENCE {
    protocolIEs           ProtocolIE-Container    {{ResetResponse-IEs}},
    protocolExtensions    ProtocolExtensionContainer {{ResetResponse-Extensions}}          OPTIONAL,
    ...
}

ResetResponse-IEs NBAP-PROTOCOL-IES ::= {
    {ID id-CriticalityDiagnostics      CRITICALITY    ignore    TYPE   CriticalityDiagnostics    PRESENCE optional},
    ...
}

ResetResponse-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *************************************************************
--
-- INFORMATION EXCHANGE INITIATION REQUEST
--
-- *************************************************************

InformationExchangeInitiationRequest ::= SEQUENCE {
    protocolIEs           ProtocolIE-Container    {{InformationExchangeInitiationRequest-IEs}},
    protocolExtensions    ProtocolExtensionContainer {{InformationExchangeInitiationRequest-Extensions}}     OPTIONAL,
    ...
}

InformationExchangeInitiationRequest-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-InformationExchangeID                          CRITICALITY reject         TYPE InformationExchangeID
    PRESENCE    mandatory   }|
    { ID    id-InformationExchangeObjectType-InfEx-Rqst       CRITICALITY reject         TYPE  InformationExchangeObjectType-InfEx-Rqst
    PRESENCE    mandatory   }|
    -- This IE represents both the Information Exchange Object Type IE and the choice based on the Information Exchange Object Type
    -- as described in the tabular message format in subclause 9.1.
    { ID    id-InformationType                     CRITICALITY reject             TYPE InformationType           PRESENCE mandatory   }|
    { ID    id-InformationReportCharacteristics               CRITICALITY reject         TYPE InformationReportCharacteristics
    PRESENCE    mandatory},
```

```
    ...
}

InformationExchangeInitiationRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

InformationExchangeObjectType-InfEx-Rqst ::= CHOICE {
    cell                        Cell-InfEx-Rqst,
    ...
}

Cell-InfEx-Rqst ::= SEQUENCE {
    c-ID                        C-ID,
    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
    mandatory    }|
        { ID    id-CriticalityDiagnostics                  CRITICALITY ignore      TYPE    CriticalityDiagnostics          PRESENCE optional
    },
    ...
}

InformationExchangeInitiationResponse-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

InformationExchangeObjectType-InfEx-Rsp ::= CHOICE {
    cell                        Cell-InfEx-Rsp,
    ...
 }
```

```
Cell-InfEx-Rsp ::= SEQUENCE {
    requestedDataValue              RequestedDataValue,
    iE-Extensions                   ProtocolExtensionContainer { { CellItem-InfEx-Rsp-ExtIEs} }  OPTIONAL,
    ...
 }

CellItem-InfEx-Rsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *************************************************************
--
-- INFORMATION EXCHANGE INITIATION FAILURE
--
-- *************************************************************

InformationExchangeInitiationFailure ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{InformationExchangeInitiationFailure-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{InformationExchangeInitiationFailure-Extensions}}    OPTIONAL,
    ...
}

InformationExchangeInitiationFailure-IEs NBAP-PROTOCOL-IES ::= {
    { ID   id-InformationExchangeID             CRITICALITY    ignore      TYPE   InformationExchangeID         PRESENCE mandatory  }|
    { ID   id-Cause                             CRITICALITY    ignore      TYPE   Cause                         PRESENCE mandatory  }|
    { ID   id-CriticalityDiagnostics            CRITICALITY    ignore      TYPE   CriticalityDiagnostics   PRESENCE optional },
    ...
}

InformationExchangeInitiationFailure-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *************************************************************
--
-- INFORMATION REPORT
--
-- *************************************************************

InformationReport ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{InformationReport-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{InformationReport-Extensions}}        OPTIONAL,
    ...
}

InformationReport-IEs NBAP-PROTOCOL-IES ::= {
    { ID   id-InformationExchangeID                             CRITICALITY ignore         TYPE  InformationExchangeID                 PRESENCE
    mandatory   }|
    { ID   id-InformationExchangeObjectType-InfEx-Rprt    CRITICALITY ignore         TYPE    InformationExchangeObjectType-InfEx-Rprt    PRESENCE
    mandatory   },
      ...
}
```

```
InformationReport-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

InformationExchangeObjectType-InfEx-Rprt ::= CHOICE {
    cell                            Cell-Inf-Rprt,
    ...
 }

Cell-Inf-Rprt ::= SEQUENCE {
    requestedDataValueInformation   RequestedDataValueInformation,
    iE-Extensions                   ProtocolExtensionContainer {{ CellItem-Inf-Rprt-ExtIEs }}   OPTIONAL,
    ...

 }

CellItem-Inf-Rprt-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ***************************************************************
--
-- INFORMATION EXCHANGE TERMINATION REQUEST
--
-- ***************************************************************

InformationExchangeTerminationRequest ::= SEQUENCE {
    protocolIEs            ProtocolIE-Container    {{InformationExchangeTerminationRequest-IEs}},
    protocolExtensions     ProtocolExtensionContainer {{InformationExchangeTerminationRequest-Extensions}}   OPTIONAL,
    ...
}

InformationExchangeTerminationRequest-IEs NBAP-PROTOCOL-IES ::= {
    { ID   id-InformationExchangeID            CRITICALITY   ignore          TYPE   InformationExchangeID        PRESENCE mandatory},
    ...
}

InformationExchangeTerminationRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ***************************************************************
--
-- INFORMATION EXCHANGE FAILURE INDICATION
--
-- ***************************************************************

InformationExchangeFailureIndication ::= SEQUENCE {
    protocolIEs            ProtocolIE-Container    {{InformationExchangeFailureIndication-IEs}},
    protocolExtensions     ProtocolExtensionContainer {{InformationExchangeFailureIndication-Extensions}}        OPTIONAL,
    ...
}
```

```
InformationExchangeFailureIndication-IEs NBAP-PROTOCOL-IES ::= {
    { ID   id-InformationExchangeID          CRITICALITY ignore       TYPE    InformationExchangeID       PRESENCE mandatory   }|
    { ID   id-Cause                          CRITICALITY ignore       TYPE    Cause                       PRESENCE mandatory   },
    ...
}


InformationExchangeFailureIndication-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}


-- *************************************************************
--
-- CELL SYNCHRONISATION INITIATION REQUEST TDD
--
-- *************************************************************

CellSynchronisationInitiationRequestTDD ::= SEQUENCE {
    protocolIEs            ProtocolIE-Container    {{CellSynchronisationInitiationRequestTDD-IEs}},
    protocolExtensions     ProtocolExtensionContainer {{CellSynchronisationInitiationRequestTDD-Extensions}}    OPTIONAL,
    ...
}

CellSynchronisationInitiationRequestTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CellSynchronisationInitiationRequestTDD-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-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,
    cellSyncBurstRepetitionPeriod            CellSyncBurstRepetitionPeriod,
    initialDLTransPower                      DL-Power,
    iE-Extensions                            ProtocolExtensionContainer { { CellSyncBurstTransInit-CellSyncInitiationRqstTDD-ExtIEs} }   OPTIONAL,
    ...
 }

CellSyncBurstTransInit-CellSyncInitiationRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

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 TDD
--
-- ***************************************************************

CellSynchronisationInitiationResponseTDD ::= SEQUENCE {
    protocolIEs             ProtocolIE-Container    {{CellSynchronisationInitiationResponseTDD-IEs}},
    protocolExtensions      ProtocolExtensionContainer {{CellSynchronisationInitiationResponseTDD-Extensions}}    OPTIONAL,
    ...
}

CellSynchronisationInitiationResponseTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CellSynchronisationResponseTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID   id-CriticalityDiagnostics                 CRITICALITY    ignore    TYPE    CriticalityDiagnostics                     PRESENCE
    optional    },
    ...
}


-- ***************************************************************
--
-- CELL SYNCHRONISATION INITIATION FAILURE TDD
--
-- ***************************************************************

CellSynchronisationInitiationFailureTDD ::= SEQUENCE {
    protocolIEs             ProtocolIE-Container    {{CellSynchronisationInitiationFailureTDD-IEs}},
    protocolExtensions      ProtocolExtensionContainer {{CellSynchronisationInitiationFailureTDD-Extensions}}    OPTIONAL,
    ...
}

CellSynchronisationInitiationFailureTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CellSynchronisationInitiationFailureTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID   id-Cause                              CRITICALITY    ignore    TYPE    Cause                      PRESENCE mandatory   }|
```

```
    { ID    id-CriticalityDiagnostics          CRITICALITY    ignore    TYPE    CriticalityDiagnostics    PRESENCE optional },
    ...
}


-- *************************************************************
--
-- CELL SYNCHRONISATION RECONFIGURATION REQUEST TDD
--
-- *************************************************************

CellSynchronisationReconfigurationRequestTDD ::= SEQUENCE {
    protocolIEs            ProtocolIE-Container    {{CellSynchronisationReconfigurationRequestTDD-IEs}},
    protocolExtensions     ProtocolExtensionContainer {{CellSynchronisationReconfigurationRequestTDD-Extensions}}    OPTIONAL,
    ...
}

CellSynchronisationReconfigurationRequestTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

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  CellSyncBurstMeasReconfiguration-
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 ::= {
    ...
}

CellSyncBurstMeasReconfiguration-CellSyncReconfRqstTDD ::= ProtocolIE-Single-Container {{ CellSyncBurstMeasInfo-CellSyncReconfRqstTDD }}

CellSyncBurstMeasInfo-CellSyncReconfRqstTDD NBAP-PROTOCOL-IES ::= {
```

```
    { ID id-CellSyncBurstMeasInfoList-CellSyncReconfRqstTDD CRITICALITY reject  TYPE CellSyncBurstMeasInfoList-CellSyncReconfRqstTDD PRESENCE
    mandatory },
    { ID id-SynchronisationReportType                       CRITICALITY reject  TYPE SynchronisationReportType                       PRESENCE optional },
    { ID id-SynchronisationReportCharacteristics            CRITICALITY reject  TYPE SynchronisationReportCharacteristics            PRESENCE optional }, ...
}

CellSyncBurstMeasInfoList-CellSyncReconfRqstTDD ::= SEQUENCE (SIZE (1.. maxNrOfCellSyncBursts)) OF ProtocolIE-Single-Container
{{ CellSyncBurstMeasInfoItem-CellSyncReconfRqstTDD }}

CellSyncBurstMeasInfoItem-CellSyncReconfRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID id-SyncFrameNumber                             CRITICALITY reject  TYPE SyncFrameNumber                             PRESENCE mandatory }|
    { ID id-CellSyncBurstInfoList-CellSyncReconfRqstTDD CRITICALITY reject  TYPE CellSyncBurstInfoList-CellSyncReconfRqstTDD PRESENCEmandatory },
    ...
}

CellSyncBurstInfoList-CellSyncReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfReceivePerSyncFrame)) OF CellSyncBurstMeasInfoItem-CellSyncReconfRqstTDD

CellSyncBurstMeasInfoItem-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 TDD
--
-- ***************************************************************

CellSynchronisationReconfigurationResponseTDD ::= SEQUENCE {
    protocolIEs         ProtocolIE-Container    {{CellSynchronisationReconfigurationResponseTDD-IEs}},
    protocolExtensions  ProtocolExtensionContainer {{CellSynchronisationReconfigurationResponseTDD-Extensions}}   OPTIONAL,
    ...
}

CellSynchronisationReconfigurationResponseTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CellSynchronisationResponseTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID   id-CriticalityDiagnostics            CRITICALITY   ignore   TYPE   CriticalityDiagnostics   PRESENCE optional },
    ...
}

-- ***************************************************************
--
-- CELL SYNCHRONISATION RECONFIGURATION FAILURE TDD
```

```
--
-- *************************************************************

CellSynchronisationReconfigurationFailureTDD ::= SEQUENCE {
    protocolIEs             ProtocolIE-Container       {{CellSynchronisationReconfigurationFailureTDD-IEs}},
    protocolExtensions      ProtocolExtensionContainer {{CellSynchronisationReconfigurationFailureTDD-Extensions}}    OPTIONAL,
    ...
}

CellSynchronisationReconfigurationFailureTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CellSynchronisationReconfigurationFailureTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID   id-Cause                            CRITICALITY   ignore   TYPE   Cause                   PRESENCE mandatory  }|
    { ID   id-CriticalityDiagnostics           CRITICALITY   ignore   TYPE   CriticalityDiagnostics  PRESENCE optional },
    ...
}


-- *************************************************************
--
-- CELL SYNCHRONISATION ADJUSTMENT REQUEST TDD
--
-- *************************************************************

CellSynchronisationAdjustmentRequestTDD ::= SEQUENCE {
    protocolIEs             ProtocolIE-Container       {{CellSynchronisationAdjustmentRequestTDD-IEs}},
    protocolExtensions      ProtocolExtensionContainer {{CellSynchronisationAdjustmentRequestTDD-Extensions}}    OPTIONAL,
    ...
}

CellSynchronisationAdjustmentRequestTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CellSynchronisationAdjustmentRequestTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID   id-C-ID                                   CRITICALITY reject  TYPE C-ID                                     PRESENCE mandatory  }|
    { ID   id-timeSlot                               CRITICALITY reject  TYPE TimeSlot                                 PRESENCE mandatory  }|
    { ID   id-CellAdjustmentInfo-SyncAdjustmntRqstTDD CRITICALITY reject  TYPE CellAdjustmentInfo-SyncAdjustmntRqstTDD PRESENCE mandatory  },
    ...
}

CellAdjustmentInfo-SyncAdjustmntRqstTDD::= SEQUENCE (SIZE (1..maxCellinNodeB)) OF ProtocolIE-Single-Container {{ CellAdjustmentInfoItem-
SyncAdjustmntRqstTDD }}

CellAdjustmentInfoItem-SyncAdjustmntRqstTDD NBAP-PROTOCOL-IES ::= 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 TDD
--
-- ****************************************************************

CellSynchronisationAdjustmentResponseTDD ::= SEQUENCE {
    protocolIEs             ProtocolIE-Container    {{CellSynchronisationAdjustmentResponseTDD-IEs}},
    protocolExtensions      ProtocolExtensionContainer {{CellSynchronisationAdjustmentResponseTDD-Extensions}}   OPTIONAL,
    ...
}

CellSynchronisationAdjustmentResponseTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CellSynchronisationAdjustmentResponseTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID   id-CriticalityDiagnostics          CRITICALITY   ignore   TYPE   CriticalityDiagnostics          PRESENCE optional },
    ...
}

-- ****************************************************************
--
-- CELL SYNCHRONISATION ADJUSTMENT FAILURE TDD
--
-- ****************************************************************

CellSynchronisationAdjustmentFailureTDD ::= SEQUENCE {
    protocolIEs             ProtocolIE-Container    {{CellSynchronisationAdjustmentFailureTDD-IEs}},
    protocolExtensions      ProtocolExtensionContainer {{CellSynchronisationAdjustmentFailureTDD-Extensions}}   OPTIONAL,
    ...
}

CellSynchronisationAdjustmentFailureTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CellSynchronisationAdjustmentFailureTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID   id-CauseLevel-SyncAdjustmntFailureTDD CRITICALITY ignore    TYPE   CauseLevel-SyncAdjustmntFailureTDD   PRESENCE mandatory   }|
    { ID   id-CriticalityDiagnostics             CRITICALITY ignore    TYPE   CriticalityDiagnostics               PRESENCE optional },
    ...
}

CauseLevel-SyncAdjustmntFailureTDD ::= CHOICE {
    generalCause            GeneralCauseList-SyncAdjustmntFailureTDD,
    cellSpecificCause       CellSpecificCauseList-SyncAdjustmntFailureTDD,
    ...
```

```
}

GeneralCauseList-SyncAdjustmntFailureTDD::= SEQUENCE {
    cause                                           Cause,
    iE-Extensions                                   ProtocolExtensionContainer { { GeneralCauseList-SyncAdjustmntFailureTDD-ExtIEs} }    OPTIONAL,
    ...
}

GeneralCauseList-SyncAdjustmntFailureTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CellSpecificCauseList-SyncAdjustmntFailureTDD ::= SEQUENCE {
    unsuccessful-cell-InformationRespList-SyncAdjustmntFailureTDD     Unsuccessful-cell-InformationRespList-SyncAdjustmntFailureTDD,
    iE-Extensions                                   ProtocolExtensionContainer { { CellSpecificCauseList-SyncAdjustmntFailureTDD-ExtIEs} }    OPTIONAL,
    ...
}

CellSpecificCauseList-SyncAdjustmntFailureTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Unsuccessful-cell-InformationRespList-SyncAdjustmntFailureTDD ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container {{ Unsuccessful-
cell-InformationRespItemIE-SyncAdjustmntFailureTDD }}

Unsuccessful-cell-InformationRespItemIE-SyncAdjustmntFailureTDD NBAP-PROTOCOL-IES ::= {
    { ID    id-Unsuccessful-cell-InformationRespItem-SyncAdjustmntFailureTDD      CRITICALITY    ignore     TYPE Unsuccessful-cell-
InformationRespItem-SyncAdjustmntFailureTDD     PRESENCE    mandatory},
    ...
}

Unsuccessful-cell-InformationRespItem-SyncAdjustmntFailureTDD::= SEQUENCE {
    c-ID                                            C-ID,
    cause                                           Cause,
    iE-Extensions                                   ProtocolExtensionContainer { { Unsuccessful-cell-InformationRespItem-SyncAdjustmntFailureTDD-
ExtIEs} }        OPTIONAL,
    ...
}

Unsuccessful-cell-InformationRespItem-SyncAdjustmntFailureTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *************************************************************
--
-- CELL SYNCHRONISATION TERMINATION REQUEST TDD
--
-- *************************************************************

CellSynchronisationTerminationRequestTDD ::= SEQUENCE {
    protocolIEs         ProtocolIE-Container    {{CellSynchronisationTerminationRequestTDD-IEs}},
    protocolExtensions  ProtocolExtensionContainer {{CellSynchronisationTerminationRequestTDD-Extensions}}    OPTIONAL,
    ...
```

```
}

CellSynchronisationTerminationRequestTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CellSynchronisationTerminationRequestTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID   id-C-ID                          CRITICALITY   ignore   TYPE   C-ID                    PRESENCE mandatory  }|
    { ID   id-CSBTransmissionID             CRITICALITY   ignore   TYPE   CSBTransmissionID       PRESENCE optional   }|
    { ID   id-CSBMeasurementID              CRITICALITY   ignore   TYPE   CSBMeasurementID        PRESENCE optional   },
    ...
}

-- *************************************************************
--
-- CELL SYNCHRONISATION FAILURE INDICATION TDD
--
-- *************************************************************

CellSynchronisationFailureIndicationTDD ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{CellSynchronisationFailureIndicationTDD-IEs}},
    protocolExtensions        ProtocolExtensionContainer  {{CellSynchronisationFailureIndicationTDD-Extensions}}    OPTIONAL,
    ...
}

CellSynchronisationFailureIndicationTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CellSynchronisationFailureIndicationTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID   id-C-ID                          CRITICALITY   ignore   TYPE   C-ID                    PRESENCE mandatory  }|
    { ID   id-CSBTransmissionID             CRITICALITY   ignore   TYPE   CSBTransmissionID       PRESENCE optional   }|
    { ID   id-CSBMeasurementID              CRITICALITY   ignore   TYPE   CSBMeasurementID        PRESENCE optional   }|
    { ID   id-Cause                         CRITICALITY   ignore   TYPE   Cause                   PRESENCE mandatory  },
    ...
}

-- *************************************************************
--
-- CELL SYNCHRONISATION REPORT TDD
--
-- *************************************************************

CellSynchronisationReportTDD ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{CellSynchronisationReportTDD-IEs}},
    protocolExtensions        ProtocolExtensionContainer  {{CellSynchronisationReportTDD-Extensions}}    OPTIONAL,
    ...
}

CellSynchronisationReportTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

```
CellSynchronisationReportTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-CellSyncInfo-CellSyncReprtTDD           CRITICALITY ignore    TYPE    CellSyncInfo-CellSyncReprtTDD           PRESENCE mandatory  },
    ...
}


CellSyncInfo-CellSyncReprtTDD ::= SEQUENCE (SIZE (1..maxCellinNodeB))   OF ProtocolIE-Single-Container {{ CellSyncInfoItemIE-CellSyncReprtTDD }}

CellSyncInfoItemIE-CellSyncReprtTDD NBAP-PROTOCOL-IES ::= {
    { ID    id-C-ID                                    CRITICALITY ignore  TYPE C-ID                                        PRESENCE mandatory}|
    { ID    id-IntStdPhCellSyncInfoItem-CellSyncReprtTDD   CRITICALITY ignore  TYPE IntStdPhCellSyncInfoItem-CellSyncReprtTDD PRESENCE optional},
    { ID    id-LateEntranceCellSyncInfoItem-CellSyncReprtTDD   CRITICALITY ignore    TYPE NULL    PRESENCE optional},
    ...
}

IntStdPhCellSyncInfoItem-CellSyncReprtTDD ::= SEQUENCE (SIZE (1.. maxNrOfCellSyncBursts)) OF CellSyncBurstMeasInfoItem-CellSyncReprtTDD

CellSyncBurstMeasInfoItem-CellSyncReprtTDD ::= SEQUENCE {
    sFN                                 SFN,
    cellSyncBurstInfo-CellSyncReprtTDD         SEQUENCE (SIZE (1..maxNrOfReceptsPerSyncFrame)) OF CellSyncBurstInfo-CellSyncReprtTDD,
    ...
}

CellSyncBurstInfo-CellSyncReprtTDD ::= CHOICE {
    cellSyncBurstAvailable        CellSyncBurstAvailable-CellSyncReprtTDD,
    cellSyncBurstNotAvailable   NULL,
    ...
}

CellSyncBurstAvailable-CellSyncReprtTDD ::= SEQUENCE {
    cellSyncBurstTiming           CellSyncBurstTiming,
    cellSyncBurstSIR              CellSyncBurstSIR,
    ...
}

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,
    maxNrOfDPCHs,
    maxNrOfCodes,
    maxNrOfDSCHs,
    maxNrOfDLTSs,
    maxNrOfDCHs,
    maxNrOfLevels,
    maxNoGPSItems,
    maxNoSat,

    id-MessageStructure
FROM NBAP-Constants

    Criticality,
    ProcedureID,
    ProtocolIE-ID,
    TransactionID,
    TriggeringMessage
FROM NBAP-CommonDataTypes

    NBAP-PROTOCOL-IES,
    ProtocolExtensionContainer{},
    ProtocolIE-Single-Container{},
    NBAP-PROTOCOL-EXTENSION
FROM NBAP-Containers;

-- =========================================
-- A
-- =========================================

Acknowledged-PCPCH-access-preambles ::= INTEGER (0..15,...)
```

```
Acknowledged-PRACH-preambles-Value ::= INTEGER(0..240,...)
-- The number of L1 acknowledged random access tries per every 20 ms period.

AddorDeleteIndicator ::= ENUMERATED {
    add,
    delete
}

Active-Pattern-Sequence-Information ::= SEQUENCE {
    cMConfigurationChangeCFN                             CFN,
    transmission-Gap-Pattern-Sequence-Status    Transmission-Gap-Pattern-Sequence-Status-List   OPTIONAL,
    iE-Extensions                               ProtocolExtensionContainer { {Active-Pattern-Sequence-Information-ExtIEs} } OPTIONAL,
    ...
}

Active-Pattern-Sequence-Information-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Transmission-Gap-Pattern-Sequence-Status-List ::= SEQUENCE (SIZE (0..maxTGPS)) OF
    SEQUENCE {
        tGPSID          TGPSID,
        tGPRC           TGPRC,
        tGCFN           CFN,
        iE-Extensions       ProtocolExtensionContainer { { Transmission-Gap-Pattern-Sequence-Status-List-ExtIEs } } OPTIONAL,
        ...
}

Transmission-Gap-Pattern-Sequence-Status-List-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

AICH-Power ::= INTEGER (-22..5)
-- Offset in dB.

AICH-TransmissionTiming ::= ENUMERATED {
    v0,
    v1
}

AllocationRetentionPriority ::= SEQUENCE {
    priorityLevel           PriorityLevel,
    pre-emptionCapability     Pre-emptionCapability,
    pre-emptionVulnerability  Pre-emptionVulnerability,
    iE-Extensions             ProtocolExtensionContainer { {AllocationRetentionPriority-ExtIEs} } OPTIONAL,
    ...
}
```

```
AllocationRetentionPriority-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

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.

BlockSTTD-Indicator ::= ENUMERATED {
    active,
    inactive
}

-- =========================================
--  C
```

```
-- ========================================

Cause ::= CHOICE {
    radioNetwork            CauseRadioNetwork,
    transport           CauseTransport,
    protocol                CauseProtocol,
    misc                    CauseMisc,
    ...
}

CauseMisc ::= ENUMERATED {
    control-processing-overload,
    hardware-failure,
    oam-intervention,
    not-enough-user-plane-processing-resources,
    unspecified,
    ...
}

CauseProtocol ::= ENUMERATED {
    transfer-syntax-error,
    abstract-syntax-error-reject,
    abstract-syntax-error-ignore-and-notify,
    message-not-compatible-with-receiver-state,
    semantic-error,
    unspecified,
    abstract-syntax-error-falsely-constructed-message,
    ...
}

CauseRadioNetwork ::= ENUMERATED {
    unknown-C-ID,
    cell-not-available,
    power-level-not-supported,
    dl-radio-resources-not-available,
    ul-radio-resources-not-available,
    rl-already-ActivatedOrAlocated,
    nodeB-Resources-unavailable,
    measurement-not-supported-for-the-object,
    combining-resources-not-available,
    requested-configuration-not-supported,
    synchronisation-failure,
    priority-transport-channel-established,
    sIB-Origination-in-Node-B-not-Supported,
    requested-tx-diversity-mode-not-supported,
    unspecified,
    bCCH-scheduling-error,
    measurement-temporarily-not-available,
    invalid-CM-settings,
    reconfiguration-CFN-not-elapsed,
    number-of-DL-codes-not-supported,
    s-cipch-not-supported,
    combining-not-supported,
```

```
    ul-sf—not-supported,
    dl-SF-not-supported,
    common-transport-channel-type-not-supported,
    dedicated-transport-channel-type-not-supported,
    downlink-shared-channel-type-not-supported,
    uplink-shared-channel-type-not-supported,
    cm-not-supported,
    tx-diversity-no-longer-supported,
    unknown-Local-Cell-ID,
    ...,
    number-of-UL-codes-not-supported,
    information-temporarily-not-available,
    information-provision-not-supported-for-the-object,
    cell-synchronisation-not-supported,
    synchronisation-adjustment-not-supported,
    dpc-mode-change-not-supported,
    iPDL-already-activated,
    iPDL-not-supported,
    iPDL-parameters-not-available
}

CauseTransport ::= ENUMERATED {
    transport-resource-unavailable,
    unspecified,
    ...
}

CCTrCH-ID ::= INTEGER (0..15)

CDSubChannelNumbers ::= BIT STRING (SIZE (12))

CellParameterID ::= INTEGER (0..127,...)

CellSyncBurstAvailabilityIndicator ::= ENUMERATED {
    cellSyncBurstAvailable,
    cellSyncBurstNotAvailable
}

CellSyncBurstCode ::= INTEGER(0..7, ...)

CellSyncBurstCodeShift ::= INTEGER(0..7)

CellSyncBurstRepetitionPeriod ::= INTEGER (0..4095)

CellSyncBurstSIR ::= INTEGER (0..31)

CellSyncBurstTiming ::= CHOICE {
    initialPhase        INTEGER (0..1048575),
    steadyStatePhase        INTEGER (0..255)
}

CellSyncBurstTimingThreshold ::= INTEGER(0..254)
```

```
CFN ::= INTEGER (0..255)


Channel-Assignment-Indication ::= ENUMERATED {
    cA-Active,
    cA-Inactive
}


ChipOffset ::= INTEGER (0..38399)
-- Unit Chip


C-ID ::= INTEGER (0..65535)


Closedlooptimingadjustmentmode  ::= ENUMERATED {
    adj-1-slot,
    adj-2-slot,
    ...
}


CommonChannelsCapacityConsumptionLaw ::= SEQUENCE (SIZE(1..maxNrOfSF)) OF
    SEQUENCE {
        dl-Cost      INTEGER (0..65535),
        ul-Cost      INTEGER (0..65535),
        iE-Extensions      ProtocolExtensionContainer { { CommonChannelsCapacityConsumptionLaw-ExtIEs } }    OPTIONAL,
    ...
}


CommonChannelsCapacityConsumptionLaw-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}


CommonMeasurementAccuracy ::= CHOICE {
    tUTRANGPSMeasurementAccuracyClass        TUTRANGPSAccuracyClass,
    ...
}


CommonMeasurementType ::= ENUMERATED  {
    received-total-wide-band-power,
    transmitted-carrier-power,
    acknowledged-prach-preambles,
    ul-timeslot-iscp,
    acknowledged-PCPCH-access-preambles,
    detected-PCPCH-access-preambles,
    ...,
    uTRAN-GPS-Timing-of-Cell-Frames-for-LCS,
    sFN-SFN-Observed-Time-Difference
}


CommonMeasurementValue ::= CHOICE {
    transmitted-carrier-power               Transmitted-Carrier-Power-Value,
    received-total-wide-band-power          Received-total-wide-band-power-Value,
    acknowledged-prach-preambles            Acknowledged-PRACH-preambles-Value,
    uL-TimeslotISCP                         UL-TimeslotISCP-Value,
    acknowledged-PCPCH-access-preambles     Acknowledged-PCPCH-access-preambles,
```

```
    detected-PCPCH-access-preambles          Detected-PCPCH-access-preambles,
    ...,
    tUTRANGPSMeasurementValueInformation     TUTRANGPSMeasurementValueInformation,
    sFNSFNMeasurementValueInformation        SFNSFNMeasurementValueInformation
}

CommonMeasurementValueInformation ::= CHOICE {
    measurementAvailable        CommonMeasurementAvailable,
    measurementnotAvailable     CommonMeasurementnotAvailable
}


CommonMeasurementAvailable::= SEQUENCE {
    commonmeasurementValue       CommonMeasurementValue,
    ie-Extensions                ProtocolExtensionContainer { { CommonMeasurementAvailableItem-ExtIEs} }    OPTIONAL,
    ...
}


CommonMeasurementAvailableItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
CommonMeasurementnotAvailable ::= NULL

CommonPhysicalChannelID ::= INTEGER (0..255)

Common-PhysicalChannel-Status-Information ::= SEQUENCE {
    commonPhysicalChannelID       CommonPhysicalChannelID,
    resourceOperationalState          ResourceOperationalState,
    availabilityStatus                AvailabilityStatus,
    iE-Extensions                     ProtocolExtensionContainer { { Common-PhysicalChannel-Status-Information-ExtIEs} }    OPTIONAL,
    ...
}

Common-PhysicalChannel-Status-Information-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CommonTransportChannelID ::= INTEGER (0..255)

Common-TransportChannel-Status-Information ::= SEQUENCE {
    commonTransportChannelID          CommonTransportChannelID,
    resourceOperationalState          ResourceOperationalState,
    availabilityStatus                AvailabilityStatus,
    iE-Extensions                     ProtocolExtensionContainer { { Common-TransportChannel-Status-Information-ExtIEs} }    OPTIONAL,
    ...
}

Common-TransportChannel-Status-Information-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
```

```
}

CommunicationControlPortID ::= INTEGER (0..65535)


Compressed-Mode-Deactivation-Flag::= ENUMERATED {
    deactivate,
    maintain-Active
}
-- on=deactivate

ConfigurationGenerationID ::= INTEGER (0..255)
-- Value '0' means "No configuration"

ConstantValue ::= INTEGER (-10..10,...)
-- -10 dB - +10 dB
-- unit dB
-- step 1 dB

CPCH-Allowed-Total-Rate ::= ENUMERATED {
    v15,
    v30,
    v60,
    v120,
    v240,
    v480,
    v960,
    v1920,
    v2880,
    v3840,
    v4800,
    v5760,
    ...
}

CPCHScramblingCodeNumber ::= INTEGER (0..79)


CPCH-UL-DPCCH-SlotFormat ::= INTEGER (0..2,...)


CriticalityDiagnostics ::= SEQUENCE {
    procedureID                 ProcedureID             OPTIONAL,
    triggeringMessage           TriggeringMessage           OPTIONAL,
    procedureCriticality        Criticality             OPTIONAL,
    transactionID               TransactionID               OPTIONAL,
    iEsCriticalityDiagnostics   CriticalityDiagnostics-IE-List  OPTIONAL,
    iE-Extensions               ProtocolExtensionContainer { {CriticalityDiagnostics-ExtIEs} }   OPTIONAL,
    ...
}

CriticalityDiagnostics-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

ETSI

```
CriticalityDiagnostics-IE-List ::= SEQUENCE (SIZE (1..maxNrOfErrors)) OF
    SEQUENCE {
        iECriticality       Criticality,
        iE-ID               ProtocolIE-ID,
        repetitionNumber    RepetitionNumber      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 },
    ...
}

MessageStructure ::= SEQUENCE (SIZE (1..maxNrOfLevels)) OF
    SEQUENCE {
        iE-ID                 ProtocolIE-ID,
        repetitionNumber      RepetitionNumber      OPTIONAL,
        iE-Extensions         ProtocolExtensionContainer { {MessageStructure-ExtIEs} } OPTIONAL,
        ...
    }


MessageStructure-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CRNC-CommunicationContextID ::= INTEGER (0..1048575)

CSBMeasurementID ::= INTEGER (0..65535)

CSBTransmissionID ::= INTEGER (0..65535)

-- =========================================
-- D
-- =========================================

DCH-ID ::= INTEGER (0..255)

DCH-FDD-Information ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-FDD-InformationItem

DCH-FDD-InformationItem ::= SEQUENCE {
    payloadCRC-PresenceIndicator        PayloadCRC-PresenceIndicator,
    ul-FP-Mode                          UL-FP-Mode,
    toAWS                               ToAWS,
    toAWE                               ToAWE,
    dCH-SpecificInformationList         DCH-Specific-FDD-InformationList,
    iE-Extensions                       ProtocolExtensionContainer { { DCH-FDD-InformationItem-ExtIEs} }  OPTIONAL,
    ...
}

DCH-FDD-InformationItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
```

```
    ...
}

DCH-Specific-FDD-InformationList ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-Specific-FDD-Item

DCH-Specific-FDD-Item ::=    SEQUENCE {
    dCH-ID                          DCH-ID,
    ul-TransportFormatSet           TransportFormatSet,
    dl-TransportFormatSet           TransportFormatSet,
    allocationRetentionPriority     AllocationRetentionPriority,
    frameHandlingPriority           FrameHandlingPriority,
    qE-Selector                     QE-Selector,
    iE-Extensions                   ProtocolExtensionContainer { { DCH-Specific-FDD-Item-ExtIEs} } OPTIONAL,
    ...
}

DCH-Specific-FDD-Item-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-InformationResponse ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-InformationResponseItem

DCH-InformationResponseItem ::= SEQUENCE {
    dCH-ID                                  DCH-ID,
    bindingID                               BindingID             OPTIONAL,
    transportLayerAddress                   TransportLayerAddress   OPTIONAL,
    iE-Extensions                           ProtocolExtensionContainer { { DCH-InformationResponseItem-ExtIEs} }    OPTIONAL,
    ...
}

DCH-InformationResponseItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-TDD-Information ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-TDD-InformationItem

DCH-TDD-InformationItem ::= SEQUENCE {
    payloadCRC-PresenceIndicator    PayloadCRC-PresenceIndicator,
    ul-FP-Mode                      UL-FP-Mode,
    toAWS                           ToAWS,
    toAWE                           ToAWE,
    dCH-SpecificInformationList     DCH-Specific-TDD-InformationList,
    iE-Extensions                   ProtocolExtensionContainer { { DCH-TDD-InformationItem-ExtIEs} }    OPTIONAL,
    ...
}

DCH-TDD-InformationItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-Specific-TDD-InformationList ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-Specific-TDD-Item

DCH-Specific-TDD-Item ::=    SEQUENCE {
```

ETSI

```
    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 is present only if DCH is part of set of Coordinated DCHs
    iE-Extensions                       ProtocolExtensionContainer { { DCH-Specific-TDD-Item-ExtIEs} }   OPTIONAL,
    ...
}

DCH-Specific-TDD-Item-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

FDD-DCHs-to-Modify ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF FDD-DCHs-to-ModifyItem

FDD-DCHs-to-ModifyItem   ::= SEQUENCE {
    ul-FP-Mode                      UL-FP-Mode      OPTIONAL,
    toAWS                           ToAWS           OPTIONAL,
    toAWE                           ToAWE           OPTIONAL,
    transportBearerRequestIndicator     TransportBearerRequestIndicator,
    dCH-SpecificInformationList         DCH-ModifySpecificInformation-FDD,
    iE-Extensions                       ProtocolExtensionContainer { { FDD-DCHs-to-ModifyItem-ExtIEs} }   OPTIONAL,
    ...
}

FDD-DCHs-to-ModifyItem-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-ModifySpecificInformation-FDD::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-ModifySpecificItem-FDD

DCH-ModifySpecificItem-FDD::=   SEQUENCE {
    dCH-ID                              DCH-ID,
    ul-TransportFormatSet               TransportFormatSet           OPTIONAL,
    dl-TransportFormatSet               TransportFormatSet           OPTIONAL,
    allocationRetentionPriority         AllocationRetentionPriority OPTIONAL,
    frameHandlingPriority               FrameHandlingPriority        OPTIONAL,
    iE-Extensions                       ProtocolExtensionContainer { { DCH-ModifySpecificItem-FDD-ExtIEs} }     OPTIONAL,
    ...
}

DCH-ModifySpecificItem-FDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}


TDD-DCHs-to-Modify ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-ModifyItem-TDD

DCH-ModifyItem-TDD ::= SEQUENCE {
```

```
    ul-FP-Mode                          UL-FP-Mode        OPTIONAL,
    toAWS                               ToAWS             OPTIONAL,
    toAWE                               ToAWE             OPTIONAL,
    transportBearerRequestIndicator     TransportBearerRequestIndicator,
    dCH-SpecificInformationList         DCH-ModifySpecificInformation-TDD,
    iE-Extensions                       ProtocolExtensionContainer { { TDD-DCHs-to-ModifyItem-ExtIEs} }      OPTIONAL,
    ...
}

TDD-DCHs-to-ModifyItem-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-ModifySpecificInformation-TDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-ModifySpecificItem-TDD

DCH-ModifySpecificItem-TDD ::=  SEQUENCE {
    dCH-ID                              DCH-ID,
    ul-CCTrCH-ID                        CCTrCH-ID                 OPTIONAL,
    dl-CCTrCH-ID                        CCTrCH-ID                 OPTIONAL,
    ul-TransportFormatSet               TransportFormatSet        OPTIONAL,
    dl-TransportFormatSet               TransportFormatSet        OPTIONAL,
    allocationRetentionPriority         AllocationRetentionPriority OPTIONAL,
    frameHandlingPriority               FrameHandlingPriority     OPTIONAL,
    iE-Extensions                       ProtocolExtensionContainer { { DCH-ModifySpecificItem-TDD-ExtIEs} }      OPTIONAL,
    ...
}

DCH-ModifySpecificItem-TDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DedicatedChannelsCapacityConsumptionLaw ::= SEQUENCE ( SIZE(1..maxNrOfSF) ) OF
    SEQUENCE {
        dl-Cost-1       INTEGER (0..65535),
        dl-Cost-2       INTEGER (0..65535),
        ul-Cost-1       INTEGER (0..65535),
        ul-Cost-2       INTEGER (0..65535),
        iE-Extensions       ProtocolExtensionContainer { { DedicatedChannelsCapacityConsumptionLaw-ExtIEs } }   OPTIONAL,
    ...
}

DedicatedChannelsCapacityConsumptionLaw-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DedicatedMeasurementType ::= ENUMERATED {
    sir,
    sir-error,
    transmitted-code-power,
    rscp,
    rx-timing-deviation,
    round-trip-time,
    ...
```

```
}

DedicatedMeasurementValue ::= CHOICE {
    sIR-Value                    SIR-Value,
    sIR-ErrorValue               SIR-Error-Value,
    transmittedCodePowerValue        Transmitted-Code-Power-Value,
    rSCP                         RSCP-Value,
    rxTimingDeviationValue       Rx-Timing-Deviation-Value,
    roundTripTime                Round-Trip-Time-Value,
    ...
}

DedicatedMeasurementValueInformation ::= CHOICE {
    measurementAvailable        DedicatedMeasurementAvailable,
    measurementnotAvailable     DedicatedMeasurementnotAvailable
}

DedicatedMeasurementAvailable::= SEQUENCE {
    dedicatedmeasurementValue       DedicatedMeasurementValue,
   cFN                          CFN                                OPTIONAL,
    ie-Extensions                ProtocolExtensionContainer { { DedicatedMeasurementAvailableItem-ExtIEs} }     OPTIONAL,
    ...
}

DedicatedMeasurementAvailableItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DedicatedMeasurementnotAvailable ::= NULL

Detected-PCPCH-access-preambles ::= INTEGER (0..240,...)

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 ::= {
    ...
```

ETSI

```
}

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,
```

ETSI

```
    ...
}

DL-TimeslotLCR-InformationItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-FrameType ::= ENUMERATED {
    typeA,
    typeB,
    ...
}

DL-or-Global-CapacityCredit ::= INTEGER (0..65535)

DL-Power ::= INTEGER (-350..150)
-- DL-Power = power * 10
-- If Power <=-35 DL-Power shall be set to -350
-- if Power >=15 DL-Power shall be set to 150
-- Unit dB, Range -35dB .. +15dB, Step +0.1dB

DLPowerAveragingWindowSize ::= INTEGER (1..60)

DL-ScramblingCode ::= INTEGER (0..15)
-- 0= Primary scrambling code of the cell, 1..15= Secondary scrambling code --

DL-TimeslotISCP ::= INTEGER (0..91)

DL-TimeslotISCPInfo ::= SEQUENCE (SIZE (1..maxNrOfDLTSs)) OF DL-TimeslotISCPInfoItem

DL-TimeslotISCPInfoItem ::= SEQUENCE {
    timeSlot                TimeSlot,
    dL-TimeslotISCP         DL-TimeslotISCP,
    iE-Extensions           ProtocolExtensionContainer { {DL-TimeslotISCPInfoItem-ExtIEs} }    OPTIONAL,
    ...
    }

DL-TimeslotISCPInfoItem-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-TPC-Pattern01Count ::= INTEGER (0..30,...)

Downlink-Compressed-Mode-Method ::= ENUMERATED {
    puncturing,
    sFdiv2,
    higher-layer-scheduling,
    ...
}

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 only 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 ::= ENUMERATED {-10, -9, -8, , -7, -6, -5, -4, -3, -2, -1, 0, 1, 2, 3, 4, 5, ...}

-- =======================================
--  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 ::= ENUMERATED {-10, -9, -8, , -7, -6, -5, -4, -3, -2, -1, 0, 1, 2, 3, 4, 5, ...}

-- =========================================
-- G
-- =========================================

GapLength                  ::= INTEGER (1..14)
```

ETSI

```
-- Unit slot

GapDuration              ::= INTEGER (1..144,...)
-- Unit frame

GPS-Almanac ::= SEQUENCE {
    wnₐ-alm             BIT STRING (SIZE (8)),
    sat-info-almanac    SAT-Info-Almanac,
    ie-Extensions       ProtocolExtensionContainer { { GPS-Almanac-ExtIEs} }        OPTIONAL,
    ...
}


GPS-Almanac-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

GPS-Ionospheric-Model ::= SEQUENCE {
    alpha-zero-ionos     BIT STRING (SIZE (8)),
    alpha-one-ionos      BIT STRING (SIZE (8)),
    alpha-two-ionos      BIT STRING (SIZE (8)),
    alpha-three-ionos    BIT STRING (SIZE (8)),
    beta-zero-ionos      BIT STRING (SIZE (8)),
    beta-one-ionos       BIT STRING (SIZE (8)),
    beta-two-ionos       BIT STRING (SIZE (8)),
    beta-three-ionos     BIT STRING (SIZE (8)),
    ie-Extensions      ProtocolExtensionContainer { { GPS-Ionospheric-Model-ExtIEs} }     OPTIONAL,
    ...
}


GPS-Ionospheric-Model-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}


GPS-Information ::= SEQUENCE (SIZE (0..maxNoGPSItems)) OF GPS-Information-Item
-- This IE shall be present if the Information Type Item IE indicates 'GPS Information'

GPS-Information-Item ::= ENUMERATED {
    gps-navigation-model-and-time-recovery,
    gps-ionospheric-model,
    gps-utc-model,
    gps-almanac,
    gps-rt-integrity,
    ...
}

GPS-RealTime-Integrity ::= CHOICE {
    bad-satellites            GPSBadSat-Info-RealTime-Integrity,
```

```
    no-bad-satellites        NULL
}


GPSBadSat-Info-RealTime-Integrity ::= SEQUENCE {
    sat-info                 SATInfo-RealTime-Integrity,
    ie-Extensions            ProtocolExtensionContainer { { GPSBadSat-Info-RealTime-Integrity-ExtIEs} }    OPTIONAL,
    ...
}


GPSBadSat-Info-RealTime-Integrity-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

GPS-NavigationModel-and-TimeRecovery ::= SEQUENCE (SIZE (1..maxNoSat)) OF GPS-NavandRecovery-Item

GPS-NavandRecovery-Item ::= SEQUENCE {
  tx-tow-nav                 INTEGER (0..1048575),
  sat-id-nav                 SAT-ID,
  tlm-message-nav            BIT STRING (SIZE (14)),
  tlm-revd-c-nav             BIT STRING (SIZE (2)),
  ho-word-nav                BIT STRING (SIZE (22)),
  w-n-nav                    BIT STRING (SIZE (10)),
  ca-or-p-on-l2-nav          BIT STRING (SIZE (2)),
  user-range-accuracy-index-nav   BIT STRING (SIZE (4)),
  sv-health-nav              BIT STRING (SIZE (6)),
  iodc-nav                   BIT STRING (SIZE (10)),
  l2-p-dataflag-nav          BIT STRING (SIZE (1)),
  sf1-reserved-nav           BIT STRING (SIZE (87)),
  t-gd-nav                   BIT STRING (SIZE (8)),
  t-oc-nav                   BIT STRING (SIZE (16)),
  a-f-2-nav                  BIT STRING (SIZE (8)),
  a-f-1-nav                  BIT STRING (SIZE (16)),
  a-f-zero-nav               BIT STRING (SIZE (22)),
  c-rs-nav                   BIT STRING (SIZE (16)),
  delta-n-nav                BIT STRING (SIZE (16)),
  m-zero-nav                 BIT STRING (SIZE (32)),
  c-uc-nav                   BIT STRING (SIZE (16)),
  gps-e-nav                  BIT STRING (SIZE (32)),
  c-us-nav                   BIT STRING (SIZE (16)),
  a-sqrt-nav                 BIT STRING (SIZE (32)),
  t-oe-nav                   BIT STRING (SIZE (16)),
  fit-interval-flag-nav      BIT STRING (SIZE (1)),
  aodo-nav                   BIT STRING (SIZE (5)),
  c-ic-nav                   BIT STRING (SIZE (16)),
  omega-zero-nav             BIT STRING (SIZE (32)),
  c-is-nav                   BIT STRING (SIZE (16)),
  i-zero-nav                 BIT STRING (SIZE (32)),
  c-rc-nav                   BIT STRING (SIZE (16)),
  gps-omega-nav              BIT STRING (SIZE (32)),
```

```
    omegadot-nav                   BIT STRING (SIZE (24)),
    idot-nav                       BIT STRING (SIZE (14)),
    spare-zero-fill                BIT STRING (SIZE (20)),
    ie-Extensions                  ProtocolExtensionContainer { { GPS-NavandRecovery-Item-ExtIEs} }    OPTIONAL,
    ...
}


GPS-NavandRecovery-Item-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}


GPS-RX-POS ::= SEQUENCE {
    latitudeSign          ENUMERATED {north, south},
    latitude              INTEGER (0..8388607),
    longitude             INTEGER (-8388608..8388607),
    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
```

```
}

IndicationType ::= ENUMERATED {
    noFailure,
    serviceImpacting,
    ...
}

InformationReportCharacteristics ::= CHOICE {
    onDemand                NULL,
    periodic                InformationReportCharacteristicsType-ReportPeriodicity,
    onModification          InformationReportCharacteristicsType-OnModification,
    ...
}

InformationReportCharacteristicsType-ReportPeriodicity ::= CHOICE {
    min             ReportPeriodicity-Scaledmin,
    hours           ReportPeriodicity-Scaledhour,
    ...
}

InformationReportCharacteristics-OnModification ::= SEQUENCE {
    information-thresholds      InformationThresholds,
    ie-Extensions              ProtocolExtensionContainer { { InformationReportCharacteristics-OnModification-ExtIEs} } OPTIONAL,
    ...
}

InformationReportCharacteristics-OnModification-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

InformationThresholds ::= CHOICE {
    dgps            DGPSThresholds,
    ...
}

InformationExchangeID ::= INTEGER (0..1048575)

InformationType ::= SEQUENCE {
    information-Type-Item       Information-Type-Item,
    gPSInformation          GPS-Information  OPTIONAL,
    iE-Extensions              ProtocolExtensionContainer { { Information-Type-ExtIEs} }      OPTIONAL,
...
}

Information-Type-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

ETSI

```
Information-Type-Item ::= ENUMERATED {
    gpsinformation,
    dgpscorrections,
    gpsrxpos,
    ...
}

InnerLoopDLPCStatus ::= ENUMERATED {
    active,
    inactive
}

IPDL-Indicator ::= ENUMERATED {
    active,
    inactive,
}


IPDL-FDD-Parameters ::= SEQUENCE {
    iP-SpacingFDD                   ENUMERATED(sp5,sp7,sp10,sp15,sp20,sp30,sp40,sp50,...),
    iP-Length                       ENUMERATED(len5, len10),
    seed                            INTEGER(1..63),
    burstModeParams                 BurstModeParams    OPTIONAL,
    iE-Extensions           ProtocolExtensionContainer { { IPDLFDDParameter-ExtIEs} }   OPTIONAL,
    ...
}

IPDLFDDParameter -ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

IPDL-TDD-Parameters ::= SEQUENCE {
    iP-SpacingTDD                   ENUMERATED(sp30,sp40,sp50,sp70,sp100,...),
    iP-Start                        INTEGER(0..4095),
    iP-Slot                         INTEGER(0..14),
    iP-PCCPCH                       ENUMERATED(SwitchOff-1-Frame,SwitchOff-2-Frames),
    burstModeParams                 BurstModeParams    OPTIONAL,
    iE-Extensions           ProtocolExtensionContainer { { IPDLTDDParameter-ExtIEs} }   OPTIONAL,
    ...
}

BurstModeParams ::= SEQUENCE {
    burstStart                      INTEGER(0..15),
    burstLenth                      INTEGER(10..25),
    burstFreq                       INTEGER(1..16),
    ...
}

IPDLTDDParameter -ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
```

```
}

-- =========================================
-- J
-- =========================================


-- =========================================
-- K
-- =========================================


-- =========================================
-- L
-- =========================================

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)


MidambleConfigurationBurstType1And3 ::=     ENUMERATED {v4, v8, v16}


MidambleConfigurationBurstType2 ::=     ENUMERATED {v3, v6}


MidambleShiftAndBurstType ::=       CHOICE {
    type1                           SEQUENCE {
        midambleConfigurationBurstType1And3 MidambleConfigurationBurstType1And3,
        midambleAllocationMode              CHOICE {
            defaultMidamble                     NULL,
            commonMidamble                      NULL,
            ueSpecificMidamble                  MidambleShiftLong,
            ...
```

```
        },
        ...
    },
    type2                               SEQUENCE {
        midambleConfigurationBurstType2     MidambleConfigurationBurstType2,
        midambleAllocationMode              CHOICE {
            defaultMidamble                     NULL,
            commonMidamble                      NULL,
            ueSpecificMidamble                  MidambleShiftShort,
            ...
        },
        ...
    },
    type3                               SEQUENCE {
        midambleConfigurationBurstType1And3 MidambleConfigurationBurstType1And3,
        midambleAllocationMode              CHOICE {
            defaultMidamble                     NULL,
            ueSpecificMidamble                  MidambleShiftLong,
            ...
        },
        ...
    },
    ...
}

MidambleShiftLong ::=               INTEGER (0..15)

MidambleShiftShort ::=             INTEGER (0..5)

MidambleShiftLCR ::= SEQUENCE {
    midambleAllocationMode      MidambleAllocationMode,
    midambleShift               MidambleShiftLong        OPTIONAL,
    iE-Extensions               ProtocolExtensionContainer { {MidambleShiftLCR-ExtIEs} }        OPTIONAL,
    ...
    }

MidambleAllocationMode ::= ENUMERATED {
    DefaultMidamble,
    CommonMidamble,
    UESpecificMidamble,
    ...
    }

MidambleShiftLCR-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

MinimumDL-PowerCapability ::=  INTEGER(0..800)
-- Unit dBm, Range -30dBm .. 50dBm, Step +0.1dB

MinSpreadingFactor ::= ENUMERATED {
      v4,
      v8,
```

```
        v16,
        v32,
        v64,
        v128,
        v256,
        v512
}

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,...)

NRepetitionsPerCyclePeriod ::= INTEGER (2..10)

N-INSYNC-IND ::= INTEGER (1..256)

N-OUTSYNC-IND ::= INTEGER (1..256)

NeighbouringCellMeasurementInformation ::= SEQUENCE (SIZE (1..maxNrOfMeasNCell)) OF
        CHOICE {
                neighbouringFDDCellMeasurementInformation        NeighbouringFDDCellMeasurementInformation,
                neighbouringTDDCellMeasurementInformation        NeighbouringTDDCellMeasurementInformation,
                ...
            }
```

```
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,
    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
```

ETSI

```
-- 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,
        ...
    },
    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
```

ETSI

```
    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-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 (SIZE (16))
-- Bit 0=P0, Bit 1=P1, .. ,Bit 15=P15 [9] --

PreambleThreshold ::= INTEGER (0..72)
-- 0= -36.0dB, 1= -35.5dB, ... , 72= 0.0dB

PredictedSFNSFNDeviationLimit ::=INTEGER (0..16384)
PredictedTUTRANGPSDeviationLimit ::= INTEGER (0..1048575)

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 (SIZE (12))
-- Bit 0=Sub Channel Number 0, Bit 1=Sub Channel Number 1, .., Bit 11=Sub Channel Number 11

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,
    ...
```

```
}

RepetitionNumber ::= 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,
    ...,
    onModification      ReportCharacteristicsType-OnModification

}

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 ::= {
    ...
}
```

ETSI

```
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 ::= {
    ...
}

    measurementThreshold            ReportCharacteristicsType-MeasurementThreshold,
    iE-Extensions                   ProtocolExtensionContainer { { ReportCharacteristicsType-OnModification-ExtIEs} }   OPTIONAL,
    ...
    }

ReportCharacteristicsType-OnModification-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

ReportCharacteristicsType-MeasurementIncreaseDecreaseThreshold ::= CHOICE {
    received-total-wide-band-power                       Received-total-wide-band-power-Value-IncrDecrThres,
    transmitted-carrier-power       Transmitted-Carrier-Power-Value,
    ackowledged-prach-preambles         Acknowledged-PRACH-preambles-Value,
    uL-TimeslotISCP                 UL-TimeslotISCP-Value-IncrDecrThres,
    sir                     SIR-Value-IncrDecrThres,
    sir-error               SIR-Error-Value-IncrDecrThres,
```

```
    transmitted-code-power          Transmitted-Code-Power-Value-IncrDecrThres,
    rscp                            RSCP-Value-IncrDecrThres,
    round-trip-time                 Round-Trip-Time-IncrDecrThres,
    acknowledged-PCPCH-access-preambles     Acknowledged-PCPCH-access-preambles,
    detected-PCPCH-access-preambles         Detected-PCPCH-access-preambles,
    ...
}

ReportCharacteristicsType-MeasurementThreshold ::= CHOICE {
    received-total-wide-band-power                          Received-total-wide-band-power-Value,
    transmitted-carrier-power       Transmitted-Carrier-Power-Value,
    ackowledged-prach-preambles         Acknowledged-PRACH-preambles-Value,
    uL-TimeslotISCP                 UL-TimeslotISCP-Value,
    sir                     SIR-Value,
    sir-error               SIR-Error-Value,
    transmitted-code-power          Transmitted-Code-Power-Value,
    rscp                            RSCP-Value,
    rx-timing-deviation             Rx-Timing-Deviation-Value,
    round-trip-time                 Round-Trip-Time-Value,
    acknowledged-PCPCH-access-preambles     Acknowledged-PCPCH-access-preambles,
    detected-PCPCH-access-preambles         Detected-PCPCH-access-preambles,
    ...,
    t-utran-gps-measurement-threshold-information       TUTRANGPSMeasurementThresholdInformation,
    sfn-sfn-measurement-threshold-information            SFNSFNMeasurementThresholdInformation
}

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
```

ETSI

```
ReportPeriodicity-Scaledmin ::= INTEGER (1..60,...)
-- Unit min, Range 1min .. 60min(hour), Step 1min

ReportPeriodicity-Scaledhour ::= INTEGER (1..24,...)
-- Unit hour, Range 1hour .. 24hours(day), Step 1hour

ResourceOperationalState ::= ENUMERATED {
    enabled,
    disabled
}

CommonTransportChannel-InformationResponse ::= SEQUENCE {
    commonTransportChannelID          CommonTransportChannelID,
    bindingID                         BindingID              OPTIONAL,
    transportLayerAddress             TransportLayerAddress   OPTIONAL,
    iE-Extensions                     ProtocolExtensionContainer { { CommonTransportChannel-InformationResponse-ExtIEs} }   OPTIONAL,
    ...
}

CommonTransportChannel-InformationResponse-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

LimitedPowerIncrease ::= ENUMERATED {
    used,
    not-used
}

RL-ID ::= INTEGER (0..31)

RL-Set-ID               ::= INTEGER (0..31)

Round-Trip-Time-IncrDecrThres ::= INTEGER(0..32766)

RNC-ID                  ::= INTEGER (0..4095)

Round-Trip-Time-Value ::= INTEGER(0..32767)
-- According to mapping in [22]

RSCP-Value ::= INTEGER (0..127)
-- According to mapping in [23]

RSCP-Value-IncrDecrThres ::= INTEGER (0..126)

Received-total-wide-band-power-Value ::= INTEGER(0..621)
-- According to mapping in [22]/[23]

Received-total-wide-band-power-Value-IncrDecrThres ::= INTEGER (0..620)

RequestedDataValueInformation ::= CHOICE {
    informationAvailable      InformationAvailable,
```

```
    informationnotAvailable     InformationnotAvailable


InformationAvailable::= SEQUENCE {
    requesteddataValue      RequestedDataValue,
    ie-Extensions           ProtocolExtensionContainer { { InformationAvailableItem-ExtIEs} }    OPTIONAL,
    ...
}


InformationAvailableItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}


InformationnotAvailable ::= NULL

RequestedDataValue ::= SEQUENCE {
    dgps-corrections      DGPSCorrections OPTIONAL,
    gps-navandrecovery   GPS-NavigationModel-and-TimeRecovery  OPTIONAL,
    gps-ionos-model      GPS-Ionospheric-Model OPTIONAL,
    gps-utc-model        GPS-UTC-Model         OPTIONAL,
    gps-almanac          GPS-Almanac           OPTIONAL,
    gps-rt-integrity     GPS-RealTime-Integrity OPTIONAL,
    gpsrxpos             GPS-RX-POS            OPTIONAL,
    ...
}
--at least one of the above IEs shall be present in the requested data value

Rx-Timing-Deviation-Value ::= INTEGER (0..8191)

-- =========================================
-- 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 {
    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 ::= INTEGER (0..40961)


SFNSFNChangeLimit ::= INTEGER (0..16384)


SFNSFNDriftRate ::= INTEGER (-16384..16384)


SFNSFNDriftRateQuality ::= INTEGER (0..16384)


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,
            sFNSFN        SFNSFN,
            sFNSFNQuality        SFNSFNQuality,
            sFNSFNDriftRate        SFNSFNDriftRate,
            sFNSFNDriftRateQuality        SFNSFNDriftRateQuality,
            sFNSFNTimeStamp            SFNSFNTimeStamp,
            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..1048575)


ShutdownTimer ::= INTEGER (1..3600)
-- Unit sec

SIB-Originator ::= ENUMERATED {
    nodeB,
    cRNC,
    ...
}

SIR-Error-Value ::= INTEGER (0..125)

SFNSFNTimeStamp::= SEQUENCE {
    sFN                 SFN,
    timeSlot            TimeSlot,
    iE-Extensions                   ProtocolExtensionContainer { { SFNSFNTimeStamp-ExtIEs} }     OPTIONAL,
    ...
}


SFNSFNTimeStamp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {

    ...

}

SIR-Error-Value-IncrDecrThres ::= INTEGER (0..124)

SIR-Value ::= INTEGER (0..63)
```

ETSI

```
-- 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,...)

SYNCDlCodeId ::= INTEGER (1..32,...)

SyncFrameNumber ::= INTEGER (1..10)

SynchronisationReportCharacteristics ::= SEQUENCE {
    synchronisationReportCharacteristicsType    SynchronisationReportCharacteristicsType,
    synchronisationReportCharactThreExc SynchronisationReportCharactThreExc     OPTIONAL
        -- Thie IE shall only be included if the value of synchronisationReportCharacteristicsType is thresholdExceeding.
}

SynchronisationReportCharactThreExc::=  SEQUENCE (SIZE (1..maxNrOfCellSyncBursts)) OF SynchronisationReportCharactThreInfoItem

SynchronisationReportCharactThreInfoItem ::= SEQUENCE {
    syncFrameNumber           SyncFrameNumber,
    cellSyncBurstInformation     SEQENCE (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,
    ...
}

SynchronisationReportType ::= ENUMERATED {
    initialPhase,
    steadyStatePhase,
    lateEntrantCell,
    ...
}

-- =========================================
-- T
-- =========================================

T-Cell ::= ENUMERATED {
    v0,
    v1,
    v2,
    v3,
    v4,
    v5,
    v6,
    v7,
    v8,
    v9
}
```

```
T-RLFAILURE ::= INTEGER (0..255)
-- Unit seconds, Range 0s .. 25.5s, Step 0.1s

TDD-ChannelisationCode ::= ENUMERATED {
    chCode1div1,
    chCode2div1,
    chCode2div2,
    chCode4div1,
    chCode4div2,
    chCode4div3,
    chCode4div4,
    chCode8div1,
    chCode8div2,
    chCode8div3,
    chCode8div4,
    chCode8div5,
    chCode8div6,
    chCode8div7,
    chCode8div8,
    chCode16div1,
    chCode16div2,
    chCode16div3,
    chCode16div4,
    chCode16div5,
    chCode16div6,
    chCode16div7,
    chCode16div8,
    chCode16div9,
    chCode16div10,
    chCode16div11,
    chCode16div12,
    chCode16div13,
    chCode16div14,
    chCode16div15,
    chCode16div16,
    ...
}

TDD-ChannelisationCodeLCR ::= CHOICE {
    sf1                 ENUMERATED { QPSK, 8PSK, ...},
    sfx                 TDD-ChannelisationCode,
    ...
}

TDD-DL-Code-Information ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF TDD-DL-Code-InformationItem

TDD-DL-Code-InformationItem  ::= SEQUENCE {
    dPCH-ID                             DPCH-ID,
    tdd-ChannelisationCode              TDD-ChannelisationCode,
    iE-Extensions                       ProtocolExtensionContainer { { TDD-DL-Code-InformationItem-ExtIEs} }   OPTIONAL,
    ...
}
```

```
TDD-DL-Code-InformationItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}


TDD-DL-Code-LCR-Information ::= SEQUENCE (SIZE (1..maxNrOfDPCHLCRs)) OF TDD-DL-Code-LCR-InformationItem

TDD-DL-Code-LCR-InformationItem ::= SEQUENCE {
    dPCH-ID                             DPCH-ID,
    tdd-ChannelisationCodeLCR           TDD-ChannelisationCodeLCR,
    iE-Extensions                       ProtocolExtensionContainer { { TDD-DL-Code-LCR-InformationItem-ExtIEs} }     OPTIONAL,
    ...
}

TDD-DL-Code-LCR-InformationItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TDD-DPCHOffset ::= CHOICE {
    initialOffset      INTEGER (0..255),
    noinitialOffset    INTEGER (0..63)
}

TDD-PhysicalChannelOffset ::= INTEGER (0..63)

TDD-TPC-DownlinkStepSize ::= ENUMERATED {
    step-size1,
    step-size2,
    step-size3,
    ...
}

TransportFormatCombination-Beta ::= CHOICE {
    signalledGainFactors        SEQUENCE {
        gainFactor                  CHOICE {
            fdd                         SEQUENCE {
                betaC                       BetaCD,
                betaD                       BetaCD,
                iE-Extensions       ProtocolExtensionContainer { { GainFactorFDD-ExtIEs } }     OPTIONAL,
                ...
            },
            tdd                         BetaCD,
            ...
        },
        refTFCNumber            RefTFCNumber     OPTIONAL,
        iE-Extensions           ProtocolExtensionContainer { { SignalledGainFactors-ExtIEs } }    OPTIONAL,
        ...
    },
    computedGainFactors         RefTFCNumber,
    ...
}

GainFactorFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
```

```
}

SignalledGainFactors-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TDD-UL-Code-Information ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF TDD-UL-Code-InformationItem

TDD-UL-Code-InformationItem ::= SEQUENCE {
    dPCH-ID                             DPCH-ID,
    tdd-ChannelisationCode              TDD-ChannelisationCode,
    iE-Extensions                       ProtocolExtensionContainer { { TDD-UL-Code-InformationItem-ExtIEs} }   OPTIONAL,
    ...
}

TDD-UL-Code-InformationItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TDD-UL-Code-LCR-Information ::= SEQUENCE (SIZE (1..maxNrOfDPCHLCRs)) OF TDD-UL-Code-LCR-InformationItem

TDD-UL-Code-LCR-InformationItem ::= SEQUENCE {
    dPCH-ID                             DPCH-ID,
    tdd-ChannelisationCodeLCR           TDD-ChannelisationCodeLCR,
    iE-Extensions                       ProtocolExtensionContainer { { TDD-UL-Code-LCR-InformationItem-ExtIEs} }     OPTIONAL,
    ...
}

TDD-UL-Code-LCR-InformationItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TFCI-Coding ::= ENUMERATED {
    v4,
    v8,
    v16,
    v32,
    ...
}

TFCI-Presence ::= ENUMERATED {
    present,
    not-present
}

TFCI-SignallingMode ::= SEQUENCE {
    tFCI-SignallingOption       TFCI-SignallingMode-TFCI-SignallingOption,
    splitType               TFCI-SignallingMode-SplitType               OPTIONAL,
    -- This IE is only present if TFCI signalling option is split --
    lengthOfTFCI2               TFCI-SignallingMode-LengthOfTFCI2           OPTIONAL,
    -- This IE is only present if 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..63)
-- 0 = infinity


TGPSID              ::= INTEGER (1.. maxTGPS)


TGSN                ::= INTEGER (0..14)

TimeSlot ::= INTEGER (0..14)

TimeSlotDirection ::= ENUMERATED {
    ul,
    dl,
    ...
}

TimeSlotLCR ::= INTEGER (0..6)
```

```
TimeSlotStatus ::= ENUMERATED {
    active,
    not-active,
    ...
}

TimingAdjustmentValue ::= CHOICE {
    initialPhase         INTEGER (0..255),
    steadyStatePhase     INTEGER (0..1048575)
}

TimingAdvanceApplied ::= ENUMERATED {
    yes,
    no
}
-- For 1.28Mcps TDD TimingAdvanceApplied = No

ToAWE ::= INTEGER (0..2559)
-- Unit ms

ToAWS ::= INTEGER (0..1279)
-- Unit ms

Transmission-Gap-Pattern-Sequence-Information ::= SEQUENCE (SIZE (1..maxTGPS)) OF
    SEQUENCE {
        tGPSID          TGPSID,
        tGSN            TGSN,
        tGL1            GapLength,
        tGL2            GapLength   OPTIONAL,
        tGD             TGD,
        tGPL1           GapDuration,
        tGPL2           GapDuration OPTIONAL,
        uL-DL-mode      UL-DL-mode,
        downlink-Compressed-Mode-Method    Downlink-Compressed-Mode-Method    OPTIONAL,
            -- This IE is only present if the value of the UL/DL mode IE is "DL only" or "UL/DL"
        uplink-Compressed-Mode-Method      Uplink-Compressed-Mode-Method      OPTIONAL,
            -- This IE is only present if the value of the UL/DL mode IE is "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,
        ...
    }
```

ETSI

```
Transmission-Gap-Pattern-Sequence-Information-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}


TransmissionGapPatternSequenceCodeInformation    ::= ENUMERATED{
    code-change,
    nocode-change
}

Transmitted-Carrier-Power-Value ::= INTEGER(0..100)
-- According to mapping in [4]/[5]

Transmitted-Code-Power-Value ::= INTEGER (0..127)
-- According to mapping in [4]/[5]

Transmitted-Code-Power-Value-IncrDecrThres ::= INTEGER (0..112,...)

TransmissionDiversityApplied ::= BOOLEAN
-- true: applied, false: not applied

TransmitDiversityIndicator ::= ENUMERATED {
    active,
    inactive
}

TFCS ::= SEQUENCE {
    tFCSvalues              CHOICE {
        no-Split-in-TFCI            TFCS-TFCSList,
        split-in-TFCI               SEQUENCE {
            transportFormatCombination-DCH      TFCS-DCHList,
            signallingMethod                    CHOICE {
                tFCI-Range                          TFCS-MapingOnDSCHList,
                explicit                            TFCS-DSCHList,
                ...
            },
            iE-Extensions                       ProtocolExtensionContainer { { Split-in-TFCI-ExtIEs } }   OPTIONAL,
            ...
        },
    ...
    },
    iE-Extensions       ProtocolExtensionContainer { { TFCS-ExtIEs} }       OPTIONAL,
    ...
}

Split-in-TFCI-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TFCS-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
```

```
    ...
}

TFCS-TFCSList ::= SEQUENCE (SIZE (1..maxNrOfTFCs)) OF
    SEQUENCE {
        cTFC                TFCS-CTFC,
        tFC-Beta        TransportFormatCombination-Beta OPTIONAL,
        iE-Extensions        ProtocolExtensionContainer { { TFCS-TFCSList-ExtIEs} }      OPTIONAL,
    ...
}

TFCS-TFCSList-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TFCS-CTFC ::= CHOICE {
    ctfc2bit                            INTEGER (0..3),
    ctfc4bit                            INTEGER (0..15),
    ctfc6bit                            INTEGER (0..63),
    ctfc8bit                            INTEGER (0..255),
    ctfc12bit                           INTEGER (0..4095),
    ctfc16bit                           INTEGER (0..65535),
    ctfcmaxbit                          INTEGER (0..maxCTFC)
}

TFCS-DCHList ::= SEQUENCE (SIZE (1..maxNrOfTFCI1Combs)) OF
    SEQUENCE {
        cTFC                TFCS-CTFC,
        iE-Extensions        ProtocolExtensionContainer { { TFCS-DCHList-ExtIEs} }      OPTIONAL,
    ...
}

TFCS-DCHList-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TFCS-MapingOnDSCHList ::= SEQUENCE (SIZE (1..maxNrOfTFCIGroups)) OF
    SEQUENCE {
        maxTFCI-field2-Value        TFCS-MaxTFCI-field2-Value,
        cTFC-DSCH                TFCS-CTFC,
        iE-Extensions                ProtocolExtensionContainer { { TFCS-MapingOnDSCHList-ExtIEs} }     OPTIONAL,
    ...
}

TFCS-MapingOnDSCHList-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TFCS-MaxTFCI-field2-Value ::= INTEGER (1..maxNrOfTFCI2Combs-1)

TFCS-DSCHList ::= SEQUENCE (SIZE (1..maxNrOfTFCI2Combs)) OF
    SEQUENCE {
        cTFC-DSCH                TFCS-CTFC,
```

ETSI

```
    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 is only present if "Number of Transport Blocks" is 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 is mandatory if the "Transmission Time Interval" of the "Semi-static Transport Format Information" is "dynamic". Otherwise it is
absent.
    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 is only present if channelCoding is 'convolutional' or 'turbo'
    rateMatcingAttribute             TransportFormatSet-RateMatchingAttribute,
    cRC-Size                         TransportFormatSet-CRC-Size,
    mode                             TransportFormatSet-ModeSSP ,
    iE-Extensions                    ProtocolExtensionContainer { { TransportFormatSet-Semi-staticPart-ExtIEs} }    OPTIONAL,
    ...
}

TransportFormatSet-Semi-staticPart-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TransportFormatSet-ChannelCodingType ::= ENUMERATED {
    no-coding,
    convolutional-coding,
    turbo-coding,
    ...
}

TransportFormatSet-CodingRate ::= ENUMERATED {
    half,
    third,
    ...
}

TransportFormatSet-CRC-Size ::= ENUMERATED {
    v0,
    v8,
    v12,
    v16,
    v24,
    ...
}

TransportFormatSet-ModeDP ::= CHOICE {
    tdd            TDD-TransportFormatSet-ModeDP,
    notApplicable            NULL,
    ...
}
```

```
TransportFormatSet-ModeSSP ::= CHOICE {
    tdd              TransportFormatSet-SecondInterleavingMode,
    notApplicable             NULL,
    ...
}

TransportFormatSet-NrOfTransportBlocks ::= INTEGER (0..512)

TransportFormatSet-RateMatchingAttribute ::= INTEGER (1..maxRateMatching)

TransportFormatSet-SecondInterleavingMode ::= ENUMERATED {
    frame-rlated,
    timeSlot-related,
    ...
}

TransportFormatSet-TransmissionTimeIntervalDynamic ::= ENUMERATED {
    msec-10,
    msec-20,
    msec-40,
    msec-80,
    ...
}

TransportFormatSet-TransmissionTimeIntervalSemiStatic ::= ENUMERATED {
    msec-10,
    msec-20,
    msec-40,
    msec-80,
    dynamic,
    ...
}

TransportFormatSet-TransportBlockSize ::= INTEGER (0..5000)

TransportLayerAddress ::= BIT STRING (SIZE (1..160, ...))

TSTD-Indicator ::= ENUMERATED {
    active,
    inactive
}

TUTRANGPS ::= INTEGER (0..37158911999999)

TUTRANGPSChangeLimit ::= INTEGER (0..1048575)

TUTRANGPSDriftRate ::= INTEGER (-16385..16384)
TUTRANGPSDriftRateQuality ::= INTEGER (0..16383)

TUTRANGPSAccuracyClass ::= ENUMERATED {
    accuracy-class-A,
    accuracy-class-B,
    accuracy-class-C,
```

```
    ...
}

TUTRANGPSMeasurementThresholdInformation ::= SEQUENCE {
    tUTRANGPSChangeLimit                     TUTRANGPSChangeLimit                    OPTIONAL,
    predictedTUTRANGPSDeviationLimit         PredictedTUTRANGPSDeviationLimit        OPTIONAL,
    iE-Extensions                    ProtocolExtensionContainer { { TUTRANGPSMeasurementThresholdInformation-ExtIEs} }    OPTIONAL,
    ...
}

TUTRANGPSMeasurementThresholdInformation-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {

    ...
}

TUTRANGPSMeasurementValueInformation ::= SEQUENCE {
        tUTRANGPS                    TUTRANGPS,
        tUTRANGPSQuality             TUTRANGPSQuality,
        tUTRANGPSDriftRate           TUTRANGPSDriftRate,
        tUTRANGPSDriftRateQuality    TUTRANGPSDriftRateQuality,
        iE-Extensions                ProtocolExtensionContainer { {TUTRANGPSMeasurementValueInformationItem-ExtIEs} }    OPTIONAL,
        ...
}

TUTRANGPSMeasurementValueInformationItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {

    ...
}

TUTRANGPSQuality ::= INTEGER (0..1048574)

-- =======================================
--  U
-- =======================================

UARFCN ::= INTEGER (0..16383, ...)
-- corresponds to 1885.2MHz .. 2024.8MHz

UC-Id ::= SEQUENCE {
    rNC-ID           RNC-ID,
    c-ID             C-ID,
    iE-Extensions          ProtocolExtensionContainer { {UC-Id-ExtIEs} } OPTIONAL,
    ...
}
UC-Id-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {

    ...
}

UDRE ::= ENUMERATED {
   udre-minusequal-one-m,
   udre-betweenoneandfour-m,
   udre-betweenfourandeight-m,
   udre-greaterequaleight-m
```

```
}

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-InfoItem-ExtIEs} }    OPTIONAL,
    ...
 }

UL-TimeSlot-ISCP-LCR-InfoItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
```

ETSI

```
    ...
}

USCH-Information ::= SEQUENCE (SIZE (1..maxNrOfUSCHs)) OF USCH-InformationItem

USCH-InformationItem ::= SEQUENCE {
    uSCH-ID                             USCH-ID,
    cCTrCH-ID                           CCTrCH-ID,
    transportFormatSet                  TransportFormatSet,
    allocationRetentionPriority         AllocationRetentionPriority,
    iE-Extensions                       ProtocolExtensionContainer { { USCH-InformationItem-ExtIEs} }    OPTIONAL,
    ...
}

USCH-InformationItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

USCH-InformationResponse ::= SEQUENCE (SIZE (1..maxNrOfUSCHs)) OF USCH-InformationResponseItem

USCH-InformationResponseItem ::= SEQUENCE {
    uSCH-ID                             USCH-ID,
    bindingID                           BindingID            OPTIONAL,
    transportLayerAddress               TransportLayerAddress   OPTIONAL,
    iE-Extensions                       ProtocolExtensionContainer { { USCH-InformationResponseItem-ExtIEs} }    OPTIONAL,
    ...
}

USCH-InformationResponseItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-TimeslotISCP-Value ::= INTEGER (0..127)
-- According to mapping in [23]

UL-TimeslotISCP-Value-IncrDecrThres ::= INTEGER (0..126)

USCH-ID ::= INTEGER (0..255)

-- =========================================
--  V
-- =========================================

-- =========================================
--  W
-- =========================================

-- =========================================
--  X
-- =========================================

-- =========================================
--  Y
```

```
-- =========================================

-- =========================================
--  Z
-- =========================================

END
```

9.3.5   Common Definitions

```
-- ***************************************************************
--
-- Common definitions
--
-- ***************************************************************

NBAP-CommonDataTypes {
itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
umts-Access (20) modules (3) nbap (2) version1 (1) nbap-CommonDataTypes (3)  }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

-- ***************************************************************
--
-- Extension constants
--
-- ***************************************************************

maxPrivateIEs                INTEGER ::= 65535
maxProtocolExtensions        INTEGER ::= 65535
maxProtocolIEs               INTEGER ::= 65535

-- ***************************************************************
--
-- Common Data Types
--
-- ***************************************************************

Criticality    ::= ENUMERATED { reject, ignore, notify }

MessageDiscriminator    ::= ENUMERATED { common, dedicated }

Presence        ::= ENUMERATED { optional, conditional, mandatory }

PrivateIE-ID    ::= CHOICE {
    local               INTEGER (0..maxPrivateIEs),
    global              OBJECT IDENTIFIER
}
```

```
ProcedureCode   ::= INTEGER (0..255)


ProcedureID     ::= SEQUENCE {
    procedureCode           ProcedureCode,
    ddMode                  ENUMERATED { tdd, fdd, common, ... }
}

ProtocolExtensionID ::= INTEGER (0..maxProtocolExtensions)

ProtocolIE-ID       ::= INTEGER (0..maxProtocolIEs)

TransactionID       ::= CHOICE {
    shortTransActionId      INTEGER (0..127),
    longTransActionId       INTEGER (0..32767)
}

TriggeringMessage   ::= ENUMERATED { initiating-message, successful-outcome, unsuccessfull-outcome, outcome }

END
```

9.3.6   Constant Definitions

```
-- *************************************************************
--
-- Constant definitions
--
-- *************************************************************

NBAP-Constants {
itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
umts-Access (20) modules (3) nbap (2) version1 (1) nbap-Constants (4)}

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

IMPORTS
    ProcedureCode,
    ProtocolIE-ID
FROM NBAP-CommonDataTypes;

-- *************************************************************
--
-- Elementary Procedures
--
-- *************************************************************

id-audit                                    ProcedureCode ::= 0
id-auditRequired                            ProcedureCode ::= 1
id-blockResource                            ProcedureCode ::= 2
id-cellDeletion                           ProcedureCode ::= 3
```

```
id-cellReconfiguration                                    ProcedureCode ::= 4
id-cellSetup                                              ProcedureCode ::= 5
id-cellSynchronisationInitiation                          ProcedureCode ::= 39
id-cellSynchronisationReconfiguration                     ProcedureCode ::= 40
id-cellSynchronisationReporting                           ProcedureCode ::= 41
id-cellSynchronisationTermination                         ProcedureCode ::= 42
id-cellSynchronisationFailure                             ProcedureCode ::= 43
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
maxNrOfDLTSsLCR                INTEGER ::= 6
maxNrOfDLCodes                 INTEGER ::= 8
maxNrOfErrors                  INTEGER ::= 256
maxNrOfTFs                     INTEGER ::= 32
maxNrOfTFCs                    INTEGER ::= 1024
maxNrOfRLs                     INTEGER ::= 16
maxNrOfRLs-1                   INTEGER ::= 15  -- maxNrOfRLs - 1
maxNrOfRLs-2                   INTEGER ::= 14  -- maxNrOfRLs - 2
maxNrOfRLSets                  INTEGER ::= maxNrOfRLs
maxNrOfDPCHs                   INTEGER ::= 240
maxNrOfSCCPCHs                 INTEGER ::= 8
maxNrOfCPCHs                   INTEGER ::= 4
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
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
```

ETSI

```
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-UARFCNforNt                                                ProtocolIE-ID ::= 280
id-UARFCNforNd                                                ProtocolIE-ID ::= 281
id-UARFCNforNu                                                ProtocolIE-ID ::= 282
```

ETSI

```
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-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-DL-DPCH-LCR-InformationList-RL-SetupRqstTDD                    ProtocolIE-ID ::= 75
id-DwPCH-LCR-Information                                          ProtocolIE-ID ::= 78
id-DwPCH-LCR-Information-AuditRsp                               ProtocolIE-ID ::= 80
id-DwPCH-LCR-InformationList-AuditRsp                          ProtocolIE-ID ::= 90
id-DwPCH-LCR-Information-Cell-SetupRqstTDD                     ProtocolIE-ID ::= 97
id-DwPCH-LCR-Information-Cell-ReconfRqstTDD                       ProtocolIE-ID ::= 99
id-DwPCH-LCR-InformationList-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 ::= 310
id-FPACH-LCR-InformationList-ResourceStatusInd                ProtocolIE-ID ::= 311
id-FPACH-LCR-Parameters-CTCH-SetupRqstTDD                      ProtocolIE-ID ::= 312
id-FPACH-LCR-ParametersItem-CTCH-SetupRqstTDD                 ProtocolIE-ID ::= 313
id-FPACH-LCR-Parameters-CTCH-ReconfRqstTDD                    ProtocolIE-ID ::= 314
id-PCCPCH-LCR-Information-Cell-SetupRqstTDD                    ProtocolIE-ID ::= 456
id-PCH-Power-LCR-CTCH-SetupRqstTDD                               ProtocolIE-ID ::= 457
id-PCH-Power-LCR-CTCH-ReconfRqstTDD                              ProtocolIE-ID ::= 458
id-PICH-LCR-Parameters-CTCH-SetupRqstTDD                      ProtocolIE-ID ::= 459
id-PICH-LCR-ParametersItem-CTCH-SetupRqstTDD                  ProtocolIE-ID ::= 460
id-PRACH-LCR-ParametersList-CTCH-SetupRqstTDD                    ProtocolIE-ID ::= 461
id-PRACH-LCR-ParametersListIE-CTCH-SetupRqstTDD               ProtocolIE-ID ::= 462
id-RL-InformationResponse-LCR-RL-SetupRspTDD                  ProtocolIE-ID ::= 463
id-Secondary-CCPCH-LCR-parameterListIE-CTCH-SetupRqstTDD       ProtocolIE-ID ::= 464
id-Secondary-CCPCH-LCR-parameterList-CTCH-SetupRqstTDD        ProtocolIE-ID ::= 465
id-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-UL-DPCH-LCR-InformationList-RL-SetupRqstTDD                  ProtocolIE-ID ::= 471
id-DL-DPCH-InformationItem-LCR-RL-AdditionRqstTDD               ProtocolIE-ID ::= 472
id-UL-DPCH-InformationItem-LCR-RL-AdditionRqstTDD              ProtocolIE-ID ::= 473
id-TimeslotISCP-InformationList-LCR-RL-AdditionRqstTDD         ProtocolIE-ID ::= 474
id-DL-DPCH-LCR-InformationAddList-RL-ReconfPrepTDD            ProtocolIE-ID ::= 475
id-DL-DPCH-LCR-InformationAddListIE-RL-ReconfPrepTDD          ProtocolIE-ID ::= 476
id-DL-DPCH-LCR-InformationModify-AddList-RL-ReconfPrepTDD     ProtocolIE-ID ::= 477
id-DL-DPCH-LCR-InformationModify-AddListIE-RL-ReconfPrepTDD   ProtocolIE-ID ::= 478
id-DL-Timeslot-LCR-InformationModify-ModifyList-RL-ReconfPrepTDD  ProtocolIE-ID ::= 479
id-TimeslotISCPInfoList-LCR-DL-PC-RqstTDD                     ProtocolIE-ID ::= 480
id-UL-DPCH-InformationAddListIE-RL-ReconfPrepTDD             ProtocolIE-ID ::= 481
id-UL-DPCH-LCR-InformationAddListIE-RL-ReconfPrepTDD         ProtocolIE-ID ::= 482
id-UL-DPCH-LCR-InformationModify-AddList                      ProtocolIE-ID ::= 483
id-UL-DPCH-LCR-InformationModify-AddListIE-RL-ReconfPrepTDD  ProtocolIE-ID ::= 484
id-UL-TimeslotLCR-Information-RL-ReconfPrepTDD                ProtocolIE-ID ::= 485
id-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


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,
    ProtocolExtensionID,
    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         ProtocolExtensionID    UNIQUE,
    &criticality    Criticality,
    &Extension,
    &presence       Presence
}
WITH SYNTAX {
    ID      &id
    CRITICALITY &criticality
    EXTENSION   &Extension
    PRESENCE    &presence
}


-- ***************************************************************
--
-- Class Definition for Private IEs
--
-- ***************************************************************

NBAP-PRIVATE-IES ::= CLASS {
    &id     PrivateIE-ID,
    &criticality    Criticality,
    &Value,
    &presence       Presence
}
WITH SYNTAX {
    ID      &id
    CRITICALITY &criticality
    TYPE    &Value
    PRESENCE    &presence
}

-- ***************************************************************
--
-- Container for Protocol IEs
--
-- ***************************************************************

ProtocolIE-Container {NBAP-PROTOCOL-IES : IEsSetParam} ::=
    SEQUENCE (SIZE (0..maxProtocolIEs)) OF
    ProtocolIE-Field {{IEsSetParam}}

ProtocolIE-Single-Container {NBAP-PROTOCOL-IES : IEsSetParam} ::=
    ProtocolIE-Field {{IEsSetParam}}

ProtocolIE-Field {NBAP-PROTOCOL-IES : IEsSetParam} ::= SEQUENCE {
    id      NBAP-PROTOCOL-IES.&id       ({IEsSetParam}),
    criticality     NBAP-PROTOCOL-IES.&criticality ({IEsSetParam}{@id}),
    value       NBAP-PROTOCOL-IES.&Value    ({IEsSetParam}{@id})
```

```
}

-- *************************************************************
--
-- Container for Protocol IE Pairs
--
-- *************************************************************

ProtocolIE-ContainerPair {NBAP-PROTOCOL-IES-PAIR : IEsSetParam} ::=
    SEQUENCE (SIZE (0..maxProtocolIEs)) OF
    ProtocolIE-FieldPair {{IEsSetParam}}

ProtocolIE-FieldPair {NBAP-PROTOCOL-IES-PAIR : IEsSetParam} ::= SEQUENCE {
    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
```

ETSI

```
--
-- *************************************************************

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].

9.5 Timers

$T_{Preempt}$

- Specifies the maximum time that a Node B may wait for pre-emption of resources for establishment or reconfiguration of Radio Links.

10 Handling of unknown, unforeseen and erroneous protocol data

10.1 General

Protocol Error cases can be divided into three classes:

- Transfer Syntax Error

- Abstract Syntax Error

- Logical Error

Protocol errors can occur in the following functions within a receiving node:
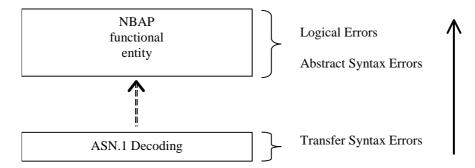
Figure 38: Protocol Errors in NBAP.

10.2 Transfer Syntax Error

A Transfer Syntax Error occurs when the receiver is not able to decode the received physical message. Transfer syntax errors are always detected in the process of ASN.1 decoding. If a Transfer Syntax Error occurs, the receiver should initiate Error Indication procedure with appropriate cause value for the Transfer Syntax protocol error.

Examples for Transfer Syntax Errors are:

- Violation of value ranges in ASN.1 definition of messages. e.g.: If an IE has a defined value range of 0 to 10 (ASN.1: INTEGER (0..10)), and 12 will be received, then this will be treated as a transfer syntax error.

- Violation in list element constraints. e.g.: If a list is defined as containing 1 to 10 elements, and 12 elements will be received, than this case will be handled as a transfer syntax error.

- Missing mandatory elements in ASN.1 SEQUENCE definitions (as sent by the originator of the message).

- Wrong order of elements in ASN.1 SEQUENCE definitions (as sent by the originator of the message).

10.3 Abstract Syntax Error

10.3.1 General

An Abstract Syntax Error occurs when the receiving functional NBAP entity:

1. receives IEs or IE groups that cannot be understood (unknown id);

2. receives IEs for which the logical range is violated (e.g.: ASN.1 definition: 0 to 15, the logical range is 0 to 10 (values 11 to 15 are undefined), and 12 will be received; this case will be handled as an abstract syntax error using criticality information sent by the originator of the message);

3. does not receive IEs or IE groups but according to the specified presence of the concerning object, the IEs or IE groups should have been present in the received message;

4. receives IEs or IE groups that are defined to be part of that message in wrong order or with too many occurrences of the same IE or IE group.

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) results 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 case 4 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 concerning object of class NBAP-PROTOCOL-IES, NBAP-PROTOCOL-IES-PAIR, NBAP-PROTOCOL-EXTENSION or NBAP-PRIVATE-IES.

The presence field of the indicated classes supports three values:

1.   Optional;

2.   Conditional;

3.   Mandatory.

If an IE/IE group is not included in a received message and the presence of the IE/IE group is mandatory or the presence is conditional and the condition is true according to the version of the specification used by the receiver, an abstract syntax error occurs due to a missing IE/IE group.

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.

10.3.4.2   IEs other than the Procedure ID

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 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 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.

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. The *Repetition Number* IE shall be included in the *Information Element Criticality Diagnostics* IE if the reported IE/IE group was part of a "SEQUENCE OF" definition.

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. The *Repetition Number* IE shall be included in the *Information Element Criticality Diagnostics* IE if the reported IE/IE group was part of a "SEQUENCE OF" definition.

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 initiate local error handling.

Ignore IE and Notify Sender:

- If a received message *initiating* a procedure is missing one or more IEs/IE groups with specified criticality "*Ignore IE and Notify Sender*", the receiving node shall continue with the procedure based on the other IEs/IE groups present in the message and report in the response message of the procedure that one or more IEs/IE groups were missing. In case the information received in the initiating message was insufficient to determine a value for all IEs that are required to be present in the response message, the receiving node shall instead terminate the procedure and initiate the Error Indication procedure.

- If a received message *initiating* a procedure that does not have a message to report the outcome of the procedure is missing one or more IEs/IE groups with specified criticality "*Ignore IE and Notify Sender*", the receiving node shall continue with the procedure based on the other IEs/IE groups present in the message and initiate the Error Indication procedure to report that one or more IEs/IE groups were missing.

- If a received *response* message is missing one or more IEs/IE groups with specified criticality "*Ignore IE and Notify Sender*", the receiving node shall initiate the Error Indication procedure.

Ignore IE:

- If a received message *initiating* a procedure is missing one or more IEs/IE groups with specified criticality "*Ignore IE*", the receiving node shall continue with the procedure based on the other IEs/IE groups present in the message.

- If a received *response* message is missing one or more IEs/IE groups with specified criticality "*Ignore IE*", the receiving node shall ignore that those IEs/IE groups are missing.

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.

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.

10.3.6   IEs or IE groups received in wrong order or with too many occurrences

If a message with IEs or IE groups in wrong order or with too many occurrences is received, 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, 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, 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, the receiving node shall initiate local error handling.

10.4   Logical Error

Logical error situations occur when a message is comprehended correctly, but the information contained within the message is not valid (i.e. semantic error), or describes a procedure which is not compatible with the state of the receiver. In these conditions, the following behaviour shall be performed (unless otherwise specified) as defined by the class of the elementary procedure, irrespective of the criticality of the IEs/IE groups containing the erroneous values.

Class 1:

Where the logical error occurs in a request message of a class 1 procedure, and the procedure has a failure message, the failure message shall be sent with an appropriate cause value.

Typical cause values are:

- Protocol Causes:

    1. Semantic Error

    2. Message not compatible with receiver state

Where the logical error is contained in a request message of a class 1 procedure, and the procedure does not have a failure message, the procedure shall be terminated and the ERROR INDICATION procedure shall be initiated with an appropriate cause value.

Where the logical error exists in a response message of a class 1 procedure, 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.

Annex A (normative):
Allocation and Pre-emption of Radio Links in the Node B

A.1 Deriving Allocation Information for a Radio Link

A.1.1 Establishment of a New Radio Link

The Allocation Information for a Radio Link in the case of establishment of a new Radio Link shall be derived as follows:

- The latest received *Allocation/Retention Priority* IE for each transport channel shall be used.

Note: The *Allocation/Retention Priority* IE for a transport channel may have been received in
a) the procedure that establishes the first Radio Link for the Node B Communication Context in the Node B or
b) a procedure adding or modifying the transport channel.

- If the *Priority Level* IE in the *Allocation/Retention Priority* IE for all transport channels that are intended to use the Radio Link is set to "not used", the pre-emption capability of the Radio Link shall be set to "shall not trigger pre-emption".

- If the *Priority Level* IE in the *Allocation/Retention Priority* IE for one or more of the transport channels that are intended to use the Radio Link is not set to "not used", the allocation priority and the pre-emption capability of the Radio Link shall be set according to the following:

  - The transport channels that have the *Priority Level* IE in the *Allocation/Retention Priority* IE set to "not used" shall be excluded when setting the allocation priority and pre-emption capability of a Radio Link.

  - The allocation priority for a Radio Link shall be set to highest priority level, given by the *Priority Level* IE in the *Allocation/Retention Priority* IE, for all non excluded transport channels that are intended to use the Radio Link.

  - If all non-excluded transport channels that are intended to use a Radio Link to be established have the 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 "not used", the pre-emption capability of the Radio Link to be modified shall be set to "shall not trigger pre-emption".

- If the *Priority Level* IE in the *Allocation/Retention Priority* IE for one or more of the transport channels to be added or modified in the Radio Link is not set to "not used", the allocation priority of and the pre-emption capability of the Radio Link to be modified shall be set according to the following:

    - The transport channels to be added or modified that have the *Priority Level* IE in the *Allocation/Retention Priority* IE set to "not used" shall be excluded when setting the allocation priority and pre-emption capability of a Radio Link to be modified.

    - The allocation priority for a Radio Link to be modified shall be set to highest priority level, given by the *Priority Level* IE in the *Allocation/Retention Priority* IE, for all the non-excluded transport channels that are to be added or modified.

    - If all non-excluded transport channels that are to be added or modified in the Radio Link have the pre-emption capability, given by the *Pre-emption Capability* IE in the *Allocation/Retention Priority* IE, set to "shall not trigger pre-emption", the pre-emption capability of the Radio Link to be modified shall be set to "shall not trigger pre-emption".
    If one or more of the non-excluded transport channels to be added or modified in the Radio Link have the value of the *Pre-emption Capability* IE in the *Allocation/Retention Priority* IE set to "may trigger pre-emption", the pre-emption capability of the Radio Link to be modified shall be set to "may trigger pre-emption".

The derived allocation priority and pre-emption capability are only valid during this allocation/retention process.

A.2 Deriving Retention Information for a Radio Link

The Retention Information for an existing Radio Link shall be derived as follows:

- The latest received *Allocation/Retention Priority* IE for each transport channel shall be used.

- Note: The *Allocation/Retention Priority* IE for a transport channel may have been received in
    a) the procedure that establishes the first Radio Link for the Node B Communication Context in the Node B or
    b) a procedure adding or modifying the transport channel.

- If the *Priority Level* IE in the *Allocation/Retention Priority* IE for one or more transport channels using the Radio Link is set to "not used", the pre-emption vulnerability of the Radio Link shall be set to "not pre-emptable".

- If the *Priority Level* IE in the *Allocation/Retention Priority* IE for all the transport channels using the Radio Link is not set to "not used", the retention priority of the Radio Link and the pre-emption vulnerability of the Radio Link shall be set according to the following:

    - The retention priority for a Radio Link shall be set to highest priority level, given by the *Priority Level* IE in the *Allocation/Retention Priority* IE, for all transport channels that uses the Radio Link.

    - If all transport channels that uses the Radio Link have the pre-emption vulnerability, given by the *Pre-emption Vulnerability* IE in the *Allocation/Retention Priority* IE, set to "pre-emptable", the pre-emption vulnerability of the Radio Link shall be set to "pre-emptable".
    If one or more transport channels that uses the Radio Link have the value of the *Pre-emption Vulnerability* IE in the *Allocation/Retention Priority* IE set to "not pre-emptable", the pre-emption vulnerability of the Radio Link shall be set to "not pre-emptable".

The derived retention priority and pre-emption vulnerability are valid until they are changed, or until the Radio Link is deleted. When new transport channels are added to or deleted from the Radio Link or when existing transport channels are modified with regards to the *Allocation/Retention Priority* IE, the retention information shall be derived again according to above.

A.3 The Allocation/Retention Process

The Node B shall establish or modify the resources for a Radio Link according to:

- The value of the Allocation Information (allocation priority and pre-emption capability) of the Radio Link to be established or modified. The Allocation Information is derived according to clause A.1.

- The value of the Retention Information (retention priority and pre-emption vulnerability) of existing Radio Links. The Retention Information derived according to clause A.2.

- The resource situation in the cell.

Whilst the process and the extent of the pre-emption functionality is operator dependent, the pre-emption indicators (pre-emption capability and pre-emption vulnerability) shall be treated as follows:

- . If the pre-emption capability for a Radio Link to be established or modified is set to "may trigger pre-emption" and the resource situation so requires, the Node B may trigger the pre-emption process in clause A.4 to free resources for this allocation request.

- . If the pre-emption capability for a Radio Link to be established or modified is set to "shall not trigger pre-emption", then this allocation request shall not trigger the pre-emption process in clause A.4.

- . If the pre-emption vulnerability for an existing Radio Link is set to "pre-emptable", then this Radio Link shall be included in the pre-emption process in clause A.4.

- . If the pre-emption vulnerability for an existing Radio Link is set to "not pre-emptable", then this Radio Link shall not be included in the pre-emption process in clause A.4.

A.4   The Pre-emption Process

The pre-emption process shall only pre-empt Radio Links with lower retention priority than the allocation priority of the Radio Link to be established or modified. The Radio Links to be pre-empted shall be selected in ascending order of the retention priority.

When the pre-emption process detects that one or more Radio Links have to be pre-empted to free resources for a Radio Link(s) to be established or modified, the Node B shall initiate the Radio Link Pre-emption procedure for all the Node B Communication Contexts having Radio Links selected for pre-emption and start the $T_{Preempt}$ timer.

When enough resources are freed to establish or modify the Radio Link(s) according to the request, the Node B shall stop the $T_{Preempt}$ timer and complete the procedure that triggered the pre-emption process in accordance with the "Successful Operation" subclause of the procedure.

If the $T_{Preempt}$ timer expires, the Node B shall regard the procedure that triggered the pre-emption process as failed and complete the procedure in accordance with the "Unsuccessful Operation" subclause of the procedure.

Annex B (informative): Change history

Change history					
TSG RAN#	Version	CR	Tdoc RAN	New Version	Subject/Comment
RAN_06	-	-	RP-99764	3.0.0	Approved at TSG RAN #6 and placed under Change Control
RAN_07	3.0.0	-	-	3.1.0	Approved at TSG RAN #7
RAN_08	3.1.0	-	RP-000250	3.2.0	Approved at TSG RAN #8
RAN_08	3.1.0	-	RP-000251	3.2.0	Approved at TSG RAN #8
RAN_08	3.1.0	-	RP-000252	3.2.0	Approved at TSG RAN #8
RAN_08	3.1.0	-	RP-000253	3.2.0	Approved at TSG RAN #8
RAN_09	3.2.0	165 168-170, 173-178, 180-189	RP-000386	3.3.0	Approved at TSG RAN #9
RAN_09	3.2.0	190-200, 203 205 207 208 211 214 218-219	RP-000387	3.3.0	Approved at TSG RAN #9
RAN_09	3.2.0	221 222 224-228 233 244, 246	RP-000388	3.3.0	Approved at TSG RAN #9
RAN_09	3.2.0	247-248	RP-000389	3.3.0	Approved at TSG RAN #9
RAN_10	3.3.0	250-324	RP-000627 RP-000628 RP-000630 RP-000697	3.4.0	Approved at TSG RAN #10
RAN_10	3.4.0			3.4.1	Correct of headers
RAN_11	3.4.1	325-330, 333-336, 339-342, 344, 346-348, 350-356, 365, 367-371, 377-379, 383, 385-386, 388	RP-010125 RP-010126	3.5.0	Approved at TSG RAN #11

Change history							
Date	**TSG #**	**TSG Doc.**	**CR**	**Rev**	**Subject/Comment**	**Old**	**New**
March 01	11	RP-010160	373, 387		Approved at TSG RAN #11 and placed under Change Control	-	4.0.0
March 01	11	RP-010166	361		Approved at TSG RAN #11 and placed under Change Control	-	4.0.0
March 01	11	RP-010159	372, 374, 381		Approved at TSG RAN #11 and placed under Change Control	-	4.0.0
March 01	11	RP-010164	358, 359		Approved at TSG RAN #11 and placed under Change Control	-	4.0.0
March 01	11	RP-010167	362		Approved at TSG RAN #11 and placed under Change Control	-	4.0.0

History

Document history		
V4.0.0	March 2001	Publication